HSBC Bank (UK) Pension Scheme
Task Force on Climate-Related Financial Disclosures (TCFD) Report 2024

This report has been prepared in line with the Department for Work and Pensions climate change governance and reporting requirements and guidance (June 2021).

This report details how the HSBC Bank Pension Trust (UK) Limited as Trustee of the HSBC Bank (UK) Pension Scheme ("the Scheme") has followed the recommendations and guidance as outlined in the most recent TCFD implementation guidance (October 2022) to the extent it was feasible to do so.
It is anticipated that this Report will continue to evolve, in line with evolving TCFD guidance, as it becomes available.

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Executive Summary

Scheme overview

Our Scheme consists of three sections: the HSBC UK Bank plc ("HBUK") Section, the HSBC Bank plc ("HBEU") Section and the HSBC Global Services (UK) Ltd ("HGSU") Section. Defined Benefit ("DB") and Defined Contribution ("DC") benefits are provided by each section. Within the DC retirement provision, there is a range of investment funds available for members, including different default arrangements and a number of self-select funds.

Our approach to climate change

As one of the UK's largest pension schemes we view climate change as a systemic, long-term financial risk to members' retirement outcomes and have embedded climate considerations into our strategic decisions over time.

We believe that transparency is an important way to improve accountability to our members, which is why we've reported annually on our climate approach through the TCFD framework since 2018. As early supporters of the TCFD, established by the Financial Stability Board in 2017, we value its role in improving the quality and consistency of climate-related disclosures – an essential part of managing climate risks effectively. This report has been prepared in line with the Department for Work and Pensions climate change governance and reporting requirements and guidance (as updated in October 2022).

This report covers the period from 1 January 2024 to 31 December 2024. It is broken down into four key areas, as prescribed by the TCFD framework, and the regulations:

- **Governance:** We operate a robust governance framework in relation to climate-related risks and opportunities. This enables confidence that climate-related risks and opportunities are appropriately factored into our investment processes. While we are ultimately responsible for the oversight of the Scheme's climate-related risks and opportunities, we are supported by committees and a full-time management team.
- **Strategy:** In 2024 we updated our climate scenario analysis work for both DB and DC benefits to assess potential climate-related impacts on funding and investment strategies. While the models confirmed climate change as a material long-term risk, they have limitations and may understate extreme outcomes. Whereas the analysis showed more pronounced negative impacts since 2021 on the DB side, the Scheme remains well-positioned to meet its liabilities under all modelled climate scenarios due to its strong funding and low-risk investment approach. A surplus is expected to persist throughout, but the analysis also highlights that climate change poses a real risk—particularly under extreme scenarios like Hot House World. On the DC side, the analysis showed that all members are exposed to climate-related risks, with higher impacts compared to 2021. The analysis found that, for most members, including younger members, failing to transition poses greater long-term risks due to physical risk impacts. Older members closer to retirement are expected to see potentially higher impacts from transition risk. We acknowledge the limitations of climate scenario analysis, including capturing tail risks and we are continuing to explore strategies to strengthen resilience. We have already taken several investment decisions to mitigate the risks from climate change, including investing the majority of the DC default investment strategies' assets in a climate-tilted equity strategy. We will continue to explore opportunities to address and limit these potential impacts.
- **Risk Management:** We established a Climate Risk Management Framework in 2020, in order to appropriately identify, assess and manage climate-related risks. Our preferred approach to climate risk mitigation includes specific consideration of climate-related risks in asset manager and fund selection, integration of climate-related considerations in fund design, engagement with asset managers, regulators, industry bodies, and policymakers, and investing in climate opportunities.
- **Metrics and Targets:**
    - **Metrics:** We monitor a combination of climate-related metrics for the Scheme, which provide a balanced view of our current and future exposure to climate-related risks. We evolve our selection of metrics year-on-year to ensure they remain helpful in our consideration of climate-related risks and opportunities. We are also aware of the limitations associated with climate metrics and we recognize the volatile nature of a lot of these metrics, especially emissions-based ones.
    - **Targets:** We set an ambition in 2021 for the Scheme to reach net zero emissions by 2050 or sooner, with a key interim aim of reducing real economy greenhouse gas ("GHG") emissions by 50% by 2030 for equity and corporate bond funds, based on 2019 levels. These targets are also supported by an ambition to ensure all of our corporate bond and equity investments are fully aligned to the goals of the Paris Agreement by 2030 and our enhanced engagement and stewardship efforts. While the carbon footprints for the DB and DC parts of the portfolio have reduced materially against a 2019 baseline, we recognise that carbon metrics are volatile and may not fully capture real-world impact. Our target is intended to support real-world decarbonisation, not just portfolio-level metrics, and is grounded in the belief that reducing financially material climate-related risk depends on an orderly global transition to net zero. As such, we continue to assess the appropriateness of our

interim targets to ensure they remain aligned with our broader ambition of real-world decarbonisation as part of an overall strategy to manage risk.

What's next?

In 2024, we completed the development of an internal Climate Transition Plan to help guide our investment work. This plan provides details on our engagement expectations, Trustee advocacy, investing in climate solutions and risk management tools to support our climate targets. Over the next year we will work on implementing the Plan. We also continue to keep our reported metrics and interim targets under review to ensure they support our goal of driving real world decarbonisation and managing and mitigating the climate-related risks that the Scheme might face. We will continue to build our investment strategy in line with this and manage climate-related risks in a robust way.

More information on our climate and other ESG activities can be found on the Future Focus website.

Introduction

Approach to climate change

The Trustee recognises that climate change is a systemic, long-term material financial risk to the value of the Scheme's investments. Therefore, the Trustee believes it has a fiduciary duty to consider the risks arising from climate change when making investment decisions and it seeks to manage these risks on behalf of the Scheme's members. This is especially the case for the Scheme's DC members, as the value of their pension pots is directly related to the underlying investments.

To embed climate-related risks and opportunities into investment decisions, the Trustee became a TCFD supporter in 2017 and published its first TCFD report in 2018. In 2021 the Department for Work and Pensions ("DWP") introduced "The Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021" (the "regulations"), requiring large UK pension schemes to put in place appropriate governance processes for managing climate-related risks and opportunities and to report on actions taken annually.

The Trustee's focus on climate change risk mitigation plays an important role in how investments are managed across all asset classes, in both the DC and DB parts of the Scheme. At a policy level, the Trustee is supportive of initiatives that contribute towards mitigating climate change risk on members' investments. Within this context, the Trustee is supportive of the Paris Agreement to minimise dangerous climate change by limiting global warming to well below 2°C above pre-industrial levels and pursuing efforts to limit it to 1.5°C.

The Trustee recognises the broader global context in which it operates, noting that global emissions have risen since the goals of the Paris Agreement were set, and since the Scheme has baselined its own emissions target.[1] The Trustee's objective is to encourage real economy GHGs emissions reductions in order to limit the impacts of climate change on the Scheme. To support this target, the Trustee focuses on stewardship and engagement with the companies and assets held across its portfolios. The Trustee will continue to work closely with the Scheme's asset managers, to ensure they are engaging with company management, voting at company shareholder meetings and encouraging management to run their businesses in line with an orderly transition, reducing emissions of greenhouse gases (GHGs) as appropriate. The Trustee also recognises that advocacy is an important lever to improve stewardship efforts, given that pension schemes are unable to avoid exposure to some systemic risks that impact the global economy.

This is the Scheme's fourth report prepared in accordance with the regulations, and seventh disclosure under the TCFD framework. It covers the period 1 January 2024 to 31 December 2024, and provides a status update on how the Trustee is aligning with each of the four elements of the TCFD framework as set out in the regulations:

Element	Description
Governance	The Scheme's governance around climate-related risks and opportunities.
Strategy	The actual and potential impacts of climate-related risks and opportunities on the Scheme's investments and funding strategy and integration into investment decision-making.
Risk Management	The processes used to identify, assess, and manage climate-related risks and integration into overall risk management.
Metrics and Targets	The metrics and targets used to assess and manage relevant climate-related risks and opportunities.

Timeline of key climate-related actions

The timeline below shows the evolution of the Scheme's TCFD disclosures and key decisions made in relation to climate change (including "going deeper into climate change" and "net zero ambition").

2015

Climate Change Risk Policy:
In 2015 the Trustee adopted a Climate Change Risk Policy that is recorded in the Statement of Investment Principles. This policy has guided the Trustee's approach to climate change since then and is updated periodically to reflect any changes and improvements to its approach.

2017

TCFD supporter signatory:
To ensure climate-related risks and opportunities are embedded in investment decision-making, the Trustee became supporters of the TCFD in 2017. Since then, the Trustee has been on a journey to follow evolving TCFD guidance.

2018

First TCFD report:
The Trustee published its first TCFD report, following the recommendations of the TCFD as applicable to asset owners.

2020

Project Clarity:
The Trustee inaugurated Project Clarity in early 2020, an internal project aiming to help enhance the Trustee's oversight, and integration, of Environmental, Social & Governance ("ESG") matters. As part of Project Clarity, the Trustee defined two priority areas for development within responsible investment: "going deeper into climate change" and "enhanced engagement".

Climate Risk Management Framework:
To allow the Trustee to manage climate-related risks effectively, the Climate Risk Management Framework was built which integrated climate-related considerations into the Scheme's approach to risk management. The purpose of this framework is to allow the Trustee to manage the Scheme's climate-related risks robustly and to support its climate-related ambitions.

2021

Net Zero target and Paris Aligned Investment Initiative ("PAII") signatory: As part of the Trustee's efforts to manage the impact of climate change on the Scheme's investments and the consequent impact on the financial interests of its members, in 2021 the Trustee set out a commitment to achieve net zero by 2050 or earlier if possible to do so. Additionally, an interim target date of 2030 has been set to ensure that sufficient progress is made towards the ultimate target of reaching net zero GHG emissions. The interim targets include:

- a real economy emissions reduction of 50% by 2030, with respect to a baseline of end December 2019, or sooner for the Scheme's equity and corporate bond mandates.
- having the ambition of achieving all of the Scheme's corporate bond and equity investments being fully aligned to the goals of the Paris Agreement by 2030 across the Scheme's DB and DC assets.
- enhancing engagement and stewardship efforts through working collaboratively with the Scheme's asset managers.

2022

Climate Action Plan: As part of the Trustee's membership in PAII, it committed to publishing a Climate Action Plan to provide an overview of the Trustee's net zero strategy. The purpose of the Plan, which can be found on the Scheme website, is to provide transparency about the Trustee's approach to deliver its net zero commitment.

Stewardship and Voting Policy: The policy sets out how the Trustee aims to practice effective stewardship as part of its fiduciary duties. The policy aims to guide the Trustee in using its influence as an asset owner to ensure best practice in terms of ESG, including climate change, to the greatest extent.

2024

Energy Position: The Trustee developed a position on the energy sector that will help the Trustee navigate its Investment, Engagement and Advocacy strategy in a manner that is better aligned with an orderly transition, consistent with fiduciary duty.

Climate Transition Plan: The Trustee completed the development of an internal Climate Transition Plan to help guide its investment work.

Increased advocacy: Reflecting its universal asset owner mindset**,** the Trustee decided to appoint an engagement overlay service on policy and market-level engagement. The relationship will cover a wide range of issues, including promoting the Trustee's ESG priorities at the wider stakeholder level.

Governance

Climate governance structure, including the role of persons undertaking governance activities and those advising the Trustee

The Trustee's investment strategy is built upon a set of investment beliefs[1] including several in relation to climate change, wider ESG factors, and stewardship. The beliefs help to guide the Trustee's investment decision making so that it can fulfil its mission to pay DB benefits as they fall due and provide high-quality investment options to enable DC members to realise their retirement ambitions. In summary:

- The Trustee recognises that global systems, such as the planet, its climate, its people and societies have a material impact on the whole of the economic system, today and over the longer term.
- A robust global economy, society and planet are critical elements for stable and resilient retirement outcomes for members.
- ESG risks and opportunities are important factors to consider in investment decision-making. Some ESG risks and opportunities may be specific to certain companies or assets, others can have a material impact on large parts of the global economy and are considered risks to the whole economic system.
- The Trustee also believes good stewardship and engagement can protect or enhance member retirement outcomes in the long-term.

Further to this, using evidence-based research and training, the Trustee has chosen to prioritise a number of system-wide ESG risks which it believes are financially material to the Scheme, now and/or in the future. These include climate change, biodiversity and nature-related losses, including anti-microbial resistance, as well as diversity, equity and inclusion (DEI).

The Trustee believes that by taking such factors into account in its investment process, the Scheme is better positioned to deliver on its objectives. The Trustee anticipates evolving its approach on these system-wide ESG risks over several years. To date, the Trustee is most progressed in its integration and oversight of risks and opportunities related to climate change, which is the focus of this report.

The Scheme's governance structure enables these beliefs to be deployed, ensuring the Scheme is run in the best interests of its members.

While the Trustee Board is ultimately responsible for the oversight of the Scheme's climate-related risks and opportunities, it is supported in this by its committees and a full-time management team:

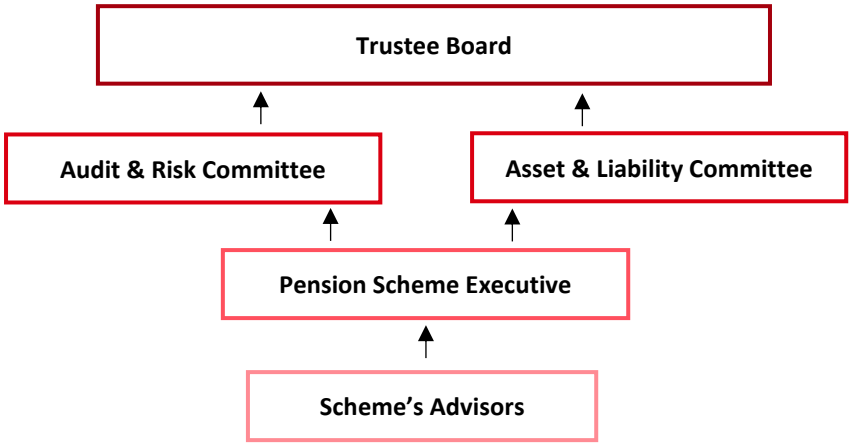
- The Asset & Liability Committee ("ALCo");
- The Audit & Risk Committee ("ARC"); and
- The Pension Scheme Executive ("PSE"), who are responsible for undertaking Scheme governance activities.

The roles and responsibilities of the Trustee, its committees, those undertaking Scheme governance activities and those advising the Trustee in identifying, assessing, and managing climate-related risks and opportunities, are documented in the Scheme's Climate Risk Management Framework. The Framework has been in place since 2020 and forms part of the separately documented scheme-wide risk management framework.

The chart below outlines the climate governance structure that was in place in 2024.

[1]The full set of beliefs are contained in the Statement of Investment Principles ("SIP") for both DB and the DC benefits, which can be found on the Scheme's website.

The Scheme's Governance Structure in relation to Climate Change Risk



	Climate-related responsibilities	Key actions over 2024
Trustee Board	The Trustee has ultimate responsibility for overseeing the Scheme's climate-related risks and opportunities and actions taken to manage them. This includes determining both the strategic climate-related objectives and the detailed climate-related targets, as well as overseeing progress made against them.	As described in previous TCFD reports (available on the Scheme's website), the Trustee continues to review quarterly updates of climate-related actions undertaken by ALCo. Additionally in 2024 the Trustee: • Built understanding around climate transition planning and what an orderly transition in the energy sector might look like. • Discussed climate scenario analysis in detail throughout the year, with a Board-level decision on this in Q4 2024. • Discussed stewardship and engagement with ALCo to advance the Trustee's policy level engagement, resulting in the approval of a provider in Q4. • Approved a revised version of the Trustee's Stewardship and Voting Policy in Q2 2024.
Asset & Liability Committee	As a committee of the Trustee Board, ALCo is responsible for ensuring that the Climate Change Risk Policy, including the Climate Risk Management Framework, and the Trustee's climate objectives are implemented into the Trustee's investment policy. To achieve this remit, ALCo has been delegated responsibility from the Trustee Board to review climate scenario analysis on the Scheme's funding and investment strategy and to select climate-related metrics to monitor. The metrics are used as management information within a climate-related risk dashboard to monitor the Scheme's progress versus the Trustee's climate objectives. ALCo is also responsible for defining the Trustee's engagement strategy with the Scheme's asset managers, consistent with the objectives set by the Trustee and the Trustee's Stewardship Policy. This process is informed by monitoring steps taken by the PSE.	As described in previous TCFD reports (available on the Scheme's website), ALCo continues to review the Scheme's climate-related risk dashboard. Additionally in 2024, ALCo: • Discussed the tools and actions to inform the development of an internal climate transition plan. ALCo reviewed the plan, which focuses on possible actions over the next three years to help guide the Trustee's investment work and decision making to meet its climate ambition, including investment, engagement and advocacy. • Explored different approaches to climate scenario analysis including reviewing existing methodologies, conducting a comprehensive review of providers and engaging with other UK asset owners. Taking a pragmatic and considerate approach and considering a number of factors including the cost-benefits of running specialist scenario analysis, the Trustee concluded that it was most appropriate for the existing investment advisors to retain responsibility for providing

	ALCo is responsible for overseeing investment strategy and will carry out changes based on climate change-related investment risks and opportunities, following advice from its legal, investment and ESG advisors. ALCo reports to the Trustee Board on a quarterly basis, with the Chair of ALCo providing a report on the matters discussed and decided that is reviewed by the Board.	climate scenario analysis for this TCFD report. Further details of this are provided in the Strategy section of this report. • Reviewed the ongoing suitability of the Scheme's metrics within the climate-related risk dashboard to evaluate progress towards meeting its climate targets. This resulted in the removal of one metric due to its limited usefulness and the introduction of two new metrics. • Reviewed a revised Stewardship and Voting Policy for the Scheme. Recognising the importance of advocacy to increase the Trustee's influence as an asset owner, ALCo also reviewed different sources of policy-level engagement expertise to enhance the Trustee's collaboration and overall influence. This resulted in the appointment of a public policy engagement provider at the end of 2024. • Reviewed the Trustee's ongoing nature strategy in Q3 2024, including broadening understanding of data and assessing different approaches to prioritise nature engagement, in line with the Taskforce on Nature-Related Financial Disclosures (TNFD) recommendations. Acknowledging current limitations with nature metrics, the Trustee will continue to refine its nature strategy over 2025.
Audit & Risk Committee	ARC is responsible for ensuring that risks related to climate change are incorporated into the Trustee's Pension Risk Framework. ARC is also responsible for receiving regular updates on the TCFD reporting process and overseeing the review of risk reports, which include ESG and climate-related risk, on a quarterly basis. Climate change risk is explicitly identified as a Scheme risk on the Trustee's Risk Register, as overseen by ARC, and reported to the Board on a quarterly basis. ARC is also responsible for providing oversight of any assurance carried out in relation to the production of the Scheme's TCFD report and ensuring all relevant controls are in place and evidenced as being operational.	• ARC oversaw an exercise undertaken by the Trustee's external auditors to review the narrative of the TCFD Report, ensuring it is a fair and balanced reflection of the analysis and results. A full Limited Assurance exercise was not possible this year due to data- and access-related challenges.

Pension Scheme Executive	To improve the efficiency of the Trustee's decision-making processes, the Trustee has full-time executive support from the PSE. The PSE provides the day-to-day management of the Scheme, including climate-related matters. The Chief Investment Officer and Investment team have responsibility for ensuring climate-related risks and opportunities are appropriately considered in investment decision-making.
	
	Specifically, the PSE is responsible for performing manager-specific and portfolio-level climate-related risk analysis of the Scheme's alignment versus the Trustee's objectives, and the implementation of the engagement strategy set by ALCo. Activity is tracked and reported quarterly to ALCo. In circumstances where the PSE assesses that an asset manager has failed to operate in line with the Trustee's climate-related objectives, it will engage with the asset manager with the intention of providing feedback on agreed mitigation steps, approved by ALCo. Should persistent engagement fail to correct asset manager's misalignment with the Trustee's objectives, the PSE will escalate this with the ALCo, having also taken formal advice from its advisors.
	
	The Trustee is required by law, as referenced above, to seek expert advice from qualified professionals, such as a legal practitioner, an actuary, or an investment advisor, before it makes certain decisions. The PSE manages the relationship with the relevant advisors, as well as ensuring that the Trustee has access to the right advice for the decisions it is taking.
		• As identified in previous TCFD Reports (available on the Scheme's website), the PSE continues to:
		  ○ Outline its expectations on a range of issues, including climate, of each of its asset managers in its annual CIO letter.
		  ○ Engage with each of the Scheme's asset managers on climate-related risks and opportunities, escalating its engagement where necessary.
		  ○ Attend and chair various industry initiative meetings on climate-related issues. This work is supported by a regular flow of information from the Trustee's investment and ESG advisor including information on key climate characteristics in a scorecard format, as well as on asset manager's voting and engagement activity, especially on the top contributors to the Scheme's GHG emissions.

The Trustee's advisors	The Trustee's investment advisors and ESG advisor advise on and provide objective assessments of differing approaches to identifying, assessing, and managing climate-related risks and opportunities to help the Trustee meet its climate-related objectives for the Scheme. This includes informing the Trustee of climate-related risks and opportunities as relevant for the Scheme. The advisors are also required to support the PSE in its role of performing manager and portfolio-specific climate-related risk analysis and engagement. This includes the completion of climate change scenario analysis on the DB funding strategy and DC investment strategy, as well as the provision of climate-related metrics selected by the ALCo which feed into the Scheme-level dashboard and manager scorecards used by the Trustee.	• In 2024, the advisors supported the Trustee's climate strategy by evolving investment guidelines to better reflect the Trustee's objectives, implementing new managers that are reasonably aligned with the Trustee's objectives and themselves engaging with managers and the wider industry to promote better climate-related risk management. Further examples are identified below, as well as some detailed case studies within the wider Report. • During the year the Trustee's advisors worked alongside the PSE on the climate scenario analysis process, including reviewing existing methodologies and scenario analysis providers and advising on the approach to take for the updated scenario analysis included within the 2024 TCFD report. • A particular focus during 2024 was placed on refining the climate dashboards and manager scorecards, both of which support the PSE's engagement with managers and provide ALCo with clear oversight. This included revising which metrics should be included within these, in order to enhance decision usefulness.

