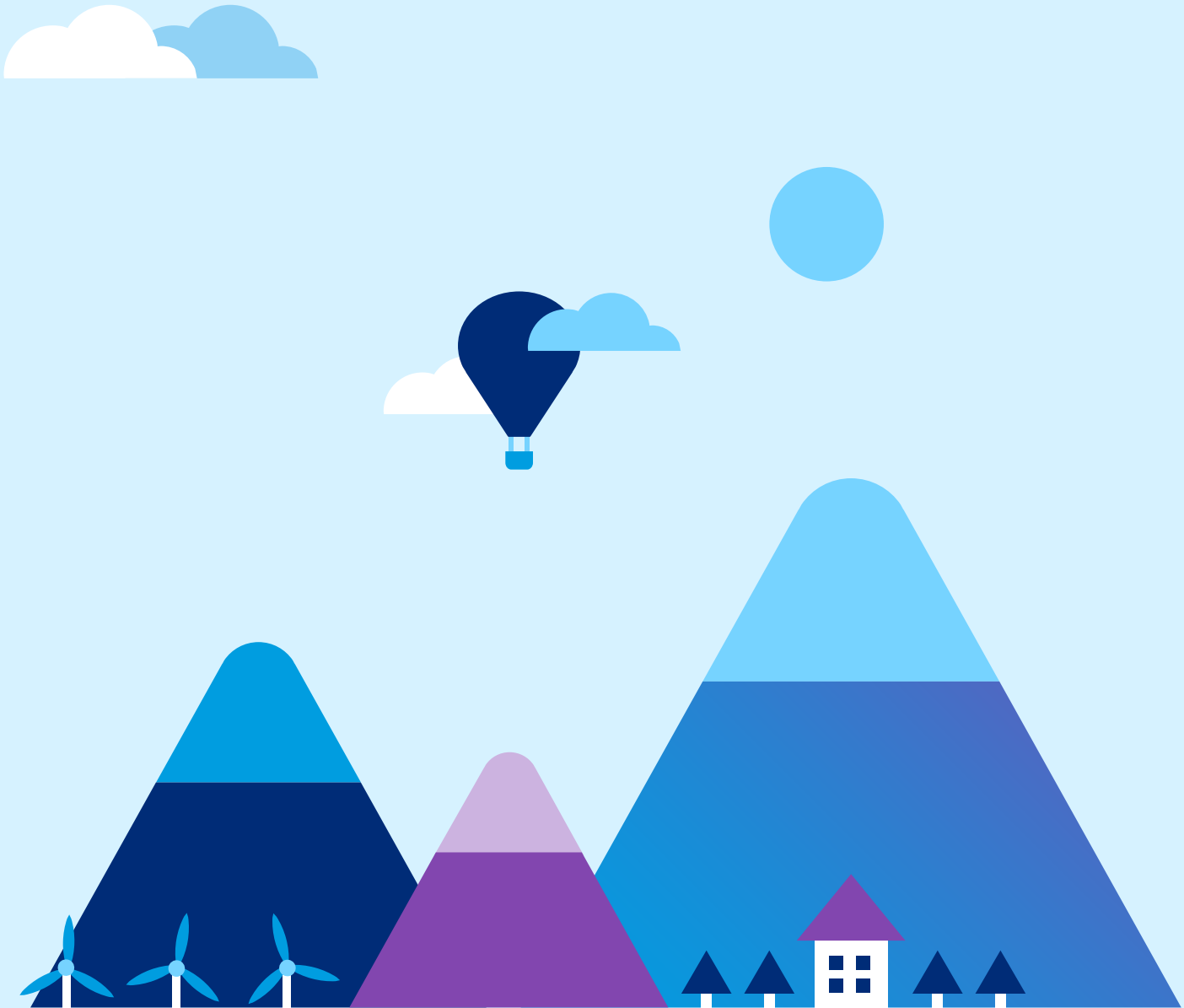
Hewlett-Packard Limited Retirement Benefits Plan

Climate change governance and reporting in line with the recommendations of the Taskforce on Climate-Related Financial Disclosures (TCFD)

Reporting period: 12 months to 31 October 2024

March 2025

Contents



Introduction

Dear Members,

Welcome to our third climate change report, which has been prepared in line with the recommendations of the Task Force on Climate-Related Financial Disclosures ("TCFD") and the statutory requirements prescribed by the Department of Work and Pensions[1].

Climate change will have far reaching impacts for economies, societies and the environment. Climate change is one risk amongst many that the Trustee of the Hewlett-Packard Retirement Benefits Plan ("the Plan")[2] measures, monitors and manages. As a responsible institutional investor, we recognise the importance of understanding and managing the financial risks and opportunities associated with climate change. To this extent, the Trustee seeks to consider climate-related risks and opportunities alongside other risks in a balanced and proportionate way. The Trustee may therefore continue to invest in companies that are exposed to climate risk, where there is a sufficiently attractive investment case and the relevant asset manager believes there is an opportunity to engage and influence changes in the behaviour and actions of a company.

Climate change is a complex process, both from a scientific and an economic perspective. With this in mind, the Trustee's assessment of climate-related risks and opportunities has been carried out based on information that is available at the time for preparing this report, both in terms of data from the companies and assets in which the Plan invests and in consideration of the different global warming scenarios that we have analysed. In producing this report, the Trustee has also considered The Pensions Regulator's observations from its April 2024 review of pension scheme TCFD reports.

1. The Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 and the Occupational Pension Schemes (Climate Change Governance and Reporting) (Miscellaneous Provisions and Amendments) Regulations 2021
2. The Hewlett-Packard Retirement Benefits Plan (the "Plan") is split into two sections: the Hewlett-Packard ("HP") Section and the Digital Section with distinct assets and liabilities. The investment strategy for the sections is broadly the same and, unless otherwise stated, this report refers to the Sections together as "the Plan" throughout.

This report is split into sections to help members understand:

- **Governance:** How the Trustee incorporates climate change into its decision-making;
- **Risk Management:** How the Trustee incorporates climate-related risk into its risk management processes;
- **Strategy:** How potential future climate warming scenarios could impact the Plan and the Trustee's funding strategy; and
- **Metrics and Targets:** The climate related metrics that the Trustee has chosen to measure, the status of current investments against those metrics, and the climate related target that the Trustee has chosen to adopt for the investment portfolio.

The last section of this report covers the more technical aspects of the climate scenario modelling and climate metrics and sets out the methodology and assumptions used to produce the information contained in this report.

The core policies and processes of the Trustee have not materially changed over the reporting year. Relative to the prior year, the key changes are:

Updated climate-related target: The Trustee has strengthened its climate-related target over the year to reflect the positive progress that it has made on its journey to date, and to allow for changes in the Plan's investment arrangements.

Climate-related metrics: The Trustee has continued to develop its approach to calculating climate-related metrics, in line with industry best practice. As such, metrics for this reporting year may not be directly comparable with the prior reporting year. We have included explanatory notes where this is the case.

Updated climate-scenario analysis: : Cardano has carried out a high-level refresh of the 2022 Climate Scenario Analysis in respect of the employer covenant, to reflect material changes to the Group's GHG emissions inventory, changes in the wider market (such as a sharp increase in AI related investment) and the Group's proposed acquisition of Juniper Networks which, all have some impact on the Trustee's assessment of climate-related risks and opportunities.

We recognise that, for a number of the Plan's investment mandates, emissions (and emissions intensity) have increased relative to the prior reporting year. In this regard we would note that:

- Climate-change is a long-term risk, and progress is not expected to be linear. It is not therefore uncommon to see increases in the metrics that are being measured when considering changes on a year-on-year basis. The Trustee is primarily concerned with longer term changes, which it will assess over time as data improves; and
- The increase in emissions reported for some of the Plan's less liquid investments is primarily driven by changes in the quality of the underlying data and how this is reported, rather than asset allocation decisions being made by the investment managers, or worsening climate metrics from the underlying companies in the portfolio. This sort of volatility in climate metrics is to be expected as industry practices develop and standardise for less liquid investments.

Whilst there have been some observed increases in emissions across the Plan's investments (notwithstanding the above comment), we are pleased to report that the Plan's Buy & Maintain Credit portfolio, against which the climate-related target is set, has continued to decarbonise along the agreed pathway. This is primarily as a result of an active decision made by the Trustee to implement a Buy & Maintain Credit portfolio at a lower carbon intensity than the previous portfolio, which was terminated in 2022 as a result of liquidity needs. The Trustee is pleased with the progress that has been made in this regard, and this is reflected in the strengthening of the Trustee's climate-related target, as noted above.

We hope you look forward to reading this report. If you would like to contact the Trustee with any questions you would like to raise, please email us at sta.hpplan@zedra.com.

Paul Early
Chair of Hewlett-Packard Limited Retirement Benefits Plan Trustee Limited

Governance

Trustee governance approach

The Trustee has ultimate responsibility for ensuring effective governance of climate-related risks and opportunities. The Trustee maintains a Statement of Investment Principles (SIP), which details the key objectives, risks and approach to considering Environmental, Social and Governance ("ESG") factors, such as climate change, as part of its investment decision making. The document is reviewed on at least a triennial basis, but typically annually.

The Trustee's key beliefs relating to ESG are:

- ESG factors may have a material impact on business performance and investment risk and return outcomes
- Good stewardship can create and preserve value for companies and markets as a whole.
- Long-term sustainability issues, particularly, but not limited to, climate change, present risks and opportunities that increasingly may require explicit consideration.

The Trustee has sub-committees that have a specific focus and decision-making powers. The Trustee will consider the recommendations of the sub-committees and will review any decisions that require its approval. Of relevance to the oversight of climate-related risks and opportunities are:

- The TCFD Working Group ("TCFDWG"), which has been established for the purpose of reviewing the Plan's compliance with the statutory requirements prescribed by the Department of Work and Pensions ("DWP") and making recommendations to the Trustee. The TCFDWG is also responsible for producing the Plan's annual TCFD report.
- The Trustee Investment Sub-Committee ("TISC"), which has the oversight and decision-making responsibility for the implementation of the investment strategy for the Plan. This includes the appointment and ongoing review of investment managers and performance considerations.

- The Funding and Covenant Sub-Committee ("FCSC"), which has responsibility for monitoring the "Sponsor", Hewlett Packard Limited, and overall group, Hewlett-Packard Enterprise ("HPE" or the "Group"), including ongoing management of climate-related risks and opportunities in relation to the Plan's covenant.

Climate change forms an explicit agenda item at least annually for the Trustee and its sub-committees when the Trustee's TCFD report is updated. The Trustee is satisfied that the amount of governance time spent is reasonable and will allocate more (or less) time to these matters as required.

The Trustee's advisors

Investment Consultant

The Trustee has appointed Mercer as Investment Consultant to the Plan. Mercer's role is to provide ongoing advice on investment strategy and manager appointments. This includes advice on managing and monitoring investment-related risks, such as climate change, which are considered at quarterly meetings. Mercer supports the Trustee in producing the Plan's TCFD report.

