British Coal Staff Superannuation Scheme TCFD Report

For scheme year ending March 2024

BCSSS
British Coal
Staff Superannuation Scheme

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Introduction

The Financial Stability Board created the Task Force on Climate-related Financial Disclosures ("TCFD") in 2015. The TCFD allows the regulator, companies and investors to understand better their financial exposure to climate risk. As required by UK government legislation, the British Coal Staff Superannuation Scheme ("the Scheme") published its first report in 2022 and is now publishing its third report. This will be available to members and other interested parties and provides detail of how the Scheme is addressing the risks and opportunities associated with climate change and the climate transition.

About the Scheme

The Scheme is one of the largest occupational pension schemes in the UK, providing benefits for just under 41,000 pensioners and deferred members as at the end of March 2024. The Scheme was established by an Act of Parliament on 1 January 1947 following the nationalisation of the coal industry. The coal industry was privatised in December 1994 and because of this, contributing members of the Scheme became deferred members. The Coal Industry Act 1994 established the parameters under which the Scheme operates, with the Government in place as the Guarantor. Coal Staff Superannuation Trustees Limited ("the Trustee") has ultimate responsibility for decision-making on investment matters. Coal Pension Trustees Investment Limited ("CPTI") is responsible for providing investment advice and investment management services to the Trustee. As of 31st March 2024, total Scheme assets were valued at £8.59bn.

The Scheme's approach to Climate and TCFD Summary

The Trustee's fiduciary duty is to act in the best interests of members, with the primary objective of paying all future member benefits (i.e. the Scheme's liabilities) from the Scheme's assets. This is done by assessing risks and return prospects. The Scheme recognises climate change as a significant source of risk and opportunity with ongoing impact on asset pricing and the ability to meet the Scheme's liabilities, making climate-related issues legitimate concerns for pension fund trustees.

In 2021, the Trustee ratified climate change/the climate transition as a strategic theme for investment. The global climate transition, supported by substantial investments from governments and corporates, is driving multiple different market dynamics which are expected to continue throughout this decade and beyond. Despite mixed performance so far, CPTI expects the climate transition theme to benefit the Scheme's assets.

The Trustee's third TCFD report restates the Scheme's governance and risk framework for tackling climate change risks and opportunities. It also addresses areas needing improvement, highlighting ongoing challenges with data coverage, methodologies, and other areas where progress is still required. Much work is being done to improve and understand the data, models and assumptions, however, significant hurdles remain and therefore many of the estimates in this report are subject to considerable uncertainty. This applies particularly to climate scenario analysis which the Trustee will re-run in 2025, in line with the regulatory deadline, despite a lack of significant improvements to the models available.

The Trustee also acknowledges the significant uncertainty around all data and models used in producing this report and the challenges this presents to decision-making. The Trustee has set an ambitious target for carbon emissions data coverage across the portfolio and continues to push to achieve this.

Key Portfolio Changes

The Scheme, since incorporating Climate Change as a theme, has made progress in reducing exposure to high near-term climate-risk areas and increasing investments with positive expected financial returns. Portfolio changes include a transition overlay to passive equities, exiting a semi-passive mandate in China where these risks were not considered and investing in climate opportunities with Ninety One, commodities with Wellington, and global listed infrastructure with BlackRock. We note that these final two mandates do not inherently align with the climate theme; rather, it's the specific nature and focus of these mandates that contribute to it. The estimated investment in climate opportunities has increased over the year, reflecting these new investments. While emissions and intensity numbers may fluctuate due to asset allocation changes, exposure to climate opportunities and Paris-aligned investments is expected to increase.

Climate Metrics

As required by regulation the Trustee has committed to report on the following metrics, which are reported across all of the Scheme's assets as far as is possible:

- **Total carbon emissions** – measures the absolute tonnes of carbon dioxide emissions for which an investor is responsible. Total emissions are what must be reduced in order to limit the carbon dioxide in the atmosphere and the degree of planetary warming. In line with regulations, the Scheme has reported on Scope 1 (direct emissions), scope 2 (purchased emissions) and Scope 3 (supply chain emissions).

- **Carbon intensity** – an efficiency metric based on absolute emissions relative to the enterprise value including cash (EVIC). EVIC is a measure of firm size so allows comparison of carbon efficiency across different firms.

- **Data coverage** – the proportion of the Scheme where reported (not proxied) Scope 1 and 2 carbon emissions data is available.
- **Paris Alignment** - per TCFD regulation, the Scheme has reported on the extent to which its assets are Paris Aligned in this TCFD report.

In line with the statutory guidance, the Trustee has also agreed a target for this report. The Trustee has chosen a target based on the third metric as follows:

- Increase the proportion of the Scheme covered by reported (not proxied) Scope 1 and 2 carbon emissions data to 90% by the end of 2024.

Since measurement of the Scheme's emissions began at the end of September 2021, the proportion of assets where data is available has increased from 54% to 91% at the end of March 2024. However much of the data is still from proxies rather than directly reported by companies and assets. Actual reported data has increased by 21%, from 39% to 60%. These numbers will continue to vary in the near term as data and methodologies continue to evolve across the whole industry and as the Scheme's asset allocation changes. The Trustee will seek to take steps to ensure data quality continues to improve and will seek continued assurance it is following best practice in data collection and aggregation.

