Climate change report

A report for members by the Trustee of the Santander (UK) Group Pension Scheme

Year to 31 March 2024

"Sustainability has continued to be a key focus area for the Scheme throughout the year. We have held positive engagements with our advisors, suppliers and investment managers on a wide range of issues. As we deepen our approach to stewardship in our main investment portfolios, we have given special attention to climate, modern slavery and board diversity to monitor, understand and influence our investment managers engagements with investee companies. Our net zero commitment remains a priority and we continue to work on its implementation, our target to achieve a credit and listed equity portfolio in which 60% of the companies we are invested in have science based targets to align to the Paris Agreement by 2030, is on track with an increase from 29% in December 2022 to 31% in December 2023.

We have ensured we keep abreast with developments so our knowledge and understanding of emerging matters and practices is up to date to support our careful consideration of the impact of sustainability risks and opportunities in the scheme's holdings and the wider economy, the communities and the environment in which our investments depend and in which our members rely."

Amaya Mazaira
Chair of the Scheme's Sustainability Committee

Executive summary

This report describes the activities and approach taken by the Trustee to understand and reduce the risks to the Scheme related to climate change, and potentially take advantage of any opportunities as part of the transition to a lower carbon economy.

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

- Sustainability, including climate change, is a priority for us (the Trustee). This is because we believe that appropriate treatment of climate-related risks and opportunities for the Scheme's investments should improve outcomes for our members through better long-term returns and lower risk.

- We have therefore allocated significant time and resource to this topic. Our Sustainability Committee oversees development and implementation of the Scheme's climate-related practices and takes advice from a sustainability adviser with significant knowledge in this area to support us.

- We have identified a number of risks and opportunities to the Scheme arising from physical changes to the climate itself and from steps being taken to limit climate change. We are taking actions to best position the Scheme to reflect these factors. Due to derisking and restructuring in the Scheme's portfolios, there has been a gradual change to the Scheme's risk profile which is expected to reduce the exposure to climate risk.

- In our first report for the year ending 31 March 2022, we considered how such risks and opportunities might affect the funding strategy, investment strategy and the Bank's ability to provide financial support to the Scheme, by modelling the Scheme under different potential climate scenarios (noting the limitations of any modelling). Each year we will re-confirm whether a repeat of the analysis is needed. This year we did not update the analysis: there hadn't been material changes to the Scheme or modelling that we expected would impact the results. Overall, we continue to believe the Scheme is well positioned to be resilient to climate-related risks over the long term, but there might be some volatility in the funding position under certain scenarios in the short term. Moreover, in higher warming scenarios, there is likely to be significant economic disruption in the long-term to which no schemes would be immune. We expect to update this scenario analysis over the year ending 31 March 2025.

- With the help of our advisers and in-house team, we regularly assess our investment managers' sustainability practices including their ability to protect the Scheme's assets from climate change and we engage with them on any matters of concern. Over the Scheme year, we made changes to the structure of our corporate bond portfolios, and incorporated sustainability in the managers' revised guidelines. We also engaged regularly with the managers of the corporate bond portfolios regarding net zero.

- The Scheme's assets are invested in a well-diversified, risk-controlled investment strategy. Over the Scheme year, we continued our derisking plan as we moved towards our lower risk long-term strategy; this mainly involved the continued run-off of our illiquid assets and deciding to remove our largest real estate manager in the short to medium term. Over the coming years, we plan to reduce risk further as we move closer to our long-term portfolio. As part of this transition, we will look for ways to invest in assets which are better positioned to reflect the risks and opportunities associated with climate change. Our biggest focus is our **investment grade credit** investments, which are expected to remain strategically important for the Scheme in the long-term, and already reflect a significant portion of Scheme assets.

- During the year the Trustee received training on climate related factors, including sustainability in the insurance market and climate investment opportunities.

- Net Zero continued to be a focus over the last year. Two additional targets were set for the corporate bond portfolio to support the 2050 Net Zero Carbon Target set in 2022. The target that we set in 2021 (to increase the proportion of the Scheme's investment grade credit holdings that have targets aligned with the **Paris Agreement** goal of limiting global average temperature rises to well below 2°C and aiming for 1.5°C) is also supportive of the Trustee's Net Zero Carbon Target.

- We have collected emissions data on the Scheme's assets, including their **carbon footprint**, to help us understand and monitor climate-related risks and identify any data gaps. It is widely recognised that there remain shortcomings in the quality and completeness of the emissions data available for many assets. Our in-house team and sustainability adviser are liaising with our investment managers to improve the quality and coverage of reporting on climate data. Coverage improvement has been mixed for individual asset classes compared to last year. However, overall coverage has improved (scope 1+2 emissions data – reported or estimated – has risen from 71%* to 75%* over the year), largely because the allocation to government bonds, which has high coverage, has increased.

- The Trustee completed the second year of monitoring against its chosen TCFD target. The target aims to increase the percentage of the Scheme's investment grade credit holdings that have **science-based targets** for reducing emissions to 60% by 31 December 2030. As at 31 December 2023, 31% of the investment grade credit portfolio had science-based targets (compared to 19% at 31 December 2021 and 29% as at 31 December 2022).

Frank Oldham
Chair of Santander (UK) Group Pension Scheme Trustees Limited

* Mandates where emissions metrics are not applicable are excluded from these figures

Introduction

About the Santander (UK) Group Pension Scheme

The Scheme is a multi-employer scheme (with one principal employer, and one participating employer), with members from around the UK.

The Scheme is a Defined Benefit ("DB") scheme, with invested assets of c£8.3bn as at 31 March 2024 plus insurance policies valued at c£0.3bn as at 31 March 2024 which pay the benefits of a small proportion of retired members. The Scheme's overall asset allocation is summarised on page 22. As at 31 March 2024, the Scheme was 99% funded on a low-risk measure[1].

The Scheme has seven separate, actuarially segregated, defined benefit sections with a common governance and risk management framework. The sections all have similar characteristics in relation to assets, liabilities and funding, and are expected to converge further over the short term. Considering this, and given the results of the climate scenario analysis (see pages 10-14) showed that the aggregated Scheme funding position was resilient under each of the scenarios modelled, the Trustee determined that it would not be proportionate to repeat the analysis on a section-by-section basis.

Similarly, since each section has a similar asset allocation, it was not considered informative or proportionate to collect climate-related metrics at section level. Therefore, the analysis presented in this report has been carried out at the aggregated Scheme level rather than for individual sections.

The purpose and structure of this report

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

This report covers the TCFD's thematic areas of:

- **Governance** – the Scheme's governance around climate-related risks and opportunities.
- **Strategy** – the potential impacts of climate-related risks and opportunities on the Scheme and the resilience of the Scheme's investment strategy and funding strategy under different climate-related scenarios.
- **Risk Management** – the processes used by the Scheme to identify, assess, and manage climate-related risks.
- **Metrics and Targets** – the metrics and target used to assess and manage relevant climate-related risks and opportunities to the Scheme.

To aim to improve readability, whilst the main body of this report contains key comments, there are references to relevant Appendix pages from each Section, which you can read for more detailed information. In Appendix 1 we have included a glossary of relevant terms (which are in **bold** at first mention in this report), but below we also confirm some Santander-specific abbreviations used throughout this report.

- **Bank** = Santander UK plc, the principal sponsoring employer of the Scheme.
- **CIF** = Common Investment Fund – this is the entity via which most invested assets of the Scheme are held, including most assets of all underlying Scheme Sections. The CIF is set up as a Trust and therefore requires a Trustee to govern it (see below).
- **CFT** = Common Fund Trustee, the Trustee of the CIF (see above).
- **CPU** = Central Pensions Unit – this is a team which operates from the Bank, to support the Trustee in matters related to the governance and management of the Scheme.

[1] As measured on a gilts+0.5% pa basis

Governance

Management of climate-related risks and opportunities – roles and responsibilities

The Trustee of the Scheme has ultimate responsibility for ensuring effective governance of climate-related risks and opportunities in relation to the Scheme. Noting the importance of sustainability and the significant level of oversight required, not least in relation to the TCFD regulations, the Trustee also has a Sustainability Committee. The Trustee and Sustainability Committee are supported by various parties including the Scheme Secretary, CPU, CFT, investment managers and advisers, as listed in Appendix 2. No climate-related governance activities are undertaken by parties other than the Trustee and its sub-committees.

In September 2023, the Trustee reviewed and updated its Climate Governance Policy. The Policy clearly lays out the division of responsibilities between the parties noted above in order to maintain appropriate oversight of the climate-related risks and opportunities relevant to the Scheme. This ensures the Trustee can be confident that its statutory and fiduciary obligations are being met. The Policy was first agreed in September 2021.

The role of the Trustee

As the Trustee has ultimate responsibility for Scheme governance activities, its role is to review, discuss and confirm or amend any decisions and proposals that have been made by the Sustainability Committee. Apart from where related to implementing the Trustee's already-agreed sustainability objectives, all decisions are ratified by the Trustee.

The Trustee role also includes:

- Scheduling appropriate training into the business plan (with the help of the Scheme Secretary and CPU).
- Ensuring the climate governance arrangements remain appropriate and effective.
- Signing off the Trustee's investment beliefs, investment policies and risk register, including appropriate climate-related wording.
- Ensuring any advice from the Scheme's external advisers is requested and carried out appropriately.
- Working with the CFT to ensure the investment managers (accessed via the CIF) manage climate-related risks and opportunities appropriately, as well as making clear its priorities for engagement with investment managers.
- Commissioning scenario analysis from time to time that illustrates how the Scheme may be affected under different climate pathways.
- Communicating with Scheme members and other stakeholders on climate change where appropriate.

The role of the Sustainability Committee

The Sustainability Committee supports the Trustee in maintaining the Scheme's overall sustainability strategy by providing recommendations, implementing and monitoring these. It is a sub-committee of the Trustee. It oversees the Scheme's policies, regulatory obligations, priorities and membership of organisations and networks in respect of climate change and wider sustainability matters. The Sustainability Committee reports back to the Trustee as necessary and reviews sustainability-related disclosures in annual reports and other publicly available documents.

Additional training and education provided to the Sustainability Committee ensures there is suitable experience in relation to sustainability and climate risk, to allow the risks to be suitably considered, documented, and periodically reviewed.

The Sustainability Committee works closely with the Integrated Risk Management (IRM) Committee and the CPU, as well as liaising with the Bank and relevant advisers, to ensure sustainability risks are reflected throughout the Scheme's activities, managed and escalated to the Trustee as appropriate.

Risk identification and assessment is achieved by:

- monitoring sustainability trends, standards and requirements in the wider industry, including their impact on the Scheme;
- undertaking climate-related scenario analysis from time to time;
- reviewing **Environmental, Social and Governance (ESG)** and climate-related metrics for the Scheme's assets;
- monitoring activity (including stewardship activity) of the Scheme's investment managers; and
- liaising with the Bank on its sustainability risks, objectives and policies.

To ensure these actions are possible, the Sustainability Committee ensures appropriate resourcing and funding of sustainability-related activities; and maintains the Scheme's **Responsible Investment (RI)** Policy. Supporting this aim, Sustainability Committee meetings are attended by Committee members, representatives from the CPU, the Bank and relevant advisers.

The role of the CPU

The CPU's responsibilities in relation to climate change include undertaking management of the Scheme's advisers and engagement with investment managers, as well as assisting the Trustee in setting the Scheme's climate strategy which includes risk management and governance arrangements. Through these responsibilities, the CPU assists the Trustee with governance activities in relation to meeting its climate-related responsibilities.

The Trustee's climate-related investment beliefs and policies

The Trustee has agreed a range of climate-specific investment beliefs and policies. These are captured in broad terms in the Statement of Investment Principles, with further detail on beliefs and policies in the Investment Beliefs Document and Responsible Investment Policy

The Responsible Investment Policy and Statement of Investment Principles are available via the following link: https://mysantanderpension.co.uk/resources/documents/index.html.

Investment beliefs

The Trustee structures all investment beliefs into three levels of detail. The climate-specific level one (high level principles) and two (more detailed) beliefs were as follows during the Scheme year:

Level 1 belief	Level 2 belief
Appropriate treatment of climate-related risks and opportunities is likely to improve outcomes for members through enhanced long-term returns and mitigation of risks	• Climate risks will have an impact on the macroeconomic environment, impacting asset returns and funding assumptions • Climate risks and opportunities are not properly priced into markets currently • The climate transition that needs to occur may present opportunities to invest in attractively priced assets • The Trustee should take proactive action to support the Paris Agreement goals • It is the Trustee's responsibility to ensure management of the Scheme's assets appropriately reflects climate risks and opportunities, even though the detailed implementation is delegated to investment managers

The level three beliefs are more specific beliefs that are used by the Trustee to inform investment decisions.

The Trustee updated its investment beliefs in June 2023, although there were no substantive changes to the climate change beliefs, and no changes to the level one and two beliefs.

Responsible Investment Policy

The Scheme's Responsible Investment Policy expands on the Scheme's approach to ESG factors and the responsibilities associated with holding investments in the members' and beneficiaries' best interests through the full suite of stewardship activities. This document was updated in September 2023 to reflect two additional targets the Trustee agreed during 2023 for the corporate bond portfolio and to include the Scheme's escalation policy (which sets out what the Trustee would do if its investment managers do not address any concerns satisfactorily). More generally the Policy contains details of the Trustee's approach to monitoring investments and investment managers on a range of factors, including managing the situation where alignment between an investment manager and the Trustee's investment beliefs is missing. It also covers the types of investments to be considered, including social impact investments.