On an annual basis, the Trustee formally reviews the performance of the Investment Consultant against agreed strategic objectives in line with the requirements of the Occupational Pension Schemes (Governance and Registration) (Amendment) Regulations 2021. At the time of writing this report, such a review does not formally cover the Investment Consultant's advice to the Trustee in relation to climate risk and opportunities, however this is considered during reviews of the Investment Consultant's performance more generally. The Trustee may include a climate-related objective as part of future reviews.

Secretarial Support

Zedra Inside Pensions Limited ("Zedra") provides secretarial support to the Plan. Zedra's role is to assist the Trustee in the general running of the Plan and to undertake Plan governance activities on behalf of the Trustee, such as coordinating required public disclosures.

Covenant Advisor

The Trustee has appointed Cardano Limited ("Cardano") as Covenant Advisor to the Plan. Cardano advises the Trustee in relation to HPE's ability to support the Plan, now and in the future. Climate-related exposures could have a positive or negative impact on the strength of HPE's covenant. Therefore, Cardano includes climate-related matters in the covenant advice provided to the Trustee. During 2024, Cardano has carried out a refresh of last year's climate scenario analysis, to make sure the Trustee has considered the latest changes and developments. The output will be used to assess the potential impact of climate risk on the Plan from the perspective of any change in the employer covenant.

Actuarial Advisor

The Trustee has appointed Aon Solutions UK Limited ("Aon") as actuarial consultant. Aon's role is to provide ongoing advice on funding strategy along with advice on members' benefits. This includes providing input to enable the Trustee to consider the impact of climate risks on funding strategy.

Risk Management

A key part of the Trustee's role is to understand and manage risks that could have a financially material impact on both the Plan's investments and the wider funding position. Climate change is one of the risks that the Trustee considers alongside other financially material risks that may impact outcomes for members. The Trustee does not explicitly take into account non-financial matters.

This section summarises the primary climate-related risk management processes and activities of the Trustee. These help the Trustee understand the materiality of climate-related risks, both in absolute terms and relative to other risks that the Fund is exposed to. The Trustee prioritises the management of risks primarily based on potential impact on the security of members' benefits in the context of the overall funding strategy.

Governance

- The Trustee's Statement of Investment Principles (SIP) is reviewed at least triennially, but typically annually, and sets out how climate-related investment risks are managed and monitored.
- The Trustee maintains a risk register which includes identifying climate risks and opportunities, and operates an Integrated Risk Management framework to monitor and mitigate financially material risks to the Plan.
- The Trustee receives training from time-to-time on climate-related issues. The training allows the Trustee to challenge whether the risks and opportunities are effectively allowed for in its governance processes and wider activities, and to be able to challenge its advisors to ensure the governance support and advice adequately covers the consideration of climate-related risks and opportunities.
- The Trustee receives six monthly updates from the Sponsor and Group on the health of the Covenant. This enables the Trustee to track and monitor progress of the Sponsor against selected targets, as well as to stay informed of the latest climate scenario developments including renewable energy outlook and carbon prices, and whether these present a risk to the Plan's covenant.

Strategy

- Mercer will take climate-related risks and opportunities into account as part of the wider strategic investment advice provided to the Trustee.
- Climate scenario analysis for the investment and funding strategy of the Plan will be reviewed at least triennially, or potentially more frequently if there has been a material change to the strategic asset allocation. The impact of climate-related risks and opportunities is an input in regular employer covenant updates.

A summary of the Trustee's climate scenario analysis is included in the next section of this report. Climate scenario analysis is one approach to help the Trustee understand the materiality of climate-related risks that could impact the Plan over time. The effective date of the climate scenario analysis included in this report is 31 December 2021. The Trustee has considered whether to renew the climate scenario analysis and has decided not to renew the climate scenario analysis, as the current investment strategy is not materially different to that which was in place as at 31 December 2021. The Trustee will update the climate-scenario analysis in the next reporting year in line with regulatory requirements. The Trustee's climate scenario analysis of the employer covenant has been updated to take account of updated information and reporting from HPE.

Reporting & Stewardship

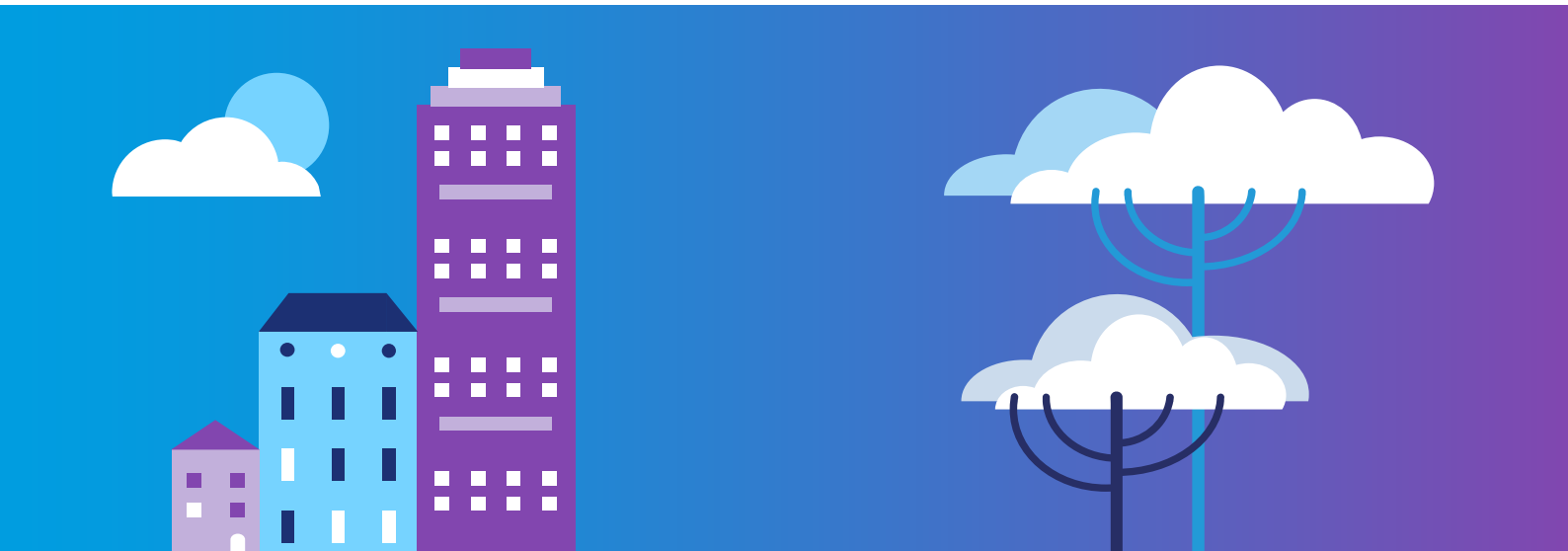
- The Trustee receives an annual report of climate-related metrics and progress against any target set in respect of the assets held in the Plan. The Trustee expects to use the information to engage with the investment managers regarding progress against these targets.
- For the mandates against which the Trustee has

set its climate-related target, the Trustee includes climate-related metrics in its quarterly reporting that it receives from the investment managers, via the Investment Consultant.

- The Trustee receives a voting and engagement activity summary on an annual basis as part of the preparation of the Engagement Policy Implementation Statement ("EPIS"). The statement summarises how the relevant investment managers vote and engage on climate-related issues (among other key engagement priorities), and how these align with the Trustee's policies as set out in the SIP. In the EPIS, the Trustee has also defined what it considers to be a 'significant vote', as carried out by the Plan's investment managers on the Trustee's behalf. The Trustee includes climate change as a key theme in determining significant votes. The statement is available on the Plan's website.
- The Trustee gives its investment managers full discretion in evaluating ESG factors in the stock selection and risk management process, including climate change considerations. The Trustee also delegates responsibility to the investment managers for exercising voting rights and stewardship obligations attached to Plan investments. This includes engagement with issuers of debt and equity and other relevant persons regarding appropriate matters such as performance, strategy, capital structure, management of actual or potential conflicts of interest and risks, in accordance with their own corporate governance policies and current best practice, including the UK Corporate Governance Code and UK Stewardship Code.

Manager Selection and Retention

- The Trustee, with advice from Mercer, will consider an investment manager's firm-wide and strategy-specific approach to managing climate-related risks and opportunities when either appointing a new manager, in the ongoing review of a manager's appointment, or as a factor when considering the termination of a manager's appointment. This assessment will predominantly be carried out using Mercer's ESG ratings, which summarise Mercer's views on the manager's capabilities in this space.
- The Trustee views climate risk as financially material and therefore expects investment managers to identify and include climate risk in their decisions around stock selection and retention.
- Mercer rates investment managers on the extent of integration of ESG factors (including climate change) into their processes. A manager's stewardship process forms part of the rating assessment. This is considered at the firm level and at the investment strategy/fund level. The ratings are presented in quarterly investment performance reports and are reviewed by the Trustee.
- Zedra supports the Trustee by keeping a log of presentations provided by the Plan's investment managers, ESG educational sessions and any additional training received as a point of reference when making decisions about investment manager selection and retention.



Climate Risks and Opportunities

The effects of climate change will emerge over many decades. The Trustee has considered two types of climate-related risks and opportunities in its climate scenario analysis:

1. Transition risks and opportunities

This covers the potential financial and economic risks and opportunities from the transition to a low carbon economy (i.e. one that has a low or no reliance on fossil fuels), in areas such as:

- Policy and legislation
- Market
- Technology
- Reputation

Risks include the possibility of future restrictions, or increased costs, associated with high carbon activities and products. There are also opportunities, which may come from the development of low-carbon technologies. In order to make a meaningful impact on reducing the extent of global warming, most transition activities need to take place over the next decade and certainly in the first half of this century.