		• The advisors helped to advance the Trustee's progress on other ESG priorities, including working to understand approaches to assess nature impact and prioritise engagement on this issue accordingly, aligning with the Trustee's approach to climate where possible. • The Trustee's advisors produced a standalone voting report in Q2 2024 which utilised the voting framework set out in the Scheme's stewardship policy and covered all of the relevant managers' voting activity over 2023. The PSE used this report to assess alignment of managers' voting behaviour with the Trustee's expectations and to identify areas of inconsistencies for monitoring. • The Trustee's investment advisors each meet bi-annually with the PSE to have detailed discussions about managers, including around any engagement being undertaken by the advisors to enhance the managers' ESG risk management.

Trustee oversight of third parties

The Trustee operates an outsourced model for Scheme investment activities and does not manage any investments in-house. Given this model, the Trustee's key responsibility is to maintain oversight of the approaches and actions taken by third parties.

	Trustee oversight	Key actions over 2024
Oversight of advisors	Climate-related objectives are included in the investment and ESG advisors' annual objectives, and are specifically included within advisor agreements, to ensure advisors are taking adequate steps to identify and assess climate-related risks and opportunities. The Trustee annually assesses the delivery of this advice using relevant frameworks where available. Following its annual assessment, the PSE produce a report for the Trustee that provides its view on whether the advisors have met the requirements set out in their annual objectives. If the PSE deems the objectives have not been met adequately, it will provide suggested escalation steps for the Trustee to consider. The processes followed by the PSE and the Trustee's advisors to produce this TCFD report are captured within a TCFD Reporting Process Manual, noting key milestones and requirements.	• In 2024, the investment and ESG advisors' objectives were updated to reflect the Scheme's enhanced ESG engagement priorities. • In 2024 the Trustee reviewed the advisors' ESG and climate-specific objectives and confirmed that the advisors met their objectives for the year. • A formal review of the Trustee's ESG advisor was undertaken in 2024. Climate skills and abilities were considered explicitly as part of the overall decision to re-appoint them.
Oversight of asset managers	The Trustee expects asset managers to be aware of climate change risks and opportunities within their investment processes and manage these on a discretionary basis as applied to the assets of the Scheme. The Trustee has also specifically informed the Trustee's asset managers of its climate-related objectives and expects managers to be aware of these when making decisions in relation to the funds the Scheme is invested in. Asset managers are expected to report annually on how these risks and opportunities have been incorporated into their investment process, including descriptions of engagement activity	• At the beginning of 2024, the PSE sent a letter authored by the CIO to each existing asset manager outlining expectations for managers to seek to align with the Trustee's sustainability objectives. Managers were asked to respond on how they aim to deliver on the Trustee's expectations. Over 2024 the PSE also met all of the Scheme's managers at least once to monitor their approach to managing climate-related risks and opportunities and to understand the managers' alignment with and progress on the twelve specific asks outlined in the CIO letter.

	undertaken with companies in their portfolios and qualitative responses to the issues raised by the PSE's analysis, within applicable guidelines and restrictions.	• The PSE reviewed the asset managers' ESG- and climate- reporting and highlighted any areas of concern during the meetings. More detail is provided in the Risk Management section.
Oversight of PSE	The PSE undertakes the day-to-day operational management of all investment activity on behalf of the Trustee in accordance with a principles-based table of delegations. The PSE's delegated authority is kept under review by the Trustee. The PSE reports quarterly to ALCo the decisions and activities undertaken within its delegated authority. This provides ALCo the opportunity to challenge how the PSE's delegated authority is exercised, including where and how it engaged with asset managers on the Trustee's ESG priorities.	• During 2024, all manager and industry engagement on ESG and climate, undertaken by the PSE was tracked and reported quarterly to ALCo and the Board.

Trustee knowledge and understanding of climate change

The Trustee and its committees receive regular training on climate-related and broader sustainability topics. This enables the Trustee to make informed decisions. The Trustee continues to assess skills gaps and undertake training accordingly. The frequency and level of training that Trustee Directors receive depends on their role and their membership of specific committees.

Climate change continued to be a topic of several interim meetings, investment away days and strategy days over the year, building on training from previous years. Training sessions were delivered in face-to-face meetings with advisors and subject matter specialists, and in the form of pre-recorded training videos prepared by the advisors as well as reading material such as relevant academic and industry reports. The use of pre-recorded videos and relevant reading material allowed Trustee Directors to ask more meaningful questions during meetings and be better informed when making decisions.

Specifically, Trustee Directors continued to build knowledge in relation to understanding what an orderly transition in the energy sector might mean for the portfolio and how the Trustee's climate transition planning can evolve. Training sessions covered how sustainability characteristics for new asset classes are considered – for example within a securitised credit training session. Recognising the link between two of the Trustee's ESG priorities, the Board received an update on nature, including an assessment of nature metrics and how to prioritise engagement on nature with the Trustee's managers. Climate Scenario analysis was also a key agenda item at the Investment Day; different approaches to analysis were considered including a presentation from a leading provider.

In addition to full Board activities, the ALCo received training on policy-level engagement as well as on two new internal climate metrics – Implied Temperature Rise (ITR) and Green Revenues. ALCo also attended sessions on carbon markets and carbon pricing and on the role of trustees' fiduciary duties regarding climate change and broader sustainability issues in the context of the Financial Markets Law Committee's paper[2].

Additionally, the Scheme is a member of several Responsible Investment organisations that enable the Trustee to remain informed of climate-related issues. The Trustee recognises that it is not possible to support all initiatives and organisations. The Trustee reviews the Scheme's associations annually and considers the benefits they offer versus the resources needed to be an active member. In 2024, the Trustee was associated with the following organisations:

- a member of the Institutional Investor Group on Climate Change ('IIGCC') and the Paris Aligned Investment Initiative ('PAII')
- a member of the Willis Towers Watson Thinking Ahead Institute ('TAI')
- a signatory to the Principles for Responsible Investment ('PRI')
- a signatory to the Asset Owner Diversity Charter ('AODC')
- a signatory to the UK Stewardship Code (2020)
- a supporter of the Transition Pathway Initiative ('TPI')
- a supporter of Climate Action 100+, including the most recent Phase II of the initiative.

[2] Financial Markets Law Committee, 2024

Strategy

Climate-related factors are fully integrated into the Trustee's strategic funding and investment decision-making, sitting alongside traditional investment and risk factors. This applies to both DB and DC benefits. The Trustee recognises that financially material impacts from climate change are unlikely to manifest uniformly across time, and therefore considers the potential impacts on the value of DB and DC benefits over the short, medium, and long terms[3]. The Trustee also seeks to consider climate opportunities when making investment decisions. Details of this are provided within the Risk Management section of the report.

The Scheme consists of three sections: the HSBC UK Bank plc (HBUK) Section, the HSBC Bank plc (HBEU) Section and the HSBC Global Services (UK) Ltd (HGSU) Section. DB and DC benefits are provided by each section. The Scheme holds in assets:

- DB: £18.9bn
- DC: £8.2bn

Climate-related considerations in setting the Scheme's investment strategy

The Trustee is cognisant that the diversified nature of the DB and DC assets means that the source of climate-related risks is likely to be asymmetric and varied. For example, climate change risk could affect:

- The credit worthiness of the issuers of the fixed income assets;
- The rental values of the real estate assets;
- The share prices of companies in the listed equities portfolios.

The Scheme has material exposure to long-dated credit in the DB HBUK section, and developed market equities in the DC default arrangements, both of which face differing climate-related risks across different time horizons. Given the differing timespans over which climate-related market impacts are likely to occur, the specific types of climate-related risks are unlikely to be constant. As a result, and to account for these differing sources, the Trustee has evaluated the impact of climate-related risks on DB and DC assets through three lenses.

Physical Risk

Physical risks from climate change are those which arise from both gradual changes in climatic conditions and extreme weather events. They can be event-driven (acute) such as flooding or storm damage or longer-term shifts (chronic) in climate patterns such as rise in sea levels and the destruction of biodiversity. These physical risks could have financial implications, such as direct damage to assets and indirect destabilising impacts from supply chain disruption. Other potential impacts of physical changes in the climate are wider economic and social disruption, including mass displacement, environmental-driven migration and social strife.

Recent scientific views highlight growing concerns about climate tipping points. These are critical thresholds in the Earth's climate system. When these thresholds are crossed, they can lead to significant, often irreversible changes in the environment. These changes can accelerate global warming and have severe impacts on ecosystems and human societies. Examples of climate tipping points include:

- Amazon rainforest dieback: could transform the rainforest into a savanna, releasing stored carbon.
- Coral reef die-off: results in loss of biodiversity and marine life habitats, worsening climate change as coral reefs are crucial for regulating ocean carbon levels.
- Melting ice sheets: if enough ice is lost, the result will reduce Earth's reflectivity, leading to faster warming.

Climate tipping points can exacerbate physical climate-related risks by amplifying extreme weather events (increasing acute physical risk) and creating long-term changes in climate patterns (contributing to chronic physical risk).

Transition Risk

Transition risks occur in the process of moving to a net-zero or low-carbon economy. This includes policy (e.g., abrupt imposition of carbon taxes or emission limits), technological risks (e.g., innovations disrupting existing industries) reputational impacts, risk of stranded assets, as well as shifts in market preferences and norms– the severity of the impact

[3] The Trustee's chosen short, medium, and long terms are defined on pages 14-15.

will likely depend on whether the transition is orderly or disorderly. An orderly transition assumes climate policies are introduced early and become gradually more stringent over time. This approach allows for a smoother adjustment for businesses, economies and societies. A disorderly transition assumes climate policies are delayed or implemented in an uncoordinated manner. This can lead to higher transition risks and economic disruptions when they are suddenly introduced. Geopolitics, and the risks and uncertainty created from geopolitical conflict in particular, can further magnify the level of economic disruption, leading to higher transition risk.

Reputational Risk

The TCFD considers reputational risk to be a sub-category of transition risk and defines it as a "risk tied to changing customer or community perceptions of an organisation's contribution to or detraction from the transition to a net-zero economy".

The reputational risk the Scheme is exposed to is mainly in relation to stakeholder and wider civil society perception - stakeholders being entities such as members and the Bank, regulators and policy makers, and civil society including activist groups, peers and the media. The risk would materialise if the Scheme were failing to meet public expectations, for example if the Trustee or appointed asset managers were found to be taking insufficient steps to manage climate-related risks, and/or changes to the legislative framework under which the Scheme operates occurred. In this context, the Trustee believes the reputational risk to the Scheme is less substantial than the reputational risk for a company that might be affected by a loss of customers as a result of reputational damage.

Nonetheless, it is acknowledged that the importance of retaining the confidence of Scheme members in the Trustee's ability to effectively manage climate-related risks on their behalf, noting that a loss of confidence, and the adverse reputational implications that may ensue, could potentially be financially material. For example, a perception of worse climate-related risk management could lead to lower DC contribution rates. The Trustee therefore considers the potential implications for the Scheme's reputation as it pertains to climate-related factors within the decision-making frameworks.

Liability Considerations

There are likely to be direct impacts to mortality and indirect impacts from changes to lifestyles resulting from climate change for members of the three DB sections. The mortality outcomes from climate change are impossible to predict accurately and will depend on complex interactions between various factors. In the UK, it is currently considered unlikely that the direct effects of climate change on weather patterns and global temperatures will have a significant impact on life expectancies. The disruption and impact of transition risks on economic activity could have a more significant effect.

Whilst the Trustee has insured broadly half of the benefits of retired members within the HBUK section against mortality impacts, including climate change, climate-related risk remains relevant for the Scheme and is therefore subject to ongoing assessment.

Time Horizons

Climate-related factors can have a material financial impact on the value of both DB and DC benefits. The impact is likely to vary over different time horizons depending on the nature of the invested assets. The Trustee therefore believes that by taking such factors into account in the investment process, the Scheme will be better positioned to deliver on its investment objectives.

Time Horizon	Comment
Short-term	The short-term time horizon is a period of 3 years for both DB and DC benefits. This relatively abrupt period will allow the Trustee to evaluate the short-term risks faced by the Scheme from sudden climate-related behavioural changes. Over the short-term, the Scheme is expected to be most exposed to transition risk. This is likely to be most applicable to the equity and corporate credit assets, given the Scheme's investment in these assets is mainly in issuers from developed markets where climate-related policy and societal behavioural changes are expected to occur more quickly and on a wider scale. Higher price volatility due to climate change considerations is also a risk the Trustee is aware of.
Medium-term	The medium-term time horizon is up to 2030, for both the DB and DC benefits. This time horizon has been identified for two main reasons: • 2030 it is aligned with the Trustee's interim decarbonisation and alignment targets in support of the most ambitious goals of the Paris Agreement, and

	• 2030 is sufficiently near to encourage action-oriented decision-making. Over the medium-term, the climate-related risk exposure of the Scheme is also expected to be predominantly transition risk, although the Trustee recognises that the increasing frequency and severity of extreme weather events means physical risk is likely to be more prevalent than in the short-term. Due to the limited climate abatement action to date, there is a higher degree of uncertainty as some physical risk is already "baked in" and climate tipping points could accelerate physical risks materialising. This is likely to have more of an impact on the Scheme's investments in real assets, such as infrastructure and property. From a transition risk perspective, a larger scale re-pricing is likely to happen in the medium term, impacting various geographies and sectors.
Long-term	For DB benefits, due to the reliance of the Cashflow Driven Investment (CDI) portfolio on long-term cash flows to make member benefit payments, the Trustee has adopted a multi-decade investment long-term time horizon in the region of up to 20 to 30 years. The majority of the DC assets are invested in the default arrangements, which is designed to generate returns sufficiently above inflation whilst members with DC or Hybrid benefits are some distance from retirement, but then to automatically and gradually switch to lower-risk investments as members approach their retirement age and take their DC pension pot. These assets therefore also have a multi-decade investment time horizon, in the region of 50 years. Over the long-term, physical risk is expected to be a more significant contributor of climate-related risk to the Scheme, however, transition risks will still exist and will likely be material. Physical risk could materialise across the DB and DC assets via write-downs in real asset valuations due to direct physical damage, or in the form of indirect impacts such as supply chain distributions and weaker productivity owing to temperature effects that may negatively impact business profitability.

Scenario analysis

The Trustee completed climate scenario analysis for both DB and DC benefits to assess the potential climate-related impacts on the funding and investment strategy most recently during 2024, based on data as at 31 December 2023 for DB and 30 September 2024 for DC. These represented the best available data. The 2024 scenario analysis considered the asset portfolio, liabilities, and sponsor covenant of the DB assets and benefits, and the DC investment options with significant assets under management ("popular arrangements"[4]). Results of this exercise are disclosed further in this section, with additional information on modelling methodologies and limitations presented in the Appendix. Details of the Scheme's funding and investment strategy are provided below.

Trustee's approach to the 2024 climate scenario analysis exercise

Climate scenario analysis assesses the potential impacts of climate change on funding and investment strategies using reasonably plausible future scenarios. Given the level of uncertainty and complexity in building the scenarios, these are not predictions. The Trustee first commissioned this analysis in 2021 and is required to repeat it every three years. In 2024, the Trustee explored new approaches, acknowledging the limitations of current models, which often understate climate-related risks by not accounting for worst-case scenarios, climate tipping points or feedback loops. To address these issues, the Trustee evaluated various quantitative and qualitative methods and providers. During the Trustee's Investment Day, external training and discussions highlighted that existing models still have significant shortcomings. Taking a pragmatic and considerate approach, chosen on the balance of a number of factors including the cost-benefit of running specialised scenario analysis, the Trustee agreed that a quantitative modelling approach is undertaken by the Trustee's existing advisors (WTW for the DB benefits and LCP for the DC benefits) for the purpose of the 2024 TCFD report. The Trustee has worked with its advisors to explore the most appropriate ways the DB and DC scenario analysis exercise can be harmonised. This process of harmonisation of approach and nomenclature resulted in recognition of some alignment in the scenarios but also differences. For example, the models are built using many assumptions, and different providers will adopt different assumptions within their models. As such, the DB and DC scenario analysis results should be interpreted separately. The Trustee will keep a watching brief on approaches to climate scenario analysis as they evolve.

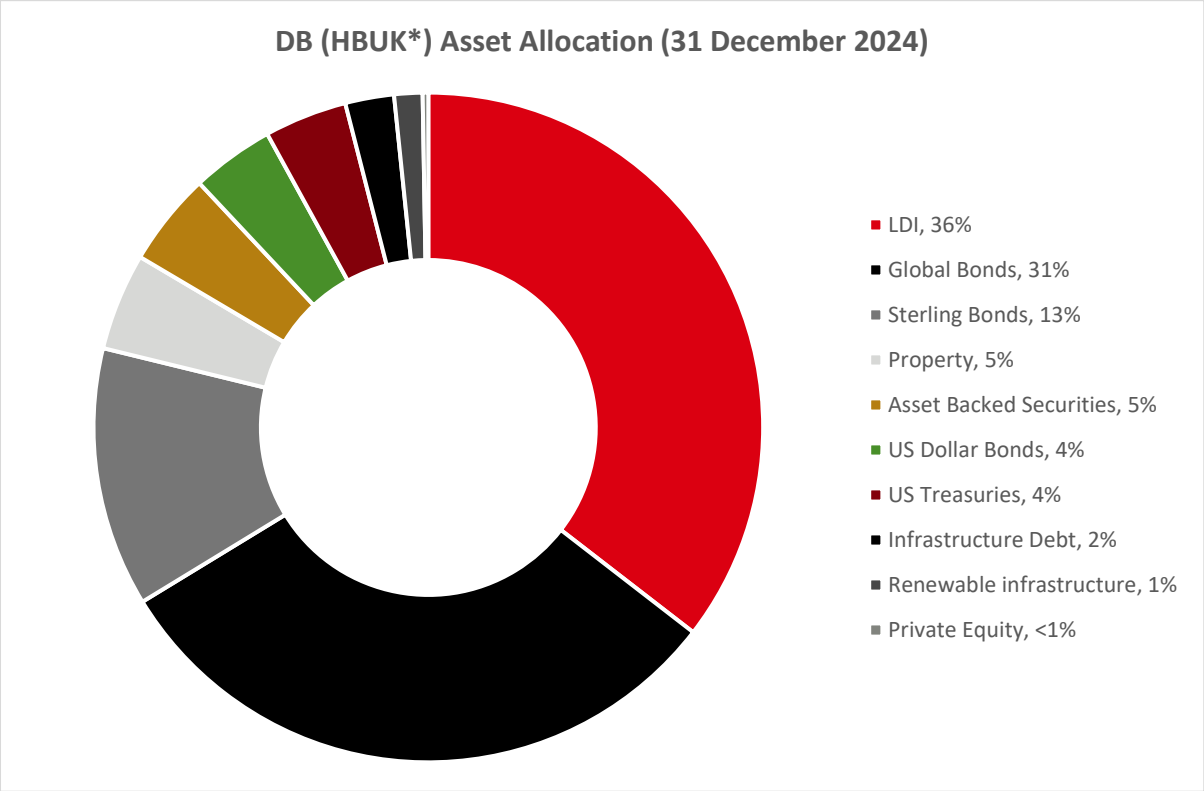
While the scenario analysis may be understating climate-related risk due to the limitations and criticisms identified, the negative impacts on the DB assets and DC member pots have become more pronounced since 2021. Like any model, those presented in this report are subject to limitations and may not demonstrate worst case scenarios. The models may underestimate downside risks and modelling simplifications may mask some impacts that could be significantly better or worse. Therefore, the Trustee does not rely solely on this analysis to inform its strategic decision-making. Nonetheless, the scenario analysis did confirm the Trustee's belief that climate change is a systemic, long-term material financial risk to the

[4] A "popular arrangement" is considered to be one in which £100m or more of the scheme's assets are invested, or which accounts for 10% or more of the assets used to provide money purchase benefits.

value of the Scheme's assets and the DB liabilities. The Trustee therefore continues to believe that appropriate risk management steps should be taken to address and limit their potential impacts.

An overview of the DB funding and investment strategy

There are different investment strategies for the three sections of the Scheme providing DB benefits. They reflect the risk and return requirements of each section. The HBUK Section contains the majority of DB assets, while the HGSU and HBEU sections, referred collectively as the Top Up Sections, are considerably smaller in size:



** Given the scale of the other two sections, we have not included a breakdown of their assets. LDI contains UK Government bonds, interest rate and inflation swaps.*

DB Sections	Total DB Assets[5,6]
HBUK Section	99.5%
Top Up Section: HGSU	0.4%
Top Up Section: HBEU	0.1%

The Trustee follows a Cashflow Driven Investment (CDI) approach in the DB HBUK section. Under this approach, the asset allocation is expected to evolve over time as cashflows are released by the underlying assets in line with the evolution of the section's liabilities. This will reduce the value of the DB HBUK section's assets and impact the relative proportions of the remaining assets. It is intended that some future asset reallocations will take place.

The DB HBUK section currently comprises government bonds, cash and hedging instruments, high-quality corporate bonds across UK/Europe/USA with a bias to the UK, illiquid matching assets providing predominantly contractual cashflows, and residual allocations in private equity and property. This asset allocation helps achieve the Trustee's overall risk-adjusted return objective to ensure members with DB benefits receive their benefits as and when they fall due. The investment strategy for the Top Up sections follows a lower-risk strategy comprised mainly of matching assets and an Investment Grade

[5] Climate scenario analysis was completed on the assets and technical provisions liabilities as at 31 December 2023 on each DB section independently, using the latest available data at the time the analysis was performed.
[6] Totals sum to 100% to more than one decimal place.

Credit fund as of 2024. Following the Scheme's 2022 actuarial valuation, the investment strategy for the two Top Up sections was adjusted in 2024, with climate-related risk considered as part of this review. The Trustee replaced a Diversified Fund with a Corporate Bond Index fund which has climate change considerations built into its construction (the fund is part of LGIM's Future World Fund range).

DB scenario analysis on the funding level

DB Modelling and Assumptions

Scenario analysis has been completed by Willis Towers Watson ("WTW"), the Scheme's DB Investment and Actuarial advisor. They have assessed the assets and technical provision liabilities associated with the three sections of the DB part of the Scheme under three climate scenarios. These scenarios and their underlying assumptions are described below.