Ensuring adequate oversight of climate-related risks and opportunities

The Trustee believes that the dedicated Sustainability Committee, along with the advice of a sustainability adviser with significant knowledge in this area, ensures a structure that allows significant dedication to climate matters, and sufficient discussion and challenge on information provided. The Sustainability Committee met quarterly during the year and its Chair updated the Trustee on the Committees' activities at each Board meeting.

Typically, the Sustainability Committee receives advice or recommendations from the sustainability adviser which is discussed at a Sustainability Committee meeting. The Sustainability Committee typically debates the advice and challenges the adviser where appropriate, to ensure the advice is fully understood and a range of options considered. Once an agreement has been reached, any decisions are proposed to the full Board for approval.

Ensuring appropriate adviser arrangements
Appendix 2 details the advisers that were in place during the Scheme year, along with the advisers' responsibilities, as set out in the Climate Governance Policy.

Where relevant, the Trustee plans to incorporate climate-specific considerations into existing advisers' formal objectives, alongside ESG-wide objectives that may include climate change, when contracts with advisers are next reviewed. In addition, when appointing new advisers, the Trustee ensures the adviser has suitable climate credentials.

The Trustee and the Sustainability Committee satisfy themselves that their advisers take adequate steps to identify and assess climate-related risks and opportunities which are relevant to the matters on which they advise by:

- setting clearly defined responsibilities and expectations in respect of climate change;
- documenting their responsibilities, where relevant, in agreements such as investment consultants' strategic objectives and advisers' service agreements;
- ensuring they have adequate expertise and resources, including time and staff, to carry these out; and
- ensuring they are adequately prioritising climate-related risk.

The Scheme's sustainability adviser has been set specific climate-related objectives, in the areas of identifying, assessing and managing sustainability-related risks and opportunities for the Scheme; compliance with relevant regulatory requirements; disclosures and member communications; governance; engagement with the Bank; and the Trustee's ESG framework and manager monitoring.

The CFT and its external investment adviser have also been set a formal objective to provide data and analysis on credit and equity managers for use in the ESG monitoring framework.

The CPU reviews all advisers against objectives set on an annual basis. The Trustee has clear processes for assessing the competency of the advisers, including (but not limited to) reviewing the advisers against the climate objectives and explicitly considering climate change in the annual review. The last review of the sustainability adviser took place in December 2023, with a positive outcome: the sustainability adviser scored green for ten out of eleven criteria, and amber for the eleventh. Steps are being taken to address this amber score. The latest review of all other advisers also took place in December 2023.

The sustainability adviser provided a detailed document outlining its climate competency against each of the indicators of the Investment Consultants Sustainability Working Group's Climate Competency Framework. The covenant adviser provided a document with information about its competency for each of the five themes in the Framework. The Sustainability Committee reviewed both documents and was satisfied that both advisers had suitable climate-related experience and resources for their roles.

Oversight activities and processes

The Trustee and relevant committees ensure adequate oversight of climate-related risks and opportunities, as set out in the Climate Governance Policy, by incorporating various activities into the Trustee's annual business plan. A summary of items reviewed by the Trustee, including their frequency, is set out below.

At quarterly Trustee Board meetings
- An update on the Scheme's risk register, which incorporates climate-related risks and opportunities, following review by its sub-committees and advisers including considering emerging risks not currently included in the risk register.
- An update on the metrics in the Scheme's Key Risk Indicators document, following review by its advisers. This document currently includes one climate-related metric.
- An update from the Sustainability Committee on progress made in relation to the Scheme's management of sustainability and climate risks, including a summary of related decisions required by the Trustee. Additionally, an update on engagement activities, focusing on the Trustee's chosen stewardship priorities.

At least annually (within Trustee Board meetings)
- Updates on the Scheme's investments, including data on sustainability and climate-related metrics and progress against agreed targets.
- Whether to retain or replace any targets set in relation to these metrics
- Reporting from the IRM Committee on the Scheme's investment managers in relation to sustainability factors and climate change, with support from the investment advisers (the CFT undertakes an annual review of its investment managers, including a review against climate-related objectives where they have been set).

- Whether it is appropriate to carry out updated scenario analysis that illustrates how the Scheme's assets and liabilities might be affected under various climate change scenarios.
- The advisers' climate competency, including how they have performed against their climate responsibilities.
- The service providers' actions to limit the potential impact of the **physical risks** of climate change on their ability to support the Trustee.
- Trustee Board effectiveness, including its climate-related skills and experience, and identifying what training is likely to be required over the coming year (to be incorporated into the relevant business plan).
- Climate-related training sessions, including an annual update on recent developments, with interim training on any time-critical developments and in support of specific meeting agenda items. Key individuals from the CPU are invited to attend such sessions, as well as being provided a budget to ensure sufficient knowledge across that team. The Bank also provides sustainability training, to which the CPU has access.

Training undertaken by the Trustee during each Scheme year is documented in the Trustee's training log.

Other regular items

Climate-related factors are considered as part of:

- Review of the investment strategy – as required, but at least every three years in conjunction with the actuarial valuation.
- Assessment of the Bank's covenant – deep dive review every three years in conjunction with the actuarial valuation, but monitoring produced every six months. This monitoring now incorporates climate factors.

Specific activities undertaken

During the Scheme year to 31 March 2024, the Trustee and Sustainability Committee sought to deepen their understanding of climate change, enhance the Scheme's management of climate-related risks and opportunities, and satisfy its regulatory obligations.

The Trustee and the Sustainability Committee continued to focus on achieving their 2050 Net Zero Carbon target set in June 2022. During the year the Trustee agreed two further interim targets to complement its existing target for 60% of investment grade credit holdings to have science-based emissions reduction targets by 31 December 2030. These additional targets also apply to the Scheme's investment grade credit mandates and relate to:

- reduction in Scope 1+2 emissions intensity by 2030; and
- percentage of Scope 1+2 emissions that relate to issuers which are Net Zero, aligned to Net Zero or the subject of engagement by the manager.

The Trustee and the Sustainability Committee received training over the period, including updates on climate change progress and action (including reports from the UN Environment Programme, the Intergovernmental Panel on Climate Change and the Skidmore review of the UK government's net zero plans), opportunities to invest in climate solutions (including their relevance to the Scheme) and key regulatory developments (including those that may directly or indirectly impact the Scheme). They also had training on how insurers approach sustainability and reviewed the responsible investment credentials of the Scheme's insurer, including its Net Zero approach.

Much of the detailed work on climate matters through the year was undertaken by the Sustainability Committee, by design. The Sustainability Committee met four times during the Scheme year covered by this report, with key items centred around the TCFD themes in this report. For example meetings focussed on steps being taken in relation to the Scheme's Net Zero commitment, the corporate bond managers' stewardship on climate change, and the impact of climate risks on the covenant. Metrics and targets for this report were agreed in March 2024.

Strategy

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

Timeframes for assessing climate-related risks and opportunities

The Trustee has considered climate-related risks and opportunities over various time periods which it believes are most relevant to the Scheme.

The Trustee selected short term, medium-term and long-term time horizons, over which to formally consider the impact of climate-related risks and opportunities. These are outlined in the table below, along with the Trustee's rationale.

	Time horizons	Rationale
Short term	~2 years (2026)	This period broadly aligns with the timeframe that the Trustee has set to achieve a lower-risk investment strategy
Medium term	~7 years (2031)	This is a key period over which policy action will determine if Paris Agreement goals are likely to be met
Long term	~17 years (2041)	This period is broadly in-line with the average time period for paying members' benefits

Understanding what climate-related risks and opportunities are relevant to the Scheme

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

The Trustee has identified various specific climate-related risks and opportunities which could impact the Scheme's financial position, and monitors these regularly through a climate monitoring section in the risk register, which covers investment, funding and covenant. The Trustee considers the likelihood and impact of these risks and opportunities over the short, medium and long-term time horizons outlined above. Some examples of these are outlined below.

Factors that impact…	in the short term.	in the medium term.	in the long term.
Investments	Investment market shocks due to the pricing-in of climate effects (transition and/or physical). This is of particular concern in the short term whilst the Scheme transitions to a lower risk portfolio, as the initial position is exposed to a higher level of investment risk generally. The Scheme is less exposed as at 31 March 2024 compared to 31 March 2023 due to the de-risking that has taken place during the Scheme year.	Investment market shocks due to the pricing-in of climate effects (transition and/or physical). The Trustee has identified an opportunity to improve resilience of the credit portfolios in conjunction with the de-risking process, by engaging with the investment managers to look to decrease the proportion of these portfolios that are exposed to companies which are likely to be most negatively affected by climate risks, and to increase the proportion exposed to those companies seeking to benefit.	Lower real investment returns, particularly over the longer term due to physical impacts of a changing climate. While the Scheme expects to be fully funded, with little exposure to growth assets, when the main effects of this risk are felt, this could become a concern if the Scheme needs to re-risk at some point (for example, if it does not achieve the returns it needs over the short term). However, there could be an opportunity to invest in assets that may benefit from a transition to a low carbon economy to improve returns, if required, particularly from asset classes such as property/infrastructure and private credit.
Funding	Potential shocks to interest rates and inflation could have a positive or negative impact on the Scheme's funding position. However, the Trustee has taken steps to immunise the Scheme from changes in these factors by increasing the level of protection. Therefore, the impact of changes in interest rates and inflation on the Scheme's position is expected to be small.	Climate impacts on investment markets and regulatory requirements could affect the cost of options to secure members' benefits with an insurance company. This could therefore impact on the Scheme's long-term funding target, to the extent it is informed by insurer pricing.	Potential demographic impacts on the Scheme's liability cashflows. Direct and indirect impacts on life expectancy could be either positive or negative. Direct impacts include the effects of milder winters and hotter summers, as well as healthcare disruption caused by extreme weather events. Indirect impacts could include improved air quality due to lower fossil fuel use and reduced spending on healthcare if economic growth is lower.
Covenant	The Bank's customers' creditworthiness could be weakened, for example by flooding negatively impacting its mortgage portfolio, worsening a homeowner's ability to repay loans at the same time as the property value is damaged. The Bank faces market risk to the value of the investments it makes, just as the value of the Scheme's investments may be affected as investment markets price-in climate effects (transition and/or physical). Changing sentiment on climate issues may lead to reputational risks depending on the Bank's climate policies and its exposure to high carbon emission industries. The Bank has an opportunity via development of products and services that promote a reduction in **carbon emissions** to help its customers with the transition to a low carbon economy, such as: green mortgages, sustainability-linked loans, and renewable energy/energy efficiency project financing.		

Assessing the importance of climate-related risks and opportunities to the Scheme

The Trustee uses various tools to assess the potential impact and likelihood of the risks and opportunities it has identified, as described in more detail on page 18-19.

The next sub-section explains how scenario analysis has been used to assess how climate-related risks and opportunities might impact the Scheme's investment and funding strategy. The following sub-section considers the potential impacts of climate change on the Bank's ability to provide financial support for the Scheme if needed, based on the covenant assessment. This high-level analysis is complemented by more granular assessment of risks to the Scheme's investment portfolios using climate-related metrics (pages 19-25).

The later section on risk management (pages 15-19) outlines the steps the Trustee is taking to help mitigate climate-related risks and take advantage of opportunities.

Climate scenario analysis

Scenario analysis is a tool for examining and evaluating different ways in which the future may unfold. At its September 2021 and March 2022 Board meetings, the Trustee used scenario analysis to consider how climate change might affect the funding strategy, investment strategy and the Bank's covenant. In November 2023, the Trustee considered whether any update was needed to the analysis this year, as required by regulation. It was concluded that the scenario analysis would not be conducted this year, as there had been no material changes to the Scheme's circumstances or to the modelling available that would be expected to lead to a materially different outcome. The Trustee will update the analysis in the year ending 31 March 2025, as required by the regulations (updated analysis must be reviewed at least every three years).

Details of the climate scenarios the Trustee has used in its most recent scenario analysis

When considering the possible impact of climate change on the Scheme's expected funding position, the Trustee sought to consider, via asset and liability modelling, the impact of three scenarios on the Scheme. The Trustee chose these scenarios (developed by Ortec Finance and Cambridge Econometrics), after consultation with its sustainability adviser, for the following reasons:

Transition	Description	Why the Trustee chose it
Failed Transition	Paris Agreement goals not met; only existing climate policies are implemented	To explore what could happen to the Scheme's funding position if carbon emissions continue at current levels and this results in significant physical risks from changes in the global climate that disrupt economic activity.
Paris Orderly	Paris Agreement goals met; rapid and effective climate action, with smooth market reaction	To see how the Scheme's finances could play out if the Paris Agreement goals are achieved, meaning that the economy makes a material shift towards low carbon by 2030.
Paris Disorderly	Same policy, climate and emissions outcomes as the Paris Orderly Transition, but financial markets are initially slow to react and then over-react	To look at the risks and opportunities for the Scheme if the Paris Agreement goals are met, but financial markets are volatile as they adjust to a low carbon economy.

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

The scenarios' key features are summarised in the following table. The three climate scenarios chosen are intended to be plausible narratives of how the future could unfold. The Trustee acknowledges that many alternative plausible scenarios exist and that other scenarios could indicate better or worse outcomes for the Scheme.