2. Physical risks and opportunities

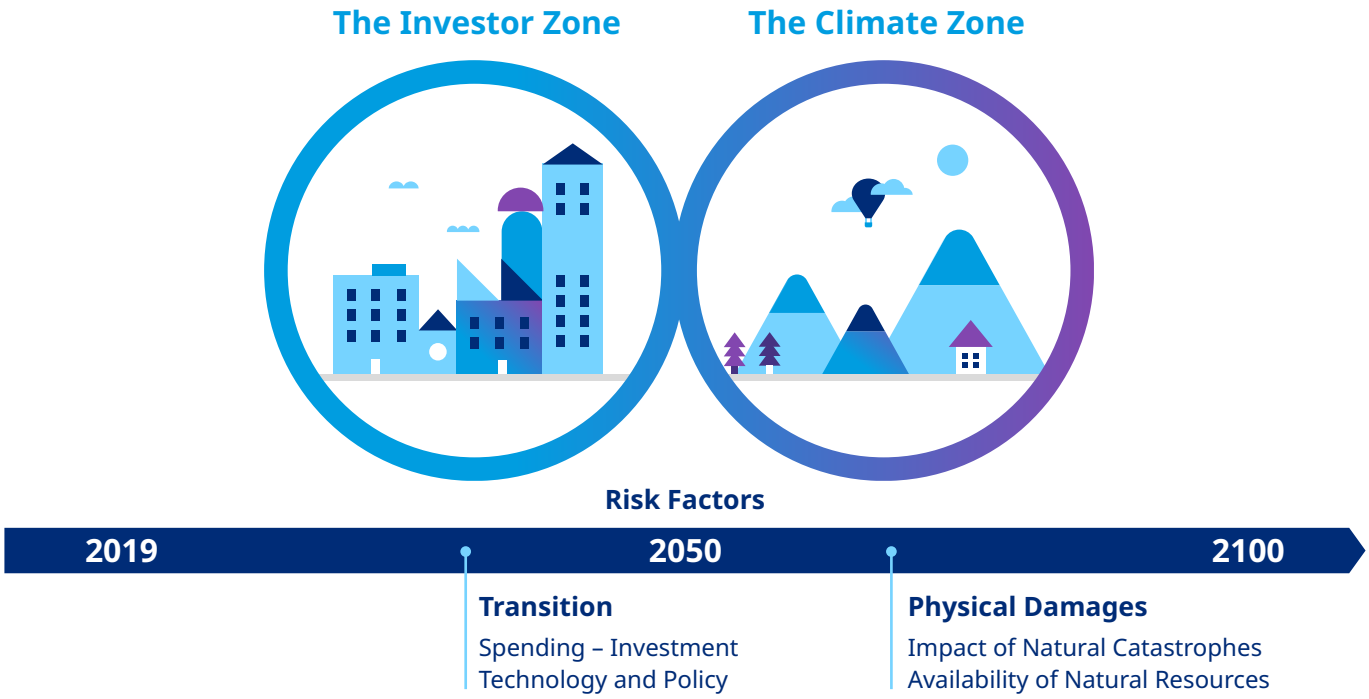
The higher the future level of global warming, the greater physical risks will be both in frequency and magnitude. Physical risks cover:

- Physical damage (storms; wildfires; droughts; floods)
- Resource scarcity (water; food; materials; biodiversity loss)

Physical risks are expected to be felt more as the century progresses, although extreme weather events may increase in the near term. The ultimate extent of the risks is highly dependent on whether global net zero greenhouse gas emissions are achieved by 2050.

There are investment opportunities, for example, in certain types of infrastructure and real estate that are designed to be resilient to the physical impacts of climate change, as well as being constructed and operated in a way that have low or no net carbon emissions. There are also opportunities for investment in those companies or industries that focus on energy conservation and resource efficiency.

Figure 1: Climate risk factors over time



Source: Mercer

Strategy

The effects of climate change will be felt at different times in the future and to different extents. The Trustee believes it is important to understand how the Plan's exposure to climate-related risks may change over time, when the risk exposure may be greatest and what actions can be taken now, or in the future, to avoid those risks becoming increasingly financially material to the Plan.

To help with this assessment, the Trustee has defined short, medium and long-term time horizons for the Plan. The climate-related risks and opportunities that are relevant to the Plan vary over these periods.

The Trustee recognises that, due to the funding position of the Plan and the expected trajectory of future progress (including the range of possible outcomes), the timeframe over which the Plan is expected to hold assets that are materially exposed to climate risks is potentially relatively short. The below timeframes have therefore been determined by reference to this time horizon. Should the Plan's investment time horizon change, the Trustee will review and update its definitions for the short, medium and long term.

'Short term' is the time period in which the Trustee, based on advice from Mercer, expects climate-related data to improve and climate-related impacts on the Plan's assets to be less material. 'Medium term' is defined by the timescale over which the Trustee expects the Plan to be fully funded on a prudent actuarial basis. By the 'Long term' the Trustee expects the Plan's investments to be substantially de-risked and therefore climate risk to be less material to the Plan, given the nature of the assets expected to be held.

The Trustee is due to update its climate-scenario analysis for the next reporting year, with an effective date of 31 December 2024, and will therefore be reviewing the short-, medium- and long-term time horizons that are described below.

Short Term (Period to 2025)

Transition risks are greater than physical risks with moderate asset re-pricing risk driven by:

- Increases in private sector net zero commitments and clearer decarbonisation plans;
- Perceived or real increased pricing of greenhouse gas emissions/carbon;
- Exposure to developing economies, which have longer time horizons for country level phase down of fossil fuel usage.

Medium Term (2025 to 2030)

Transition risks continue to dominate with heightened asset re-pricing risk driven by:

- Future warming pathways become clearer;
- Market awareness grows and is better priced into asset valuations;
- Unexpected policy changes that surprise markets.

Long Term (2030 to 2050)

Physical risks increase but transition risks still dominate:

- Development of technology and low carbon solutions;
- Policy, legislation and regulation are likely to also play a key role at the international, national and subnational level.

Investment Impacts and Opportunities

Short Term (Period to 2025)

The Plan is exposed to climate-related risks through its allocation to bonds, as debt issuers are themselves exposed to both transition and physical risks in the short term. The Plan is also exposed to climate-related risks through its allocation to public equity, albeit this risk is assessed as being less material given the relative size of the Plan's equity holdings, compared to its bond assets. The climate scenario analysis helps the Trustee understand which market sectors are most exposed to climate-related risks and which are well positioned to transition to a low carbon economy.

Medium Term (2025 to 2030)

The climate-related focus over the medium term is similar to the focus over the short term as it will be centred on bond assets. Over this time period, bond investments where the issuer of the debt has made minimal effort to support the low carbon transition (or suitably account for climate-related risks) may lead to a potential default or downgrade. Market surprises due to unexpected policy changes related to climate change could lead to asset price volatility and therefore funding level volatility. The Plan holds a diversified portfolio so therefore would expect to be insulated from this volatility to a degree. Exposure to this market volatility is expected to reduce over time as the Plan reduces its allocation to risk assets in line with its long-term funding strategy. The resilience of the funding strategy to climate-related risks is therefore expected to improve.

Long Term (2030 to 2050)

Investment opportunities remain in industries which are supportive of the transition to a low carbon economy. As the Plan matures, the Trustee would expect its exposure to these industries to decrease as the Trustee aims to reduce investment risk with a view to providing the greatest security possible for members' benefits. A typical investment strategy of this kind would invest in high quality corporate bonds, government bonds and cash, all of which we would see as suited to a transition to a low carbon economy due to climate-related risk being priced into their value over the long term.

Climate scenarios

In order to assess the potential impact of climate-related transition and physical risks, the Trustee has considered two possible climate scenarios. Defined as 'warming pathways', these scenarios consider the expected degrees of warming of the atmosphere by the end of the century relative to pre-industrial levels.

The scenarios considered by the Trustee are:

- **1.5°C Scenario ("Rapid Transition") -** Average temperature increase of 1.5°C by 2100. This scenario assumes sudden divestments across multiple securities in 2025 to align portfolios to the Paris Agreement goals. This type of realignment is expected to have disruptive effects on financial markets with sudden repricing followed by stranded assets and a market sentiment shock.
- **>4.0°C Scenario ("Failed Transition") -** Average temperature increase above 4°C by 2100. This scenario assumes the world fails to co-ordinate a transition to a low carbon economy and global warming exceeds 4°C above pre-industrial levels by 2100. Physical climate impacts cause large reductions in economic productivity and increasing impacts from extreme weather events.

The Trustee will review the scenarios modelled and reported in future assessment periods. It is important to note that the modelling may understate or overstate the true level of risk due to the uncertainty around the future economic impacts of climate change. Further, there is not currently an agreed market practice for the modelling of each climate scenario. Modelling of the financial impact on the Plan under each climate scenario may therefore differ across the industry. The Trustee has endeavored to present results on a consistent basis where possible, and stated where there are differences in methodology. The Trustee expects that methods will converge in future as market practice around climate reporting improves.

Climate scenario analysis must be undertaken in the first scheme year during which trustees are subject to requirements of the Regulations, and in every third year thereafter. The Trustee may update climate scenario analysis more regularly if deemed appropriate, as is the case in respect of the employer covenant climate scenario analysis during the current year, to reflect changes in information available from the Sponsoring Employer. The Trustee has not carried out updated funding and investment climate scenario analysis for this reporting period. The effective date of the funding and investment climate scenario analysis included in this report remains 31 December 2021.

The Technical Section of this report provides more detail on the modelling approach, along with the assumptions and comments on the limitations of the scenario analysis.

Table 1: Scenario modelling

	1.5°C Scenario	4.0°C Scenario
Overview	This scenario captures a sudden transformation to a low-carbon economy, in order to limit global warming to no more than 1.5°C by the end of the century.	This scenario captures no transformation to a low-carbon economy, as global warming is allowed to rise to 4°C by the end of the century.
Risk factors	Transition risks are very high, particularly in the first half of this century. Physical risks are anticipated in the latter half of the century, although are less impactful relative to higher warming pathway scenarios.	Transition risks are very low. Physical risks are conversely high, are anticipated sooner in the century and are more impactful than with lower warming pathway scenarios.
Narrative	Global action starts immediately, driven by policy, regulation and consumer sentiment. Emissions peak in the early 2020s and coal is phased out by mid-century. By the middle of the century, the average global sea level is expected to rise and longer droughts will be experienced in regions across the globe.	Global economies fail to co-ordinate a transition to a low carbon economy. Emissions peak late in the century and coal is not phased out. The average global sea level continues to rise throughout the century and natural disasters become commonplace.
Market impact	Over the short term, the cost of transition plays through at the sector level with heavy carbon-based industries, such as the energy sector and utilities being most negatively impacted. The renewable energy sector is expected to perform strongly under this scenario, along with raw materials, telecoms and IT.	Heavy carbon-based industries, such as the energy sector and utilities, are not negatively affected as they would be in lower warming pathway scenarios. The renewable energy sector is expected to perform less strongly under this scenario, along with raw materials, telecoms and IT.
Asset class impacts	At the asset class level, equities, infrastructure and commodities are most sensitive to climate-related risks. Sustainable allocations to global equity and infrastructure capture the opportunities presented by the transition to a low-carbon economy and avoid exposure to carbon-intensive sectors and/or companies.	At the asset class level, equities, infrastructure and commodities are most sensitive to climate-related risks. Sustainable allocations to global equity and infrastructure underperform due to lack of transition to a low carbon economy and carbon intense industries continue to generate stable returns.

Covenant scenario analysis

The Trustee recognises it is crucial to better understand the potential impact on the covenant of the effects of climate change, which may influence the near-term or longer-term funding strategy of the Plan.