WTW's scenario analysis considered three separate scenarios which are in part defined through their success, or otherwise, in meeting the Paris Agreement target of a below 2.0°C temperature rise by the end of the century. In line with the guidance, the two transition scenarios are within the range of a 1.5 °C to 2.0°C temperature rise. The scenarios differ in the size of the physical risks, based on the resulting temperature impacts, but also in the size of the transition risks. The Delayed Transition scenario, where transition is more disorderly due to delays in meaningful action, represent bigger transition risks for assets than the Below 2°C Transition scenario.

The physical and transition risks also impact the liabilities by changing assumed long-term rates of improvements in mortality. Significant warming can result in physical risks that are expected to reduce life expectancies relative to current expectations (as in the Hot House World scenario), but in some cases (Below 2°C Transition) consumer action which improves climate outcomes can also have positive impacts on the health of individuals and lead to greater improvements in life expectancy.

	Delayed Transition	Below 2°C Transition	Hot House World
Description	Delays in taking meaningful policy action result in a rapid policy shift around 2030. Policies are implemented in a somewhat but not completely co-ordinated manner resulting in a more disorderly transition to a low carbon economy. Emissions exceed the carbon budget temporarily, but then decline.	Globally co-ordinated climate policies are introduced immediately, becoming gradually more stringent over time. Companies and consumers take the majority of actions available to capture opportunities to reduce emissions	The world follows a Net Zero 2050 pathway, however the resultant temperature outcome exceeds 2°C due to a lower than expected remaining carbon budget and/or the impact of climate tipping points. Use of Carbon Dioxide Reduction (CDR) technologies is relatively low.
Temperature Rise	<2°C	<2°C	~3°C
Renewable energy by 2050	c90%	c90%	c90%
Physical risk level (longer term)	Medium	Medium	Very High
Transition risk level (shorter term)	High	Medium	High
Longevity impact	Negative	Positive	Negative

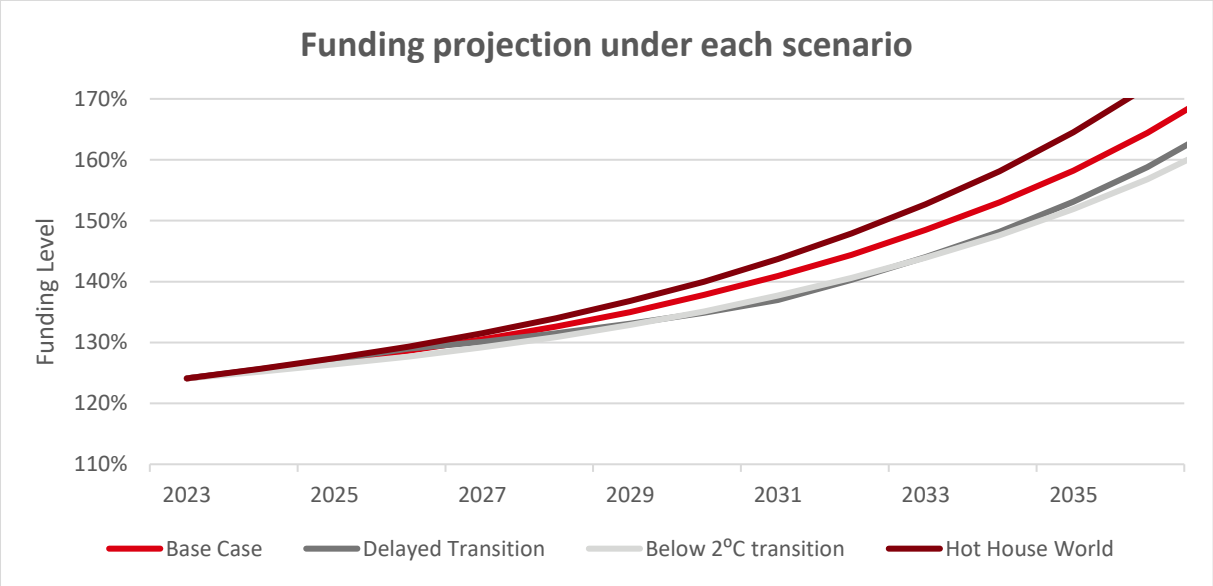
Scenarios source: Willis Towers Watson, 2024

DB Scenario Analysis results – HBUK section

Climate scenario applied over time leads to asset price drags and funding level changes

The scenario analysis below models the impact of climate-related risks as drags on asset returns and changes in liabilities are felt each year over the life of the Scheme, as and when they arise. As such, these drags will increase or decrease the returns and move the expected impacts away from the base case scenario (which assumes that the financial impact of climate change is not sufficiently different to market expectations vs. other significant events within the model's dataset e.g. Great Depression, World Wars, Financial Crisis to warrant further changes to expected returns and risk).

The chart shows the funding projections under the three scenarios relative to the current base case as at 31 December 2023 when the scenarios are assumed to materialise over time. It assumes current investment strategy is unchanged across the projection.



The projections assume the below average annual drag on expected returns (over 20 years)[7].

Base case	0.00%	0.00%
Delayed Transition	-0.20%	-0.06%
Below 2°C Transition	-0.07%	0.11%
Hot House World	-0.23%	-0.26%

- Liability impacts have been allowed for by incorporating them as an increase or decrease in liability returns over 15 years (broadly in line with the duration of the liabilities). In fact, the modelled scenarios' effect on longevity has a significant impact on the funding projection in The Hot House World scenario, influenced by lower longevity improvements, resulting in a higher anticipated funding level by 2030. The Trustee notes that it is not prudent to rely on a fall in liabilities due to changes in mortality assumptions to improve funding levels. The Trustee notes that despite an increase in the funding level in this scenario, this is not a good outcome, given the adverse impact of climate-related risk on the planet and its ecosystems, including human life expectancy.
- The Below 2°C Transition scenario, characterised by higher longevity improvements, leads to a reduction in the expected funding level by 2030, although the funding position remains robust in this scenario. The most significant decrease in funding level by 2030 is estimated under the Below 2°C Transition scenario for all sections, mainly driven by higher longevity improvements. The impacts of longevity on the funding level in the scenario analysis would be greater without the Scheme's longevity hedge being in place.

Overall, the results of this modelling work suggest that due to the strong funding position of the Scheme, the impact of climate costs arising through time is not projected to affect the Scheme's ability to meet liabilities as they fall due. This indicates that the potential for a climate shock could be a more material concern for the Scheme. To assess what might be the estimated impact of a sudden shock, WTW carried out some modelling assuming asset and liability shocks from climate change occur as instantaneous shocks. Looking at the impact from both a drag and a shock perspective helps to test the sensitivity of the Scheme to the timing of climate impacts as it is unknown when markets could start to price in climate-related costs.

Climate scenarios applied as a point-in-time shock leading to a sudden repricing

As a means of reviewing the impact of climate scenario analysis differently, WTW examined the potential impact of climate-related risks using instantaneous shocks, assuming that in reality markets will price in future impacts once they are anticipated not only when they are incurred. These shocks are the potential impact of the market suddenly pricing in each of these scenarios instantaneously. Allowing for the entire climate change impact to be priced in instantaneously, the analysis

[7] For the purposes of the analysis, WTW have assumed that physical risks create drags on asset return and liabilities from years 8 and onwards in the model. For the purposes of the analysis, transition risks are assumed to occur in the first 8 years of WTW's model.

below assumes that markets overreact. In order to reflect this, WTW have assumed that, for all liquid assets, the net present value (NPV) impact is doubled relative to the asset price drags assumed on the previous page.

The analysis shows the Delayed Transition scenario has the greatest immediate impact on the deficit. This is due to the high level of transition risk associated with a more disorderly transition, which causes a significant fall in asset values, coupled with medium physical risk which results in a moderate drag on liabilities. The smallest impact on the funding position comes from the Below 2°C Transition scenario, where the temperature rise is the same, but with lower impact on asset values from transition risks. In this scenario, some of the change is driven by consumer action, which results in healthier lifestyles and hence improvements in longevity relative to the Delayed Transition scenario.

Scenario	Asset shock (reduction in assets, £m)	Liability shock (increases in liabilities, £m)	Immediate reduction in surplus (£m)	Immediate change in funding level
Delayed Transition	1,548	-213	1,334	-8%
Below 2°C Transition	659	356	1,014	-6%
Hot House World	2,096	-854	1,242	-7%

Overall, some of the potential impacts illustrated are severe, particularly when assessed relative to the Scheme's Value At Risk 95 (£1,000m on a TP basis as at 31 December 2023), which capture general investment and longevity risks. It should be noted that we would expect the immediate pricing (and market overreaction) to the most severe climate scenario modelled to be more extreme than a 1 in 20 shock, nevertheless this demonstrates the potential materiality of climate-related risk to the Scheme. However, the Trustee notes that this modelling indicates that none of the shocks is expected to reduce the Scheme's funding level below 100%.

Sponsor covenant

Given the strong funding position and surplus on both a Technical Provisions and Low Risk Funding Measure ("LRFM") basis, the Scheme has a low reliance on the Bank to achieve its long-term objectives. Nonetheless, the Trustee recognises that the Bank is likely to be affected by climate change, which in turn, may impact the resilience of the Scheme's investment and funding strategy over the short-, medium-, and long-term. Climate change is a topic that has been covered within the assessment of the investment and funding strategy. Also, the Trustee has noted the Group's 2024 Annual Report and Accounts, which includes climate-related disclosures, along with the Group's first Net Zero Transition Plan released early in 2024. These disclosures highlight the Bank's climate ambition and efforts to integrate climate-related risk into its governance and risk management of the business, noting that it keeps it ambition under review.

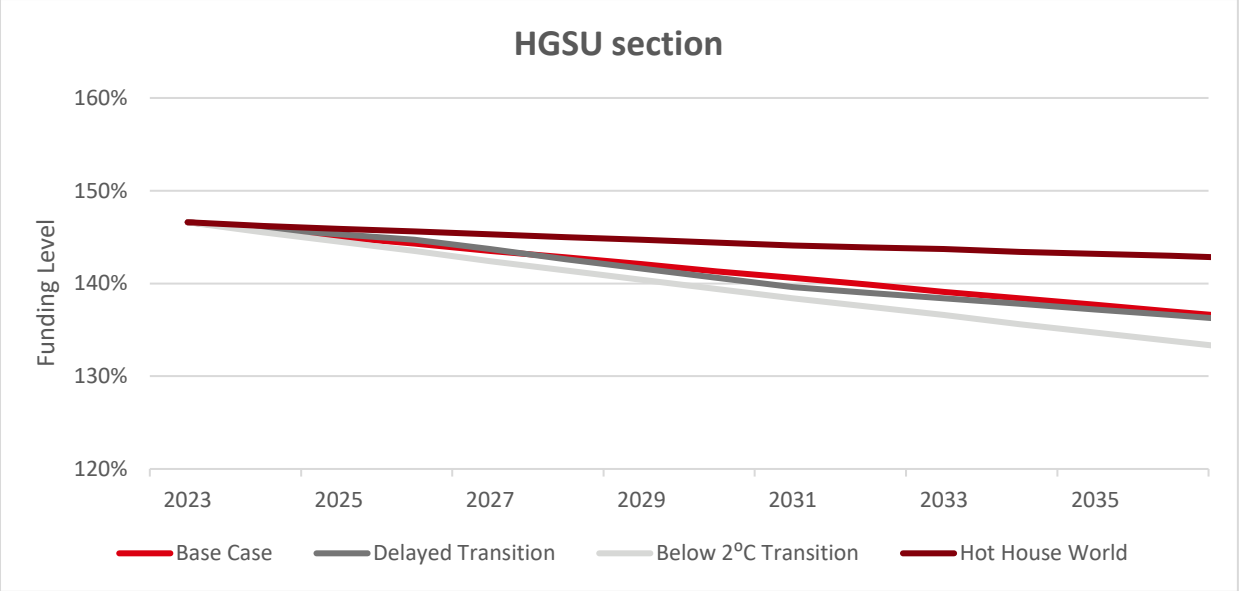
The Trustee will continue to engage with the Bank to understand climate-related risks and their impact on the Scheme. Furthermore, the Trustee is conscious about the financial scenarios that could negatively impact the Bank and so makes conscious investment design decisions so that the scheme's asset portfolio is less likely to be impaired at the same time as that of the bank i.e. the Trustee tries to minimise holding the same sort of assets on their respective balance sheets.

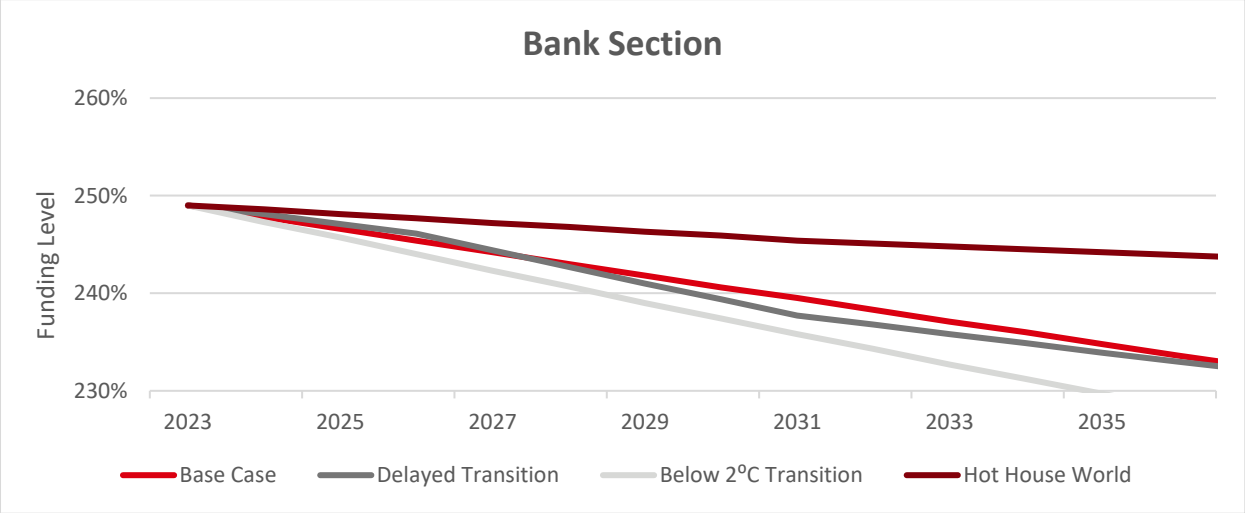
DB Scenario Analysis results – Top-up sections

Climate scenario applied over time lead to asset price drags and funding level changes

The results for the two Top-Up sections look reasonably similar to that for the main HBUK section. The Below 2°C Transition scenario has the worst impact, the Delayed Transition scenario is slightly lower but relatively close to the Base Case and the Hot House World scenario leads to an improvement in the funding level albeit as noted above, holistically, this is not a good outcome given the wider impact of climate-related risk on the planet and on human life expectations. As above, these results are primarily driven by the impact on longevity. We can see that the average annual drag on liabilities is significantly worse than the average annual drag on expected returns on the assets under the Hot House World scenario, leading to an improvement in funding level.

There is a transfer back mechanism in place involving moving benefits between the HBUK section and the Top-up sections to balance the funding levels. This mechanism means most of the longevity risk in the Top-up sections will be borne by the main HBUK Section.





Climate scenarios applied as a point-in-time shock leading to a sudden repricing

When the scenarios are applied as instantaneous shocks, leading to a market overreaction, both the Delayed Transition scenario and the Below 2°C Transition scenario result in a reduction in the funding level, while the Hot House World scenario estimates funding levels will improve – again this is driven by the assumptions on longevity. The Trustee notes that it is not prudent to rely on a fall in liabilities due to changes in mortality assumptions to improve funding levels.

	HGSU Section				Bank Section			
Scenario	Asset shock (reduction in assets, £m)	Liability shock (increase in liabilities, £m)	Immediate reduction in surplus (£m)	Immediate change in funding level	Asset shock (reduction in assets, £m)	Liability shock (increase in liabilities, £m)	Immediate reduction in surplus (£m)	Immediate change in funding level
Delayed Transition	2.5	-0.9	1.6	-2.10%	0.8	-0.2	0.6	-3.50%
Below 2°C Transition	0.7	1.5	2.1	-4.70%	0.2	0.3	0.5	-8.00%
Hot House World	3.1	-3.5	-0.4	3.70%	0.9	-0.6	0.3	6.30%

DB scenario analysis conclusions

Due to the strong funding positions of HBUK and the Top-Up Sections, none of the three scenarios modelled is projected to affect the Scheme's ability to meet liabilities as they fall due. However, the negative impacts on the DB assets have become more pronounced since the analysis was last run in 2021.

Under the scenarios tested, a surplus on the TP basis is expected to remain in all cases, both in present value terms, and through the scenario time period. Therefore, the Scheme appears to be resilient to the impacts of climate change due to its strong funding position and low-risk nature of the Scheme's investments. However, climate change is a risk as demonstrated by the NPV shock of the Hot House World scenario being larger than the 1-in-20 investment Value at Risk for the HBUK section. The Trustee notes, however, that there are limitations around the fact that skewed, left-sided tail risks won't be reflected by normal distributions (VaR95). The risk could be much more significant. The Trustee has already undertaken a number of actions to improve the Scheme's resilience to climate-related risk. Mitigation, advocacy and knowledge building remain important. Going forward, the Trustee continues to consider investment approaches that aim to improve resilience to downside risks such as climate change.

DB scenario analysis limitations

These scenarios do not cover the entire range of outcomes, and it is possible for a climate related outcome to have a greater impact on the Scheme than what is presented in this report. More detail on the limitations of the modelling can be found in the Appendix.

An overview of the DC investment options

There are a range of investment options available to members with only a DC pension pot or with Hybrid benefits (former active members with DB benefits on 30 June 2015 who became active members with DC benefits from 1 July 2015). The DC default arrangements vary depending on whether a member has a DC pension pot or Hybrid benefits and where in the targeted strategy a member is (i.e. the time to retirement age).

In line with the definition prescribed by the regulations, in 2024, the Trustee considered climate scenario analysis on the DC funds that met the regulatory definition of a 'popular arrangement'. These were the Flexible Income Strategy, the default arrangement for members with DC-only benefits, and the Lump Sum Strategy, the default arrangement for members with Hybrid benefits. In addition to the two main default arrangements for members of the Scheme with DC benefits, the Scheme also offers a strategy for members who wish to purchase an annuity at retirement. This strategy does not change its asset allocation following a member's target retirement age. Beyond the default arrangements, the popular arrangement definition also captures several self-select funds at the time of the analysis. In order to capture funds which may be in scope in subsequent years, all funds with more than £50m in assets as at 30 June 2024 have been included in the analysis. This included 8 funds, grouped into 5 white label categories. Please see Appendix for more detail.

Together, the three default strategies and five self-select funds in scope for the climate scenario analysis covered 98.6% of members' savings.

	DB Sections	Assets (as of 30 September 2024) in millions
Default Strategies	Flexible Income Strategy (the default)	£5,782
	Lump Sum strategy	£270
	Annuity strategy	£131
Self-select Funds[8]	Global equities	£751
	Overseas equities	£129
	EM equities	£86
	UK equities	£90
	Diversified growth (active)	£61
	Money market cash*	£104

**While the money market cash fund falls into the scope of "popular arrangements", the Trustee notes that there are no impacts on cash assets as a result of the climate scenarios.*

The main DC investment fund used in the Flexible Income Strategy and Lump Sum Strategy, the Global Equities - passive fund, has Legal and General Investment Management's (LGIM's) Future World Fund, which aims to replicate the FTSE All-World ex Controversial Weapons Climate Balanced Factor Index, as its underlying investment (75% GBP currency hedged). This is a

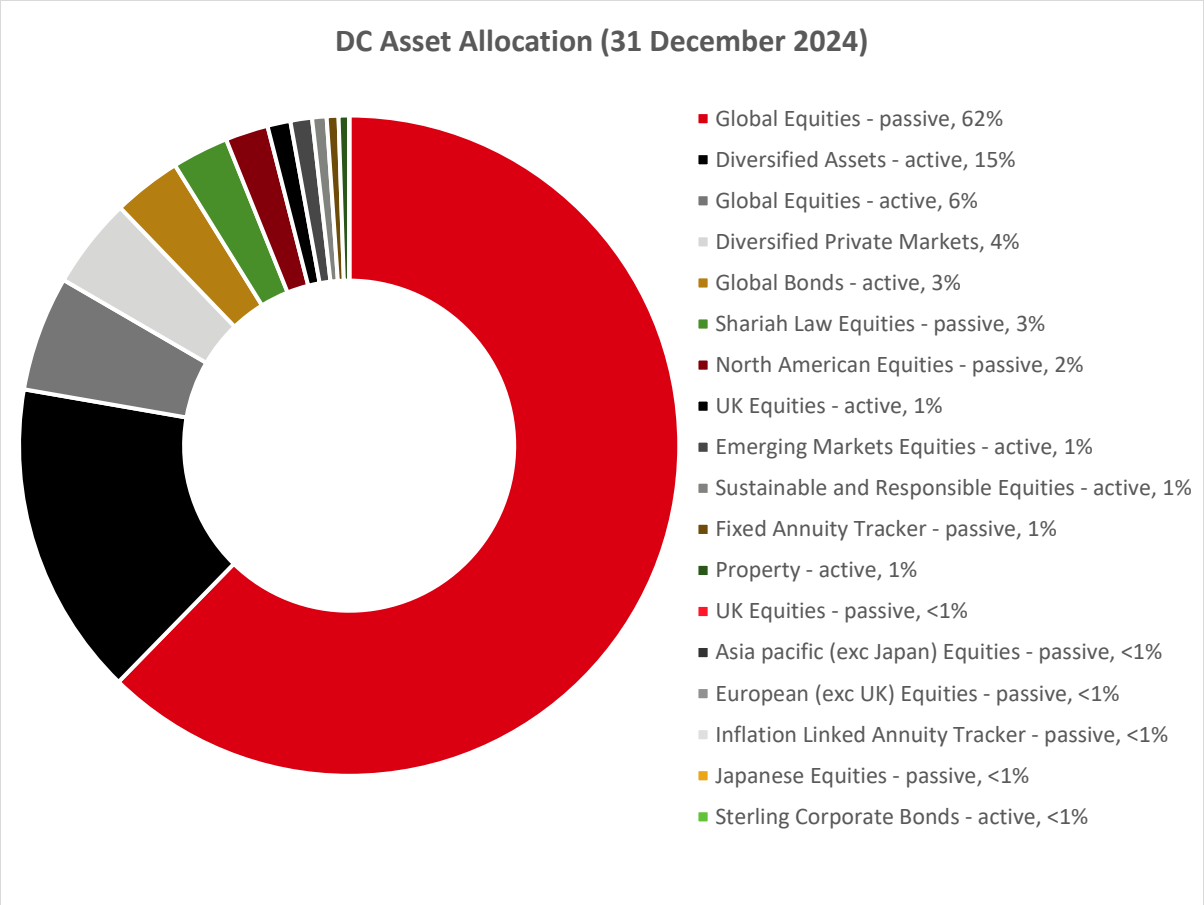
[8] More information on the self-select funds is included in the Appendix.

multi-factor global equity fund which targets certain stocks to gain a balanced factor exposure while incorporating climate change considerations in the core investment thesis.