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

Scenarios:	Failed Transition	Paris Orderly Transition	Paris Disorderly Transition
Low carbon policies	Continuation of current low carbon policies and technology trends (eg significant falls in renewable energy prices)	Ambitious low carbon policies, high investment in low-carbon technologies and substitution away from fossil fuels to cleaner energy sources and biofuel	
Paris Agreement outcome	Paris Agreement goals not met	Paris Agreement goals met	
Global warming	Average global warming is about 2°C by 2050 and 4°C by 2100, compared to pre-industrial levels	Average global warming stabilises at around 1.6°C above pre-industrial levels	
Physical impacts	Severe physical impacts	Moderate physical impacts	
Impact on GDP	Global GDP is significantly lower than the climate-uninformed scenario in 2100. For example, UK GDP in 2100 predicted to be 55% lower than in the climate uninformed scenario.	Global GDP is lower than the climate-uninformed scenario in 2100. For example, UK GDP in 2100 predicted to be about 10% lower than in the climate-uninformed scenario.	In the long term, global GDP is slightly worse than in the Paris Orderly scenario due to sentiment shock.
Financial market impacts	Physical risks priced in over the period 2025-2030. A second repricing occurs in the period 2035-2040 as investors factor in the severe physical risks	Transition and physical risks priced in smoothly over the period of 2021-2025	Abrupt repricing of assets and a sentiment shock to the financial system in 2025

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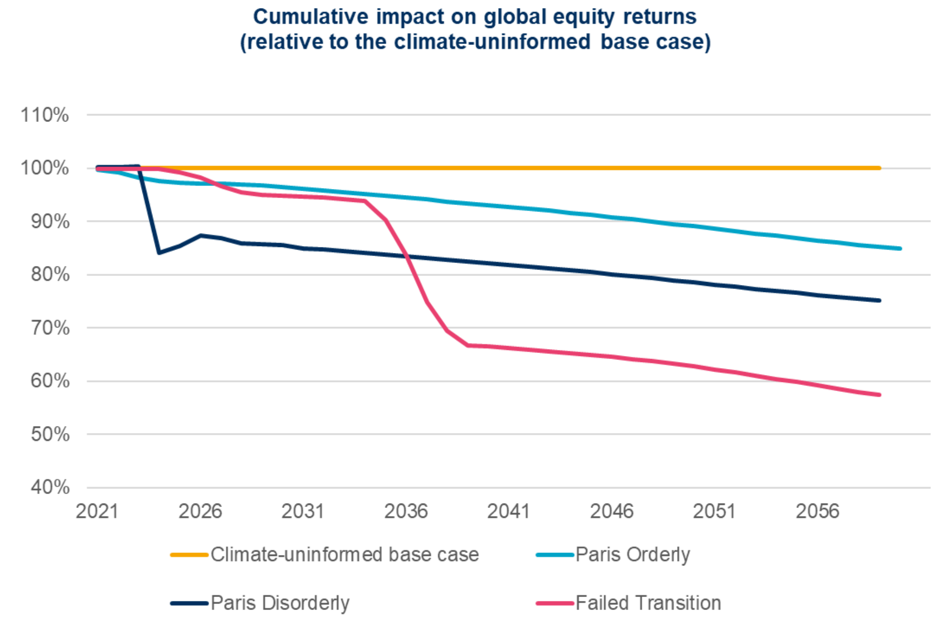
Source: Ortec Finance. Figures quoted are medians.

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



Source: Ortec Finance. Impacts shown are medians, based on financial conditions as at 31 December 2020.

Over the long-term, and particularly beyond the time horizon modelled, the largest effects would be felt under the Failed transition scenario. On the face of it, the results below suggest that the Scheme is fairly resilient in this scenario. This is partly because in the modelling the Scheme is assumed to reach its low-risk long-term investment strategy by 2026, after which it has no exposure to growth assets such as equities which are expected to be most severely affected by climate change. Moreover, the Scheme invests in a way that is designed to make it fairly immune to changes in interest rates and inflation in normal circumstances, which significantly reduces the volatility of its funding position. However, under climate scenarios with major economic disruption – such as the later years of the Failed transition scenario – the Scheme's interest rate and inflation protection may break down, leaving it more exposed to climate risks. The median modelled outcomes do not illustrate this possibility.

If the impacts of climate risks in practice are more severe than has been modelled, this could have implications for the Scheme's expected journey plan and potentially require additional contributions from the Bank. Therefore, when considering the impact that climate risks could have on the Scheme's funding strategy, the Trustee also considers the potential impact on the Bank and how these risks could interact.

Results from the Trustee's assessment of climate scenarios on the Scheme's investment and funding strategy

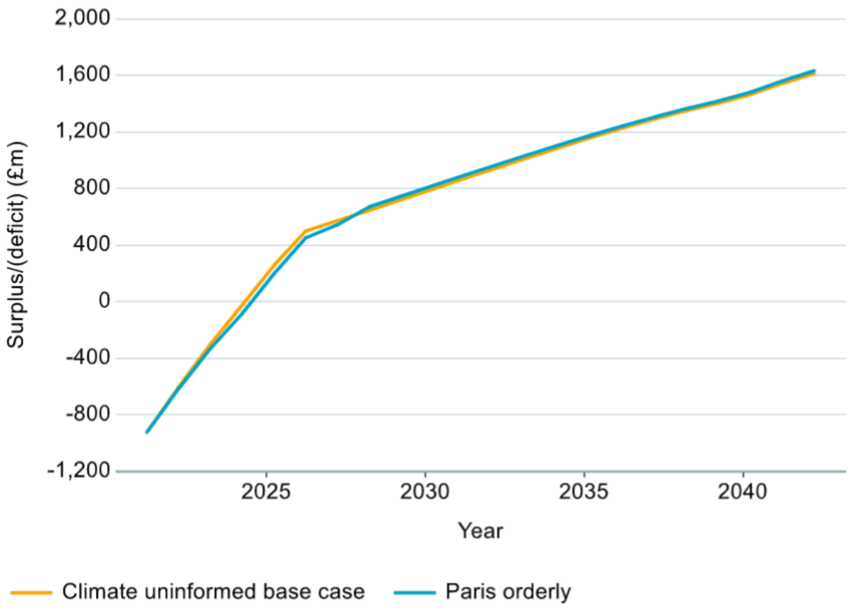
The charts below show the potential impact on the progression of the Scheme's funding position over time under each of the scenarios outlined above, relative to the climate uninformed base case. The effective date of the analysis is 31 March 2021. The Scheme's funding position reflects the gap between the value placed on the Scheme's assets and the value placed on its liabilities over time. To calculate the funding position at each point, the impact of each climate scenario has been applied to the assets and liabilities separately, before the two figures are compared.

The investment strategy modelled assumes the asset allocation held at the effective date of analysis was gradually de-risked to a lower risk asset allocation by 2026, consistent with the Trustee's long-term objective. Some of this de-risking, particularly the removal of the listed equity assets, has now taken place. This brings forward progress towards the long-term target portfolio.

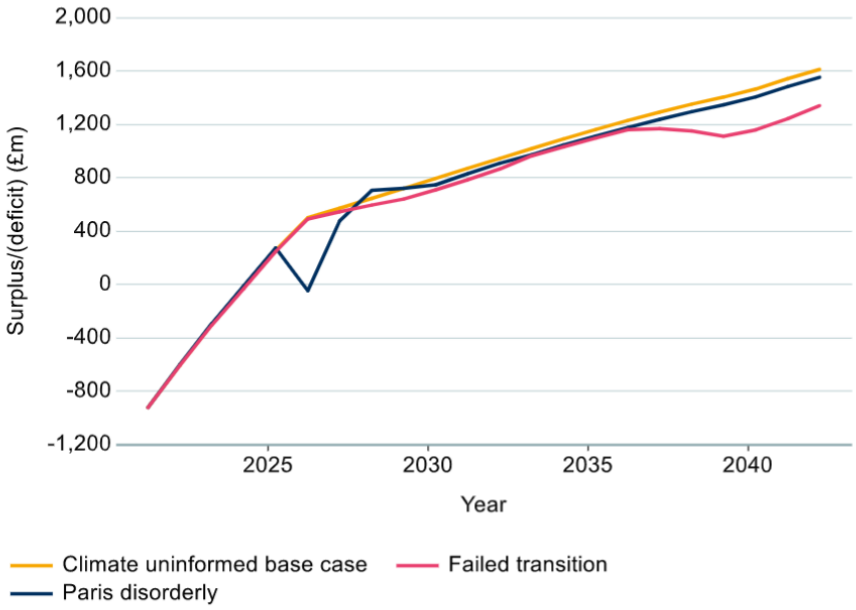
For the purpose of this analysis, the Trustee used a funding measure of **gilts** +0.5% pa which is consistent with the long-term discount rate underlying the Technical Provisions.

Note that the modelling assumes no further de-risking of the investment strategy after 2026, and therefore the charts show the Scheme's surplus growing in perpetuity after this date. In practice, once the Scheme has achieved full funding on the low-risk measure, it is likely the Trustee would pursue further de-risking or look to buy out the Scheme's liabilities with an insurer (albeit there currently is no specific plan to secure more liabilities via insurance solutions in the future).

Projection of funding position under Paris orderly scenario (assuming no further investment de-risking)



Projection of funding position under Paris disorderly and Failed transition scenario (assuming no further investment de-risking



Deficit on gilts + 0.5% pa basis as at effective date of analysis: £900m
Deficit on gilts + 0.5% pa basis as at 31 March 2024: £124m

Results from the Trustee's climate scenario analysis

The climate scenario analysis shows that the Scheme is expected to be relatively resilient to climate shocks under the scenarios modelled, consistent with achieving a strong position on a low-risk measure[2] within the "short" time horizon identified, in line with the Trustee's long-term objectives. This is supported by the risk-controlled and diversified investment strategy the Scheme is running today, with plans to reduce risk further in the short term, mitigating the potential impact of climate risk over the longer-term.

The Trustee observed the following points on its climate scenario analysis:

- Under all scenarios modelled, the liabilities are generally expected to increase over the short-to-medium term relative to the base case. This is largely due to assumed higher inflation, due to higher carbon prices and an increase in government investment. Over the longer term, liabilities are expected to fall under all scenarios relative to the base case, as the impacts of climate change reduce global productivity and cause a fall in inflation.
- As the Scheme hedges a high level of the interest rate and inflation movements in the liabilities, the change in the total value of assets under each scenario generally moves broadly in line with the liabilities. So, over the short-to-medium term, total Scheme assets are expected to increase but then decrease over the longer term relative to the base case. This means the net impact on the Scheme's funding position from changes in interest rates and inflation is mostly quite small.
- The two most significant impacts on the Scheme's funding level relate to the short-term volatility in the mid-2020s under the Paris disorderly scenario and over the longer term under the Failed transition scenario. In both instances, the assets fall in value by more than the liabilities, with the main impact originating from the Scheme's allocation to investment grade credit, as credit spreads are expected to widen during these periods causing a fall in the value of credit assets.
- In the short term, the Scheme is also exposed to climate-related shocks due to the high-risk assets held such as equities and hedge funds, although these risks are mitigated by the portfolios' relatively low allocations to climate-sensitive sectors such as energy, utilities and materials.
- The modelling assumed that the Scheme's exposure to these high-risk assets would reduce as the Scheme de-risks further over the period to 2026, so the resilience of the Scheme to climate risks would increase in the medium term and before the assumed timing of the Paris disorderly volatility. In practice, some of this risk has already been removed due to the recent reduction in equity exposure.

[2] As measured on a gilts+0.5% pa basis

- Therefore, as the Scheme continues to move towards a lower risk investment strategy, the main risks to the Scheme's assets are expected to arise from its investment grade credit holdings and, to a lesser extent, any remaining allocation to property and private credit assets.

In summary, the key scenario which could potentially hinder the Trustee's objectives to achieve full funding on a low-risk measure in the agreed timeframe is a Paris disorderly scenario. The analysis shows the funding position could initially worsen under this scenario, albeit it is expected to recover from the initial shock in later years.

The Trustee recognises that there are many reasons why the outcome might differ from those modelled. In November 2023, the Sustainability Committee again considered the limitations of this type of analysis. In particular, it considered the importance of model risk, that is the risk of the model not capturing the full extent of the risks that may arise, either economically or physically. In particular, climate-financial models cannot currently capture the full scale of possible outcomes, meaning significantly different results are possible. However, there is a consistent conclusion that climate change, and the actions taken that seek to prevent it, will have a material impact on economies and asset values. The Sustainability Committee considered a range of actions the Trustee could take to help mitigate key risks, including the importance of considering physical risks and policy advocacy, noting that governments would play a key role in addressing climate change.

Following on from this, in March 2024, the Sustainability Committee discussed the importance of systemic stewardship, whereby investors use their influence at a systems level to address systemic risks (risks that could cause the collapse of the entire financial system or market, and cannot be diversified away). This would include engaging with policy makers and regulators, with the objective of addressing systemic risks such as climate change that have the potential to materially harm financial outcomes.

Further information on the assumptions used as part of the climate scenario analysis and the limitations of this analysis can be found in Appendix 3.

The Trustee's analysis of sponsor covenant

The Scheme is relatively well-funded and so, in the normal course of events, is not expected to have much reliance on the Bank for financial support in the medium- to long-term. However, climate-related shocks could trigger the need for additional support. It is therefore important to understand how the Bank could be affected by climate change and, in particular, its ability to support the Scheme in climate scenarios where additional funding is required. To assist with this, in September 2021, the Trustee's covenant adviser analysed the potential impact of the above scenarios on the Bank's covenant.