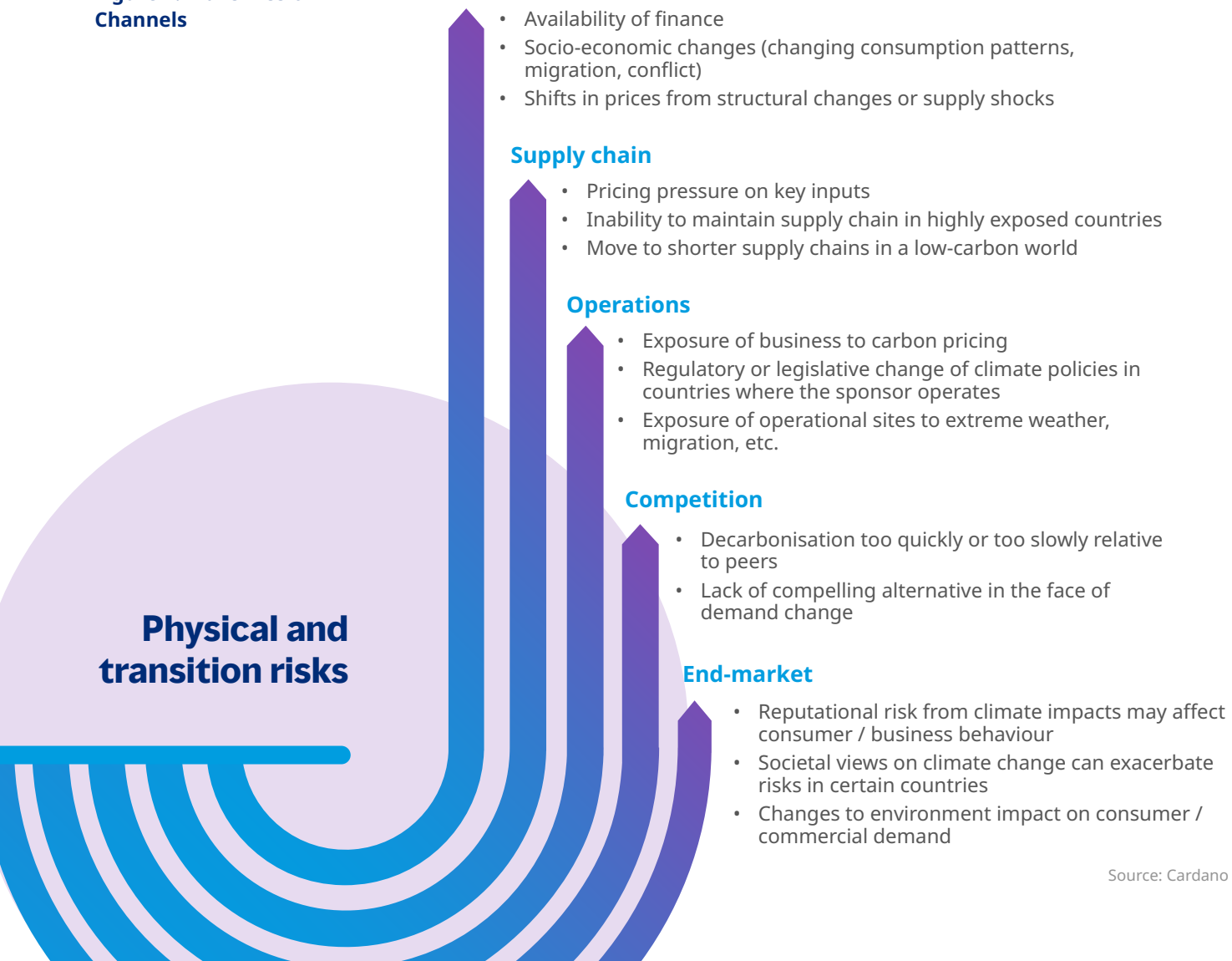
The Trustee's assessment, carried out by Cardano, has been focussed on HPE rather than the Plan's UK Sponsor (Hewlett Packard Limited) given the integrated nature of the Group and covenant.

During 2022, Cardano carried out a high-level assessment of the potential exposure of the Plan's covenant to climate scenarios to assist the Trustee in producing the Plan's TCFD report. In 2023 and 2024, Cardano carried out a high-level refresh of the 2022 Climate Scenario Analysis, to ensure the Trustee had considered relevant changes and developments (such as the Group's accelerated Net Zero targets). In 2024, there have been some material changes to the Group's GHG emissions inventory, changes in the wider market (such as a sharp increase in AI related investment) and the Group's proposed acquisition of Juniper Networks which all have been considered as part of the Trustee's assessment of climate-related risks and opportunities.

Transmission channels

Climate change can impact a business or organisation throughout the entire value-chain and the key issues arising as a result of climate change are complex and multi-dimensional. Figure 1 provides an overview of the transmission channels and the potential risks or impacts from climate change that have been considered as part of the high-level assessment of HPE.

Figure 4: Transmission Channels



Source: Cardano

Climate scenarios

The following two climate scenarios, consistent with the scenarios considered by the Trustee's investment and actuarial advisors, were considered for the covenant scenario analysis.

Table 2: Climate scenarios

Overview	1.5°C Scenario	4.0°C Scenario
	Global decarbonisation starts now so policies intensify gradually but immediately. Large transition changes will happen quickly	No new transition policies above existing commitments leads to continued increase in GHG emissions and rise in global temperature
Physical risks	Long-term physical risks are reduced but deviations from present climate still expected	More pronounced physical risks, particularly over the longer-term
Transition risks	Highest in the near-term as policies are implemented immediately	Limited transition risks over and above existing commitments and policies
Macroeconomic impact	Overall longer-term impact on GDP growth muted, with assumed long-term benefit from green tech investment	UK and global GDP growth permanently lower with that impact growing over time. Macroeconomic uncertainty increases
Alignment	IPCC's RCP1.9	IPCC's RCP7.0

IPCC = Intergovernmental Panel on Climate Change
RCP = Representative Climate Pathway

Scenario analysis

Table 3 below provides an overview of the scenario risk analysis over time on the covenant of HPE. The key findings from the risk analysis remain consistent with the analysis presented in the Trustee's first report on climate change, as follows:

- In the near term, risks associated with a Rapid Transition scenario appear higher due to the impact that rapid global de-carbonisation and new regulations could have on HPE and its relatively carbon intensive supply chain and operations. This could lead to: i) reputational risk and financial liabilities (for example, if suppliers operating in countries with less stringent environmental regulations were not to comply with HPE's policies); ii) higher pass-through costs associated with a quicker transition to net zero; and, iii) higher costs if regulations were to make HPE responsible for some/all Scope 3 emissions or if access to renewable energy was to become more expensive.

However, changes in the Group and market have resulted in the long-term risk assessment increasing to higher risk in the Rapid Transition scenario (previously medium risk). The Failed Transition scenario remains assessed as 'higher risk', driven by the increased physical risks (extreme temperature, acute weather events, and water scarcity) faced by suppliers and in key operating locations. This could disrupt client services, impact insurance premiums, and lead to additional costs to mitigate operational damages.

Table 3: : Assessed climate scenario risk analysis over time

	Near-term < 3 years	Mid-term 3 – 13 years	Long-term 13 years +
Rapid Transition	Medium risk	Medium risk	Higher risk
Failed Transition	Lower risk	Medium risk	Higher risk

Source: Cardano.

In addition to the identified risks, the Trustee is aware that HPE may also benefit from opportunities to provide customers with services that better enable them to meet sustainability targets and limit environmental impact. This could partly offset risks identified in this climate focused assessment.

Conclusions from Scenario Analysis

The Trustee recognises that, due to the funding position of the Plan and the expected trajectory of future progress (including the range of possible outcomes), the timeframe over which the Plan is expected to hold assets that are materially exposed to climate risks is potentially relatively short. The Trustee has therefore focussed its attention with regard to the climate scenario analysis on the medium-term timeframe (i.e. to 2030).

Over this period, the 4°C "Failed Transition" Scenario does not have a significant impact on investments or funding levels given the risk associated with this scenario is primarily physical risk, which is expected to come through over the longer term. The main impact from the Plan's perspective is under a 1.5°C "Rapid Transition" scenario, where there is assumed to be a shock around 2025 (within a reasonable tolerance), as markets price in transition costs.

This 1.5°C "Rapid Transition" scenario assumes credit spreads initially widen materially, but recover over subsequent years as defaults do not increase as expected. Equities also suffer in this scenario, but the impact on the funding position is smaller due to the Plan's relatively small allocation to public equity. The result is a funding level fall of c. 5% in 2025. This is a description of the impact of a 1.5°C "Rapid Transition" scenario on the Plan's assets and liabilities at an aggregate level.

A "rapid transition" is one of many scenarios that could occur. The Trustee will therefore consider any potential changes to mitigate this risk alongside the wider risk/return considerations associated with the Plan's investment strategy. The Trustee will refresh its climate-scenario analysis in 2025 so will consider these scenarios in more detail.

To the effective date of this report the Trustee has not made any changes to the Plan's investment strategy for the explicit purpose of reducing exposure to climate-related risks. The Trustee notes that there is limited scope to reduce the climate-related risk inherent to the Plan's investments, and that the Plan cannot fully insulate itself from climate risk. This is because of the relatively short timescale over which the Plan is expected to hold assets that have material exposure to these risks

Covenant

Under both scenarios in the 2030 timeframe, the employer covenant has been assessed as having a medium level of risk exposure. To address the risks noted above, the Trustee has considered the recommendations from the covenant advisor in each of the following areas:

- Closely monitor the Group's carbon emissions in the context of Group and supplier Scope 3 emission reduction and Net Zero targets;
- Assess the impact of corporate activity on Group emissions and risk profile over time;
- Regularly conduct horizon scans for potential regulations or changes in competitor policy that may impact the Group;
- Consider how climate risk could impact the Plan's longer term journey planning; and
- Consider climate risk metrics in ongoing covenant monitoring processes with the Group and Sponsor.