These include aiming to achieve at minimum a 30% reduction in carbon intensity and a minimum 50% reduction in carbon reserves intensity (reducing exposure to coal, oil, and gas) relative to an index without climate considerations. This includes through a combination of tilting and exclusion. Companies that derive more than 25% of their revenue from thermal coal extraction or thermal coal power generation are excluded. The Global Equities - passive fund is designed to favour investment in companies which are less carbon-intensive or earn green revenues.

Over the past few years, the Trustee has updated a number of the default options to ensure that climate considerations are embedded into their core theses.

The Trustee reviews the investment arrangements for consistency with their beliefs, including those on ESG risk management, climate change and stewardship, on a regular basis. The Trustee also monitors the behaviour of members with DC or Hybrid benefits to check whether assumptions made about how members will access their benefits are borne out in practice. The Scheme's full DC asset allocation is shown below:



DC scenario analysis on popular arrangements, undertaken by LCP

DC Modelling and assumptions

Scenario analysis has been completed by Lane Clark & Peacock ("LCP"), the Scheme's DC Investment advisor, on three lifestyle strategies and five self-select funds. Conducting climate scenario analysis is required for all "popular arrangements" i.e., those investment options with more than £100m invested or which account for 10% or more of total Scheme assets. In order to capture funds which may be in scope in subsequent years, LCP have included all funds with more than £50m in assets as at 30 June 2024, which captures several self-select funds.

Member impacts will depend on their asset allocation, and for members in lifestyle strategies, this asset allocation changes as they approach retirement (assumed to be 65 years of age), LCP have modelled members at four different ages and considered the impacts over the Trustee's three time horizons. The scenarios cover projections to retirement for four straw person members: a 25-, 35-, 45- and 55-year-old, with characteristics taken from the average member of that age within the Scheme. Analysis for the example 35-year-old member is not presented in this report as it was not significantly different from that of the example 45-year-old.

The three scenarios analysed and their underlying assumptions are described below.

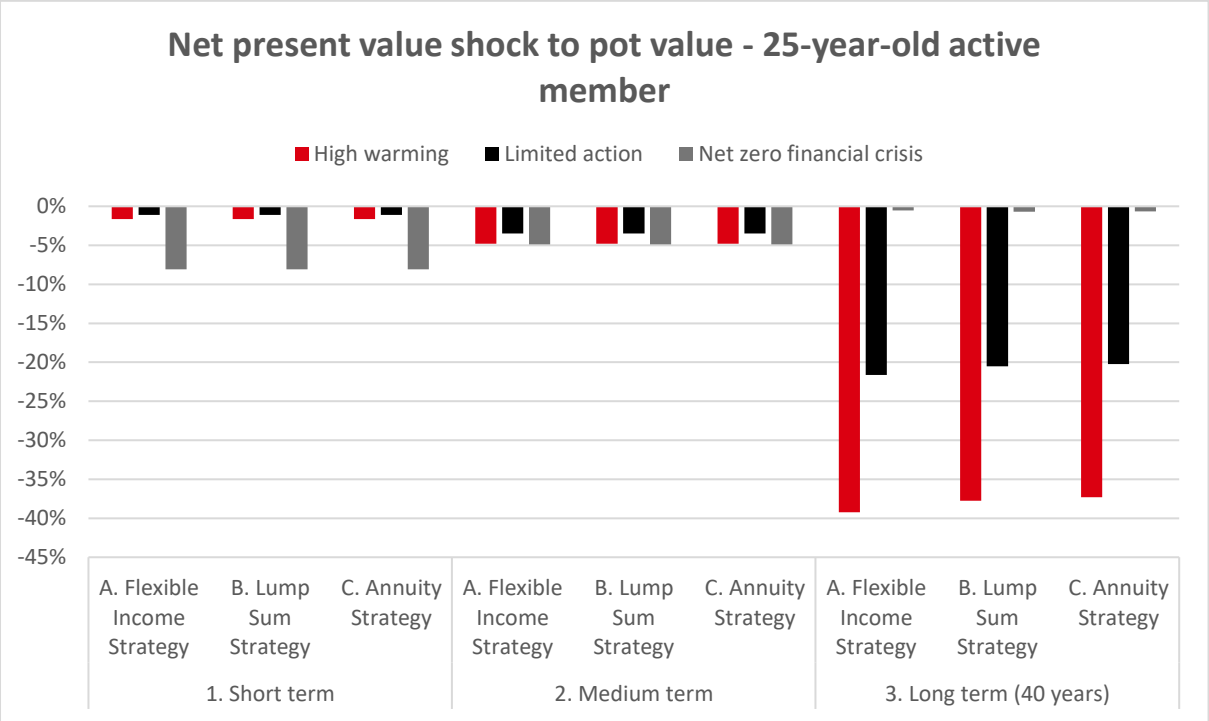
	High Warming	Limited Action	Net Zero Financial Crisis
Low carbon policies	There are no new* low-carbon policies enacted in this scenario and some existing ones are scaled back. Current technological trends continue (e.g. significant falls in renewable energy prices).	Moderate steps taken by policymakers to increase climate action including working towards the 2030 targets and net zero commitments. Carbon Capture and Storage also used.	Ambitious low carbon policies, high investment in low carbon technologies and substitution away from fossil fuels to cleaner energy sources and biofuel. Carbon Capture and Storage also used to achieve global net zero by 2050.
Paris Agreement outcome	Paris Agreement goals not met.	Paris Agreement goals not met.	Global net zero CO_2 achieved by 2050; Paris Agreement goals met.
Global warming	Average global warming is about 2°C by 2050 and 3.7°C by 2100, compared to pre-industrial levels.	Average global warming is about 1.8°C by 2050 and 2.6°C by 2100, compared to pre-industrial levels.	Average global warming stabilises at around 1.5°C above pre-industrial levels.
Physical impacts	Severe physical impacts. Multiple climate tipping points are reached and modelled and many countries suffer from extreme weather events.	High physical impacts.	Moderate physical impacts.
Impact on GDP	Global GDP in 2100 predicted to be almost 80% lower than in the Ortec Finance/Cambridge Econometrics base case.	Global GDP in 2100 predicted to be about 50% lower than in the Ortec Finance/Cambridge Econometrics base case.	Global GDP is slightly behind the Ortec Finance/Cambridge Econometrics base case by 2100.
Financial market impacts	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.	Physical risks priced in over the period 2026-2030. A second repricing occurs in the period 2036-2040 as investors factor in the high physical risks.	Abrupt repricing of assets and a sentiment shock to the financial system in 2025.

*New compared to the International Energy Agency's World Energy Outlook 2021 – Stated Policies Scenario (STEPS)
Scenarios source: Ortec Finance, scenarios as at 31 December 2023.

DC Scenario Analysis results – Lifestyle strategies (flexible income, lump sum, annuity)

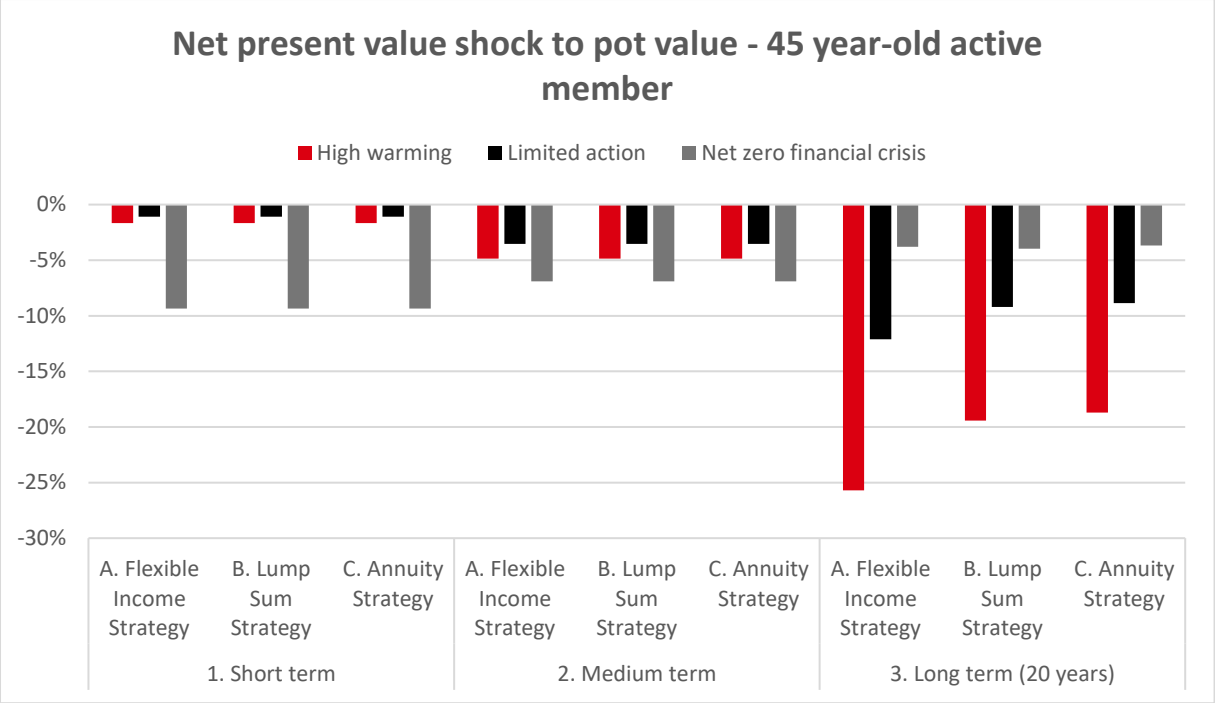
25-year-old members

25-year-old members' retirement outcomes are most exposed to physical risks. While retirement pots are projected to be considerably smaller under these scenarios compared to the base case, this doesn't imply that current savings will face immediate or severe reductions. Over the shorter term, a rapid, abrupt transition modelled by the Net Zero Financial Crisis scenario creates an acute shock to member pot values across all three strategies, but this is expected to have very little long-term impact on member outcomes. Over the 40 years to retirement, significant impacts are estimated on member outcomes under both the Limited Action scenario and a failed transition scenario (e.g., High Warming), where physical risks dominate. More defensive allocations within the de-risking phase of the Lump Sum and Annuity Strategies have a relatively small mitigating effect against this risk. This reflects the chronic impact of physical risk, where effects are expected to drag on returns over time rather than in one large shock.



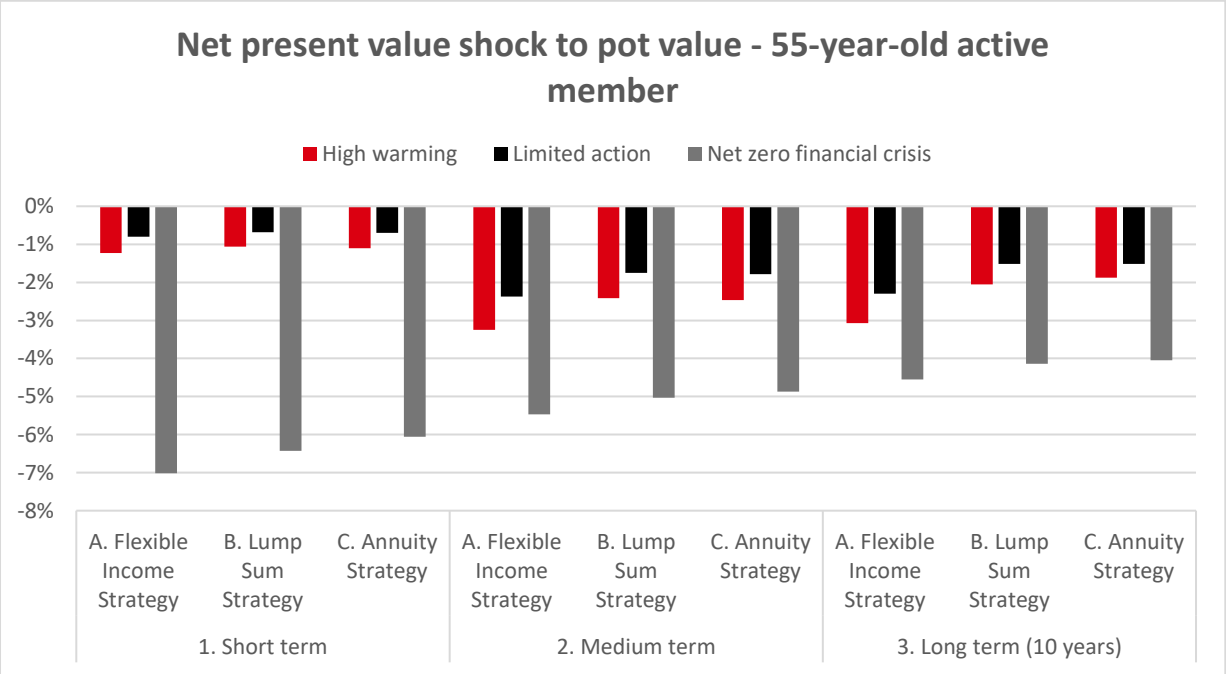
45-year-old members

Similar to the 25-year-old cohort, climate risk has a negative impact on member pots for the 45-year-old cohort, noting that under the scenarios modelled, retirement pots are expected to be smaller than the baseline. Over the 20 years to their Normal Retirement Age (65 years of age), the physical risks to a 45-year-old member from a failed (High Warming scenario) or incomplete transition (Limited Action scenario) are less pronounced than for younger members but still meaningful. These members have greater protection from physical risk as they already have more allocation to de-risking assets and less investments in riskier growth assets. These members have less time to make up for impacts than younger members should those risks materialise at the level modelled.



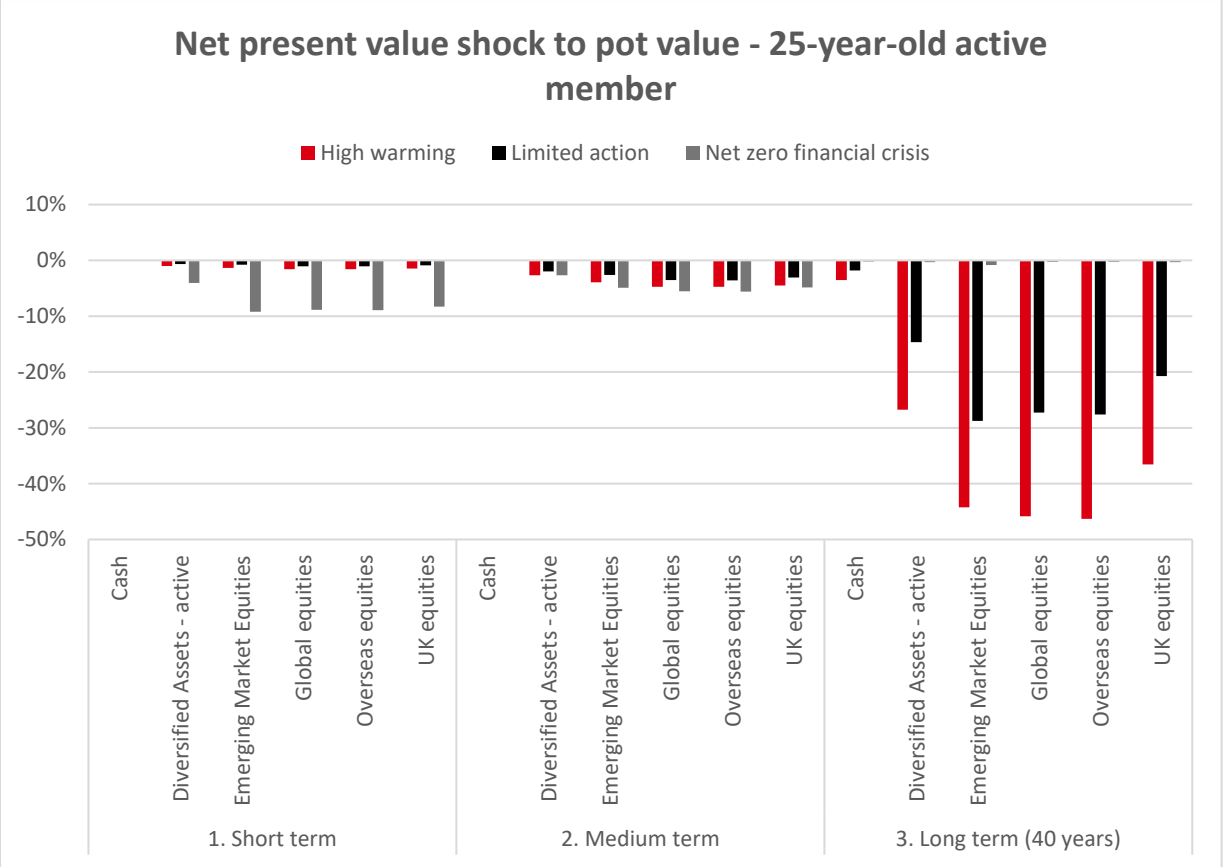
55-year-old members

The largest risks faced by 55-year-old members are from a rapid, abrupt transition (Net Zero Financial Crisis scenario). This reflects the fact that members are expected to reach their target age before major physical impacts become prevalent under Limited Action and High Warming Scenarios.



DC Scenario Analysis results – Self-select funds

Members investing in self-select funds may be exposed to meaningful climate-related risks, especially in the long term. The climate scenarios have a similar impact on the self-select funds as on the lifestyle funds (most akin to impact on 25-year-old members). Over the short-term, the Net Zero Financial Crisis scenario is most prominent while as members move towards the long term, the High Warming scenario grows in importance. More detail on the limitations of the modelling can be found in the Appendix.



Impacts on the Diversified Assets – Active funds are relatively more muted than those on the equity funds. This is because active diversified funds include a mix of investments beyond equity such as bonds and other alternative assets, which help spread out risk. However, the scenarios show that the widespread impact of climate change can't be completely avoided, even with diversification.

DC scenario analysis conclusions

All members will experience some impacts from the climate scenarios modelled as the negative impacts on DC member pots have become more pronounced since the analysis was last run in 2021. A rapid, abrupt transition (Net Zero Financial Crisis scenario) would affect members in all strategies over the short term. However, across all of the investment strategies modelled, for all but the oldest set of example members (aged 55 and older), the long-term physical risks associated with a failure to transition are significantly larger than those from a rapid, abrupt transition. For 55-year-old and older members, transition risk is the most material climate-related risk. A number of options to potentially help mitigate this risk may exist, including increasing contributions or the consideration of alternative investment options. The Trustee will be keeping a watching brief on this, including potential implications for different cohorts of members.

The Trustee is already taking substantive actions to address the potential impacts identified. Over 2025 the Trustee will:

1. Continue to take climate change into account within DC investment strategy;
2. Continue to monitor and challenge the asset managers on how the impacts arising from climate change are being considered in the management of the mandates;
3. Produce additional materials for members to increase understanding of the impact of climate change on pension savings.

DC scenario analysis limitations

As for DB, these scenarios don't cover the entire range of outcomes possible for members due to climate change. The top-down modelling makes no allowance for manager skill in managing climate-related risk, which is particularly important in active funds. The key limitations are that modelling is inherently uncertain and significant impacts of climate change are understated at higher temperatures. Therefore, the Trustee does not base investment decisions based on this specific scenario analysis and seeks to mitigate climate-related risk impact across its investment strategy to the extent that is possible given current levels of investment and scientific knowledge.

Risk Management

Identifying and assessing climate-related risks in an integrated way

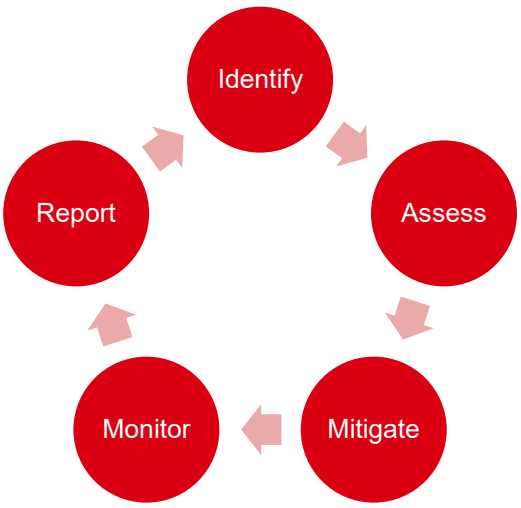
The Trustee considers climate change to be a systemic, long-term financial risk to the DB and DC assets, though it acknowledges that it is difficult to measure with a single number, metric, or lens. To ensure climate-related risks are assessed in an integrated manner, the Trustee has explicitly identified "Climate-related Risk" as a Scheme risk in the Trustee Risk Management Framework, as overseen by the Audit & Risk Committee, and reported to the Board on a quarterly basis. This ensures climate-related risk is given due consideration alongside the other investment risks identified by the Trustee. Additionally, as one of the Trustee's ESG priorities, the Trustee recognises the role that biodiversity and nature can play in understanding and mitigating climate-related risk.