That assessment concluded that the main impacts to the strength of sponsor covenant would be felt under a failed transition scenario, and the impacts were likely to be more material over the long term. By comparison, it is expected that there would be a smaller impact under both the Paris orderly and disorderly scenarios, and over the long term the impact of both of these scenarios would be similar. However, it is expected that there could be greater volatility during the short term under a disorderly transition.

Overall, the modelling and qualitative consideration of climate-related risks and opportunities gave comfort that the Bank was not particularly climate-exposed, given that the majority of its UK loan book is mortgages. It was acknowledged that the potential range of outcomes, and uncertainty surrounding them, increases the importance of the Trustee achieving the low-risk investment portfolio as quickly as possible.

Since the initial assessment, the Trustee's regular reporting from its covenant adviser has incorporated some information about climate risks and opportunities. These have not changed the conclusions reached above.

In March 2024, the Sustainability Committee received an update directly from the Bank in relation to its management of climate change risk. This presentation included consideration of climate stress tests over a 5-year time horizon and the Bank's plans for further analysis, which included extending the model to cover a 30-year time horizon. There was also discussion around the Bank's plans to reduce its scope 3 emissions through its lending policies and client outreach. The Sustainability Committee asked a number of questions to help them understand the Bank's approach to reducing climate risks and achieving Net Zero.

Following discussion with its covenant adviser, it was agreed that the Trustee will consider covenant in more detail following the conclusion of the Bank's further analysis (due in September 2024). The Trustee had no immediate concerns and agreed that there was no need for further action until then.

Risk management

Risk management processes

The Trustee has established various processes to identify, assess and manage climate-related risks and opportunities in relation to the Scheme, and has taken steps to integrate these within the overall risk management of the Scheme. Some of the key measures in place are outlined below.

- Various responsibilities have been agreed to ensure the identification and assessment of climate-related risks and opportunities, as outlined in the Climate Governance Policy (see pages 4-7). These responsibilities are confirmed within the Trustee's business plan, to ensure they are covered appropriately during each Scheme year.

- The Sustainability Committee considers the exposure to climate risks within its listed credit portfolios on a biannual basis using selected climate-related metrics, reporting any concerns to the Trustee. It reviews climate-related metrics for its other assets annually, to support its consideration of the climate exposures for those assets.

- The Trustee, supported by relevant sub-committees, reviews its risk register on a quarterly basis. This includes explicit consideration of climate risks, alongside other risks relevant to the Scheme. The Trustee has also built climate-related metrics into its Key Risk Indicator reporting.

- The Trustee, IRM Committee and the CPU regularly monitor managers' sustainability practices, supported by responsible investment assessments from the Trustee's investment advisers, and engages with them on any matters of concern. In September 2023, the IRM Committee met with several of the Scheme's managers. It asked questions regarding the management of sustainability risks and climate change. This led to further engagement, in particular in March 2024, when the Sustainability Committee received presentations from one of the investment grade credit managers on its stewardship practices, including discussion of how it is assessing the underlying companies' management of their climate-related risk exposures.

- In November 2023, the Trustee had training on the sustainability approach of insurers that provide **bulk annuities** to pension schemes. The Sustainability Committee discussed the Scheme's insurer in more detail in March 2024, including a responsible investment assessment by the sustainability adviser.

- The Trustee's covenant adviser provides covenant monitoring which includes some climate risk reporting. The adviser aims to extend this over time as information availability improves. An initial assessment of the climate exposures of the Bank was conducted in September 2021. In 2022, the Bank carried out climate stress tests on the likely impacts to its balance sheet from climate transition scenarios and presented the results to the Sustainability Committee in March 2023. It provided an update on its climate modelling and risk management to the Sustainability Committee in March 2024.

The Trustee's Responsible Investment Policy reflects the actions being taken to manage climate-related risks. This Policy can be found online via this link: https://mysantanderpension.co.uk/resources/documents/index.html.

The role of stewardship in managing climate-related risks and opportunities

The Trustee is continually evolving its stewardship approach, including how it monitors the stewardship activities undertaken on its behalf by investment managers and how it engages with investment managers to encourage improvements in their practices. These improvements might relate to stewardship, climate risk management or other aspects of investment.

The Trustee has identified climate risk as one of its priorities for stewardship. In May 2023, the Sustainability Committee reviewed the engagement policies and an overview of recent stewardship activities for its two investment grade credit managers and its largest real estate manager. The Committee noted that the managers' engagement approaches for climate risk were more developed than for its other two stewardship priorities. However, only one of the three managers was able to provide data on the proportion of its engagements over 2022 that related to climate change (it was around 40% of all engagements relevant to the Scheme's holdings) and none could report on the outcomes of their engagement. These were identified as possible areas for follow-up discussions with the managers.

In addition, as part of its quarterly stewardship monitoring, the Trustee asked its two investment grade credit managers to provide examples of their engagement on climate risk in relation to the Scheme's holdings over the 12 months to January 2024. The following table summarises one climate engagement for each manager. The Sustainability

Committee discussed these in March 2024. It asked CPU to put specific questions to the managers related to the examples given and report back at the next Committee meeting.

	Manager 1 – energy utility company	Manager 2– energy company
Rationale	Manager 1 has regular engagements with the company and provided significant input when the company first developed its sustainability-linked bond (SLB) framework. Unforeseen circumstances were driving up the company's carbon emissions – (1) weather, including drought reducing hydroelectric generation and (2) to a lower extent, energy shock from the Russia-Ukraine conflict. Hence, there was a possibility that the company would miss the target for its inaugural SLB. Being a flagship issuer of SLBs, this could have spread scepticism on the instrument in the market and potentially impacted the company's bond spreads.	The company is a Climate Action 100+ (CA100+) focus company for which the manager co-leads engagement. Manager 2 believes the company has a critical role to play in supporting the electric utilities sector in getting on a net-zero trajectory to meet the goals of the Paris Agreement. It is also a company that Manager 2 directly engages with via its own climate engagement programme. Manager 2's 'red lines' for the electric utilities sector are as follows: • Does the company have a target for phasing out unabated coal by 2030 in advanced economies, and 2040 globally? • Does the company have a target to reduce its material scope 3 emissions? • Does the company disclose its climate-related lobbying activities, including trade association memberships, and explain the action it will take if these are not aligned with a 1.5°C scenario?
What was done	Manager 1 has ongoing engagement on the company's climate strategy implementation as well as progress on Key Performance Indicators linked to its SLBs. In early 2023, the manager discussed the latest trends of the company's targets and the possibility for it to miss the target for its SLB, resulting in a step-up in coupon. The manager recommended that the company include scope 3 and EU taxonomy-aligned capex (ie expenditure eligible and aligned with EU sustainability regulation) in its SLB framework. The manager also encouraged the company to attribute drivers for its carbon emissions compared to target, minimising reputational risks of the potential step-up.	Manager 2 has been engaging with the company since 2021, and has also been leading CA100+ engagements with the company. Manager 2's areas of focus in its meetings and dialogue with the company have included disclosures that meet its requirements on climate for the sector, Manager 2's expectations for Say on Climate votes, indicators of the CA100+ Benchmark, **SBTi** verification, and the question of carbon neutrality versus net zero. Manager 2 has also discussed the the impact of a controlled exit from Russian assets against the backdrop of the war against Ukraine. Transparency around the company's climate lobbying activities has also been a topic of discussion, and Manager 2 has very much welcomed the company's leading position on the subject with the publication of its Climate Lobbying Review in December 2021, and its updates to the 2021 Climate Lobbying Review in December 2022 and December 2023. Under its climate engagement programme, Manager 2 requires companies to have a target for phasing out unabated coal by 2030 in advanced economies, and by 2040 globally. It was pleased to note that the company had committed to exit coal by 2027 and generate carbon-free electricity in Europe by 2035. Manager 2 meets with the company on a regular basis but has not yet escalated its climate engagement into voting sanctions against the company. Levels of individual typically engaged with include the Head of Sustainability and the Head of Investor Relations. Manager 2 continues to engage with the company to better understand its updated strategy after its exit from Russia and also exactly how it will meet its interim and 2050 emissions reduction targets, as well as the details of its strategy to phase out coal across its European operations. Manager 2 will continue to lead collaborative engagements with the company under the umbrella of the CA100+, and to encourage the company to meet its minimum expectations as set out under Manager 2's climate engagement programme. Manager 2 has continued to meet with the company in 2023 and to hold in-depth discussions, both in collaborative engagements with them under the umbrella of the CA100+, and individually as part of its climate engagement programme. Topics of focus have included publishing a transition plan, SBTi verification, and the question of carbon neutrality versus net zero.
Outcomes / next steps	The company updated its SLB framework in February 2023, including the additional targets on Scope 3 and taxonomy-aligned capex. However, the framework now includes a step-down mechanism, which Manager 1 engaged with to ask for inclusion of an earlier trigger date for future SLB. Manager 1 is also following up on recent human rights controversies and implications for Global Norms compliance.	Manager 2 was pleased to note that the company had committed to carbon-free electricity in Europe by 2035. Manager 2 believes the levels of disclosure and transparency it (and its peers in the CA100+) are encouraging companies to publish should better enable investors and the market to assess risks and opportunities related to the climate transition and price these more accurately. Appropriate pricing of climate-related risks and opportunities in the market can also be an important incentive for change.

The Trustee has agreed an escalation process for managers that are not meeting the Trustee's requirements, although has not yet needed to use it.

In addition, as noted above, in March 2024, one of the Scheme's investment grade credit managers also presented to the Sustainability Committee specifically on its stewardship activities in order to discuss this in more depth than was possible when it presented at the IRM Committee meeting in September 2023. The Committee concluded that the manager had demonstrated that it had a sophisticated approach to engagement.

The Implementation Statement for the year to 31 March 2024 contains more information about the Trustee's stewardship processes and stewardship activity during the Scheme year. The Implementation Statement can be found online via this link: https://mysantanderpension.co.uk/resources/documents/index.html.

Tools used to identify and assess risks and opportunities

The Trustee has sought to identify and assess climate-related risks and opportunities facing the Scheme arising from both the physical impacts of climate change and the transition to a low carbon economy. It has used the following main tools to help it: climate scenario analysis; assessment of sponsor covenant; discussions with the Bank; climate-related metrics; and investment manager oversight.

- **Climate scenario analysis** was used to understand the macroeconomic impact of different climate scenarios on the Scheme's finances (see the climate scenario section on pages 10-14 for further details).

- **Assessment of sponsor covenant** has been used to identify the potential impact of both physical and transition risks from climate change on the financial strength of the Bank, including under the three chosen climate scenarios. The covenant adviser also integrates climate considerations into its broader assessment of the Bank's strength, putting climate risks into context of other covenant risks the Scheme is exposed to.

- The Trustee's sustainability adviser provides reporting for the Scheme's portfolios containing various **climate-related metrics**, as outlined above, which help illustrate the current exposure to certain climate transition risks.

- The Trustee, with the help of the CPU, its Committees and advisers, **assesses and monitors its investment managers** to ensure they are adequately managing risks to the Scheme's assets, including those relating to the physical and transition risks from climate change. This includes the following steps:

  - Assessing the responsible investment practices of prospective managers during the manager selection process.

  - Regular monitoring of the managers' responsible investment practices with the aid of the investment advisers' assessments.

  - Assessing the stewardship practices of the Scheme's key managers through its stewardship monitoring process, which identifies questions with which to engage with the managers.

  - Regularly reviewing the extent to which the Scheme's investment grade credit investment managers are aligned with the Trustee's 2050 Net Zero Carbon Target and actions being taken to improve alignment.

The Trustee also undertakes training, as outlined on page 7, to maintain and deepen its understanding of climate-related risks and opportunities, and hence support its identification and assessment of those faced by the Scheme.

How the assessment of climate-related risks fits into the wider risk management picture

The Scheme's risk register includes an assessment of climate-related risks and opportunities, including the likelihood and impact of ten key climate factors over the Trustee's short, medium and long-term time horizons. The Trustee has put in place various controls to help mitigate these risks. Inclusion within the risk register helps the Trustee to put climate risk into the context of other risks being run, and to prioritise those risks which pose the most significant potential for loss and are most likely to occur.

Overall, the Trustee believes the measures it has put in place are sufficiently robust to reduce the risk of the climate factors it has identified materially impacting the Scheme's financial position. Its gross risk score, which assesses the inherent risk from climate change prior to implementing operating controls, is currently 20 out of a maximum of 25 reflecting the very high likelihood of risks to a large proportion of the Scheme's assets. Its residual risk score, after allowing for the operating controls, is 6 out of 25. These scores did not change during the year. The main key risk identified which could still materially impact the Scheme's position is the long-term effects of climate change on market returns, which are increasingly uncertain over the long term, and are significantly dependent on which climate pathway materialises.

How the Trustee manages the key risks and opportunities identified

The Trustee has in place a number of measures to help manage climate-related risks and opportunities. Some examples of these are outlined below:

- The Scheme invests in a well-diversified investment strategy to help reduce exposure to risk generally, which also reduces the exposure to climate risks impacting any individual asset class. In addition, the Trustee continued to undertake de-risking steps during the latest Scheme year and has further plans to further de-risk the Scheme's investment strategy over the short term. During the Scheme year the main derisking comprised of continued run-off from the Scheme's illiquid assets; and the decision to redeem from the largest real estate manager in the short to medium term. The Trustee views growth assets as likely to be most impacted by climate risks and so de-risking generally also reduces this risk.