Metrics and Targets

Metrics

The Trustee has chosen to present four climate-related metrics in this report. The climate-related metrics help the Trustee to understand the climate-related risk exposures and opportunities in the Plan's investment portfolios and identify areas for further risk management, including investment manager portfolio monitoring, and voting and engagement activity and priorities. The metrics in this report are:

1. Absolute emissions metric: Total carbon emissions;

2. Emissions intensity metric: Weighted Average Carbon Intensity ("WACI")

3. Portfolio alignment metric: Implied temperature rise; and

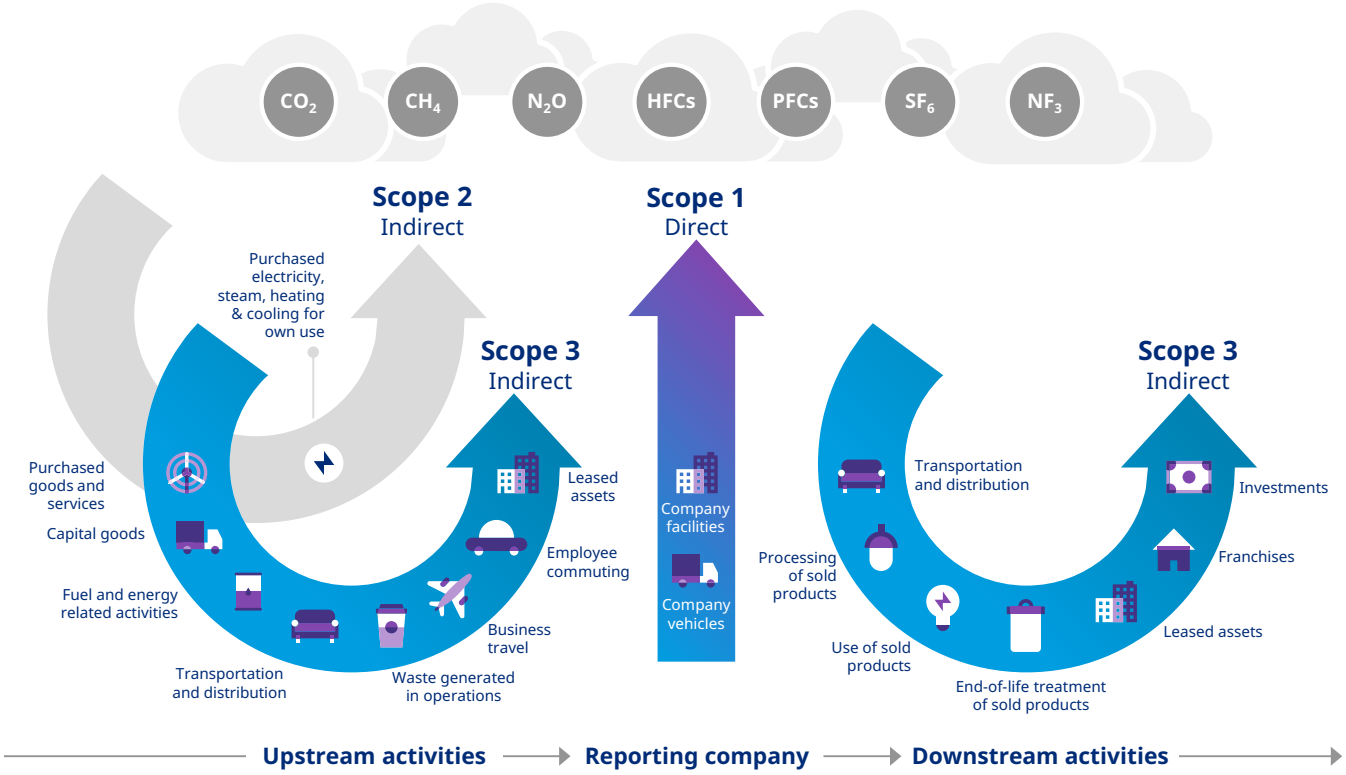
4. Additional climate change metric: Data quality

The Trustee recognises the challenges with various metrics, tools and modelling techniques used to assess climate change risks. The Trustee aims to work with its investment adviser and investment managers to improve the approach to assessing and managing risks over time as more data becomes available, and has done so throughout the reporting year. The Technical Section of this report sets out the data limitations and assumptions used in collating these metrics.

1. Total carbon emissions

This metric represents the underlying investee company's or issuer's reported or estimated greenhouse gas emissions, where available, and is expressed in absolute terms on an annual basis. It includes various scopes of emissions, which are summarised in the following diagram.

Figure 8: Scopes of emissions



Source: Greenhouse Gas ("GHG") Protocol

There are seven recognised greenhouse gases, as defined by the GHG Protocol. In order to simplify reporting, each greenhouse gas is calibrated relative to carbon dioxide and is reported as 'carbon dioxide equivalent' emissions (CO2e).

For the purpose of this report, scope 1, 2 and 3 emissions have been reported where available. The absolute emission metric is a proxy for the share of GHG emissions that are 'owned' by the Plan through investing in the underlying companies and issuers, including countries (referred to as 'sovereign exposure' through government debt). This metric is expected to be volatile through time, meaning that progress to reduce absolute emissions will not be linear. Absolute emissions are also influenced by changes in asset value, rather than solely by the climate-related activities of the investment managers or underlying companies.

Table 5: Total carbon emissions data (exc. LDI)

Asset Class	Manager	Absolute Emissions (tCO2e)											31/12/23 Strategic Asset Allocation ("SAA")[2]
		Scope 1+2					Scope 3 Upstream			Scope 3 Downstream			
		Coverage[1] (%)	HP Section	% Change	Digtal Section	% Change	Coverage (%)	HP Section	Digtal Section	Coverage (%)	HP Section	Digtal Section	HP/Digital (%)
Synthetic Equity	Insight	99.8%	7,230	-21%	7,751	-20%	99.8%	13,264	14,220	99.8%	35,202	37,741	10/10
Multi-Asset Credit	Apollo	34.3%	10,047	+216%	12,545	+216%	34.3%	11,985	14,965	34.3%	30,962	38,660	15/19
	PIMCO (LDIF)	18.7%	2,323	-	3,586	-	18.7%	6,385[3]	+9,859[3]	-	-	-	
	PIMCO (IF)	14.9%	2,637	-	4,083	-	14.9%	10,435[3]	+16,145[3]	-	-	-	
Buy & Maintain Credit	Insight	50.3%	5,640	-	6,046	-	50.3%	17,180	18,419	50.3%	22,384	23,998	10/10
Long Dated Assets	M&G	62.7%	7,262	+45%	7,559	+39%	-		-	-	-	-	11/11
Senior Private Debt	GSAM BS III	100.0%	1,712	+13%	1,880	+13%	100.0%	15,351	16,858	100.0%			13/13
	GSAM BS IV	100.0%	1,971	+39%	2,032	+39%	100.0%	5,812	5,993	100.0%			
	M&G	-	-	-	-	-	-	-	-	-	-	-	

Source: MSCI, Mercer Calculations and Investment Managers. The Plan also allocates to Asset Backed Securities through the Liability Driven Investments (LDI) portfolio, however coverage on these mandates is not high enough (< 25%) to draw meaningful conclusions from the data. Where there is < 100% coverage, the figures in this analysis have been pro-rated at the individual manager fund level (where reasonable data is available) to present full coverage as if full data was available.

1. Coverage is defined as the percentage of underlying fund assets for which there is data available, relative to total fund assets. Further information is outlined in the Technical Section.
2. The Plan's strategic allocation is set by the Trustee and can also be referred to as the 'Target' allocation of the Plan's assets to the relevant asset class.
3. The upstream figure quoted in relation to PIMCO Multi-Asset Credit includes both upstream and downstream scope 3 emissions, as PIMCO does not currently report the downstream/upstream split for Scope 3.

Relative to the prior reporting year the Trustee had made a number of changes to the investment strategy. This includes new investments over the reporting year into PIMCO Multi-Asset Credit (MAC), Insight Buy and Maintain Credit and Asset-Backed Securities (ABS), the latter of which is not shown in the table above due to insufficient coverage. As such, at a total portfolio level and for some of the Plan's mandates, the metrics in this year's report are not directly comparable with last year's report.

Relative to the prior reporting year, absolute emissions for the Apollo Multi-Asset Credit M&G Long Dated Assets and Goldman Sachs Senior Private Debt funds have increased materially. Explanations for these increases are summarised below.

- **Apollo:** 'Given MSCI's relative low coverage of environmental data in the portfolio, increases and reductions in emissions can be swayed materially by minor adjustments in sector allocation, positioning, and availability of data. Fluctuations will persist until portfolio coverage increases to 80-90%. The increase in scope 1 & 2 absolute carbon emissions and carbon footprint from Q4 2022 to Q4 2023 may be partially attributed to an increase in portfolio coverage: the financed emissions eligible portfolio [market value] coverage has increased to 34.3% in Q4 2023 from 24.9% in Q4 2022. Furthermore, there was an increase in exposure to higher emitting names over the period.' Source: Apollo.

- **M&G:** 'M&G has developed an automated system which allows greater granularity and standardisation of carbon emissions data. The system uses a data hierarchy when sourcing emissions from several sources, including MSCI, Bloomberg, and a number of other data providers for ESG data on private assets and leveraged loans'.

  'As companies become more sophisticated at reporting these emissions, it is likely that the total will rise as more types of emissions are able to be measured… …This has led to, in some instances, large increases in Scope 3 numbers, however we believe that these are ultimately more accurate in the long-term and a better representation of a portfolio's transition risk profile.' Source: M&G.

- **GSAM:** As shown on pg. [25], the vast majority of the data that GSAM provide for these mandates is estimated, due to the nature of the assets being privately owned and managed. The metrics shown are therefore heavily dependent on the assumptions and approach taken by GSAM in calculating the metrics, which may vary year-on-year, rather than necessarily the actions of the underlying portfolio companies. It is difficult to draw conclusions from metrics for mandates with poor data quality for this reason.

Weighted Average Carbon Intensity (exc. LDI)

WACI is an intensity measure of emissions that takes the Total GHG Emissions figure and weights it to take account of the revenue of the underlying portfolio companies. This metric is calculated by taking the total carbon emissions of each underlying security, as expressed on the previous page, and dividing by the annual revenue of the same security. For each investment this allows the Trustee to determine carbon intensity per $1m of revenue generated and therefore provides a better understanding on where specific action might have the greatest actual impact.

Analysing the WACI assists the Trustee in identifying carbon-intense sections of the Plan's portfolio.

Table 6: Weighted average carbon intensity data

Asset Class	Manager	WACI / Sovereign Carbon Intensity (tCO2e / $M revenue) / (tCO2e / $M PPP-Adjusted GDP)							% Change	SAA Allocation ("SAA")[2]
		Scope 1+2			Scope 3 Upstream		Scope 3 Downstream			
		Coverage (%)	Fund	% Change	Coverage (%)	Fund	Coverage (%)	Fund		(%)
Synthetic Equity	Insight[2]	99.7%	117.6	-21%	99.8%	245.5	99.8%	459.2	+76%	10/10
Multi-Asset Credit	Apollo	40.0%	272.2	+7%	40.3%	256.2	40.3%	693.3	+95%	15/19
	PIMCO (LDIF)	18.7%	83.1	-	18.7%	951.6[10]	-	-	-	
	PIMCO (IF)	14.9%	85.3	-	14.9%	384.7[10]	-	-	-	
Buy & Maintain Credit	Insight	82.0%	74.3	-	80.1%	235.2	80.1%	187.5	-	10/10
Long Dated Assets	M&G[3]	-	-	-	-	-	-	-	-	11/11
Senior Private Debt	GSAM BS III	100.0%	90.0	+111%	100.0%	291.8			+61%	13/13
	GSAM BS IV	100.0%	71.1	+55%	100.0%	204.3			+25%	
	M&G	-	-	-	-	-	-	-		

Source: MSCI, Mercer Calculations and Investment Managers. The Plan also allocates to Asset Backed Securities through the Liability Driven Investments (LDI) portfolio, however coverage on these mandates is not high enough (< 25%) to draw meaningful conclusions from the data. Where there is < 100% coverage, the figures in this analysis have been pro-rated at the individual manager fund level (where reasonable data is available) to present full coverage as if full data was available.

1. Coverage is defined as the percentage of underlying fund assets for which there is data available, relative to total fund assets. Further information is outlined in the Technical Section.
2. The Plan's strategic allocation is set by the Trustee and can also be referred to as the 'Target' allocation of the Plan's assets to the relevant asset class.
3. The upstream figure quoted in relation to PIMCO Multi-Asset Credit includes both upstream and downstream scope 3 emissions.