As discussed in the Governance section of this report the Climate Risk Management Framework, established in 2020 and which aligns with the Scheme's existing Risk Management Framework, clarifies the roles and responsibilities of the Trustee, the Trustee's committees, the PSE and Scheme advisors with regards to identifying, assessing and managing climate-related risks. Having this framework in place allows the Trustee to manage climate-related risk in a considered and effective manner by considering both top-down (Scheme-level) and bottom-up (DB fund- and DC fund-level) perspectives. The Risk Management Framework, illustrated in the diagram below, follows a circular approach that ensures identified risks are managed on an ongoing basis. At a more granular level:

- The Trustee delegates authority to its ALCo to approve metrics that quantify, assess, and monitor the climate-related risks of the DB and DC assets.
- The PSE reviews the characteristics of the Scheme's assets against the ALCo-approved metrics and recommends mitigating actions to the ALCo for approval where necessary. The DB and DC asset managers are required to provide descriptions of engagement activity undertaken with companies in their portfolios and qualitative responses to issues raised by the PSE's climate-related risk analysis.
- Where feasible, mitigation of climate-related risks is factored into the DB and DC investment funds.
- Evaluation of ESG risk management, which includes climate-related risks, is a part of all DB and DC manager selection exercises, the manager on-boarding process, and continued due diligence and monitoring that the Trustee undertakes.

The Trustee also delegates the authority to the PSE, and advisors, where appropriate, to engage with the DB and DC asset managers as appropriate.

The Trustee's Approach to Climate-related Risk Management



Top-down risk identification and assessment process

At the Scheme level, quantitative and qualitative scenario analysis is used to identify and assess climate-related risks and opportunities under different climate outcomes and circumstances. This includes consideration of the possible impacts that physical and transition risks could have on the Scheme. The conclusions from the scenario analysis are assessed by ALCo in the context of the Trustee's overall climate change risk mitigation objectives. As discussed in more detail in the Strategy section, the Trustee is aware of the current limitations associated with climate scenario analysis, notably the fact that the scenarios do not cover the entire range of outcomes, and that it is possible for a climate-related outcome to have a greater

impact than what is presented in this report. For this reason, the Trustee is planning to review its approach to risk assessment and management with a particular focus on physical risk. The Trustee will continue to monitor developments in the climate scenario analysis space to aid decision-making. The Trustee also recognises the role that biodiversity and nature can play in understanding and mitigating climate-related risk.

Bottom-up identification and assessment process

To assess risk at the DB and DC fund-level, the Trustee uses a selection of climate metrics, alongside the guidance of the Net Zero Investment (NZIF) Framework. This enables the Trustee to form a balanced view of the Scheme's current exposure to transition risk as well as an indication of the future trajectory.

The Trustee recognises that climate-related metrics remain incomplete and have mixed levels of accuracy and therefore does not rely on any individual metric to drive investment decisions. The Trustee also recognises the pace of change in the development of climate-related metrics and keeps its selection of metrics under active review. In 2024, the Trustee removed one of the internal monitoring metrics and added a new forward-looking alignment metric to monitor in its internal climate dashboards and manager scorecards.

The key metrics are incorporated into scorecards that highlight the DB and DC asset managers' integration of climate-related risk factors into their overall investment and risk management processes. The scorecards are used to monitor the year-on-year progress of each individual DB and DC fund against the Scheme's climate-related risk management objectives, as well as any fund-specific targets. The scorecards also identify the funds' top emitters, the alignment status (relative to the goals of the Paris Agreement) of these emitters, where there is available data, and whether or not the asset manager has engaged with these companies on this issue.

To supplement the annual climate metric analysis and in line with the Trustee's focus on stewardship in 2024, the scorecards also monitor engagement and voting statistics (where relevant) of the DB and DC asset managers, and include an overarching qualitative assessment formed by the Scheme's investment advisors. The purpose of the scorecards is to enable the PSE to assess and monitor the climate-related risk exposure of the Scheme and to identify assets where changes could be made to keep them in line with the Trustee's objectives. In 2024, the scorecards were predominantly used to support and inform PSE engagements with the DB and DC asset managers.

Recognising their specialist risk identification and management skillset, the DB and DC asset managers are also invited to share their own assessment of climate-related risks identified within the portfolios they manage. This forms part of the regular engagement that the PSE and investment advisors perform, the results of which influence the PSE's assessment of the DB and DC asset managers in its reporting of climate-related risks to ALCo.

Recognising the role of nature in understanding climate-related risk, in 2024 the Trustee reviewed Scheme exposure to nature-relevant sectors across the Scheme's key portfolios. This analysis was considered in combination with both climate and anti-microbial resistance (AMR) risk across the portfolios. Over 2024, the PSE has taken steps to engage with managers, including discussing the outcomes of mandate-level nature risk assessment, progress on company-level engagements and target setting. The Trustee will continue to consider how nature risk can be integrated as part of its future regular processes, including exploring relevant metrics to assess risk.

Mitigating climate-related risks in an integrated way

Once risks have been identified and assessed appropriately as described above, the next step following the Climate Risk Management Framework is to take appropriate and proportionate actions to mitigate these risks. The Trustee has a preference for engagement as a means to mitigate the Scheme's climate-related risk exposure, however it will also make use of a range of approaches, as appropriate. These include:

- Engagement with asset managers, wider industry and policymakers, including around biodiversity and nature-related risk within the context of climate change,
- Consideration of climate-related risks in DB and DC asset manager selection,
- Integration of climate-related considerations in fund design, and
- Seeking to limit the Scheme's exposure to climate-related risks by investing in climate opportunities.

Additionally, in 2024, the Trustee completed the development of an internal Climate Transition Plan for the Scheme, following a framework-based approach and building on recognised industry frameworks such as that developed by the Transition Plan Taskforce. ALCo reviewed the plan, which focuses on possible actions over the next three years to help guide the Trustee's investment decision-making, including investment, engagement and advocacy. The possible actions in the plan will be explored over the next 12-24 months to advance the Trustee's climate-related work. This internal roadmap will be

used as a key tool to mitigate climate-related risks in an integrated way, mindful of the dynamic global context, including the geopolitical context, in which it is operating, to help progress towards the Scheme's climate ambitions, and it will also serve as a reference point for future engagement with managers.

Engagement with DB and DC asset managers to mitigate climate-related risk in the portfolio

To help protect the Scheme's assets, the Trustee requires the DB and DC asset managers to be cognisant of climate-related risks and opportunities within their investment processes and to manage climate-related risks on a discretionary basis, considering both transition and physical risks. The DB and DC asset managers are required to report annually on how this has been achieved, including descriptions of engagement activity undertaken with companies in their portfolios and qualitative responses to the issues raised by the PSE's climate-related risk analysis, within applicable investment guidelines and restrictions.

The Trustee also delegates voting rights to its asset managers and, where permissible, expects them to vote consistently with the Trustee's climate-related objectives, and in line with the Trustee's fiduciary responsibility. Where the Trustee has no ability to retain voting rights, for example within pooled fund structures, the Trustee has made the Scheme's climate-related objectives clear to the asset managers and will engage with them should monitoring of their voting activity highlight inconsistencies with Scheme policies and with its fiduciary responsibility.

The Trustee has a framework in place for effective stewardship, formulated in the Scheme's Stewardship and Voting Policy. This framework sets out the Trustee's expectations of the asset managers' voting and engagement processes, the significance of stewardship in the appointment and monitoring of managers, and how the Trustee holds the asset managers to account versus expectations. It also details the Trustee's priority stewardship themes, selected based on the materiality of the financial risks that they pose. One of the priority themes pertains to climate change and the risks associated with significant increases in global temperatures. The Trustee uses the stewardship framework to assess and ultimately to aim to improve the alignment of the DB and DC assets to the Trustee's net zero ambition, with the intention of mitigating the climate-related risks facing the Scheme.

Throughout 2024, the PSE, supported by the investment advisors, engaged with all the Scheme's DB and DC asset managers on matters relating to the climate-related risk exposure of the assets they manage on behalf of the Scheme. This climate-related engagement focussed on four overarching themes:

1. Reiterating to the DB and DC asset managers the Trustee's priority ESG risk management themes. In particular, highlighting the importance of biodiversity and nature loss and how the Trustee views this area as an important lever to achieving its climate-related objectives.
2. Reinforcing the value the Trustee places on engagement as a risk management lever and its expectations of the DB and DC asset managers to use it to create long-term value for the Scheme's members. In particular, considering the DB and DC asset managers' voting behaviour in relation to significant votes related to the Trustee's priority ESG themes.
3. The manager's conviction in its own commitments to supporting the transition to net zero, including assessing whether they are engaging with the most material contributors to climate-related risk within their portfolios.
4. Understanding the approach taken by a selection of the DB and DC asset managers to assess the climate-related risk and opportunities of government bond assets.

The intention of this engagement was to initiate an ongoing process of improvement with the DB and DC asset managers rather than act as a catalyst for significant immediate changes to their portfolios.

To highlight two specific examples:

- At the start of 2024, the Trustee's Chief Investment Officer sent a letter to all the DB and DC asset managers. This letter, in addition to outlining clear expectations of the Trustee's asset managers regarding climate, ESG and stewardship, asked to see the Trustee's external asset managers' climate transition plans, including their climate ambitions, and for a report of how these are being implemented for the mandates being managed on behalf of the Trustee. The managers' responses to this letter formed the basis of the PSE's ongoing engagement with the managers throughout 2024, the results of which were reported to the Trustee Board.
- In 2024, the PSE evolved investment guidelines for its Buy and Maintain managers. This engagement was focused on allowing the managers more flexibility to remove or reduce exposure to certain investments based on climate-related risks.

ESG priorities, especially climate change, continue to be a large part of each manager monitoring meeting, in many cases taking up over 50% of the discussions.

Engagement with industry, and through policy advocacy to help mitigate systemic climate-related risk

Noting that active participation in industry initiatives and public policy consultations can provide valuable insight as to current best practice regarding climate-related risk management processes and to help to achieve Scheme objectives, the Trustee completed a stewardship policy overlay provider selection exercise in 2024. The Trustee selected a provider to supplement efforts by the Scheme's asset managers by more closely emphasising the asset owner perspective in industry-shaping engagement, recognising that this perspective may differ from that of asset managers. For example, asset owners tend to adopt a longer time horizon than asset managers when considering risk, as well as adopting a total portfolio approach to risk as opposed to a single mandate-level approach. A sample of the Trustee's public engagements during 2024 are noted in the table below.

Engagement	Purpose	Details of engagement
Climate Scenario Analysis (CSA)	Connect industry leaders to further evolve industry thinking on CSA, with particular reference to creating a process that is decision-useful.	In Q2 the HSBC Bank (UK) Pension Scheme hosted an event at its office, convened through the University of Exeter. The event was titled Narrative Climate Scenarios: Bringing the Real World into Decision-making. 40+ participants from policymakers, academia and the investment sector came together to share their views.
Financial Reporting Council (FRC) Consultation on the UK Stewardship Code	The FRC consulted on a revised UK Stewardship Code, aiming to continue to drive effective stewardship by supporting high-quality disclosures and appropriately reflecting developing stewardship practices, and maintaining its global leadership.	The Trustee responded to the consultation, largely supporting the proposed revisions to the Code, but also proposing improvements regarding the definition of stewardship, and the structure and purpose of the report.
Institutional Investors Group on Climate Change (IIGCC) Consultation on Net Zero Investment Framework 2.0	The IIGCC consulted on the updated version of the Net Zero Investment Framework, NZIF 2.0. In addition to general feedback, the consultation specifically requested feedback regarding changes to the framework. These include recommended action points for users of the framework, changes to objective and target-setting process, and changes to the assessment approach for listed equities, corporate fixed income and sovereign bonds.	The Trustee responded to the consultation, emphasising the Trustee's ongoing support of IIGCC and the importance of NZIF for setting a standard for good practice for net zero investors, but also noting that the structure of the current framework is challenging for asset owners to comply with in its entirety. The Trustee also noted that the focus on emissions measurement as an indicator for climate-related risk and impact has limited utility given the limitations associated with this data.

Mitigating climate-related risks via asset manager and fund selection

The Trustee has sought to integrate climate change considerations into the DC assets for several years. This includes being an early adopter of climate-aware indices. The LGIM Future World Fund was invested in 2016 and represents a material portion of the default fund for DC members. It is a climate-tilted, passively managed, multi-factor global equity fund. The design of this fund is reviewed from time to time, with the most recent review being undertaken at the time of writing.

In 2021, the Trustee undertook a major fund selection exercise to construct a bespoke Long Term Asset Fund ("LTAF") with a material allocation to illiquid assets for the growth phase of the DC default arrangements. Sustainability considerations, including climate considerations, were core criteria in the development of the fund and the selection of the asset manager. In 2023, following selection of Fulcrum as asset manager, work began on the investment guidelines and reporting requirements for this fund, with the Trustee's ESG priorities, climate ambition and preference for engagement being central elements. In 2024, the Trustee began to allocate capital to Fulcrum Asset Management LTAF. Sustainability integration is core to the manager's investment process – whilst reviewing investment opportunities, Fulcrum assesses multiple factors to determine an overall score for sustainability policy and approach. In addition to impacting return and volatility assumptions, sustainability scores can influence marginal investment decisions. Improving sustainability characteristics through engagement is also central to the proposition, and the LTAF additionally invests in natural resources and climate solutions, ensuring that the Scheme is able to access these types of investment opportunities.

Mitigating climate-related risks via fund design

In 2024, the Trustee reviewed the Investment Management Agreements (IMA) of the DB asset managers to ensure they remain up to date and reflect the Trustee's climate and broader sustainability objectives. In some cases, this led to an evolution of the IMA to better incorporate climate considerations into the DB Asset managers' investment processes. For example, and as noted above, the IMAs for a selection of the Scheme's buy and maintain funds were updated to enable managers to divest from corporate bonds where the issuing entity was deemed to be unaligned with the Trustee's climate ambitions and fiduciary responsibility.

Mitigating climate-related risks by capturing climate opportunities

As well as adopting climate-related risk mitigating actions as part of the Trustee's investment strategy, the Trustee also strives to capture opportunities that will contribute to limiting the adverse impacts of climate change on Scheme investments, either directly or via biodiversity and nature-related opportunities, while also contributing to enhanced member outcomes.

The DC funds that the Trustee designed with LGIM and Schroders Investment Management, have a dual objective of managing climate-related risks and capturing climate opportunities where feasible. There is also a DC fund that focuses on investing in sustainability solutions and assets, focussing on climate- and nature-related opportunities created by the transition to a sustainable economy.

The DB HBUK section contains an investment in a diversified fund of renewable onshore wind and solar infrastructure assets managed by Schroders Greencoat. These assets provide the Scheme with exposure to the long-term investment opportunities presented by the global net-zero transition, whilst also contributing towards real economy decarbonisation, given the potential negative financial impact climate change may have on the Scheme. The assets also provide a steady stream of cash flows that are used to meet member benefit payments.

In 2024, as previously mentioned, the Trustee allocated capital to an LTAF, giving the Scheme exposure to a range of climate opportunities.

Monitoring climate-related risk exposure

The top-down and bottom-up climate analysis described above was used in 2024 to update the climate dashboards monitored by ALCo for the DB and DC assets. The dashboards build upon the individual DB and DC asset manager scorecards to present an assessment at the total Scheme level.

The climate metrics set out in this report are key tenets of the dashboards and scorecards, alongside additional metrics that combine quantitative and qualitative assessments of each asset manager, supplementing the assessment of funds and DB and DC asset managers' practices. The Trustee recognises, however, that data and methodology gaps remain, and therefore continues to explore ways in which new forms of risk analysis will assist with the monitoring of climate-related risks across different asset classes. The investment advisors also perform specialist monitoring of the Scheme's DB and DC asset managers on an ongoing basis, considering climate-related risk and opportunities at the fund-level, as well as taking an overarching Scheme-level view.

As in previous years, in 2024, the Trustee requested that all asset managers complete an annual questionnaire that included questions about their progress against the Trustee's climate ambition, including procedures and processes to address climate change risk, including their engagement on climate change issues e.g. voting, and their climate-related risk management practices at the firm and asset-level. The purpose of this annual exercise is to identify whether the DB and DC asset managers have deviated from the Trustee's climate-related objectives. If any deviation is observed, ALCo will be informed, and if necessary, the PSE will recommend corrective steps.

Reporting on the Trustee's management of climate-related risk

On a quarterly basis, ALCo reviews a summary of manager monitoring activity and recommended mitigating actions prepared by the PSE and where appropriate with input from its advisors. The PSE's reporting is supplemented by reporting provided by the Scheme's advisors to ALCo on a quarterly basis that summarises the takeaways from their manager monitoring and assessment. These include clear calls to action should the advisors feel a manager is not meeting the required standard set by the Trustee. ARC also provides a report on the Trustee's Risk Register on a quarterly basis. This includes an assessment of climate-related factors.

In addition to regular internal monitoring, the Trustee reports on climate-related risk management practices and the steps it has taken to address climate-related risks in annual publicly disclosed reports. The Trustee published the Scheme's first annual TCFD report in 2018, the Scheme's first Implementation Statement in 2021 and the Scheme's first Stewardship Code report in 2022.

Metrics & Targets

Assessment of climate metrics in relation to the Scheme's investments

The Trustee uses a set of metrics, explained below, to help assess the Scheme's current and forward-looking exposure to climate-related risks and opportunities for both DB and DC benefits.

The Trustee has evolved these climate metrics over time, including in 2022 adopting a metric to assess alignment of the Scheme's assets with the goals of the Paris Agreement and in 2023 adopting a metric to monitor the quality of reported financed emissions over time.

Details of the metrics and their calculation methodologies are provided in the table below:

Metric Type	Metric	Description and methodology
Absolute Emissions	Total Carbon Emissions (tCO2e)	Measures the total absolute financed emissions associated with a portfolio, expressed in tons CO2e. It is a metric based on ownership. For corporate issuers, ownership is determined based on the Enterprise Value Including Cash (EVIC) of the underlying corporate issuer, in line with the guidance from the Partnership for Carbon Accounting Financials (PCAF). For sovereign issuers, ownership is determined based on purchasing power parity-adjusted Gross Domestic Product (GDP).
Emissions Intensity	Carbon Footprint (tCO2e / £m invested)	Measures the total financed emissions normalised by total portfolio value. It is a metric based on ownership, determined in the same way as above.
	Weighted Average Carbon Intensity "WACI" (tCO2e / £m revenue)	Measures a portfolio's exposure to carbon-intensive assets. It is a metric based on exposure, rather than ownership. The metric calculates corporates' emissions intensity defined as the emissions in tons CO2e per company revenue (converted to pound sterling £).
Non-Emissions-Based Metric	PCAF Data Quality score	Measures the quality of disclosed financed emissions data. PCAF Data Quality Score: a score from 1 to 5 of the quality of the data according to the below PCAF Data Quality Scale. The Scheme level total figure is calculated as a weighted average based on proportion of asset values. 1 - Reported emissions, based on the Greenhouse Gas Protocol, that have been verified by a third-party auditor. 2 - Unverified reported emissions or estimates based on the company's energy consumption, in line with the GHG Protocol. 3 - Estimated emissions based on the company's production data. 4 - Estimated emissions based on economic data – e.g. revenue, company value and amount lent/invested. 5 - Estimated emissions based on economic data – e.g. sectoral revenues and asset turnover ratios. At present, MSCI does not distinguish between a score of 1 and 2. Therefore, the highest score currently achievable is a score of 2.
Non-Emissions-Based Metric (additional metric)	TPI Management Quality Score "TPI MQ score"	Measures companies' management and governance of GHG emissions and the risks associated with the net-zero transition. The metric ranges from a score of 0, where a business is unaware of (or not acknowledging) climate change as a business issue, to 5 where a business has established a rigorous transition plan. The Scheme-level figure is calculated as a weighted average based on proportion of financed emissions that have a score.
Portfolio Alignment Metric	TPI Carbon Performance Score "TPI CP score"	Provides a quantitative benchmarking of companies' emissions pathways against the 2015 Paris Agreement goals. This metric translates greenhouse gas emissions targets made at the international level (e.g., under the 2015 Paris Agreement) into a benchmark based on sectoral decarbonisation pathways. The benchmark is used to assess the actual performance and forward-looking

		trajectory of individual companies against each decarbonisation pathway. The TPI metrics provide assessments of companies' trajectory on three time horizons: 2025, 2035 and 2050. The metric used in this report is based on the assessments until 2050. The metric ranges from a score of 0% to 100%, showing the proportion of the portfolio assessed as aligned with the three decarbonisation pathways consistent with the goals of the 2015 Paris Agreement. The Scheme-level figure is calculated as a weighted average based on proportion of financed emissions that have been assessed.

Explanation of how emissions-based metrics are calculated

To calculate the absolute emissions, emissions intensity, non-emissions-based metrics, and portfolio alignment metrics, the Trustee has used individual portfolio holdings data provided by the asset managers. To estimate fund-level emissions-based metrics, individual portfolio holdings data was used in conjunction with emissions data provided by the Trustee's third-party data provider, MSCI, which uses a combination of issuer-reported and modelled data. For the non-emissions-based metric and portfolio alignment metric, individual portfolio holdings data was used in conjunction with data provided by the TPI.

Individual portfolio holdings data was available for most of the listed and publicly traded assets across the DB and DC portfolios. When individual portfolio holdings data was unavailable due to the complex or illiquid nature of the assets, where possible the metrics used figures calculated by the Scheme's managers. The data sources and calculation methodologies are detailed in Appendix C.

For remaining assets (some Private Equity assets and Municipal and Government Guaranteed Bonds), equivalent to circa 5% of DB portfolio assets (excluding cash), for which it was not possible to obtain emissions-based and non-emissions-based data due to coverage issues associated with these assets, the Trustee elected not to use proxy figures. This is because of the complex methodologies and heavy reliance on modelling assumptions to derive estimates. The Trustee has kept this approach under review and not changed it over the reporting period.