- The Trustee has a policy to protect against a high proportion of the interest and inflation risks that could impact the value of the Scheme's liabilities. Therefore, any potential impacts on interest rates and inflation from climate change (and indeed from other factors) are significantly mitigated.

- In June 2022, the Trustee made a commitment to achieve Net Zero greenhouse gas emissions across the Scheme's investments by 2050 or sooner. Consistent with the Net Zero Investment Framework developed by the Paris Aligned Investment Initiative (PAII), the key areas of focus for the Trustee are: the setting of targets, including suitable interim targets; stewardship; and a forward-looking action plan. The Sustainability Committee has identified investment grade credit as the Scheme's priority asset class, since it is expected to remain key in the Scheme's long-term investment strategy. The Trustee has engaged extensively with the investment managers managing the Scheme's investment grade credit portfolios about aligning their assets with Net Zero pathways, as well as developing approaches to measuring and monitoring progress on a granular basis. Discussions with the investment managers are ongoing and updates are received regularly from managers and the sustainability adviser.

- The portfolios identified as having the most exposure to climate risks and opportunities over the long term are the Scheme's investment grade credit holdings. The Trustee is exploring ways to make these investments more resilient to climate risks and take advantage of opportunities where possible in conjunction with its project on working towards Net Zero alignment (see above). During the Scheme year, these portfolios were restructured from active credit to buy & maintain mandates to better serve the Scheme's investment needs. When implementing the restructuring, consideration was given was to the integration of ESG and sustainability factors, and meeting the Scheme's climate-related targets. The resulting investment management agreements reflect differences in the managers' ESG approaches, but one or both of them include requirements relating to:

    - Increasing the proportion of issuers with science-based targets;
    - Improving the portfolio's weighted average Temperature Alignment scores;
    - Reducing the portfolio's greenhouse gas emissions compared to reference benchmarks and over time;
    - Allocating a specified proportion of the portfolio to ESG labelled bonds;
    - Aligning with United Nations Sustainable Development Goals; and
    - Providing reporting to the Trustee on ESG related matters.

- As outlined above, the Trustee with the help of its advisers regularly engages with its investment managers on climate-related risks and opportunities. The Trustee encourages managers to improve their climate practices where possible. In mid-2023, the CPU corresponded with two of the Scheme's investment advisers about their approach to climate risk and shared the responses with the Sustainability Committee. This included a review of the climate risk exposure of the Scheme's private equity and infrastructure mandates.

- To help manage the impact of changes to members' life expectancy, the Trustee has:

  - entered into a 'longevity **swap**', which works in a similar way to an insurance contract, and aims to protect the Scheme against the risk that the members covered by the longevity swap live longer than expected; and
  - purchased insurance contracts (bulk annuity policies) which also protect against the risk that some members live longer than expected, by paying all benefit payments required for the covered group of members to the Scheme.

  Whilst these contracts were not entered into on the grounds of mitigating climate risk, nonetheless they help protect the Scheme from potential impacts of climate change on member life expectancy.

- The CPU discusses the Scheme's actuarial adviser's approach to climate change, including the use of climate scenario analysis, with the adviser from time to time. The most recent conversation was in November 2023 and covered how climate change is reflected in the adviser's advice to the Trustee, including for the 2022 actuarial valuation, and confirmed that this is similar to the approach it is taking with other large schemes. The outcome of the call was reported to the next Sustainability Committee meeting. Subsequently, CPU clarified how the investment adviser incorporates climate change in its expected return assumptions, since this informs the actuarial valuation assumptions.

Metrics and targets

The Trustee's choice of metrics

The Trustee has selected the following climate-related metrics to help it monitor climate-related risks to the Scheme:

Metric	Detail
Total greenhouse gas emissions[1]	This measures a portfolio's **absolute emissions**. It represents the Scheme's share of its portfolio companies' emissions if emissions are split between equity and debt investors in proportion to the value of their investment in the company.
Carbon footprint	This is an **emissions intensity** metric*,* expressed as emissions per million pounds (£m) invested. It is equal to total greenhouse gas emissions divided by the value of the portfolio. As the metric adjusts for the value of the portfolio, it allows emissions exposure of different portfolios to be compared.
Science-based targets	This is a **portfolio alignment** metric, which measures the extent to which the Scheme's investments are aligned to the Paris Agreement goal of limiting global average temperature rises to 1.5°C. It is calculated as the proportion of companies with ***science-based targets*** to reduce their greenhouse gas emissions, such as ones validated by the SBTi[2]. The Trustee chose this "binary target" measure because it is the simplest and most robust of the various portfolio alignment metrics available.
Data quality	This is an **additional climate change** metric, which states the proportion of the portfolio for which greenhouse gas emissions data is reported, estimated or unavailable. "Reported" emissions are reported by the emitting entity whereas "estimated" emissions are estimated by a third party and so are generally considered to be of lower quality. This approach was chosen because it is in line with the statutory guidance.

[1] More information about greenhouse gas emissions is provided in Appendix 4, including their classification into Scopes 1, 2 and 3.
[2] Science-Based Targets initiative (see Glossary in Appendix 1).

The Trustee chose to report these metrics as they are ones recommended in the DWP's statutory guidance. To help it form a broader view of climate-related risks and opportunities, the Trustee also monitors information on the Scheme's exposure to fossil fuel companies and climate-related revenues for the investment grade credit portfolios, since better quality data is available for this asset class and they comprise a large, and growing, proportion of the Scheme's non-**LDI** assets.

The metrics for the Scheme's assets

The Trustee asked its sustainability adviser to calculate metrics for its government bond and investment grade credit holdings, which ensured high data coverage and a consistent approach. The data was sourced from public databases for government bonds and MSCI, a leading provider of climate-related data for investors, for investment grade credit. For the other mandates, metrics were requested from the investment managers if the value of assets comprised more than around 0.5% of the total value of Scheme assets, which the Trustee considered to be a proportionate approach. For the largest mandate for which the manager was unable to provide emissions data, the Trustee identified and used proxy data to estimate the emissions.

The metrics obtained by late March 2024 are shown on page 22, based on the assets held at 31 December 2023 except where otherwise stated. The figures in brackets are corresponding figures from the previous report.

The coloured figures in the data quality columns relate to the proportion of the portfolio for which metrics are unavailable, with green indicating good data coverage and red indicating poor data coverage. The arrows in the table indicate where the values of metrics have increased or decreased compared to last year's report, green for an improvement and red for a deterioration. Where data has been disclosed for the first time this year, a green arrow is shown for the data quality metric. Where the metric has stayed the same based on new data, this is noted with an amber equals sign. Where it has stayed the same due to being the same data, this is noted with an amber dash.

More detailed comments on the metrics shown are provided in Appendix 5, including information about the methodology used, any estimations made and reasons for missing data.

Conclusions from assessment of climate metrics

The Trustee uses the metrics collected in its identification and assessment of climate-related risks and opportunities to the Scheme. This more granular assessment complements the macro-level climate scenario analysis described on pages 10-14, enabling the Trustee to focus its climate risk management on the areas of the portfolio which are expected to be most exposed to climate change.

The Trustee considered the metrics collected for each of the asset classes in the portfolio (detailed on p22), with the following highlights:

- **LDI and government bonds:** this is a large component of the Scheme's matching portfolio for investment risk management purposes and will be held long-term. Emissions appear high (although slightly lower than last year), but this is expected given the large allocation and the way emissions metrics are calculated for government bonds. Although required as part of the disclosure, the Trustee recognises that emissions are not a good indication of climate risk for these portfolios, and that government climate policies are more relevant for assessing their long-term climate risk exposure.
- **Bulk annuity contracts:** although a small component of Scheme assets, the Trustee may wish to undertake further transactions in the future. The Trustee notes that the metrics required for disclosure are not good reflections of the climate risk exposure of the bulk annuity assets, rather the risk lies in scenarios that could affect the insurer's solvency. Therefore, the insurer's financial strength and climate practices are more relevant. The insurer has a goal to be Net Zero by 2040 with interim targets also set, which the Trustee views positively. The Sustainability Committee reviewed the sustainability practices of the insurer during the year and agreed to keep them under review.
- **Investment grade credit:** this is likely to be the Scheme's main source of climate risk in the medium term as it is the largest part of the long term de-risked portfolio. While the Scope 1+2 carbon footprint remains unchanged, the Scope 3 carbon footprint has increased. The proportion of assets with an SBT has improved since last year, suggesting a reduction in risk exposure, although this improvement was less than the improvement seen last year. Total emissions have increased due to the increase in allocation to this asset class. The metrics compare favourably to a global corporate bond reference index, suggesting a below average exposure to climate risk. The Trustee will continue to liaise with its investment grade credit managers to support further improvements over time and help achieve its 2050 Net Zero Carbon Target.
- **Real estate:** this is currently a fairly high proportion of assets but expected to decrease over the coming years as the larger mandate is being sold down. Real estate has quite high climate risk exposure, due to the risk of damage from physical risks such as flooding and the costs of retrofitting properties to improve their energy efficiency, although this is not captured in the metrics reported below. The carbon footprint is low, as is typical for the asset class, although emissions coverage remains quite low and has worsened slightly since last year. The larger manager has committed to Net Zero by 2050 as a firm and has been investigating the cost of actions to align projected emissions for each property with Net Zero pathways. This will give the Trustee a better feel for the potential to reduce risk in this area. No data is available for the other manager.

- **Infrastructure:** this can be a high emitting asset class with high exposure to physical and transition risks, but also provides considerable opportunity in relation to the low carbon transition. Both managers' metrics have worsened since last year, with a notable increase in Scope 1+2 carbon footprint, although it is unclear whether this represents a genuine increase in climate risk exposure. As this asset class is not expected to form a significant part of the Scheme's long-term investment strategy, it has not been prioritised for further investigation at this stage.
- **Private equity:** this is currently a fairly high proportion of assets but expected to decrease over the coming years. The emissions for the largest manager have been estimated using sector proxies, as noted above. The actual emissions could be considerably different from the estimates; the Trustee has therefore not drawn firm conclusions from the information received. No information is available on the companies' emission reduction plans.
- **Non-conventional credit:** this does not form part of the long-term portfolio and the assets are in run off, meaning the climate exposure from this asset class is only short term for the Scheme. Data remains a challenge, with large lags or large gaps in information provided.

The analysis informed the Trustee's decision to prioritise managing climate risks and opportunities for investment grade credit, given its significance in the long-term portfolio. In particular, this asset class is the focus of the Trustee's Net Zero project plan.

The Trustee notes that, in some instances, changes to the metrics over the year could result from wider strategic changes to the Scheme's assets, rather than a change in how the underlying assets are managed. For example, total greenhouse gas emissions for the investment grade credit portfolio have increased over the period, as the allocation to this asset class has increased due to the move towards a lower risk long-term portfolio for the Scheme. For this asset class, the Trustee is comfortable that progress is being made, as evidenced by the increase in proportion of issuers with a science-based target over the period.

Portfolio [1]	£m as at 31 Dec 2022	£m as at 31 Dec 2023	% of total DB assets as at 31 Dec 2023	£m exposure at date of portfolio holdings [2]	Total greenhouse gas emissions (tCO_2e) [3]		Carbon footprint (tCO_2e per £m invested) [3]		% of emissions data in £m which is: reported / estimated / unavailable (arrows refer to unavailable data)		% science-based targets	Date of portfolio holdings
					Scope 1 + 2	Scope 3	Scope 1 + 2	Scope 3	Scope 1 + 2	Scope 3		
Matching portfolio, investment grade credit and bulk annuity	**4,588**	**5,696**	**64.3%**									
Government bonds, including gilts and swaps within Liability Driven Investment (LDI) [4]	2,334	3,094	34.9%	4,445 *(3,703)*	603,000 *(647,000)* ▼	377,000 *(388,000)* ▼	136 *(176)* ▼	85 *(105)* ▼	100 / 0 / 0 *(100 / 0 / 0)* =	100 / 0 / 0 *(100 / 0 / 0)* =	100% *(99%)* ▲	31/12/2023 *(31/12/2022)*
Bulk annuity - listed equities and corporate bonds [5]				96 *(142)*	5,610 *(8,370)* ▼		67 *(72)* ▼		87 / 13 *(82 / 18)* ▼			31/12/2023 *(31/12/2022)*
Bulk annuity - government bonds [5]	291	292	3.3%	41 *(32)*	8,570 *(6,900)* ▲		212 *(216)* ▼		99 / 1 *(100 / 0)* ▲			31/12/2023 *(31/12/2022)*
Bulk annuity - other assets [5]				155 *(117)*	4,220		34		80 / 20 *(0 / 100)* ▼			31/12/2023 *(31/12/2022)*
Investment grade credit [6]	1,963	2,310	26.1%	2,310 *(1,963)*	75,200 *(67,200)* ▲	539,000 *(368,000)* ▲	52 *(52)* =	376 *(287)* ▲	56 / 6 / 38 *(58 / 8 / 34)* ▲	0 / 62 / 38 *(0 / 66 / 34)* ▲	31%[9] *(29%)* ▲	31/12/2023 *(31/12/2022)*
Real assets	**1,622**	**1,490**	**16.8%**									
Real Estate [7]	1,196	1,082	12.2%	1,082 *(1,196)*	527 *(699)* ▼	6,350 *(5,880)* ▲	3 *(4)* ▼	9 *(7)* ▲	15 / 0 / 85 *(15 / 1 / 84)* ▲	10 / 55 / 35 *(11 / 60 / 29)* ▲	0% *(0%)* =	31/12/2023 *(31/12/2022)*
Infrastructure [8]	426	408	4.6%	412 *(375)*	52,900 *(34,200)* ▲		131 (92) ▲		98 / 0 / 2 *(100 / 0 / 0)* ▲		0% *(0%)* =	31/12/2022 & 30/09/2023 *(31/12/2021)*
Alternatives	**1,232**	**1,015**	**11.5%**									
Private equity [6]	1,213	1,003	11.3%	1,100 *(1,329)*	54,900 (55,800) ▼	278,000 *(338,000)* ▼	56 *(49)* ▲	295 *(310)* ▼	0 / 89 / 11 *(0 / 86 / 14)* ▼	0 / 85 / 15 (0 / 82 / 18) ▼		31/12/2022 & 30/09/2023 *(30/06/2022 & 30/09/2022)*
Other alternatives managers	18	12	0.1%									
Non-conventional credit	**245**	**239**	**2.7%**									
Non-conventional credit	245	239	2.7%	216 *(242)*	756 *(519)* ▲	*(1,390)*	18 *(11)* ▲	*(395)*	20 / 0 / 80 (19 / 0 / 81) ▼	0 / 0 / 100 *(2 / 0 / 98)* ▲	0% *(0%)* =	31/12/2021 & 31/12/2022 *(31/12/2021)*
Cash	**1,278**	**423**	**4.8%**									
Cash and cash equivalents	1,231	418	4.7%		N/A	N/A	N/A	N/A	N/A	N/A	N/A	
FX Hedge account	59	21	0.2%		N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Longevity swap	*-12*	*-16*	-0.2%		N/A	N/A	N/A	N/A	N/A	N/A	N/A	
TOTAL	**8,963**	**8,863**	**100.0%**									