GSAM have undertaken several enhancements to their data collection processes, methodologies and governance. They have attributed the increase in WACI to this change in approach, rather than an increase in absolute or emissions intensity of the underlying portfolio holdings. For Apollo, the change in WACI is commensurate with the increase in absolute emissions. Meanwhile, WACI fell meaningfully (-21%) relative to the previous year for the Insight Synthetic Equity mandate.

Implied temperature rise

This is a forward-looking metric that considers the pledges, commitments and business strategy changes that underlying investee companies/issuers have made. It provides a prediction of the potential temperature rise over the rest of the century based on the activities of those companies and issuers. The metric illustrates the degree of portfolio alignment with the goals of the Paris Agreement (notably to limit warming to well below 2°C by the end of the century).

The Trustee has chosen to include this metric in the report because of its relative simplicity in presentation. It also provides a useful way to see, at a glance, the positioning of a fund towards a low carbon economy. Asset allocations with high Implied Temperature Rise metrics are invested in companies or issuers that are not transforming their businesses or activities in order to reduce the reliance on fossil fuels. This is also a measure of climate transition risk with greater transition risk highlighted in asset allocations with a higher Implied Temperature Rise.

Table 7: Implied temperature rise data

Asset Class	Manager	Implied Temperature Rise (°C)			SAA
		Coverage (%)	Fund	% Change from 31 Dec 2022	HP/Digital (%)
Synthetic Equity	Insight[1]	99.8%	2.6	+0.1	10/10
Multi-Asset Credit	Apollo	37.3%	2.7	-0.3	15/19
	PIMCO (LDIF)	18.7%	2.6	-	
	PIMCO (IF)	14.9%	2.5	-	
Buy & Maintain Credit	Insight[4]	75.6%	1.8	-	10/10
Long Dated Asset Fund	M&G	-	-	-	11/11
Senior Private Debt	GSAM BS III	-	-	-	13/13
	GSAM BS IV	99.8%	2.6	+0.1	
	M&G	-		-	

Source: MSCI, Mercer Calculations and Investment Managers.

Sovereign bond metrics

The largest asset allocation for the Plan is to the Liability Driven Investment (LDI) portfolio, and therefore this portfolio makes up the largest proportion of the Plan's absolute emissions.

These assets are held to provide protection for the Plan's funding level against changes in interest rates and inflation (as they will change in value in a similar way to the liabilities).

Best practice around calculating metrics for sovereign assets continues to develop. Relative to the prior year, the methodology has changed such that direct comparisons may not be possible or appropriate. On this basis, we have excluded the prior year's analysis from this report.

Mandate	Production Emissions Including LULUCF				Production Emissions Excluding LULUCF				31/12/23 SAA
	Sovereign Carbon Intensity (tCO2e / $M PPP-Adjusted GDP)		Absolute Emissions (tCO2e)		Sovereign Carbon Intensity (tCO2e / $M PPP-Adjusted GDP)		Absolute Emissions (tCO2e)		
	Metric	Coverage	Metric	Coverage	Metric	Coverage	Metric	Coverage	
HP Section	**120.6**	100.0%	**156,341**	100.0%	**120.2**	100.0%	**155,874**	100.0%	41.0%
Digital Section	**120.6**	**100.0%**	**164,935**	**100.0%**	**120.2**	**100.0%**	**164,443**	**100.0%**	**37.0%**

Source: Mercer, using data from MSCI. All data is based on stocklists as at 31st December 2023, using metric calculations and data feeds as at 14th August 2024, or latest available. Sovereign emissions data shown are consistent with the Partnership for Carbon Accounting Financials (PCAF) definition of Scope 1 sovereign emissions, aligning with the UNFCCC definition of domestic territorial emissions, including emissions from exported goods and services. Emissions data are presented including and excluding land use, land-use change and forestry (LULUCF). .

Where mandates are synthetic, the allocation weight represents the market value of exposure

HP / Digital Sections: Where mandates are synthetic, the allocation weight represents the market value of exposure. Emissions from total long exposure to gilts (£1,017m / £1,368m) are shown in the table above. Emissions associated with gilt exposure from reverse repo contracts (-£26.5m / -£112.3m) and Network Rail Bonds (£7.7m / £11.1m) are not included in the analysis. Gilts posted out as collateral are included in gilt valuations; gilts received as collateral are excluded. Cash and other derivative contracts have been excluded.

For production emissions including LULUCF, absolute emissions in respect of funded gilt exposure (£420.4m / £328.9m) are 64,600 / 50,542 tCO2e. Absolute production emissions including LULUCF from additional exposure achieved through gilt repos (£597.0m / £744.4m) are 91,741 / 114,393 tCO2e. For production emissions excluding LULUCF, absolute emissions in respect of funded gilt exposure (£420.4m / £328.9m) are 64,407 / 50,391 tCO2e. Absolute production emissions excluding LULUCF from additional exposure achieved through gilt repos (£597.0m / £744.4m) are 91,467 / 114,052 tCO2e.

Mandate	Consumption Emissions						SAA
	Sovereign Carbon Intensity (tCO2e / capita)		Sovereign Carbon Intensity (tCO2e / $M PPP-Adjusted GDP)		Absolute Emissions (tCO2e)		
	Metric	Coverage	Metric	Coverage	Metric	Coverage	
HP Section	**9.1**	100.0%	**167.3**	100.0%	**216,984**	100.0%	41.0%
Digital Section	**9.1**	100.0%	**167.3**	100.0%	**228,912**	100.0%	37.0%

Source: Mercer, using data from MSCI. All data is based on stocklists as at 31 December 2023, using metric calculations and data feeds as at 14th August 2024, or latest available. Sovereign emissions data shown are consistent with the Partnership for Carbon Accounting Financials (PCAF) definition of consumption emissions, equivalent to production emissions, less exported emissions, plus imported emissions. Emissions data exclude land use, land-use change and forestry. Additional information on the approach that has been taken is set out in the Appendix.

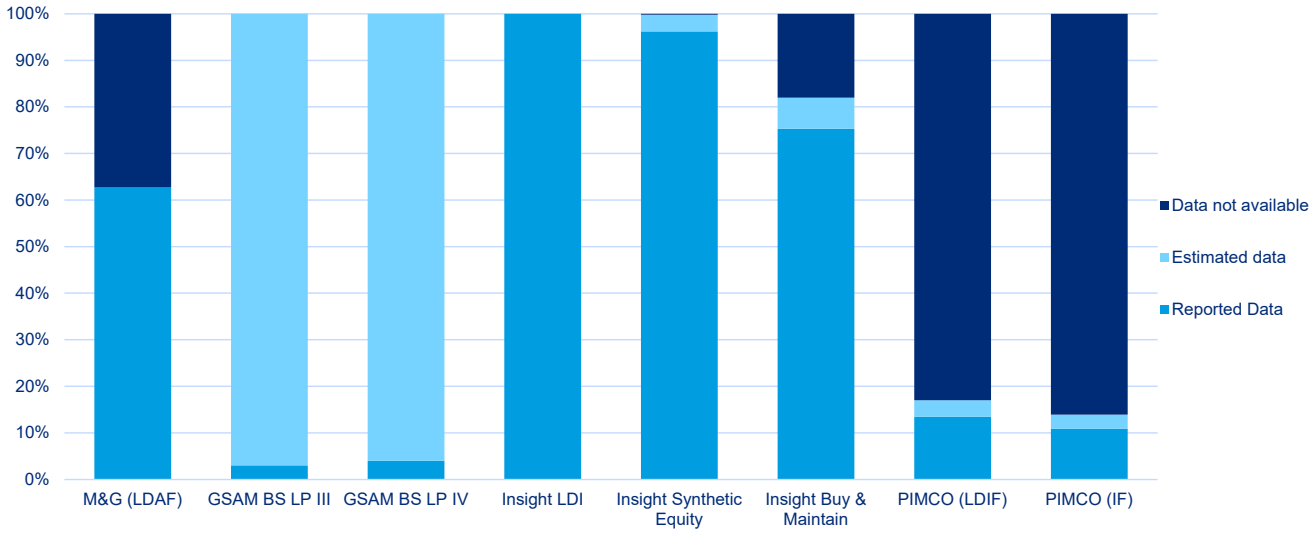
HP / Digital Sections: Where mandates are synthetic, the allocation weight represents the market value of exposure. Emissions from total long exposure to gilts (£1,017m / £1,368m) are shown in the table above. Emissions associated with gilt exposure from reverse repo contracts (-£26.5m / -£112.3m) and Network Rail Bonds (£7.7m / £11.1m) are not included in the analysis. Gilts posted out as collateral are included in gilt valuations; gilts received as collateral are excluded. Cash and other derivative contracts have been excluded. Absolute emissions in respect of funded gilt exposure (£420.4m / £328.9m) are 89,658 / 70,147 tCO2e. Emissions from additional exposure achieved through gilt repos (£597.0m / £744.4m) are 127,326 / 158,765 tCO2e.

Data quality

Data Quality aims to represent the proportions of the portfolio for which the Trustee has high quality (or "reported") data. The Trustee has considered underlying data provided by investment managers that is reported, estimated, or not reported, to determine the how representative the analysis is of the Plan's actual portfolio.

Data Quality also assists the Trustee in monitoring quality of reporting over time, as investment managers/companies are expected to continually improve their reporting on climate-related metrics. There have been a number of changes to the underlying mandates in the Plan's investment strategy over the reporting period. The chart below shows the data quality for the current reporting period (solid colours) relative to the prior reporting period (shaded colours) for the applicable mandates.

Figure 9: Data quality chart



Source: Investment Managers

Trustee Target

The Trustee keeps its target under review to ensure it remains appropriate and relevant, taking into account any changes to the investment strategy of the Plan, the availability of data and wider market developments.

As the Plan's funding level improves, the investment strategy is expected to evolve as a means of reducing investment risk. This will be achieved through the sale of risk assets and investing further into lower risk assets, which are designed to match the movement of the Plan's liabilities. The Trustee has agreed to focus on the carbon intensity of the lower risk assets, in particular investment grade credit, given this is expected to have a greater role to play in the Plan's investment strategy moving forwards.

The Trustee believes that setting quantitative targets for the purpose of monitoring the Plan's climate-related credentials provides a robust framework for assessing progress. Quantitative measures also help the Trustee in identifying, managing and tracking the Plan's exposure to financial risks and opportunities that climate change will bring.

Within the investment strategy, the Liability Driven Investment portfolio has the largest allocation. The exposure is mainly to UK government gilts. The Trustee has no control over the carbon intensity of the UK and has concluded that a target set for the liability hedging mandate would be impractical to influence and change.

Most of the remaining asset classes which would be considered low risk currently have limitations with the provision of climate-related data, notably the private markets strategies. The Trustee expects that provision of climate-related data will improve for these asset classes over time as reporting on climate-related data becomes commonplace. Mercer will continue to work with the investment managers on the Trustee's behalf with the aim of obtaining better data from the underlying assets (when available).