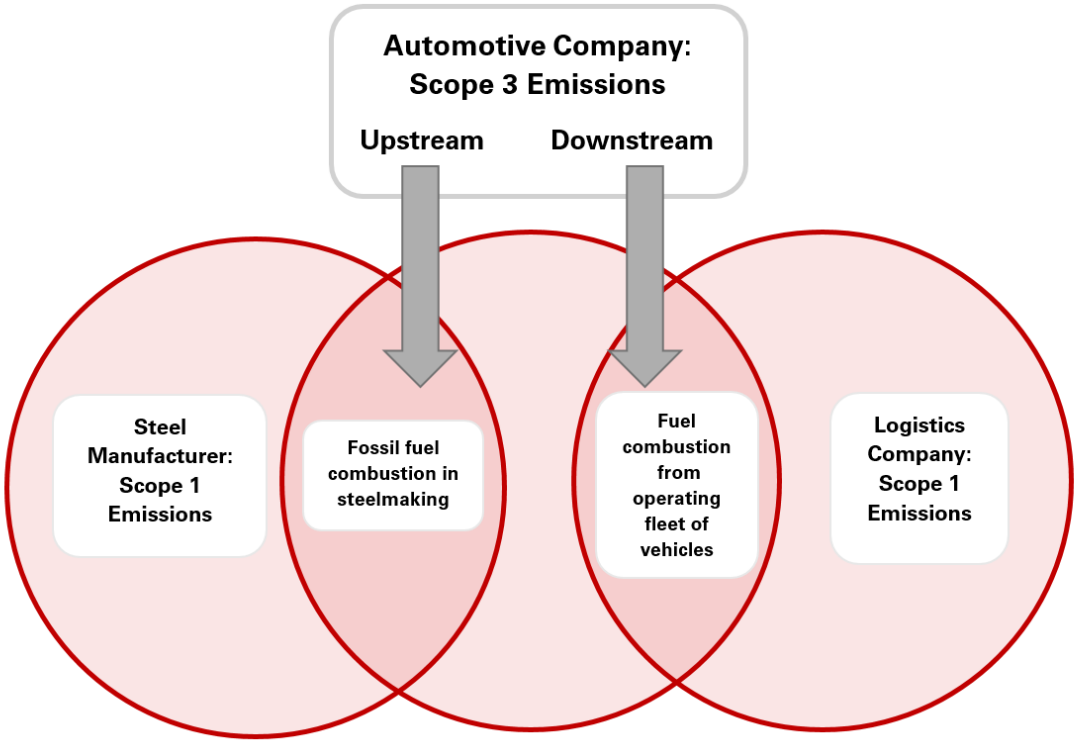
Given that the Scheme's own operational emissions - scope 1 and scope 2 emissions directly relating to its business operations - are likely to be immaterial, the emissions-based metrics analysis focuses on the Scheme's most material scope 3 emissions: financed emissions. This is in line with the statutory guidance. The figures below disclose the Scheme's financed scope 1, scope 2, and scope 3 emissions.

Scope 3 financed emissions represent indirect emissions of companies and assets the Scheme is invested in. These comprise upstream emissions related to a company's suppliers and any processes that occur before the company's operations and downstream emissions related to the company's customers and any processes that occur after the company's operations. For example, the upstream scope 3 emissions of an automotive company will include the emissions from the fossil fuel combustion required to make the steel needed in the cars. The downstream scope 3 emissions will include the emissions from the fuel combustion in the sold vehicle engines. There are 15 different scope 3 emissions categories, making attribution and calculation complex. In aggregate, scope 3 emissions tend to be considerably larger than scope 1 and 2 emissions combined.

Over the year MSCI has noted an increase in the quality of company-reported scope 3 emissions data from some companies (but not all). They therefore have changed their methodology to use company-reported scope 3 numbers where they are at least 80% of their own estimated values and use modelled estimates if lower. This means that the scope 3 figures reported by the Trustee represent a combination of reported and modelled emissions. Whilst the Trustee recognises the potential estimation error in using modelled data due to the inherent complexity of emissions data, it believes this approach to be appropriate given data quality.

The estimated scope 1 and 2 financed emissions for a given investment will form part of the scope 3 financed emissions for another investment. Aggregating the three emissions scopes will lead to double counting, as illustrated in the graphic below. In this example, the scope 3 emissions of the automotive company overlap both the scope 1 emissions of the steel manufacturer further up the supply chain and the scope 1 emissions of the logistics company later on in the product lifecycle.

Double Counting Across Different Emissions Scopes



To avoid misrepresentation of the Scheme's financed emissions, the total scope 1 and 2 absolute emissions and carbon footprint are reported separately from scope 3 emissions.

The Trustee monitors sovereign emissions for the Scheme in addition to the corporate emissions detailed above. For countries (and therefore sovereign bonds), distinct categories are used compared to corporate emissions, following guidance from the DWP:

- **Production emissions:** the emissions of everything produced in a country; this is broadly equivalent to scope 1 emissions.
- **Import emissions**: the emissions of what a country imports from other countries; this is equivalent to scope 2 & 3 emissions. In practice, for large economies, scope 2 emissions are trivial in comparison to the other scopes.

The share of a country's emissions and carbon intensity is attributed by dividing a portfolio holding by a country's purchasing-power-parity-adjusted GDP. Sovereign emissions are reported separately based on the aggregated sovereign security positions from funds comprised solely of sovereign securities (e.g. LDI), as well as funds which hold only a proportion of their total portfolios in sovereign securities.

The Trustee is aware of the limitations associated with emissions-based metrics in their current form. The inclusion of asset valuations creates a risk that inaccurate valuation data is a further source of error and lower coverage in the Scheme's estimated financed emissions. It may also create timing inconsistencies due to differences in when valuation data becomes available and the Trustee's required disclosure timelines. Additionally, there is often a timing lag between the reporting period and the period covered by the latest available emissions data, leading to discrepancies. The Trustee is cognisant of these issues but recognises the value in measuring its emissions to help understand and manage climate-related risk across the portfolio. The Trustee aims to take a pragmatic approach to measurement and is working to mitigate methodological challenges where possible.

Non-emissions-based metrics

In line with the DWP and PCAF guidance, the Trustee adopted the PCAF Data Quality score as its non-emissions-based metric in 2023, which is used to help the Trustee understand the quality of disclosed emissions data.

The Trustee continues to report an additional non-emissions-based metric, TPI MQ score as well as an alignment metric, TPI CP score, which use the TPI's publicly available dataset to provide a forward-looking assessment of the Scheme's exposure to climate transition risk. These metrics were selected as they are independently calculated and focus on material carbon emitters, covering companies with higher climate-related risk exposure. The Trustee chose to disclose both TPI metrics as they complement each other and so should provide a more complete view of a company's climate trajectory. The Trustee acknowledges that low coverage – in terms of number of companies scored – is a limitation of the TPI metrics. However, the Trustee recognises that the TPI company universe is increasing; 2000 companies were included at the time of data gathering

for this report, which is double that of last year. The coverage has also extended to 24 sectors, up from 17 sectors last year. However, this is still low when compared with other climate metrics. TPI metrics are not available for sovereign securities. Despite the noted limitations, given that the Trustee's approach is also based on industry guidance such as PCAF, this means that the approach is comparable with other asset owners and financial services organisations. The Trustee has informed its asset managers of its climate metrics and continues to engage with them on metrics availability and company disclosures, aiming to improve data quality and coverage over time.

Climate metrics for the Scheme's DB assets

Absolute Emissions and Emissions Intensity metrics

The section below provides the results for the first three climate metrics at an asset class level, alongside the coverage of total DB assets and the coverage of emissions data. As the current methodology for the attribution of emissions from sovereign bonds differs from that of other asset classes, the Trustee feels it is appropriate to consider these figures separately. As such, these are reported in a separate table below. Asset class-level year-on-year comparisons are not provided below given the range of factors that can impact these figures, however, trend data is provided in the next section for those assets in scope of the Trustee's climate-related targets. Full asset class calculation methodologies are detailed in Appendix C.

Corporate Emissions

Asset Class	Absolute Carbon Emissions (tCO2e)		Carbon Footprint (tCO2e / £m invested)		WACI (tCO2e / £m revenue)
	Scope 1&2	Scope 3	Scope 1&2	Scope 3	Scope 1&2
Global Bonds (corporate)	244,383	1,990,358	46	371	116
Infrastructure Debt[1]	107,594	26,675	244	83	527
Sterling Bonds (corporate)[2]	49,099	419,606	38	326	109
US Dollar Bonds	98,196	326,778	121	403	838
Property[1,3]	22	7,190	0	8	See note 3
Renewable Infrastructure[1]	10	14,993	0	57	0.3
Private Equity[1]	1,953	11,780	38	228	91
Asset Backed Securities[1]	26,119	2,908	60	7	See note 3

[1] *Data provided by the Scheme's respective asset managers.*
[2] *One of the Scheme's Sterling Bond funds has been excluded from the calculations due to the lack of EVIC and emissions data available for issuers (largely supranational issuers).*
[3] *Due to the nature of the fund and the calculation methodology used for WACI, this data was not available.*

Sovereign Emissions

Asset Class	Absolute Carbon Emissions (tCO2e)		Carbon Footprint (tCO2e / £m PPP adjusted GDP)	
	Production Emissions (scope 1)	Import Emissions (scope 2&3)	Production Emissions (scope 1)	Import Emissions (scope 2&3)
LDI	803,865	539,343	150	101
US Treasuries	208,241	55,443	306	81
Sterling Bonds (sovereign)	3,195	1,451	196	89
Global Bonds (sovereign)	94,058	51,329	178	97

The metrics calculation process has allowed greater granularity in the tables above. One outcome of this is that the emissions associated with any sovereign exposure within the sterling bond funds and global bond funds are now calculated and reported separately from the corporate exposure. For example, the emissions associated with the sovereign bonds held in a global buy and maintain fund would be split out and reported under 'Global Bonds (sovereign)' above, separately from the corporate bonds held in the fund. The aim of this is to provide greater transparency of the source of emissions across the asset classes.

The asset class with the highest absolute emissions on a scope 1 and 2 basis is the DB portfolio's allocation to Liability Driven Investments (LDI), which is due to a combination of the amount invested (circa 38.5% of assets) as well as the emissions intensity of the fund. This fund primarily consists of UK Government bonds and cash assets and is used for liability interest rate and inflation hedging purposes. However, the emissions attributed to the LDI fund account solely for the Scheme's investment in UK Government bonds. Looking at carbon footprint across corporate and sovereign emissions, the US Treasuries and Infrastructure Debt funds are the most emissions intensive with respect to scope 1 and 2 emissions similar to last year. Looking only at corporate emissions, Infrastructure Debt is followed by US Dollar Bonds. These results are largely in line with expectations. Infrastructure is typically emissions intensive given the nature of the investments, for example, in transport, utilities and energy facilities. However, these are essential structures supporting economic growth and the Scheme also has exposure to renewable energy infrastructure to support the transition, given the potential negative financial impact that climate change may have on the Scheme. Regarding US Dollar Bonds, the funds within this asset class typically have a material weighting to emissions intensive US companies, notably in the utilities sector. When considering scope 3 emissions, US Dollar Bonds, Global Bonds and Sterling Bonds have the highest carbon footprints.

The figures for the Property assets were provided by the asset managers. The Property Fund has a scope 1 and 2 carbon footprint close to zero but a more meaningful scope 3 carbon footprint. This is due to the treatment of emissions associated with the underlying assets applied by the asset managers of the Scheme's property assets, whereby the majority of the property assets' emissions are tenant emissions that are classified as scope 3. The figures for the Infrastructure Debt assets were provided by the asset managers. We note that the scope 3 absolute emissions and carbon footprint are lower than scope 1 and 2 due to lower coverage.

For the first time this year, the Trustee was able to obtain emissions associated with the Asset Backed Securities fund, which were provided by the manager.

Looking at WACI, the US Dollar Bonds have the highest exposure to carbon-intensive assets with a WACI significantly higher than the other funds. This is due in part to a higher aggregate exposure to companies that generate a relatively high level of emissions.

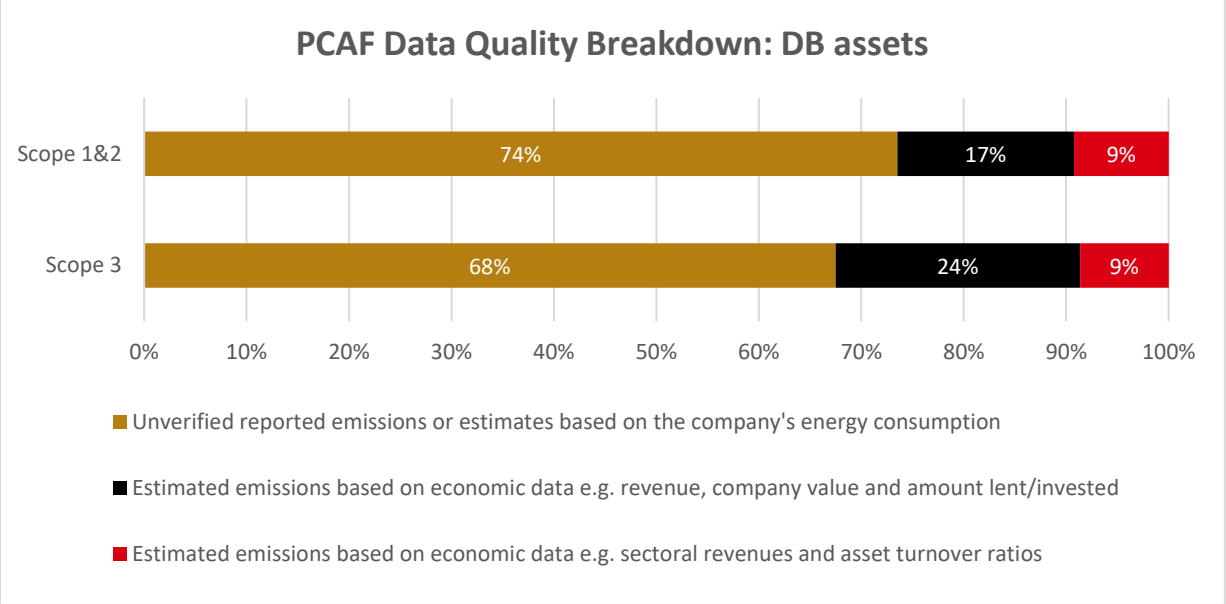
In general, scope 3 emissions have increased. This is mainly due to a change in methodology by the Trustee's third-party data provider MSCI, as described earlier in the report. One fund was an exception to this and saw a significant decrease in scope 3 carbon footprint since 2023. This was due to an increase in the coverage of utilities companies, which is described later on in the report in the Trustee's climate-related targets section. Whilst the increased coverage resulted in higher scope 1 and 2 carbon footprint, utilities companies tend to have significantly lower scope 3 emissions, meaning that the average scope 3 footprint fell.

The Trustee will perform more in-depth analysis to further explore the drivers of these insights, which will inform the Trustee's engagement activities over 2025.

Data Quality and Coverage

The table below shows the aggregate PCAF Data Quality score and the coverage for the emissions-based metrics for the DB assets.

Data Quality and Coverage Statistics	
DB assets PCAF Data Quality score (scopes 1&2)	**2.6**
DB assets covered as a percentage of total (excluding cash)	**90%**
DB assets average data coverage where line-by-line emissions data was available	**89%**



For both DB and DC sections, the PCAF Data Quality score is applicable to the listed and publicly traded assets calculated using individual portfolio holdings data provided by the asset managers. It could not be applied to illiquid assets or government bonds. We note that MSCI does not currently assign a score 1 to any emissions, therefore the best available score is 2. The score of 2.6 indicates that the majority of the data used to calculate the DB assets' emissions-based metrics was reported but unverified by the underlying corporate issuers in line with the Greenhouse Gas Protocol or estimated based on the company's energy consumption and production data. We can see from the breakdown of the scores that for scope 1 and 2 emissions 74% of emissions are of the highest quality currently (score 2), 17% have a score of 4 and 9% have a score of 5. On a scope 3 basis, the best available score of 2 is assigned to just less than 70% of the emissions, with more emissions assigned a score of 4 and 5. While data coverage limitations and complications remain in corporate bond assets, notably where companies with publicly traded debt but unlisted equity disclose less information, the Trustee expects to see the scores trending towards 2 in the short-medium term.

Overall, it was possible to calculate emissions-based metrics for 89% of the total DB assets (excluding cash). This includes the listed and publicly traded assets calculated using individual portfolio holdings data from the MSCI data feed as well as illiquid assets and gilts where the emissions figures were provided by the Scheme's asset managers. The non-cash assets that could not be covered by the analysis are made up of some Private Equity assets, as well as one Sterling Bond fund that was excluded due to the lack of emissions and/or EVIC data. Emissions coverage of the listed and publicly traded assets was better for some funds than others.

On average, 89% of the assets within the funds covered with individual portfolio holdings data had available emissions and EVIC figures, inputs necessary to calculate the ownership-based emissions metrics. This is a significant increase from 49% last year. This result was largely driven by the portfolio's large LDI, US Dollar Bonds and sovereign components of Bond funds for which a higher coverage was achieved this year. The Absolute Emissions and Emissions Intensity figures for assets within the funds covered with individual portfolio holdings data were scaled up to reflect an equivalent 100% coverage. The Trustee is aware that whilst this aids comparability across assets, it remains an imperfect assessment of the Scheme's financed emissions.

Average data coverage and quality has been improving year-on-year since the Trustee's first TCFD report in 2018. However, the Trustee recognises the data challenges it faces and will explore further analysis of the underlying quality of emissions data used in its reporting. To help overcome the data quality challenges, the Trustee engages with its asset managers as well as with regulators and industry bodies.

TPI Management Quality and Carbon Performance Scores

The Trustee uses the TPI metrics to provide forward-looking indicators of climate-related risk. These metrics cover the listed and publicly traded assets of the DB portfolios, where this data was available, and are weighted on a financed emissions basis.

Metric	Result
TPI Management Quality Scores	Aggregate TPI MQ across all funds where data available: **4.2**
	Highest TPI MQ of all funds where data available: **4.7**
	Lowest TPI MQ of all funds where data available: **3.8**

TPI Carbon Performance Score*	Aggregate TPI CP score (2050) = **51.1%**

** The methodology for calculating the TPI scores is based on the proportion of financed emissions that have a score and are aligned with the Paris Agreement goals.*

As noted above, the TPI's assessment universe comprised 2000 companies at the time of data gathering. This is encouraging, however, the Trustee notes that coverage for the TPI metrics is still lower than emissions-based metrics for most funds. While coverage has improved, the Trustee finds it challenging to meaningfully use the aggregated TPI CP and TPI MQ metrics at a portfolio-level and instead uses the metrics at an individual company and fund level.

The aggregate TPI MQ score across all funds, weighted on a financed emissions basis of the companies in which the Scheme invests in high impact sectors and have a TPI score, represents an average of 4.2. This means that on average these companies have assessed how climate-related risks impact their business and have started integrating these considerations into their business strategy.

To assess the DB portfolio's alignment to the goals of the Paris agreement, the Trustee has calculated an aggregate TPI CP score. This metric looks at the proportion of the DB portfolio assets that are projected to be aligned with relevant decarbonisation pathways based on a 2050-time horizon.

The result shown above implies that c.51% of the portfolio's financed emissions assessed by TPI are aligned to a 2050 decarbonisation pathway. This is a significant increase compared to 20% last year, which is in part due to the improved coverage of the metric.

Climate metrics for the Scheme's DC assets

Absolute Emissions and Emissions Intensity metrics

The table below provides the results for the first three climate metrics at a white label fund level consistent with the range of funds available to DC members, alongside the coverage of total DC assets and the coverage of emissions data.

Corporate Emissions

White Label Fund	Absolute Carbon Emissions (tCO2e)		Carbon Footprint (tCO2e / £m invested)		WACI (tCO2e / £m revenue) Scope 1&2
	Scope 1&2	Scope 3	Scope 1&2	Scope 3	
Global Equities – passive	284,682	5,770,968	58	1,168	107
Diversified Assets – active	39,242	567,828	34	491	81
Global Equities – active	13,980	236,612	31	530	97
Global Bonds – active	15,757	146,231	81	751	124
Shariah Law Equities – passive	3,719	58,110	17	265	54
Emerging Markets Equities – active	2,834	44,620	34	532	76
UK Equities – active	3,395	56,160	38	629	54
North American Equities – passive	5,122	56,390	31	339	118
Sustainable and Responsible Equities – active	1,225	19,800	22	353	89
Fixed Annuity Tracker – passive	1,097	11,874	39	421	95
UK Equities – passive	2,762	42,428	75	1,158	96
Inflation Linked Annuity Tracker – passive	249	2,842	39	446	94
Asia pacific (excluding Japan) Equities – passive	1,949	16,131	110	909	187
Property – active[2]	297	1,565	7	39	41
European (excluding UK) Equities – passive	951	14,118	65	963	102

Japanese Equities – passive	841	16,380	74	1,437	95
Sterling Corporate Bond Funds – active	129	1,315	23	234	63
Long Term Asset Fund (illiquid assets) [1]	34,198	8,262	121	55	286

[1] *Data provided by the Scheme's respective asset managers.*

[2] *Data for Property – active asset allocation is estimated using both individual portfolio holdings data and data calculated and provided by the Scheme's asset managers.*

Sovereign Emissions

Asset Class	Absolute Carbon Emissions (tCO2e)		Carbon Footprint (tCO2e / £m invested)	
	Production Emissions (scope 1)	Import Emissions (scope 2&3)	Production Emissions (scope 1)	Import Emissions (scope 2&3)
Diversified Assets - Active	18,439	5,164	277	78
Global Bonds - Active	21,595	5,613	306	80
Fixed Annuity Tracker – Active	2,638	1,770	150	101
Inflation Linked Annuity Tracker - Passive	1,062	712	150	101
Sterling Corporate Bonds – Active	305	202	152	101

The allocation with the largest absolute emissions, on both a scope 1 and 2 and scope 3 basis, is the Global Equities – passive fund. As this is the main DC default investment strategy, this result is a function of the size of the investment rather than the intensity of the fund.

Looking at the intensity metrics, within the DC portfolio the fund with the highest scope 1 and 2 carbon footprint is the new Long Term Asset Fund, followed by the Asia pacific (excluding Japan) Equities – passive. The Japanese Equities – passive fund displays the highest scope 3 carbon footprint, followed by the Global Equities – passive and UK Equities – passive funds.

As well as having the highest scope 1 and 2 carbon footprint, the new Long Term Asset Fund also has the highest WACI, meaning this fund has the highest exposure to high carbon emitters. This is not surprising given the fund's asset class exposure to real assets (c.60%), private equity (c.20%) and credit (c.20%). While sustainability integration is a core factor of the fund's investment process, these asset classes, principally real assets, can be carbon intensive as they involve construction of new buildings and facilities.