Note: figures may not sum due to rounding

Notes to the table

1. Where the Trustee has not been able to obtain any data, the cell is blank. Where the metric is not applicable for the mandate, N/A is shown.
2. This column shows the Scheme's economic exposure from the mandate, consistent with the emissions figures provided. It may differ from the market value of the mandate due to leverage or the use of derivatives. It may also differ from the market value of assets used in the next column where the portfolio holdings are at a date other than 31 December 2023.
3. The total greenhouse gas (GHG) emissions figures omit any entities for which data was not available. For example, if the portfolio was worth £100m and emissions data was available for 70% of the portfolio by value, the total GHG emissions figure shown would relate to £70m of assets and the portfolio's carbon footprint would equal total GHG emissions divided by 70. In other words, no assumption is made about the emissions for entities without data.
4. A different emissions intensity metric has been calculated for government bonds and swaps, so neither this nor total GHG emissions can be compared with the other emissions figures shown.
5. The valuations shown are based on the value of the Scheme's bulk annuity policies from the Bank's report & accounts. A split of the emissions data between reported and estimated data is not available, so the combined figure is shown.
6. Metrics data is obtained from ©2024 MSCI ESG Research LLC and reported by permission. See Appendix 1 for further information.
7. Data for one real assets manager has been restated for 2022 due to errors identified relating to confusion between square feet and square metres in the reporting of emissions. The manager has rectified this and provided the restated 2022 figures alongside the 2023 figures.
8. Data is omitted from the table where it relates to only certain sources of emissions and so understates the full emissions exposure.
   This affects two infrastructure managers. The first manager has partial Scope 3 emissions and carbon footprint of 8,990 and 46 respectively, with 70% reported data and 30% unavailable. The corresponding figures last year were 330 and 2 respectively, with 52% reported data and 48% unavailable.
   The second manager was unable to report Scope 3 emissions this year. Last year, the omitted figures were partial Scope 3 emissions and carbon footprint of 32 and 0 respectively, with 100% of emissions reported. See Appendix 1 for further information.
9. Coverage of the SBT metric for the investment grade credit mandates is equal to the % SBT shown. This is because the MSCI database does not distinguish between companies which do not have an SBTi target and companies for which the SBTi status is not known.

Climate change data gaps

Some data was available for mandates comprising 93% (last year 92%) of the value of the Scheme's assets at 31 December 2023, with Scope 1+2 emissions data (either reported or estimated) for individual assets comprising 75% (last year 71%[3]) of the value of the Scheme's assets[4]. This 75% includes a private equity mandate, accounting for 9.8% (last year 11.3%) of the Scheme's assets, for which emissions have been estimated using a broad-brush proxy. The improvement in the proportion of assets with data available is predominantly due to an increase in the value of government bonds which have full coverage, and to a lesser extent increased reporting coverage on the bulk annuity policies.

Most of the Scheme's investment managers are seeking to improve their climate-related reporting, by increasing the number of metrics they report and seeking to fill the data gaps. The Trustee therefore expects data coverage and quality to improve over time. As data is incomplete, the Scheme's total greenhouse gas emissions are currently understated. This metric may increase in future years as more data becomes available.

The CPU and the Trustee's sustainability adviser are encouraging the managers in their efforts to improve the reporting, focusing on the larger mandates and the mandates to which additional money is being allocated. The sustainability adviser has been encouraging MSCI to improve data coverage for investment grade credit and provided feedback on the

[3] This has increased from the 70% stated in the 2022 report to reflect the slightly increased coverage due to the restatement of the 2022 figures for one real estate manager.
[4] Mandates where emissions metrics are not applicable (eg cash) are excluded from these figures.

types of issuers to prioritise. MSCI is adding emissions metrics for further non-listed fixed income issuers to its database, however so far this has had limited impact on coverage of the Scheme's portfolios.

The main mandates without any data relate to some of the Trustee's investments in property, private equity and non-conventional credit. The Trustee has focused on other mandates for improving data since these assets are considered to be in run-off as there are no plans to renew the managers' contracts beyond current arrangements. The assets' illiquid nature also limits the actions the Trustee can take to reduce the Scheme's climate-related risk exposure in relation to these assets.

The Trustee's choice of target

The Trustee has set the following target against one of its three chosen metrics:

Target	Scheme coverage	Reference base date
60% of investment grade credit portfolios to have science-based targets by 31 December 2030	Investment grade credit portfolios (c26% of total Scheme assets as at 31 December 2023, but is expected to form a larger part of the Scheme's investment strategy in future)	31 December 2021

This target was chosen as the metric is forward-looking and focussed on the transition that needs to occur in the future in order to achieve Net Zero aims globally. It is also supportive of the Trustee's 2050 Net Zero Carbon target, which was formally agreed in June 2022.

During 2023, the Trustee agreed two additional targets for each of its two corporate bond mandates in relation to:

- reduction of scope 1+2 emissions intensity by 2030; and
- percentage of scope 1+2 emissions that relate to issuers which are Net Zero, Net Zero aligned or the subject of engagement by the manager.

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

1. Reducing exposure to climate transition risks in the shorter-term by keeping up with/slightly ahead of a general market trend; and

2. Supporting collective action to meet the Paris Agreement goals, hence reducing longer-term systemic risks from the physical effects of climate change.

The climate reporting carried out for the Scheme during the year included an assessment of the progress against the Scheme's TCFD target (ie the one relating to science-based-targets). At 31 December 2023, an estimated 31% of the Scheme's investment grade credit holdings by value had set science-based targets, based on information held on the MSCI database for whether companies have an SBTi-validated target (as shown in the table on page 22). This is an increase from 19% as at the base date of 31 December 2021, and up from 29% as at 31 December 2022.

Where MSCI data on SBTi targets was missing, the portfolio company was assumed not to have any science-based targets in place. However, the Trustee notes that it is possible for portfolio companies to have science-based targets that are not validated by SBTi and it would be possible for investment managers to make their own assessment of whether a company's targets are science-based. The Trustee will continue to monitor its investment grade credit managers' ability to assess SBT targets for portfolio companies themselves, with a view to using a more comprehensive measure of SBTs in due course.

The Trustee has decided to retain its current TCFD target. It will keep the definition of its science-based targets metric under review as market practice evolves, noting that SBTi validation may not be feasible for some fixed income issuers. It will also review the level of its target periodically in light of any changes in definition and the pace of company adoption of science-based targets. The Trustee will continue to engage with the investment grade credit managers on achieving progress against the target earlier than planned where there is opportunity to do so.

Achieving the Trustee's target

The following steps are being taken to achieve the TCFD target:

- The CPU has communicated the target to each affected investment manager (ie the two investment grade credit managers) and incorporated the target into the investment manager agreements.

- The CPU and IRM Committee routinely talk to managers as part of the investment monitoring process. The CPU has communicated the Scheme's targets to its investment grade credit managers and tracks the coverage of science-based targets within its portfolio. During the year a credit transition project has been undertaken, the science-based target coverage has been monitored and the CPU has promoted engagement with companies that do not currently have science-based targets in place.

- Following the Trustee's agreement to set a 2050 Net Zero Carbon Target in June 2022, the Sustainability Committee, with support from the sustainability adviser and CPU, have been working through its Net Zero alignment plan. This involves discussions with the investment grade credit managers on how they can support the Trustee's Net Zero commitment. Given the nature of the TCFD target, this work also contributes to progress against the TCFD target.

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

The Trustee reviews progress towards the target twice a year as one of the Scheme's Key Risk Indicators and considers whether additional steps are needed to increase the chance of meeting the target. As at 31 December 2023 the progress against the target has been strong and the Scheme is considered on track to meet its target.

Appendix 1: Glossary of terms used within this report

Below we describe various terms which are used in this report.

- **Bulk annuity** – This is an insurance policy which pays part or all of future benefit payments owed to a group of pension scheme members.
- **Carbon emissions** – These refer to the release of carbon dioxide, or greenhouse gases more generally, into the atmosphere.
- **Carbon footprint** – In an investment context, the total carbon dioxide or greenhouse gas emissions generated per amount invested (eg in £m) by an investment fund. Related definitions are used to apply the term to organisations, countries and individuals.
- **Environmental, social and governance (ESG)** – an umbrella term that encompasses a wide range of factors that may have been overlooked in traditional investment approaches. Environmental considerations might include physical resource management, pollution prevention and greenhouse gas emissions. Social factors are likely to include workplace diversity, health and safety, and the company's impact on its local community. Governance-related matters include executive compensation, board accountability and shareholder rights.
- **Fossil fuels** – fuels made from decomposing plants and animals, which are found in the Earth's crust. They contain carbon and hydrogen, which can be burned for energy. Coal, oil, and natural gas are examples of fossil fuels.
- **Gilt** – a bond issued by the UK government.
- **Greenhouse gas (GHG) emissions (scopes 1, 2 and 3)** – gases that have been and continue to be released into the Earth's atmosphere. Greenhouse gases trap radiation from the sun which subsequently heats the planet's surface (giving rise to the "greenhouse effect"). Carbon dioxide and methane are two of the most important greenhouse gases. See also Appendix 4.
- **Gross Domestic Product (GDP)** – this is the value of all goods and services produced in a country over a given period, typically a year.
- **Investment grade credit** – corporate bonds which are viewed to have a low probability of default, compared to some other corporate bonds available in the market. The Trustee feels it is important to distinguish investment grade credit in relation to its analysis of climate-related exposures, and so refers to investment grade credit holdings (where applicable) for the remainder of this report.
- **Liability Driven Investment (LDI)** – This is an asset class designed to mirror the movements of pension scheme liabilities relative to interest rates and inflation by investing in leveraged gilt and swap instruments. It is used to protect funding level or surplus against movements in interest rates and inflation that would otherwise have a material effect.
- **Net Zero** – this describes the situation in which total greenhouse gas emissions released into the atmosphere are equal to those removed. This can be considered at different levels, eg company, investor, country or global.
- **Physical risk** – these are climate-related risks that arise from changes in the climate itself. They include risks from more extreme storms and flooding, as well as rising temperatures and changing rainfall pattens.
- **Paris Agreement** – the Paris Agreement is an international treaty on climate change, adopted in 2015. It covers climate change mitigation, adaptation and finance. Its primary goal is to limit global warming to well below 2°C, preferably to 1.5°C, compared to pre-industrial levels.
- **Purchasing Power Parity (PPP)** – the PPP is a theory of long-term equilibrium in exchange rates based on relative prices. For example, if the price of a basket of goods in the UK is £100 and the same basket costs $200 in the USA, then the PPP exchange rate would be £1:$2. The PPP rate and the actual market exchange rate can differ.
- **Responsible Investment (RI)** – the process by which environmental, social and governance (ESG) issues are incorporated into the investment analysis and decision-making process, and into the oversight of investments companies through stewardship activities. It is motivated by financial considerations aiming to improve risk-adjusted returns.
- **Science-based targets –** targets to reduce greenhouse gas emissions that are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement.