The Trustee's previous climate related target to was to reduce the Weighted Average Carbon Intensity associated with the Plan's Buy & Maintain Credit portfolios by 60% by 31 December 2030, from a baseline of 31 December 2021. When this target was put in place, the Plan's Buy & Maintain Credit portfolios were managed by LGIM. However, LGIM's mandate was disinvested in full in 2022 due to liquidity needs..

The Insight Buy & Maintain Credit mandate was then implemented in 2023, at a significantly lower WACI than the previous LGIM mandate, and included target WACI levels at 5 year intervals, based on a net zero 2050 trajectory (as outlined in the chart below).

As a result of the step-change from the LGIM to Insight portfolios, the Trustee has decided to revise the target percentage reduction in WACI by 2030 to align with the Insight target trajectory, with the same baseline (2021).

As such, **the Trustee has updated its climate-related target to reduce the Weighted Average Carbon Intensity associated with the Plan's Buy & Maintain Credit portfolios by 68% for the HP Section / 65% for the Digital Section by 31 December 2030, from a baseline of 31 December 2021.**[3] The Trustee's carbon reduction target remains consistent with a trajectory towards net zero emissions by 2050. The Trustee notes that the expected timeframe of the Plan's investment strategy is to 2030; the Trustee does not believe that achieving a net zero target by this date is feasible based on the requirements of the Plan's investment strategy (and the Trustee's fiduciary duty).

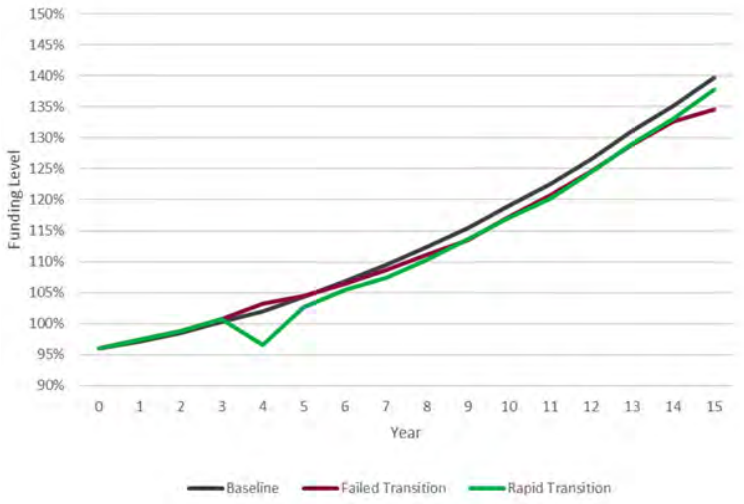
[3] The HP and Digital Sections have slightly different % targets because the starting WACI for the LGIM portfolios was different for each Section, whilst the target WACI for the Insight portfolios is the same for both Sections.

Appendix 1 – Investment and funding scenario analysis

Resilience of the investment and funding strategy

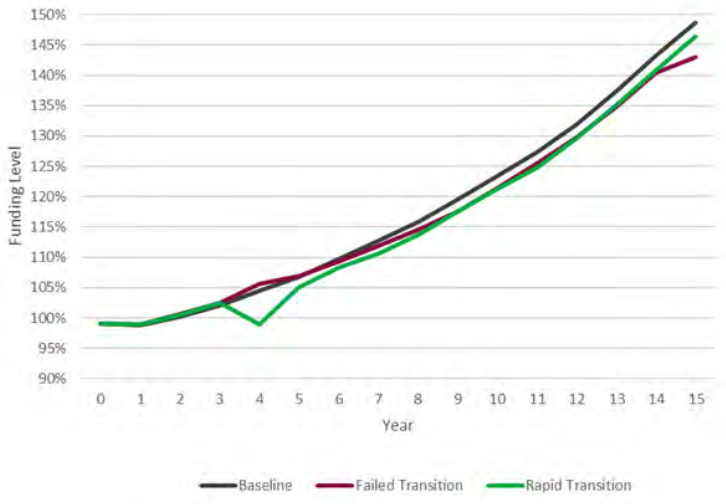
The analysis has been carried out for both scenarios for the Plan, with the key output summarized below. The analysis shows the impact on the funding level (as measured on a low risk, or "gilts flat" actuarial basis) for the HP and Digital Sections (together the "Sections") of the Plan under the 1.5°C and 4.0°C scenarios compared with the expected baseline funding level progression.

Figure 2: HP Section Funding Level Progression under 1.5°C and 4.0°C Scenarios



Source: Mercer. Based on assets and gilts flat liabilities as at 31 December 2021. Does not allow for future de-risking and assumes a static investment strategy.

Figure 3: Digital Section Funding Level Progression under 1.5°C and 4.0°C Scenarios



Source: Mercer. Based on assets and gilts flat liabilities as at 31 December 2021. Does not allow for future de-risking and assumes a static investment strategy.

Impact on Plan Funding

Mortality Scenario Analysis

The Trustee considers the impact of climate change on mortality as a material risk and has therefore conducted scenario analysis to assess the expected long-term impact on the Plan. This analysis has been run on an as consistent basis as possible with those run by the Plan's investment and covenant advisors. Aon refers to the scenarios as 'Abrupt' and 'No' Transition. This is equivalent with Mercer's Rapid and Failed Transition scenarios, respectively.

The charts below show how mortality improvements, plotted on the Y-axis, are expected to change over time, plotted on the X-axis, under each of the different warming scenarios.

Base Scenario

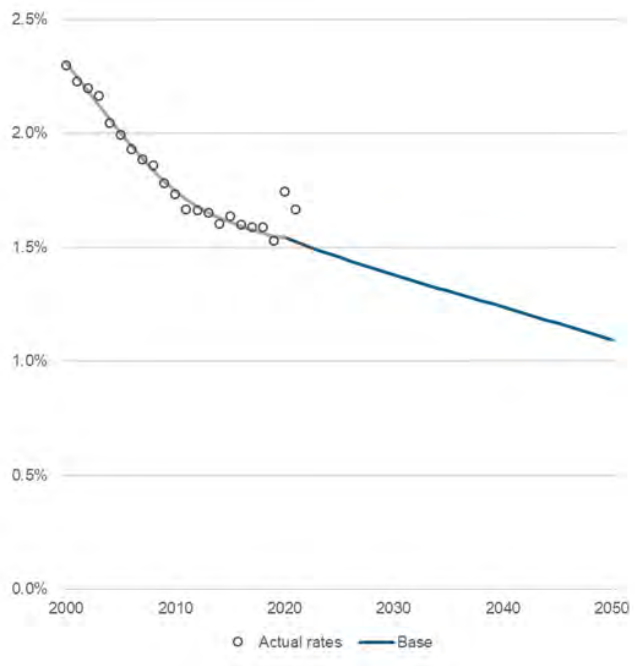
Both of the warming pathway scenarios considered will be compared against a base scenario in charts similar to the one to the right.

The grey circles indicate the actual pattern of mortality seen in the England & Wales male population over 2000-2021 (note in particular the extremely high mortality in 2021) with a grey line showing the smoothed mortality rates produced by the standard improvements model. The blue line shows how mortality is projected to continue to improve over time under the base scenario.

The level of mortality indicated is based on male pensioners aged 50-90 – we have standardised the population to allow for a fair comparison over time.

Where a scenario is positive for life expectancy, the scenario's line will show lower mortality (below the blue line). All else being equal, lower mortality leads to higher life expectancy and higher liabilities.

Figure 5: Mortality progression under Base Scenario



Source: Aon

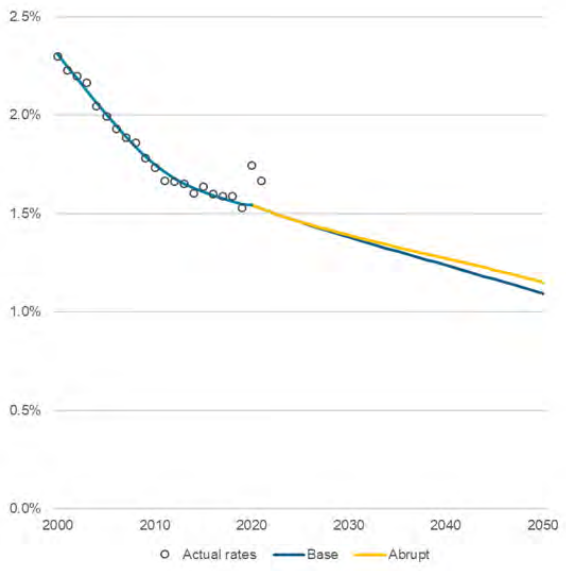
Rapid Transition

The green policy measures introduced by central governments under a rapid transition scenario create considerable economic disruption, hampering economic growth and hurting corporate profitability, initially leading to a global recession in 2027 followed by several years of weak growth as the transition to low carbon is made.

Significant falls in GDP only start occurring from around year 5 and start to recover from around year 12.

Short to medium term mortality improvements are in line with the base scenario but longer-term improvements are slightly lower.

Figure 6: Mortality progression under Rapid Transition Scenario



Source: Aon

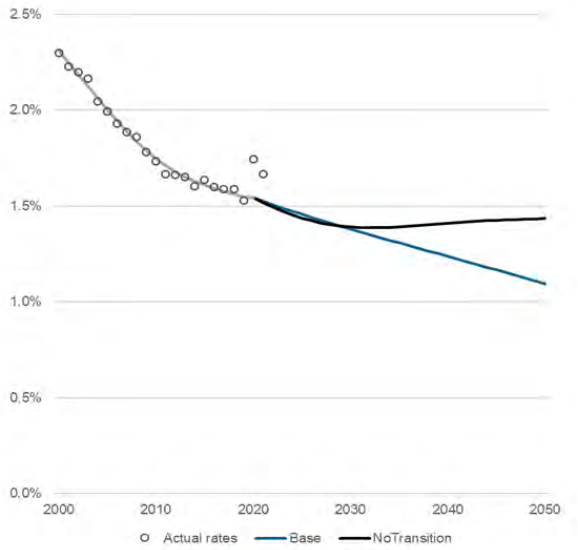
Failed Transition

Under this scenario, limited consideration is given to environmental challenges. In the short-term more money may be spent on health services, perhaps reducing mortality slightly.

Over the medium term there is growing awareness of a changing environment and the damaging effects a lack of action is having. There is a higher incidence of damaging storms, water shortages, higher pollution levels and reduced agricultural yields (leading to higher food prices). Markets become more volatile and climate change begins to have a growing drag on economic growth and asset returns. In such an environment, there may be no long-term future improvements in mortality (consistent with what we saw between 2014 and 2018).

In terms of the direct climate impacts, fewer deaths from warmer winters may more than offset any impact of heatwaves, but the impact is likely to be marginal.