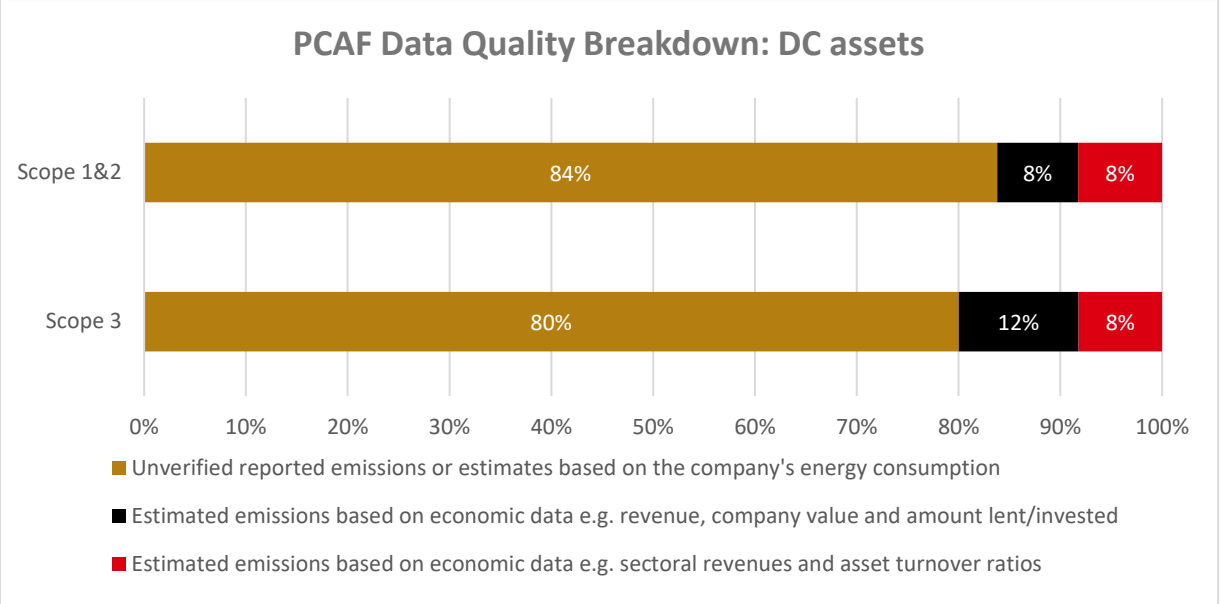
Looking at scope 3 emissions, the table above demonstrates the point raised earlier: scope 3 emissions are multiples of scope 1 and 2 emissions for many of the funds. This is expected due to the scale of activities and the range of sources of emissions captured in scope 3 when compared with scope 1 and 2 emissions.

Similarly to the Scheme's DB assets, scope 3 emissions have generally increased. This is mainly due to a change in methodology by the Trustee's third-party data provider MSCI, as described earlier in the report.

Data Quality and Coverage

The table below shows the aggregate PCAF Data Quality score and the coverage for the emissions-based metrics for the DC assets.

Data Quality and Coverage Statistics	
DC assets PCAF Data Quality score	**2.4**
DC assets covered as a percentage of total (excluding cash)	**100%**
DC assets average data coverage where line-by-line emissions data was available	**92%**



The emissions data in the table above covers 100% of the total DC assets (excluding cash). It was possible to cover most funds using line-by-line emissions data analysis from the MSCI data feed, with the exception of two funds within the Property–active allocation and the Long-Term Asset Fund, where emissions data was provided by the respective asset managers. Of the line-by-line emissions data 84% has a PCAF Data Quality score of 2 with a fund average of 2.4. This means that the data was sourced either directly via reported emissions or using highest quality estimates. The remaining 16% of the line-by-line emissions data was estimated by MSCI based on different levels of economic data. Overall, emissions coverage of the listed and publicly traded assets was higher for the DC funds due to better data availability on equity assets. On average, 92% of the assets within the funds with individual portfolio holdings data had available emissions and EVIC figures, inputs necessary to calculate the ownership-based emissions metrics.

Consistent with the approach taken to the assets within the DB portfolio, to address the data gap issues, the Absolute Emissions and Emissions Intensity figures for assets within the funds covered with individual portfolio holdings data were scaled up to reflect an equivalent 100% coverage.

TPI Management Quality and Carbon Performance Scores

The Trustee uses the TPI metrics to provide forward-looking indicators of climate-related risk. These metrics cover the listed and publicly traded assets of the DC portfolios, where data was available and are weighted on a financed emissions basis.

Metric	Result
TPI Management Quality Scores	Aggregate TPI MQ score across all funds where data available: **3.9** Highest TPI MQ score of all funds where data available: **4.7**
	Lowest TPI MQ score of all funds where data available: **3.2**
TPI Carbon Performance Score*	Aggregate TPI CP score (2050) = **77.3%**

** The methodology for calculating the TPI scores is based on the proportion of financed emissions that have a score are aligned with the Paris Agreement goals.*

Looking at the aggregate TPI MQ across all funds, the average score of companies is 3.9 when weighted on a financed emissions basis, meaning that on average companies have assessed how climate-related risks impact their business and have started integrating these considerations into their business strategy.

The TPI CP metric reflects the proportion of the DC portfolio's financed emissions produced by companies that TPI have a score for and are considered to be aligned with relevant decarbonisation pathways to 2050. This is a significant increase compared to 50% last year, due to the increase in the coverage of the TPI data. However, we note that the coverage of this metric is still limited and does not allow an assessment of the total portfolio.

Climate Metrics Conclusion

The results set out above are used by the Trustee to provide insights on the Scheme's climate-related risk exposure as part of the bottom-up identification and assessment process set out in the Risk Management section. In addition, the metrics

form part of the Trustee's annual "climate dashboard" which is used as a monitoring tool to track the Scheme's progress versus the Trustee's climate-related objectives and is maintained separately for DB and DC assets. Underlying the dashboards are fund-level climate scorecards, which combine metrics with qualitative considerations from discussions with the asset managers and are used to monitor the managers' performance and to inform engagement activities.

The ALCo, overseen by the Trustee, reviews the selection of climate metrics in the dashboard and the scorecards from time to time as appropriate to ensure it continues to make use of best practice techniques that offer effective insight to the Scheme's climate-related risk exposure.

Note: All line-by-line emissions-based analysis is provided by the Scheme's Investment Advisor, Redington Ltd ("Redington"), and the data in the report is sourced from MSCI©. Certain information ©2025 MSCI ESG Research LLC. Reproduced with permission. Where the emissions-based analysis was sourced directly from asset managers, the relevant approaches are outlined in Appendix C.

The Trustee's climate-related targets

Details of the Scheme's historical progress and most recent emissions level as at 31 December 2024 are provided below. The Trustee obtained emissions data during 2024 as at 31 December 2023, and used this data to assess the Scheme's progress against its targets and work out whether to retain or replace them. (That information was included in the 2023 report) This data was then refreshed as at 31 December 2024 and that information is included in this report.

In 2021 the Trustee set out its target to achieve net zero emissions by 2050, or sooner. The high-level 2050 target is supported by shorter-term interim targets, which include:

- targeting a real economy greenhouse gases emissions reduction interim target of 50% by 2030 or sooner for the Scheme's equity and corporate bond funds, (compared to a baseline of financed emissions as at 31/12/2019).
- having the ambition of fully aligning all corporate bond and equity investments to the goals of the 2015 Paris Agreement by 2030 across both DB and DC assets.
- enhancing the Trustee's engagement and stewardship efforts through the Scheme's asset managers.

It is important to note that the Trustee's climate-related ambition is grounded in reducing financially material risk to the Scheme. The Trustee is cognisant that this risk is only meaningfully reduced in the context of an orderly real-world transition to net zero emissions. The Trustee aspires to contribute towards real economy decarbonisation through the Scheme's decarbonisation target, given the potential negative financial impact that climate change may have on the Scheme.

To date, the Trustee has quantitatively monitored progress against the interim decarbonisation target, details of which are described below. The Trustee uses its carbon intensity metric, the carbon footprint, to quantify progress against the target. The carbon footprint for the DB and DC parts of the portfolio have reduced materially against its 2019 baseline, and the Trustee will continue to work to bring about further reductions, with the ambition of reaching the interim target.

Over the last few years two important points have become apparent to the Trustee. Firstly, that carbon footprints are volatile metrics, significantly impacted by year-on-year changes in variables including (among others) financial valuations, emissions, coverage, and portfolio weights. The Trustee seeks to attribute why the carbon footprints move as they do, but notes it is extremely challenging to do so accurately and in a meaningful way. Secondly, that while the original intention of this target was to promote and support real economy decarbonisation given its implications for the long-term value of the Scheme assets, this metric, as noted in the Trustee's interim targets, may not be as appropriate as initially assumed. The Trustee will continue to keep its reported metrics and interim targets under review, given real world context, to ensure they support its goal of driving real world decarbonisation and managing and mitigating the climate-related risks that the Scheme might face.

Progress against the Trustee's alignment and engagement targets is more challenging to quantify robustly at present. The section below outlines the Trustee's progress in measuring these.

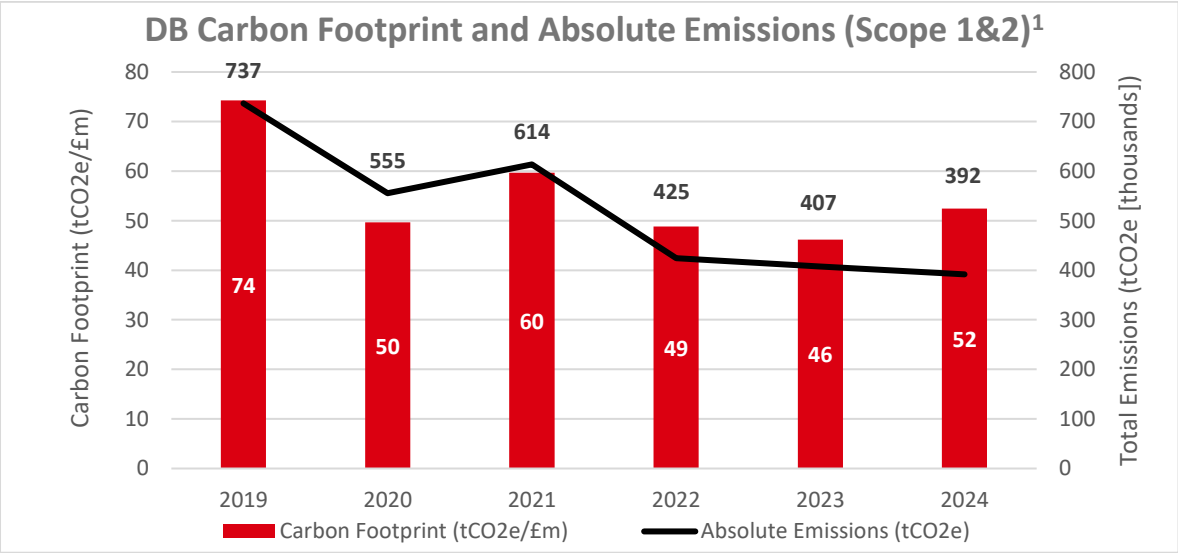
Progress towards the Trustee's 2030 decarbonisation target

The Trustee's 2030 decarbonisation target covers scope 1 and 2 financed emissions. Scope 3 emissions are not included in the target as the companies the Trustee invest in have less direct control over them compared to scope 1 and 2 emissions. As noted above, the decarbonisation target only includes public markets mandates including public equity and corporate bonds, and does not currently include private market assets such as the diversified private markets Long Term Asset Fund (LTAF), which was recently added to the default section. Given that the LTAF was funded with assets from the Scheme's main default investment strategy, which is a public markets mandate, this has resulted in a slight artificial reduction in the Scheme's carbon footprint as these newly invested assets are private market assets and therefore not included in the target. The illiquid and diverse nature of the asset make its inclusion within the target challenging; however, the Trustee will keep this under review and adjust in an appropriate way if possible in the future.

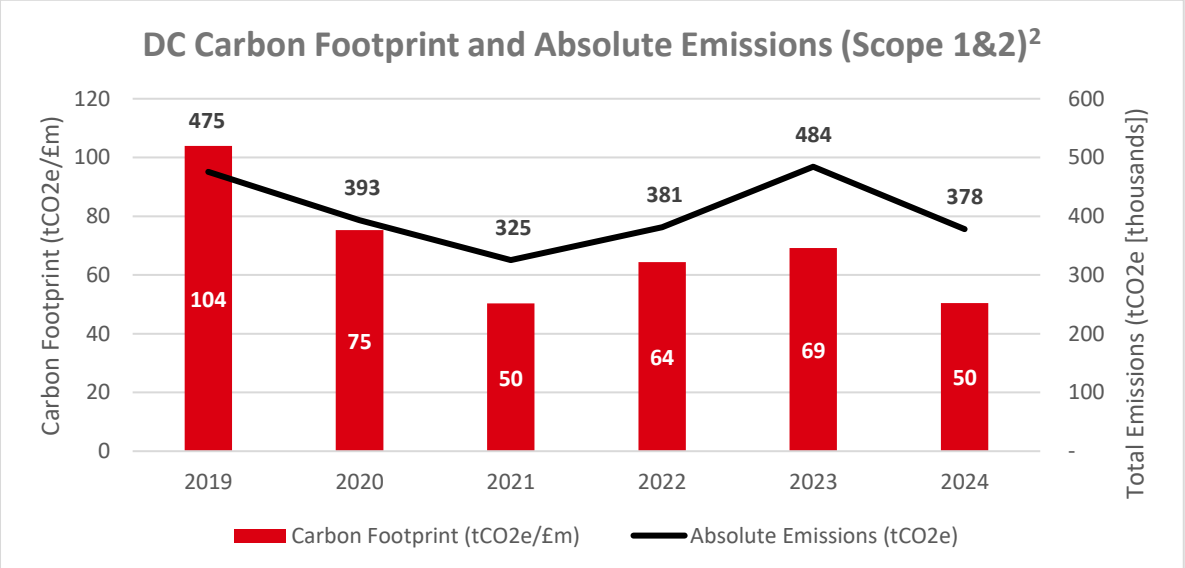
Decarbonisation target	The Trustee aims to achieve 50% greenhouse gases emissions reduction in the Scheme's listed equity and corporate bond funds by 2030 or sooner compared to a year-end 2019 baseline. This target covers scope 1 and 2 financed emissions, measured by carbon footprint (tCO2e/£m EVIC)

Progress to date	The carbon footprint has declined as compared to 2019: by 29% in the DB and 51% in the DC portfolios.
Steps the Trustee is taking to achieve its target	The Trustee uses two key levers to progress towards its decarbonisation target: • **Investing for a net zero future:** As described in the Risk Management section the Trustee makes asset allocation, fund selection and fund design decisions to increase its investment in climate solutions and assets that are aligned to a net zero future. • **Engaging for a net zero future:** The Trustee views engagement as its main lever of influence to help decarbonise the assets that it holds, including engagement with its asset managers, policymakers and the wider industry. The Trustee has clearly communicated its decarbonisation target to all asset managers and it expects its managers to align their investment decision-making with these goals. The Trustee's Stewardship framework helps the Trustee hold asset managers to account on climate-related engagements, outlining clear expectations and escalation measures.

The charts below show the Scheme's progress on its 2030 decarbonisation target, looking at the financed emissions of the DB and DC parts of the portfolio as at 31/12/2024 against the Trustee's 31/12/2019 baseline.



[1] Chart uses latest available EVIC data at the time of reporting. EVIC figures used may not align with the reporting year end due to lagged availability.



[2] *Chart uses latest available EVIC data at the time of reporting. EVIC figures used may not align with the reporting year end due to lagged availability.*

Both the DB and the DC portfolios have reduced their carbon footprint since the 2019 baseline. Having a 2019 baseline provides the Trustee with five data points and allows for a year-on-year comparison over time. These five datapoints show that there is significant year-on-year variation in the metrics, as set out in the chart above. This variation is largely driven by volatility in market valuations, changes in portfolio composition and improved coverage of underlying data – both for emissions and EVICs. The Trustee has reviewed the year-on-year changes and can broadly attribute these to the following:

- The carbon footprint of DB assets has declined by 29% compared to the baseline year of 2019, but has increased by 14% compared to 2023. The majority of the change seen since 2023 is a result of the average coverage increasing from 49% last year to 89% this year. This has significantly increased the carbon footprint of the three corporate bond funds, due to companies within the utilities sector now being covered and therefore brought into scope. The utilities bonds with the higher carbon footprint are those in the US with high emissions from power generation on a relatively carbon-intensive grid.
- The carbon footprint of DC assets in scope has declined by 51% compared to the baseline year, which exceeds the target set for 2030 at the current point in time. The primary driver of the decreased carbon footprint is an increase in financial values over the Scheme year (i.e., the underlying companies increased in market value). The Trustee is not able to attribute real-world decarbonisation to these results. Almost all of the funds have shown a decrease in carbon footprint, including the allocation with the largest absolute emissions – the Global Equities – passive fund. As this is the main DC default investment strategy, this is the fund with the largest absolute emissions due to the size of the investment rather than the intensity of the fund. The exception to this decrease in intensity is one of the Scheme's bond funds, whose carbon footprint has more than doubled since last year. The reason for this is partly due to an increase in coverage, from 23% last year to 76% this year. Additionally, there has been a change in sectoral composition of the fund over the last year, with an increased weighting to companies in the materials sector. Coverage for companies within the energy sector in the fund has also increased.

The Trustee is broadly encouraged to see the carbon footprint decreasing for both portfolios since 2019. However, when comparing the Scheme's progress to the real economy, where an equivalent reduction in absolute emissions has not been achieved, it is evident that further progress is required given the risk that climate change can pose to the long-term value of the Scheme's assets. Over 2025, the Trustee will continue to consider how the Scheme can move closer towards its real economy emissions target and support the global transition to a low carbon economy through implementation of an internal Climate Transition Plan, given the potential negative financial impact that climate change may have on the Scheme.

Progress for measurement of alignment and engagement target

Over 2024 the Trustee continued to assess its portfolio's alignment to the goals of the 2015 Paris Agreement using the TPI CP score as described above. To date, the Trustee has used alignment metrics in its fund-level climate dashboards and scorecards to assess the alignment of the Scheme's largest emitters on an issuer basis. While the coverage of this metric has improved materially compared to last year, the Trustee notes that the universe of assets for the measurement is limited to companies in the high impact sectors as defined by TPI. Companies outside of the TPI's universe are not included in the assessment which still includes companies in high impact sectors.

As such, the Trustee continues to evaluate the usefulness of this alignment metric and continues to engage with its asset managers around climate expectations and more specifically on the availability of alignment data. The Trustee continues to work with its investment advisors to explore the development of other alignment metrics and expects to report on the alignment of all assets in scope in the coming years.

Similar to alignment metrics, assessing indicators of quality of the Scheme's asset managers' engagement activities is also integrated into fund-level climate dashboard and scorecards. The Trustee's climate dashboards and scorecards identify each asset managers' level of engagement with the Scheme's top ten emitters, and this informs the discussions it has with the asset managers.

In 2024, the Trustee approved a first draft of its internal Climate Transition Plan, which aims to guide the Trustee's climate-related actions. Over 2025 the Trustee will use this plan to make further progress towards its climate targets and to appropriately manage and mitigate Scheme investment risks.

Appendices

Appendix A: Climate Scenario Analysis Additional Information and Limitations

DC Self-select funds in scope for reporting:

Fund	Assets as at 30 June 2024 (£'000)	% of total assets	LCP asset-class assumption category
Global Equities - passive	460,600	5.9	Global equities
Global Equities - active	456,676	5.8	
Shariah Law Equities - passive	183,948	2.4	
Sustainable & Responsible Equities - active	64,282	0.8	
North American Equities - passive	129,725	1.7	Overseas equities
Emerging Market Equities - active	86,145	1.1	Emerging market equities
UK Equities - active	90,450	1.2	UK equities
Diversified Assets - active	61,463	0.8	Diversified growth (active)
Cash - active	104,468	1.3	Money market cash

The climate scenario analysis modelling for the Scheme's DB and DC assets has been undertaken by Willis Towers Watson and Lane Clark & Peacock respectively. The following explains the general limitations of financial and climate modelling and gives greater detail from WTW and LCP about the limitations of elements of their respective processes used.

General limitations of financial modelling

- Models are relatively simplistic approximations of real-world behaviour that are not able to capture every possible real-life permutation. The use of any model of future economic and investment experience is subject to risks arising from the underlying uncertainties inherent in predicting the future.
- Risk models are only models, even if complex and/or powerful.
- The random variation in future inflation and investment returns over short or medium time periods may result in experience that is significantly different to the expected long-term average experience over much longer time periods. In short, circumstances that are (reasonably) assumed by a model to be very unlikely to occur may, nevertheless, occur.
- The conclusions of the modelling process will depend on the structure of the underlying model (particularly the relationships between different economic and investment indicators) and on the detailed parameterisation of the model, including the assumed path dependency of the interaction of modelled variables which influence the modelled results.
- The results of the modelling depend crucially on the methodology and assumptions used. Using different models or using different assumptions in the same model can give rise to very different results.
- The results of modelling should be regarded as illustrative. Limited weight should be put on the probabilities of different outcomes emerging calculated by the model.
- The model is best used to compare potential outcomes between scenarios.
- The modelling does not capture all dynamic changes to circumstances.

General limitations of climate modelling

- Material uncertainties in climate modelling are inevitable. For example, there is uncertainty about the physical changes in the climate that will emerge as a result of GHGs that have already been emitted (i.e., the locked-in effects of climate inertia) and how the climate will respond to future rises in GHG concentrations. There is also huge uncertainty about the future trajectory of GHG, the actions that will give rise to that trajectory, and the economic effects of those actions.

Willis Towers Watson – DB Analysis Limitations

- The purpose of the scenarios is to help UK pension fund trustees meet their regulatory requirements by assessing whether their investment and funding strategies are resilient to the impacts of climate change. They may not be suitable for any other purpose e.g. public policy making.
- The scenarios are designed for risk management and therefore make no allowance for upside events (e.g. material technological breakthroughs around clean energy) and focus on the most plausible downside events. The presence of

tipping points and feedback loops mean that materially worse outcomes could occur, particularly over longer time horizons.