- **Science-Based Targets initiative (SBTi)** – an organisation that sets standards and provides accreditation for science-based targets set by companies and investors.
- **Stewardship** – stewardship is the responsible allocation, management and oversight of capital to create long-term value for clients and beneficiaries leading to sustainable benefits for the economy, the environment and society. It is often implemented via engagement with investee companies and exercising voting rights.
- **Sustainable investing** - an approach in which an assessment of the environmental and social sustainability a company's products and practices is a key driver in the investment decision. ESG analysis therefore forms a cornerstone of the investment selection process.
- **Swap** – a derivative contract between two parties in which those parties agree to exchange one set of cash flows for another.
- **Taskforce on Climate-related Financial Disclosures (TCFD) –** a group of senior preparers and users of financial disclosures from G20 countries, established by the international Financial Stability Board in 2015. The TCFD has developed a set of recommendations for climate-related financial risk disclosures for use by companies, financial institutions and other organisations to inform investors and other parties about the climate-related risks they face.
- **Transition risk** – these are climate-related risks that arise from the transition to a low-carbon economy and can include changes in regulation, technology and consumer demand.

Appendix 2: Key advisers supporting the Trustee

We have included a list of the key advisers in-place supporting the Trustee over the year below:

- **Sustainability adviser** – Lane Clark & Peacock LLP
- **Investment advisers** – Willis Towers Watson Limited, Cardano Risk Management Limited, Cambridge Associates Limited and Santander Asset Management UK Limited
- **Actuarial adviser** – Willis Towers Watson Limited
- **Covenant adviser** – Ernst & Young LLP
- **Legal advisers** – Mayer Brown International LLP and Stephenson Harwood LLP
- **Scheme Secretary** – CPU

The roles of these advisers, as described in the climate governance policy, are laid out below**.**

The role of the sustainability adviser

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

- providing training and other updates to the Trustee on relevant sustainability and climate-related matters;
- helping the Trustee to formulate its investment beliefs in relation to sustainability and climate change and reflecting these in the Scheme's investment policies and strategy;
- advising how climate-related risks and opportunities might affect the different asset classes in which the Scheme might invest over the short, medium and long-term, and the implications for the Scheme's investment strategy;
- advising the Trustee on the appropriateness and effectiveness of the Scheme's investment managers' processes, expertise and resources for managing sustainability and climate-related risks and opportunities, given the Trustee's investment objectives and beliefs;
- carrying out scenario analysis that illustrates how the Scheme's assets and liabilities might be affected under various climate change scenarios as agreed with the Trustee from time to time, and advising on when it is appropriate to update the analysis;
- advising the Trustee on the implications of the scenario analysis results for the Scheme's investment strategy and journey planning;
- assisting the Trustee in identifying and monitoring suitable sustainability- and climate-related metrics and targets in relation to the Scheme's investments; assisting the Trustee in assessing and monitoring investment managers' voting and engagement on sustainability and climate-related issues;
- leading on the preparation of the Trustee's TCFD reporting, working with the Trustee and its other advisers as appropriate; and
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its governance arrangements, risk register, Key Risk Indicators and communication with stakeholders as appropriate.

The role of the CFT and the investment advisers

In broad terms, the CFT is responsible for implementing the investment of the Scheme's assets. The CFT and its external investment advisers are responsible, as requested by the Trustee, for:

- ensuring the Trustee's investment beliefs, including responsible investment and climate beliefs, are reflected appropriately in any investment strategy proposals presented to the Trustee;
- incorporating climate-related considerations into any advice they provide to the Trustee, where these
- considerations may be material;
- incorporating the Trustee's investment beliefs, including responsible investment and climate beliefs, into manager selection, mandate design and manager monitoring;
- advising the Trustee on the appropriateness and effectiveness of the Scheme's investment managers' processes, expertise and resources, including the extent to which these manage climate-related risks and opportunities, reflecting the Trustee's investment objectives and beliefs; and
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its funding, investment and covenant monitoring, ESG reporting and communication with stakeholders (including, but not limited to, its TCFD and PRI reporting) as appropriate.

The role of the actuarial adviser

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

- assisting the Trustee in understanding how climate-related risks and opportunities might affect the Scheme's funding position over the short, medium and long-term and the implications for the Scheme's funding strategy and long-term objectives, working with the Trustee's other advisers as appropriate;
- advising how climate-related risks and opportunities might affect the Scheme's funding position over the short, medium and long-term and the implications for the Scheme's funding strategy and long-term objectives; and
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its funding, investment and covenant monitoring, and communication with stakeholders (including, but not limited to, its TCFD reporting) as appropriate.

The role of the covenant adviser

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

- advising how climate-related risks and opportunities might affect the Scheme's sponsoring employer over the short, medium and long-term;
- leading on the inclusion of climate change in the Scheme's covenant monitoring, working with the Trustee and its other advisers as appropriate; and
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its governance arrangements, risk register, Key Risk Indicators and communication with stakeholders (including, but not limited to, its TCFD reporting) as appropriate.

The role of the legal advisers

In broad terms, the Scheme's legal advisers are responsible, as requested by the Trustee, for:

- providing training and other updates to the Trustee on relevant climate-related legal matters;
- ensuring the Trustee is aware of its statutory and fiduciary obligations in relation to climate change and working with the Trustee's other advisers to ensure alignment between these obligations and:
    - any Trustee formulation of its investment beliefs in relation to climate change; and
    - the identification and monitoring of climate-related metrics and targets in relation to the Scheme's investments;
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its governance arrangements, risk register, Key Risk Indicators and communication with stakeholders (including, but not limited to, its TCFD reporting) as appropriate; and
- where requested, assisting in the documentation of any contractual requirements to be included in the arrangements with the Scheme's investment managers with respect to the governance, management and reporting of climate-related matters.

The role of the investment managers

In broad terms, the Scheme's investment managers are responsible for:

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

Appendix 3 – More detail on the climate scenario analysis

A note on the variability of the modelling

The Trustee recognises that there are many reasons why the outcome might differ from those modelled, including:

- There is a wide 'funnel of doubt' around the median outcome under each scenario due to the usual investment market uncertainties and additional uncertainties arising from climate-related variables.
- A disorderly transition could play out differently to the scenario modelled (there could be a series of mini shocks and/or different timing).
- Other scenarios are possible, eg delayed and/or disorderly policy action to limit climate change.
- The timing and amount of benefit payments is uncertain, and cashflows from the Scheme's assets may not match the benefits as closely as assumed.
- The assessment of the funding strategy did not allow explicitly for impacts from changes in mortality rates, as it is hard to predict how climate change might affect longevity in the UK (some effects are likely to be positive and others negative).

How are the scenarios modelled and what are the key assumptions underlying the modelling?

The scenario analysis is based on the ClimateMAPS model developed by Ortec Finance and Cambridge Econometrics, and was then applied to the Scheme's assets and liabilities by the sustainability adviser. The three climate scenarios were projected year by year, over the next 40 years.

ClimateMAPS uses a top-down approach that consistently models climate impacts on both assets and liabilities, enabling the resilience of the Scheme's funding strategy to be considered. The model output is supported by in-depth narratives that bring the scenarios to life to help the Trustee's understanding of climate-related risks and opportunities.

ClimateMAPS uses Cambridge Econometrics' macroeconomic model which integrates a range of social and environmental processes, including carbon emissions and the energy transition. It is one of the most comprehensive models of the global economy and is widely used for policy assessment, forecasting and research purposes. The outputs from this macroeconomic modelling – primarily the impacts on country/regional GDP – are then translated into impacts on financial markets by Ortec Finance using assumed relationships between the macroeconomic and financial parameters.

Ortec Finance runs the projections many times using stochastic modelling to illustrate the wide range of climate impacts that may be possible, under each scenario's climate pathway. LCP takes the median (ie the middle outcome) of this range of impacts, for each relevant financial parameter, and adjusts it to improve its alignment with LCP's standard financial assumptions. These financial assumptions provide market yields and changes to market values in a median case, for each climate scenario considered. Ortec Finance also provide equivalent information for a climate-uninformed basis to highlight the potential mispricing in markets that could occur if climate change is not taken into account, or if past trends are relied upon, ignoring the potential future impact of climate change.

LCP then uses these adjusted median impacts to project the assets and liabilities of the Scheme to illustrate how the different scenarios could affect its funding level. The modelling summarised in this report used scenarios based on the latest scientific and macro-economic data at 31 December 2020, calibrated to market conditions at 31 March 2021. Given the scenario analysis was not updated during the Scheme year, these dates remain unchanged.

The modelling included contributions assumed to be paid in line with the current Schedule of Contributions, and the Trustee discussed how future planned changes to the investment strategy for the Scheme would change the analysis. No allowance was made for changes to the investment strategy or contributions in response to the climate impacts modelled.

The modelling was conducted net of the bulk annuity policies owned by the Scheme. Whilst the Scheme's insured liabilities are likely to be subject to similar financial risks to those illustrated for the non-insured liabilities, the protection afforded by bulk annuity policies means that, under the assumptions used in the modelling, any financial impacts are unlikely to affect the net funding position in the three climate scenarios considered. This is because the insurance solvency regime provides considerable protection for policyholders and the climate impacts that are most likely to result in the insurer becoming bankrupt have not been fully modelled, as indicated below. Therefore including the bulk annuity policies would not affect the results presented in this report. However, the Trustee noted that in practice climate change could cause insurer bankruptcy under more extreme scenarios.

Certain assumptions were needed to match the specific asset classes held by the Scheme with the asset classes for which scenario modelling was available:

- It was assumed that 30% of the Scheme's allocation to listed equities (at the time of the analysis) is invested in a 'Paris-aligned' equity asset class, to reflect the Scheme's lower exposure to climate risks than wider equity markets.
- No allowance was made for any climate impacts on the listed equity collar, given the exposure to equities is expected to be very small by 2025, when the first material climate impacts are assumed to take place. Note that since the analysis was carried out, the full listed equity allocation has been sold.
- Investment grade credit portfolios have been modelled as investment grade corporate bonds with an eight year duration.
- The property portfolio, with the exception of long-lease property, has been modelled as core UK property.
- The strategies within the alternatives portfolio, other than private equity, have been modelled as fund of hedge funds.

What are the key limitations of the modelling (including any data gaps)?

As this is a "top-down" approach, investment market impacts were modelled as the average projected impacts for each asset class, ie assuming that the Scheme's investments are affected by climate risk in line with the market-average portfolio for the asset class. This contrasts with a "bottom up" approach that would model the impact on each individual investment held in the Scheme's investment portfolio. As such, it does not require extensive scheme-specific data and so the Trustee was able to consider the potential impacts of the three climate scenarios for all of the Scheme's assets.

In practice, the Scheme's investment portfolio may not experience climate impacts in line with the market average. The Trustee considers how the Scheme's climate risk exposure differs from the market average using climate metrics (which are compared with a market benchmark where appropriate) and its investment advisers' responsible investment assessments which include consideration of the investment managers' climate approaches.

The Trustee notes that the three climate scenarios chosen are not intended to be "worst case" and the modelling is based on median outcomes. It therefore illustrates how the centre of the "funnel of doubt" surrounding the projections might be affected by climate change. It does not consider tail risks within that funnel, nor does it consider how the funnel might be widened by the additional uncertainties arising from climate change. In addition, only three scenarios out of infinitely many have been considered. Other scenarios could give better or worse outcomes for the Scheme.

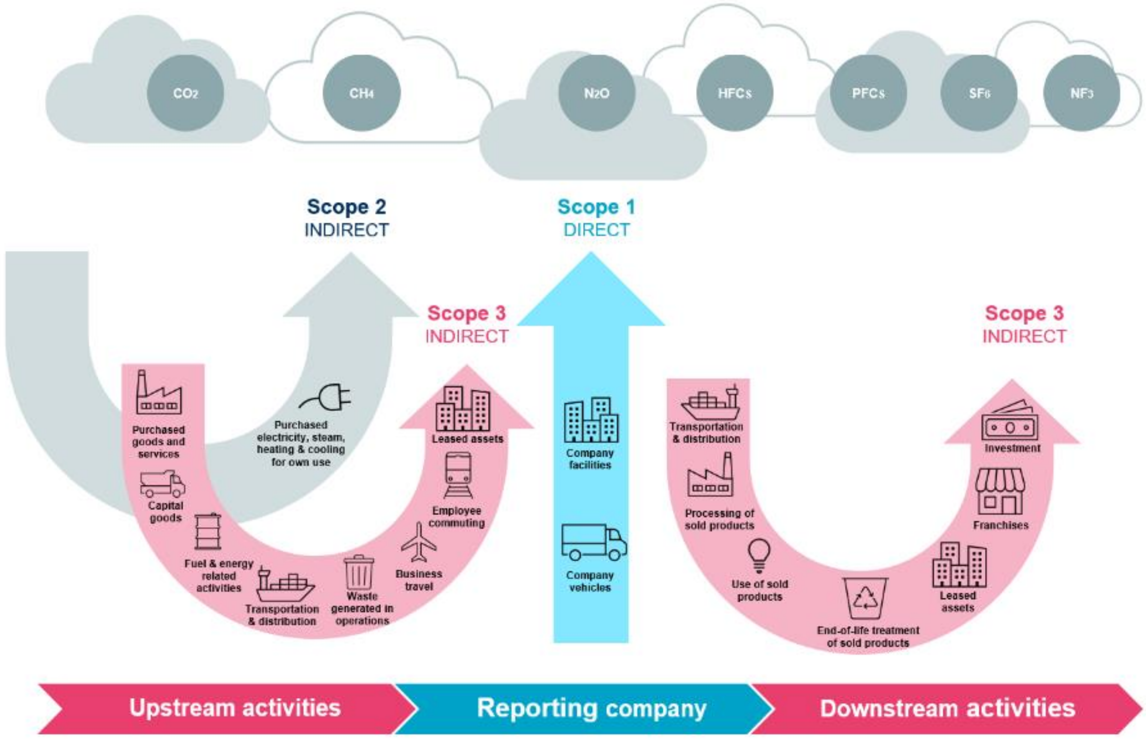
Uncertainty in climate modelling is inevitable. In this case, key areas of uncertainty relating to the financial impacts on the Scheme's assets and liabilities include how climate change – and the steps which might be taken because of any temperature increase (by governments or otherwise) – might affect financial assumptions based on market yields (including interest rates and inflation), and the timing of market responses to climate change. ClimateMAPS, like most modelling of this type, does not allow for all climate-related impacts and therefore, in aggregate, is quite likely to underestimate the potential impacts of climate-related risks, especially for the failed transition scenario. For example, tipping points (which could cause runaway physical climate impacts) are not modelled and no allowance is made for knock-on effects, such as climate-related migration and conflicts. In addition, the model presumes that the UK government and bank counterparties will remain solvent, thereby making no allowance for credit risk on government bonds and derivative exposures. However, in a scenario where global warming reaches 4ºC, this assumption may no longer be valid.