Figure 7: Mortality progression under Failed Transition Scenario



Source: Aon

Mortality

Figure 4: Liability impacts under different climate scenarios

Scenario	Aon assumed long-term improvement in mortality	Ultimate liability impact (age 60) from change in mortality
Base Case	1.5% p.a	-
Failed Transition	0.0% p.a.	-4%
Rapid Transition	1.5% p.a.	-1%

Source: : Aon
The ultimate liability impact is the adjustment to be made to the Mercer scenario to allow for mortality effects. Figures are based on impact on male life expectancy but each scenario impacts females to the same extent. The figures are approximate in that they have been calculated to reflect the impact on life expectancy for a member age 60 rather than being calculated based on full membership data for each Section but we consider them to be appropriate for both Sections of the Plan.

Resilience of the Plan's Investment Strategy

Impact on mortality

Using analysis provided by Aon, in its capacity as Actuarial Consultant to the Plan, mortality changes directly due to the warming pathway climate scenarios considered are assumed not to be material. Mortality changes are not therefore expected to have a material impact on the funding strategy shortened time period over which the Trustee is considering climate related risks (based on current research).

Impact on interest rates and inflation

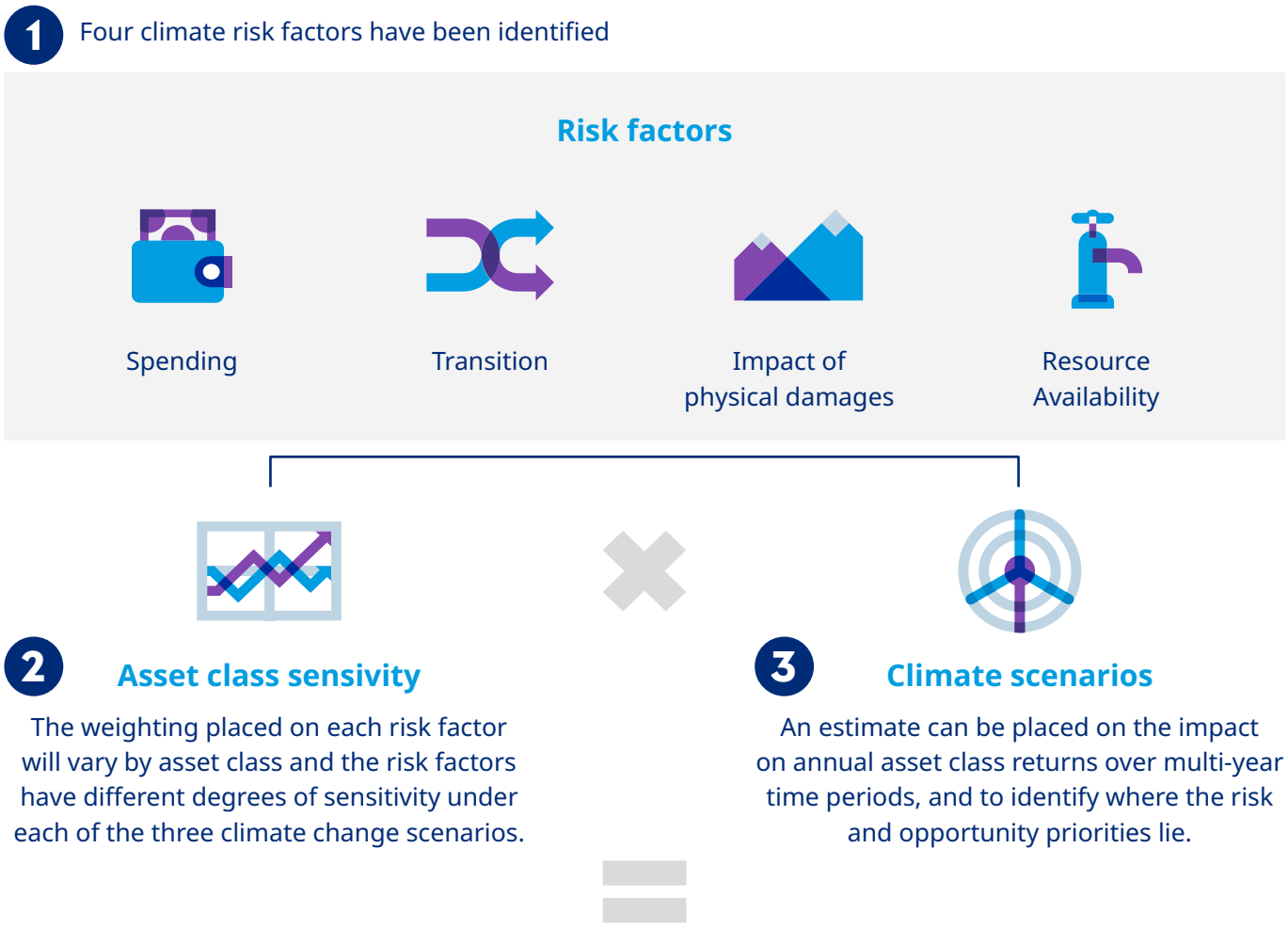
Under a Rapid Transition scenario, attempts by central governments to help support a low carbon transition is expected to be inflationary. This would be expected to increase the value of the liabilities of the Plan in respect of benefit payments over the long-time horizon, which will be largely offset by the movement of the assets supporting the liability hedging portfolio. Therefore, the impact on the funding strategy is expected to be low.

Summary

Whilst the climate scenario analysis indicated a marginal negative impact to the investment strategy over the timeframe which the Plan is expected to hold assets, the overall impact on the investment strategy and funding strategy is relatively low. Considering climate-related risks alongside other risks that the Plan is exposed to, the Trustee believes the current investment and funding strategies continue to be resilient to climate-related risks. This position will be kept under review.

Appendix 2: Technical Section

Figure 10: Climate scenario modelling approach



Source: Mercer

Climate scenario modelling is a complex process. The Trustee is aware of the modelling limitations. In particular:

1. The further into the future you go, the less reliable any quantitative modelling will be.
2. Looking at average asset class returns over multi-decade timeframes leads to small impacts. The results are potentially significantly underestimated.
3. There is a reasonable likelihood that physical impacts are underestimated. Feedback loops or 'tipping points', like permafrost melting, are challenging to model particularly around the timing of such an event and the speed at which it could accelerate.
4. Financial stability and insurance 'breakdown' is not modelled. A systemic failure may be caused by either an 'uninsurable' 4°C physical environment, or due to the scale of mitigation and adaption required to avoid material warming of the planet.
5. Most adaptation costs and social factors are not priced into the models. These include population health and climate-related migration.

Data sources

Climate-related metrics provided by Mercer have been sourced from MSCI using stock list data provided by the investment managers. Other data has been requested directly from the asset managers.

Scope of emissions

Scope 1, 2 and 3 emissions data have been included in this report, with the exception of the Insight LDI mandate. The assessment of the UK government's emissions WACI could therefore be considered an understatement.

Data coverage

Data coverage refers to the proportion of an asset in which the various climate-related metric data is available. There are gaps in the data as:

- Some public listed companies are not publishing climate-related data or are providing poor quality data. This is relevant to public equity and corporate bonds. Obtaining data for emerging market equity can also be challenging due to general disclosure and transparency challenges.
- Many private companies do not currently produce climate-related data and coverage for private markets, such as private equity and private debt, will be low, or zero for mature funds.
- Sovereigns, or governments, may not publish climate-related data in the public domain. This is a particular challenge for emerging market debt. For UK government debt, data is available but there is a delay in the data being published.
- Short-term instruments, such as secured finance assets, have limited data available due to the short-term nature of the individual assets.
- For the long dated property portfolio, the occupiers of the buildings in the portfolio have full operational control and there are no Scope 1, 2 or 3 emissions associated with the investments. The asset managers are looking to improve the collection of Scope 3 emissions data – this includes occupier activities where they have direct utility supplier contracts.

In this report, the Trustee has used a pro rata approach to scale up each climate metric in order to present the data as if full coverage was available for each asset. This assumes that the part of an investment fund that does not have data available has the same investment characteristics (for example, same sector or geography) as the part where there is data. For example, where an investment manager can only provide climate metrics on half of the underlying investments for a particular strategy, we have assumed that the remaining half for which data cannot be provided has identical climate characteristics as the half for which climate can be provided. The relevant climate metric as provided by the investment manager has then been scaled up to allow for this. In this example, the data would be doubled to get to 100% coverage.

Glossary

Carbon intensity

The amount of emissions of carbon dioxide (or other greenhouse gasses) released per unit of another variable such as revenue, gross domestic product (GDP), per $1million invested etc. over a given time period (typically annually). See also Weighted Average Carbon Intensity (WACI).

Credit spread

The difference in yield between two debt securities of the same maturity but different credit quality. In the Plan's context, this is typically the difference in yield between corporate bonds (of varying credit quality) and UK government bonds.

Decarbonisation

The process by which countries, individuals or other entities aim to achieve zero fossil carbon existence. Typically refers to a reduction of the carbon emissions associated with electricity, industry and transport.

Global warming

The estimated increase in global mean surface temperature expressed relative to pre-industrial levels unless otherwise specified.

Greenhouse gases

Gases in our planet's atmosphere which trap heat. They let sunlight pass through the atmosphere but prevent heat from leaving the atmosphere. Greenhouse gases include: Carbon Dioxide (CO2), Methane (CH4), Nitrous Oxide (N2O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulphur Hexafluoride (SF6), Nitrogen Trifluoride (NF3).

Net zero (CO2 emissions)

Net zero carbon dioxide (CO2) emissions are achieved when CO2 emissions are balanced globally by CO2 removals over a specified period. The term "net zero" is also typically associated with the 2050 date or earlier, as this is aligned with the scientific recommendations to achieve a 1.5°C scenario.

Paris Agreement

The Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) was adopted on December 2015 in Paris, at the 21st session of the Conference of the Parties (COP) to the UNFCCC. The agreement, adopted by 196 Parties to the UNFCCC, entered into force on 4 November 2016 and as of May 2018 had 195 Signatories and was ratified by 177 Parties. One of the goals of the Paris Agreement is "Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels", recognising that this would significantly reduce the risks and impacts of climate change. Additionally, the Agreement aims to strengthen the ability of countries to deal with the impacts of climate change.

Physical risks

Dangers or perils related to the physical or natural environment that pose a threat to physical assets e.g. buildings, equipment and people. Mercer's scenario analysis grouped these into the impact of natural catastrophes (for instance sea level rise, flooding, wildfires, and hurricanes) and resource availability (particularly water). See also Transition risks.

Scope 1, 2, 3 emissions

Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions. Emissions are measured over annual periods.

Transition

The process of changing from one state or condition to another in a given period of time. Transition can be in individuals, firms, cities, regions and nations, and can be based on incremental or transformative change.

Transition risks

Risks from policy changes, reputational impacts and shifts in market preferences, norms and technology. See also Physical risks.

Weighted Average Carbon Intensity (WACI)

The carbon intensity of a portfolio, weighted by the proportion of each constituent in the portfolio. Carbon intensity is calculated for each company as (Scope 1, 2 and 3 carbon emissions / $m sales) over a given time period (typically annually).

Important notices from data providers

Mercer

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