- Scenarios are derived on the basis of all other things being equal, which is unlikely to be the case in practice. For example, the climate transition could lead to higher or lower levels of global inflation, growth or interest rates, which would in turn have material impacts on investment returns. These second order effects and feedback loops are hard to estimate with certainty.
- The impact of climate change on investment returns depends upon the extent to which actual outcomes are in line with market pricing. The market pricing of climate-related risk is almost impossible to observe and therefore broad-brush assumptions must be made around what is currently priced in and when and to what extent market pricing will move.
- The scenarios are based upon the latest climate science, which is a rapidly evolving and uncertain field. These uncertainties mean that there can be no guarantee that any given level of transition in the scenarios will result in the associated level of warming and physical risk assumed.
- A proxy investment portfolio based on current broad market indices is used in the climate model. This may not fully reflect the Scheme's investment approach or the actual portfolio composition over time, as both the Scheme's portfolio and the composition of market cap indices will evolve, most likely in the direction of reduced climate-related risk.
- Although the scenarios illustrate the potential variability in future mortality rates due to climate change, they are subjective, and arguments could be made for different outcomes. They represent beliefs which are intended to form the basis of a discussion and it is right that they should be challenged.
- Detailed analysis of the drivers of mortality indicates very little impact on the future path of UK longevity, with these impacts much more concentrated on other populations. However, the indirect effects of climate change and the transitional risks on economic, social and health factors would appear to be of sufficient consequence to have similar impact on improvements or deterioration in longevity to that seen in the past, supporting the belief that climate change represents a demographic risk to be managed by pension schemes and their sponsors.
- WTW has taken reasonable steps to satisfy itself that the data provided by third parties is of adequate quality for the purposes of the modelling, including carrying out basic tests to detect obvious inconsistencies. These checks have given WTW no reason to doubt the correctness of the information supplied. It is not possible, however, for WTW to confirm that the detailed information provided, including that in respect of individual members and the asset details, is correct.

<u>Lane Clark & Peacock – DC Analysis Limitations</u>

- The scenarios are intended to be plausible, not "worst case". Hence, they do not indicate the potential seriousness of tail risks.
- In aggregate, it is quite likely that Ortec Finance's modelling, which has been used to support this work, is biased to under-estimate the potential impacts of climate-related risks. This is typical of climate-economic modelling.

  LCP's modelling makes no allowance for:

  - Tail risks (the high impact but less likely outcomes).
  - Variations from median outcomes.
  - Impacts of migration and increased likelihood of armed conflict.
  - Impacts of food and other resource shortages.
  - Other (systemic) risks (e.g. new pandemics, financial market volatility, energy security) as these are beyond current modelling capabilities.
  - Tipping points are allowed for to some extent in the High Warming scenario, but they are not allowed for in the other scenarios.
  - These are key limitation of the modelling and can result in underestimating downside risk and the simplifications may mask some impacts that could be significantly better or worse. These risks are recognised as being particularly challenging to model and there are significant research gaps in these areas. LCP continues to monitor developments in modelling these closely.
- The scenarios are intended to be illustrative and do not reflect all possible risks. Moreover, as described elsewhere, LCP is using median values from Ortec Finance's stochastic modelling outputs. We consider three scenarios out of infinitely many that are possible. Alternatives include different long-term temperature outcomes, different combinations of policy/technological/behavioural actions to achieve similar long-term temperature outcomes to those we are modelling, and different financial market reactions to the same policy/technological/behavioural actions that we are modelling. Plausible scenarios we have not considered include:

- Disorderly transition where the disorder arises from delayed and/or uncoordinated policy action, unexpected technological breakthroughs, and/or a sudden shift in consumer sentiment (not just a disorderly financial market reaction).
- A 'worst of both worlds' scenario. For example, where policy action is too late to prevent severe physical risks but when eventually introduced it is rapid and disorderly causing significant additional transitional risks.

- Climate modelling is based on CO_2 emissions from energy use only. A climate sensitivity coefficient is used to implicitly include other GHGs (i.e. CO_2 emissions from agriculture or changes in land use and gases other than CO_2).
- The High Warming scenario allows for the modelled impacts of some tipping points (e.g. the irreversible loss of the Greenland ice sheet), informed by recent academic research. It is not known when tipping points would be hit and what impacts they would have. The actual physical impacts could be very different to what has been modelled. Tipping points are not modelled in the other scenarios.
- Some natural resource constraints (e.g. water) are not fully reflected in the modelling framework.
- The modelling of gradual physical risks does not explicitly include changing rainfall patterns (which will affect agriculture and food security). These are indirectly captured via increasing temperature and the impact of that on agricultural productivity, although this seems unlikely to fully capture the effects.
- The effect of climate change related migration and conflicts on GDP are only implicitly captured via the GDP damage function. Impacts on health, mortality and migration flows are not explicitly modelled.
- Food and other resource shortages which may lead to both lower GDP and higher inflation are only taken account of to a limited extent.

Limitations of the derivation of financial market impacts from economic impacts

- There is particular uncertainty about how climate change might affect interest rates and inflation. The modelling assumes inflation and interest rates fall broadly together in the climate scenarios, which means that the real interest rate does not change that much. Plausible narratives can be constructed in which interest rates fall but inflation is stable or rises.
- Ortec Finance model climate impacts on financial markets using the GDP and inflation impacts from Cambridge Econometrics' macro-econometric modelling and historically-observed relationships between these macro variables and the financial market parameters. GDP, inflation and sector Gross Value Added are the translation mechanisms from the macro econometric model to the stochastic financial scenario model. Other potential translation mechanisms are not modelled in the stochastic financial model explicitly but are embedded in the climate-informed macro variables (for instance, carbon-price impacts inflation in the Cambridge Econometrics modelling, and inflation impacts interest rates in the Ortec Finance stochastic financial model).
- There is a great deal of uncertainty in the timing of market responses to climate change. Ortec Finance's model assumes the biggest market movements under the Limited Action and High Warming scenarios occur after 2030, so DB schemes which wind up before then would avoid the worst impacts. However, the market movements could occur a lot earlier.
- Financial market volatility might increase as the physical and transition impacts of climate change unfold, particularly if this happens in an unpredictable manner. The modelling does not make any allowance for this, except in the Net Zero Financial Crisis during 2025 while pricing-in of climate-related risks takes place.

Adjustment of Ortec Finance scenarios by LCP

- Ortec Finance's view of financial markets is different in a number of ways to LCP's central estimate, including how climate change is allowed for in their base case. To allow the scenarios to be used alongside other LCP modelling in a meaningful way we have applied the difference between the Ortec Finance scenarios and their base case to LCP's base case at the relevant quarter end.
- Adjusting Ortec Finance's climate scenarios in this way can produce inconsistencies in the resulting scenarios. Interest rates, credit spreads, and consistency of fixed income returns are areas that are particularly at risk of this. However, we have assessed these risks and are comfortable that they do not make a material difference to the modelling output.
- There is significant uncertainty around the extent to which climate-related risks are already "priced-in" to financial markets, and so there is a risk that LCP's baseline asset return assumptions are overly optimistic or overly pessimistic about the level of risk already reflected.

Features not specifically modelled or only partly modelled

- No explicit allowance has been made in the climate shocks modelled for the comparative impacts on markets or climate policy for specific ongoing global conflicts.
- In the High Warming scenario, the only low carbon policies allowed for are those in force (based on the International Energy Agency's World Energy Outlook 2021 – Stated Policies Scenario (STEPS)), with some existing policies being scaled

back. For example, the US Inflation Reduction Act is not allowed for in the High Warming scenario, but it is in the Limited Action scenario.

Appendix B: Climate Impact Pledge exclusions and engagement

As part of the Climate Impact Pledge, LGIM will assess and rank companies according to a traffic light scoring system reflective of the climate-critical sector in which they operate. Companies identified as failing to meet LGIM's minimum expectations will be subject to direct engagement and encouraged to align their strategy with net zero and to build climate resilience. The consequence of a lack of subsequent action may include a vote against the re-election of the companies' board chair at the next annual general meeting using all the voting interests from their assets under management. When change is insufficient over time, LGIM may subsequently divest from that company. As of June 2024, LGIM have increased the number of companies subject to deep engagement to over 100 and excluded 16 companies from the Scheme's global equity exposure as an outcome of the manager's Climate Impact Pledge. 2 new companies – Glencore and TJX – have been excluded since 2023. The reason for the exclusion is reported alongside each company name below.

- Air China - no operational emissions reduction target is in place and the company has not made material progress since last year.
- American International Group Inc - material Scope 3 emissions data related to insurance has not been disclosed.
- China Construction Bank Corporation - no thermal coal policy in place and no disclosure of Scope 3 emissions associated with the company's financing activities.
- China Resources Cement - no operational GHG emissions reduction target is in place, and it does not fully meet expectations.
- COSCO Shipping Holdings – a medium-term operational emissions target is in place, but the level of ambition for this target appears to be insufficient. There is no commitment or target to increase the adoption of low-carbon fuels, which is key to sector decarbonisation.
- Exxon Mobil Corporation – there are gaps in climate-related disclosures and LGIM regard the company's interim operational targets as insufficiently robust to reach the ambition expected of a net-zero trajectory.
- Glencore - LGIM remain concerned that Glencore does not meet their red line asking mining companies to disclose whether they plan to increase thermal coal capacity. The decision to divest came after LGIM filed a shareholder resolution at Glencore last year requesting that the company disclose how its projected thermal coal production aligns with the Paris Agreement's objective to pursue efforts to limit the global temperature increase to 1.5°C.
- Hormel Foods Corporation – no net zero target in place, and lack of upstream Scope 3 emissions disclosure. Lack of disclosure on climate-lobbying activities and monitoring trade associations through engagement to be aligned with the Paris Agreement goals.
- Industrial and Commercial Bank of China (ICBC) - no thermal-coal policy in place and no disclosure of Scope 3 emissions associated with its financing activities.
- Invitation Homes Inc - there has been no disclosure of emissions from its property portfolio, or an emissions target covering the property portfolio's operational emissions.
- Korea Electric Power Corporation (KEPCO) – plans to use coal until 2050 which is misaligned with net-zero on a global basis.
- Loblaw Companies Ltd.- the company does not publicly disclose a comprehensive zero-deforestation policy covering all material commodities.
- MetLife, Inc. - no material Scope 3 emissions disclosure and no net-zero commitment for all of the company's underlying investments.
- PPL Corporation - plans to use coal until 2050 which is misaligned with net-zero on a global basis
- Sysco Corporation - no net-zero commitment in place and the company does not have a public comprehensive zero deforestation policy. Lack of disclosure on climate-lobbying activities and monitoring trade associations through engagement to be aligned with the Paris Agreement goals.
- TXJ - LGIM remain concerned that TJX does not have a zero deforestation policy in place and has not shown a clear intention to analyse its potential exposure to commodity-driven deforestation. TJX does not provide comprehensive disclosure of material Scope 3 emissions (particularly category 1: purchased goods and services). Its net-zero target and decarbonisation efforts are limited to reducing operational emissions, leaving value chain emissions unaddressed. Lack of disclosure on climate-lobbying activities and monitoring trade associations through engagement to be aligned with the Paris Agreement goals.

Source: LGIM, LGIMs Climate Impact Pledge 2024

Appendix C: Climate Metrics Analysis

Data sources:

- The absolute emissions and emissions intensity metrics have been calculated using line-by-line holdings data for the Scheme's Corporate Bonds, Equities, Diversified Funds and REITS Funds. The emissions data for these funds is from MSCI. Please see MSCI data disclosure below:
    - *This disclosure was developed using information from MSCI ESG Research LLC or its affiliates or information providers. Although HSBC Bank (UK) Pension Scheme's information providers, including without limitation, MSCI ESG Research LLC and its affiliates (the "ESG Parties"), obtain information (the "Information") from sources they consider reliable, none of the ESG Parties warrants or guarantees the originality, accuracy and/or completeness, of any data herein and expressly disclaim all express or implied warranties, including those of merchantability and fitness for a particular purpose. The Information may only be used for your internal use, may not be reproduced or re-disseminated in any form and may not be used as a basis for, or a component of, any financial instruments or products or indices. Some funds may be based on or linked to MSCI indexes, and MSCI may be compensated based on the fund's assets under management or other measures. MSCI has established an information barrier between index research and certain Information. Further, none of the Information can in and of itself be used to determine which securities to buy or sell or when to buy or sell them. None of the ESG Parties shall have any liability for any errors or omissions in connection with any data herein, or any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.*
- Latest available EVIC data was used to calculate the absolute emissions and emissions intensity metrics for the baseline year 2019 and for 2024. Due to data availability constraints, one year lagged EVIC figures were used for the calculations for interim years 2020, 2021 and 2022. Additionally, emissions data used by MSCI and provided by the asset managers is generally provided on at least a one-year lag, such that this report relies on emissions data from before the Scheme's year-end date of 31 December 2024.
- The emissions data for the Scheme's Property, Renewable Infrastructure, Private Equity, Infrastructure Debt, Asset-Backed Securities and Diversified Private Markets assets were calculated and provided by the Scheme's respective asset managers.
- Where required for conversions, the 31/12/2024 USD/GBP exchange rate of 0.798977 was used, sourced from MSCI.

Redington's calculation methodology using MSCI input data:

- Emissions metrics are calculated in line with the GHG Protocol Methodology, the global standard for companies and organisations to measure and manage their GHG emissions. The GHG Protocol provides accounting and reporting standards, sector guidance and calculation tools. It has created a comprehensive, global, standardised framework for measuring and managing emissions from private and public sector operations, value chains, products, cities, and policies to enable greenhouse gas reductions across the board.
- The ownership-based metrics have also been calculated using the guidance from the PCAF, which apportions emissions using ownership as determined by EVIC, rather than Market Value.

Sovereign emissions:

- The Trustee's advisor has calculated the reported emissions for sovereign bonds, which is based on guidance from PCAF and DWP and uses sovereign climate data sourced from MSCI to ensure consistent reporting across the Schemes' sovereign exposure. For the LDI portfolio, the advisor has used the gilt exposure provided by the PSE and emissions data from MSCI to calculate the emissions of the gilt component of the fund. Gilts posted as collateral by the Scheme are included in the gilt valuations and gilts received as collateral are excluded. The approach for sovereign emissions differs to the methodology for corporate emissions and as such these have been reported separately within this report. This methodology is detailed below.

Sources, assumptions and approach:

- Sovereign emissions coverage is available for 198 countries.
- PPP-adjusted GDP is used instead of EVIC. The advisor considers this an appropriate measure of the market capitalisation of a country as it provides a standardised means of measuring and comparing the economic output of different countries.
- The emissions buckets are as follows:
    - **Production emissions:** emissions produced within a country.
    - **Import/Export emissions**: emissions from the production of imported/exported goods.

- **Consumption emissions**: emissions from what a country consumes (production + import – export emissions).

- In line with the guidance from the Department for Work and Pensions, production (scope 1) and import (scope 2 and 3) emissions have been reported.

Asset-Backed Securities (ABS):

- Wellington Asset Management ("Wellington") provided the estimated figures for the Asset-Backed Securities fund, with data coverage of 51%.
    - RMBS (Residential Mortgage-Backed Securities):
        - Emissions are estimated using deal-level data: current balance, ZIP/state codes, property type, and Loan To Value (LTV).
        - Federal Housing Finance Agency (FHFA) data is used to estimate emissions at ZIP, state, or national levels.
        - For single-family rentals, ZIP or national averages are applied; for others, state averages and normalized square footage are used.
    - ABS Auto (Asset-Backed Securities – Auto).
        - Emissions are calculated using collateral data, LTV, EPA vehicle emissions, and FHA mileage data.
        - Portfolio emissions are derived by combining holdings with deal-level emissions.
        - Where data is missing, averages by vintage year and collateral type are used.
        - Auto rentals use rental fleet data and average emissions of vehicles from the past 4 years.
        - Emissions types include:
            - Direct: Tailpipe emissions.
            - Indirect: Electricity used for PHEVs/EVs.
            - Upstream: Fuel production/distribution emissions for ICE vehicles.
    - ABS Aircraft:
        - Emissions are estimated using averages of comparable aircraft models.
        - Portfolio ownership is calculated pro-rata from total deal emissions.

Diversified Private Markets:

- Fulcrum Asset Management ("Fulcrum") provided the estimated figures for the Diversified Private Markets Long-Term Asset Fund (LTAF) fund in the DC portfolio. This uses emissions data taken from the underlying managers. The coverage for Scope 1 and 2 WACI is 83%.
- Where Fulcrum have identified inconsistencies in emissions data, they have engaged with managers to better understand calculation methodologies and the reasons for inconsistencies and to provide them with guidance to improve data quality. For example, Fulcrum continue to work with managers to ensure WACI is provided using Scope 1 and 2 emissions for consistency.
- Fulcrum have taken the carbon emissions of their water rights manager and their cat bond manager as zero, due to the nature of the asset class i.e. these being contracts rather than underlying assets or holding.

Infrastructure Debt

- Vantage Infrastructure ("Vantage") provided the estimated figures for the Infrastructure Debt fund in the DB portfolio. This uses emissions reporting data taken directly from borrower reporting as at 31st December 2023 and the Scheme's investment amounts as at 31st December 2023. This is the latest available information. If emissions data is not reported, Vantage uses Clarity AI or peer set comparable to calculate estimates. Where Scope 3 emissions are not reported by an asset, Vantage has not calculated estimated values due to the complexity and variability between companies.
- Vantage seeks GHG emissions reporting from each of its investee companies on an annual basis. The response rate has improved year on year and, for 2023 emissions, 90% of the borrowers in the portfolio have reported vs 85% for 2022. Vantage encourages investee companies to validate their reported emissions but this still only occurs comparatively rarely.

Property

- Alpha Real Capital (Ground Rents)
    - Alpha Real Capital provided the estimated figures for the Scheme's Property funds in the DB portfolio.

- Fund emissions are assessed annually and the data provided corresponds to 2023 emissions, obtained in 2024 with the support of external consultants (CBRE).
- The reported metrics are based on proxy and actual data. In the case of proxy data, figures are provided by MSCI Real Estate Climate Value at Risk (VaR), and therefore is subject to MSCI's methodology limitations and assumptions.
- In the case of HSBC ILIF Holding, reported data corresponds to 73% of the fund and estimated equals 27%, on a floor area basis.
- In the case of the HSBC Direct Holding (Parkdean), emissions data were 100% reported data. The 'Estimated Scope 3 Carbon Footprint (tCO2e / EVIC £m)' was calculated with MSCI's Climate VaR assessment, as the ratio between: 'Estimated Scope 3 Carbon Emissions' of the portfolio for 2023 calendar year (193.80 tonnes) and the Capital Value of the portfolio as of Dec 2023 (date of MSCI Parkdean's report) converted to GBP (£73.29m). Exchange rate used was of 31 Dec 2024 (0.79).

- LaSalle Investment Management
  - LaSalle Investment Management provided the estimated figures for two of the Scheme's Property funds in the DB portfolio.
  - The reported emissions data relates to building-level energy consumption and is based on a combination of actual energy consumption (where available, but substantially increased from last year's submission) and estimated energy consumption, based on the property type, size and nature of the underlying occupiers. Estimates are provided by JLL Sustainability Services.
  - LaSalle did not provide a WACI for the two funds as this metric is inconsistent with commercial real estate metrics. LaSalle have aligned its carbon reporting metrics with the PLSA and until an appropriate and consistent methodology and calculation is available for Real Assets it does not provide a WACI figure on its funds.
- Colombia Threadneedle Investment
  - Colombia Threadneedle Investment provided the estimated figures for one of the Scheme's Property funds in the DC portfolio. Asset-level GHG emissions (i.e., whole building carbon emissions) include:
    - Scope 1 emissions
    - Scope 2 emissions
    - Scope 3 emissions for Category 13: Downstream Leased Assets (i.e., tenant data)
  - The above scope aligns with Task Force on Climate-Related Financial Disclosures for 'Implementing the Recommendations of the Task Force on Climate-Related Financial Disclosures' (October 2021); PCAF Technical Guidance for 'Accounting and reporting of GHG emissions from real estate operations; Technical Guidance for the Financial Industry' (March 2023) and The International Financial Reporting Standards (July 2023).
  - Assumptions and Approach:
    - Where there is only partial or no data available for any asset in the reporting period, 01 January 2024 to 31 December 2024, gaps in consumption data (for assets with less than 50% completeness) are filled on a pro-rata basis using existing data from a comparable historical period or using a representative benchmark if insufficient historical proxy data is available. Benchmarks are sourced from EVORA Global Ltd's proprietary dataset, allocated by asset class and country where available.
    - Where Gross Internal Area (GIA) is not reported for an asset, GIA is estimated using asset class-specific benchmarks based on a ratio of the net lettable area to GIA, aligned to those used by GRESB
  - **Carbon footprint:** Whole-building GHG emissions are attributed to investors based on an equity ownership approach, normalised by the portfolio value. Emissions are the absolute emissions associated with the portfolio, expressed in tonnes CO2e.
  - **WACI:** WACI is the exposure of the portfolio to carbon-intensive companies, expressed in tonnes of CO2e per million units of revenue in applicable currency.
- LGIM
  - LGIM provided the estimated figures for one of the Scheme's Property funds in the DC portfolio.
  - Carbon dioxide equivalent (CO2e) is a standard unit to compare the emissions of different greenhouse gases. The choice of this metric follows best practice recommendations from the Task Force on Climate-related Financial Disclosures.

- Data on carbon emissions is sourced from companies' operations and purchased energy.

Private Equity

- Pathway provided the estimated figures for the Scheme's Private Equity fund. This data relies on the Holdings-based Carbon Footprint Analysis as provided by MSCI and Burgiss. The carbon data includes both reported and estimated emissions for companies, covering approximately 66% of the market value of PPEF XIX.
- MSCI and Burgiss provide carbon estimates and other figures in alignment with PCAF standards.

Renewable Infrastructure

- Schroders GreenCoat provided the estimated figures for the Renewable Infrastructure fund. All emissions are estimated using a GHG Protocol approved methodology and calculated based on equity ownership of the assets. Scope 2 emissions are market based.
- All emissions figures are based on physical activity data related to the underlying assets, provided by asset managers of the respective Operations Managers of the assets.