Appendix 4 – Greenhouse gas emissions explained

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

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

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



Source: GHG Protocol

Appendix 5 – More detail on the climate-related metrics reported

This appendix provides more detail on the metrics reported in the main body of this report, on page 22.

Government bonds, including Liability Driven Investment (LDI), gilts and swaps

GHG emissions

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

The emissions figures were calculated by the Trustee's sustainability adviser in February 2024 using publicly available data sources, thereby ensuring consistency between the government bonds managed by different firms.

As suggested in the statutory guidance, Scope 1+2 emissions have been interpreted as the production-based emissions of the country. Scope 3 emissions have been interpreted as the emissions embodied in goods and services imported by the country and consumed within the country (rather than re-exported).

In line with guidance from the Partnership for Carbon Accounting Financials (PCAF) issued in December 2022, emissions intensity has been calculated, for each country in which government bonds are held, as:

$$\frac{(\text{the country's greenhouse gas emissions})}{(\text{the country's Gross Domestic Product at Purchasing Power Parity})}.$$

GHG emissions have then been calculated as:

$$\text{value of the Scheme's investment in the country's government bonds} \times \text{the country's emissions intensity.}$$

These figures have been aggregated across countries by summing the GHG emissions and calculating a weighted average emissions intensity based on the proportion of the country's weight in the portfolio.

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

Science-based targets

Government bonds have been assessed as having a science-based target if Climate Action Tracker has assessed the issuing country as having a domestic emissions target which is rated as 1.5°C or below 2°C. For example, the UK (the issuer of the vast majority of the Scheme's government bonds) is rated as 1.5°C. It has a Net Zero by 2050 target written into law and sets carbon budgets to achieve this target based on advice from the independent Committee on Climate Change.

Bulk annuity policies

The Scheme holds two bulk annuity policies that make payments equal to certain members' pension benefits. As suggested in the statutory guidance, the Trustee has used the insurance provider's emissions data from its public TCFD report for the calendar year 2023. It should be noted that this data does not reflect the contracts' exposure to climate-related risks since the payments made to the Scheme are not linked to the value of assets held.

The insurer has published Scope 1+2 emissions data for asset classes comprising 74% of the assets held for the relevant subsidiary company in its TCFD report. These assets back a range of life insurance products, including the bulk annuity book. The insurer was not able to provide any Scope 3 data, emissions data for the bulk annuity assets alone, the split of emissions data between reported and estimated data (although it did provide a weighted average data quality score on a 1-5 scale for each asset class), nor any data for the Trustee's selected alignment metric.

The Scheme's share of the total Scope 1+2 GHG emissions disclosed by the subsidiary has been estimated by multiplying the carbon footprint for each asset class by an estimate of the value of assets in the asset class backing the Scheme's bulk annuity policies, adjusted appropriately for data coverage. The value of assets in each asset class was estimated by applying the latest available asset allocation of the bulk annuity book, as at 31 December 2022, to the value of the Scheme's bulk annuity policies, as calculated for the Bank's accounts for the calendar year 2023. This is a change in methodology to the data provided in last year's report, which assumed that the assets backing the Scheme's bulk annuity policies were invested in line with the asset allocation of the subsidiary as a whole.

This approach effectively assumes that the value of the policies calculated for the Bank's accounts is the same as the market value of the share of assets backing the Scheme's policies and that the asset allocation for the insurer's bulk annuity policies did not change between 31 December 2022 and 31 December 2023. Whilst this may not be correct in practice, the Trustee believes it is a reasonable approach to take given the data available.

Scope 1+2 emissions data is available for listed equities and corporate bonds (33% of bulk annuity assets, with 87% coverage), sovereign bonds (14% of assets, with 99% coverage) and various illiquid assets (including infrastructure debt, commercial real estate mortgages and equity release mortgages) which have been grouped under "other" (53% of assets, with 86% coverage). "Other" also includes the bulk annuity's 9% allocation to private credit and other illiquids, which has 0% coverage given it is not included in the data disclosed by the insurer. The carbon footprint and coverage for the "other" asset classes has been calculated as a weighted average of the constituent asset classes.

Investment grade credit

The metrics for these mandates were obtained from MSCI[5], a leading provider of climate-related data for investors, by the Trustee's sustainability adviser in January 2024, using portfolio holdings as at 31 December 2023. Data coverage is likely to compare favourably with other data sources.

GHG emissions

Emissions coverage is less than 100% because:

- Some holdings are not covered by MSCI's database such as bonds that have recently matured.
- The MSCI database does not hold emissions data for some portfolio companies because the company does not report it and MSCI does not estimate it.
- The MSCI database does not hold EVIC[6] data for some portfolio companies, so emissions cannot be attributed between equity and debt investors.

The last of these reasons is the main explanation for the fairly low emissions coverage. The Trustee's sustainability adviser met with MSCI during the year to encourage them to increase the EVIC coverage. MSCI continues to work on this and has welcomed feedback on the types of issuers to prioritise.

Where emissions data is estimated, MSCI uses one of three methods.

- For electric utilities, MSCI's estimate of Scope 1 emissions is of direct emissions due to power generation, calculated using power generation fuel-mix data.
- For companies not involved in power generation, which have previously reported emissions data, MSCI starts with a company-specific carbon intensity model.

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[6] EVIC is Enterprise Value Including Cash, ie the value of equity plus outstanding debt plus cash. It is used to attribute emissions to investors in the calculation of Total GHG emissions and hence Carbon Footprint.

- For other companies, MSCI uses an industry segment-specific carbon intensity model, which is based on the estimated carbon intensities for 1,000+ industry segments.

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

Science-based targets

The metric shown is the proportion of the portfolio by weight for which the MSCI database indicates the company has an SBTi-validated target. Coverage for this metric is equal to the proportion of the portfolio with an SBTi-validated target because the MSCI database does not distinguish between companies which do not have an SBTi target and companies for which the SBTi status is not known. The Trustee's sustainability adviser has asked MSCI to introduce this distinction.

Real estate

For one real estate mandate, with value £694m as at 31 December 2023, the climate-related metrics have been provided by the investment manager for the buildings held as at the same date. The emissions figures relating to electricity use are location-based, ie calculated using the average emissions intensity of the electricity grid where the property is located. The majority of emissions are "tenant controlled" so they are classed as Scope 3 emissions. The Scope 1 and 2 emissions therefore look low compared to other asset classes. Although data was reported last year, the manager informed us in early 2024 that there was an inconsistency in its calculations. This has been resolved in this year's data, and last year's figures have been restated in the table on page 22.

The "reported" emissions have been calculated using utility meter readings for the year to 31 December 2023. There are two types of "estimated" emissions data:

1. Gap-Filled Data, where actual metered energy supply data is typically available but where data gaps have occurred. These estimates are informed by analysis of historic consumption trends and where appropriate normalised for climate / external temperatures.
2. Unmonitored Data, where actual metered energy supply data is not available. Energy use intensity benchmarks are used to calculate estimated consumption based on the relevant floor area and property type.

The manager has provided Scope 1+2 reported emissions for 24% of the properties and Scope 3 reported emissions for 15% of the properties, with the remainder of the portfolio having estimated Scope 3 emissions.

The Trustee attempted to obtain energy or emissions data for a second real estate mandate (valued at £388m as at 31 December 2023). However, as with previous years, the manager was unable to provide any information and a suitable proxy has not yet been identified.

Infrastructure

For one infrastructure manager, with value £272m as at 31 December 2023, data was provided by the investment manager for holdings as at 30 September 2023, but using emissions for the calendar year 2022. This is because 31 December 2023 holdings and 2023 emissions data was not yet available. Emissions data was reported by each company and a proportionate share was allocated to the Scheme based on its percentage ownership of the asset. Some companies reported Scope 1-3 emissions, whereas others reported Scope 1+2 only. Where Scope 3 emissions are reported, the Trustee understands that these typically do not represent emissions throughout the full value chain and so the figure provided understates the full Scope 3 emissions, although the data is more complete than last year which has contributed to an increase in emissions disclosed. For this reason, the figure has been disclosed in a footnote rather than in the main table. Some portfolio companies have set net zero targets, but none have yet had their targets validated by SBTi.

For a second infrastructure manager, with value £136m as at 31 December 2023, the investment manager has provided Total GHG emissions and Carbon Footprint data as at 31 December 2022. This is a single-asset mandate for which the portfolio company reports Scope 1+2 emissions, so no estimation has been used. The scope 3 emissions figure provided by the manager last year as at 31 December 2021 was implausibly low so was omitted from the main table and included as a footnote. No Scope 3 data has been provided by the company as at 31 December 2022. The company does not have a science-based target.

Private equity

One private equity manager continues to request emissions data from its portfolio companies. However, very little information was available in time for this report. Given the size of the mandates with this manager, valued at £868m as at 31 December 2023, the Trustee sought to estimate their emissions.

The manager provided a split of the assets by sector as at 30 September 2023, reported separately for the US and African holdings. The Trustee's sustainability adviser used data from MSCI in February 2024 to calculate the Carbon Footprint for each sector of the MSCI US Small Cap Index and MSCI Emerging Markets Index at 31 December 2023, using the same sector classification. They then combined these sector-average Carbon Footprints into an estimate of the overall Carbon Footprint of the assets using the sector splits provided and the market value of assets at 30 September 2023.

In other words, the figures shown assume that the Scheme's US and African assets have the same emissions intensity as the average company in the relevant sector of the MSCI US Small Cap Index and MSCI Emerging Markets Index respectively. In practice, the portfolio companies' emissions may differ significantly from that assumed, for example where the nature of their business differs significantly from the sector average.

The manager was not able to provide any information on which portfolio companies have SBTi-validated emissions reduction targets.

A second private equity manager, with market value £31m as at 31 December 2023, provided Total GHG emissions and Carbon Footprint data for the whole fund based on latest available emissions data as at 31 December 2021 and company valuations as at 31 December 2022, for 84% of the Scheme's exposure (this is the same emissions data as last year, but with portfolio holdings for December 2022, rather than June 2022). This relates to Scope 1+2 emissions only, and 6% of the data provided is company-reported, with 41% estimated based on revenue and 37% estimated based on investment intensity. Estimated Scope 3 data was provided for the energy sector only, so coverage is very low although this is likely to be the sector with the most material Scope 3 emissions. The manager was not able to provide the proportion of companies held with science-based targets.

The Scheme's share of the fund as at 31 December 2022 has been used to calculate its share of the fund's Total GHG emissions. The market value of the Scheme's holding is lower than the implied exposure value because it is net of leverage, fund running costs, management charge and carried interest.

Private equity and other alternatives – other managers

The other alternatives managers (mainly private equity, valued at £116m in total as at 31 December 2023) were either unable to provide emissions data or the mandate was considered too small for it to be proportionate to request the data.

Non-conventional credit

Emissions data was provided by one non-conventional credit investment manager, valued at £81m as at 31 December 2023, for just over half of the portfolio's committed assets as at 31 December 2021. This data was the same as reported for the last two years since more recent data was not yet available. The data was reported by each portfolio company. Though some companies reported Scope 1-3 emissions, the figures for Scope 3 GHG emissions only included a few of the fifteen categories of Scope 3 emissions and have therefore not been reported. The manager was not able to provide the proportion of companies held with science-based targets, but advised it was unlikely that any portfolio companies have SBTi-validated targets.

The Scheme's share of the portfolio's Total GHG emissions was calculated based on the approximate % of the total portfolio commitments represented by the Scheme. The emissions data is based on the portfolio's total lending commitment, even where those loans are not yet fully drawn, so the corresponding economic exposure shown is greater than the market value of the loans.

Another non-conventional credit manager valued at £81m as at 31 December 2023, was able to provide Total GHG emissions and Carbon Footprint data for 13% of the portfolio for Scope 1+2 (representing three companies in the portfolio) as at 31 December 2022. It was not able to provide any Scope 3 data, as the company that provided data last year did not report Scope 3 emissions for this round of reporting. The Scheme's share of the portfolio has been used to calculate its share of the portfolio's Total GHG emissions. None of the portfolio companies have SBTi-validated emissions reduction targets.

The other non-conventional credit managers (valued at £77m as at 31 December 2023) were either unable to provide emissions data or the mandate was considered too small for it to be proportionate to request the data.