The Scheme has observed a decline in both absolute emissions and emissions intensity from March 2021 to March 2024, with a roughly 33% reduction in estimated emissions intensity. This reduction results from strategic asset class changes, investments in climate opportunities, risk reduction efforts but also a gradual decline in index level emissions. There is no specific emissions reduction target, and the Trustee acknowledges the likelihood of emissions fluctuating if considering future allocations to high-emission assets. For example, the Scheme's new investments in emerging market credit have significantly higher emissions intensity than many of the Scheme's other

existing asset classes. This is due to the fact that such bonds, both corporate and sovereign, often come from sectors or countries with higher carbon emissions. However, the Scheme is comfortable investing here as the investment is focused on companies with transition plans in place or in development.

The Scheme commits to reporting Scope 3 emissions for public market holdings and, for the first time in this report, for real estate where the data is available. The Scheme also continues to monitor Paris Alignment to gauge the portfolio's alignment with the 1.5-degree Celsius goal of the Paris Agreement. Despite limited Paris Aligned assets currently (for this Scheme and the market as a whole), the Scheme expects improvement over time, aligned with broader market improvements.

The addition of Scope 3 emissions significantly increases the total emissions picture, potentially overlapping with Scopes 1 and 2. The Scheme's Scope 3 intensity, based on MSCI estimations for public markets and manager data for real estate, is considerably lower than the FTSE All World Index for public equity and below the Bloomberg Global Aggregates Corporate Index for investment grade credit. There is not a comparable real estate index.

Whilst not a formally selected metric, CPTI has continued to track investment in climate opportunities. Exposure to Climate Opportunities has increased slightly over the year and whilst performance thus far has been mixed, this area is expected to contribute positively to growth over the medium term.

Conclusion

The Scheme has continued to improve management of climate risks and increase its exposure to climate opportunities, which are expected to contribute to improving the financial position of the Scheme. That said there is significant further work to be completed, not least owing to the ongoing development of solutions, regulation, data and understanding in this area. The Trustee is committed to a multi-year process of reducing unrewarded risk and adding to climate opportunities to improve the financial position of the Scheme. Whilst significant work has already been undertaken and improvements have been made in the recent past, the Trustee acknowledges there is still much more work to be done.

Section 1 – Governance

Since the Scheme's last TCFD report there have been no significant changes to the governance framework set out, maintaining the same formalised governance framework for managing climate risks and opportunities. The Committee of Management (COM) oversees climate strategy, approves climate policies, monitors metrics, and reports on climate targets, while the Investment Sub-Committee (ISC) manages implementation.

CPTI advises on investment management and climate risks. Climate risk and performance are assessed regularly, and the Trustee prioritises training to ensure ongoing expertise in this area. Further details on governance are provided later in the report in the detailed governance section.

Section 2 – Strategy, risks, opportunities, time frames

This section highlights how the Trustee, on an ongoing basis, identifies climate-related risks and opportunities which it considers will have an effect over the short, medium, and long term on the Scheme's investment strategy and funding strategy. It also demonstrates how the Trustee considers where climate change, and actions to address climate change, might contribute positively to anticipated returns or to reduced risk. In addition, this section sets out progress over the past Scheme year.

Appropriate Time Periods over which the Scheme assesses Strategy:

Short term: Everything up to 3 years in the future. This would cover the Scheme's next actuarial valuation (undertaken every 3 years) and is in line with the Scheme's economic scenario modelling, which is used to assess risk and asset allocation.

Over the short term the most material impact to the Scheme's assets associated with climate is likely to be Transition Risk and Opportunity. The Scheme has made a number of investments in climate opportunities to take advantage of market moves likely to occur over this time period. The Scheme has also focused on reducing exposure to less efficient companies who produce more waste than their peers.

Even over the short term the Scheme has already experienced the impact of some physical risks to the Real Asset portfolio, for example (i) flood risk and retrofitting requirements in the property portfolio; and (ii) greater stranding risk and investment requirement in the UK infrastructure holdings alongside weather damage and higher insurance costs.

Medium term: Defined as the period between 3 and 10 years. The end of this period is aligned with long term expected return forecasting which is done over 10 years. Over 65% of the Scheme's future payments (in real terms) are expected to be made over the next 10 years. During this period Transition Risk

and Opportunity, Physical Risk and potentially Stranded Asset risk in some of the least efficient technologies, properties and companies are all relevant.

Long term: Defined as anything beyond 10 years up until 35 years (2059) when less than 1% of the Scheme's future payments (in real terms) are expected to remain. All risks and opportunities are relevant over this period, however the Scheme's risk taking capacity is likely to be greater in the medium term than the long term.

Climate Related Risks and Opportunities - Investments

Responsibility

The Trustee is responsible for setting the climate strategy and managing and monitoring climate risk as with all other areas of risk and strategy. Like other areas of investment, the Trustee delegates the implementation of the strategy and the management and monitoring of risk to CPTI who use external investment managers, data providers and advisors to assist.

High Level Strategy

In 2021 the Trustee formally recognised climate change as a key investment theme over the next decade, emphasising the need to assess and strategically position assets to manage risks and leverage opportunities, in line with the Trustee's fiduciary duty. CPTI, on behalf of the Trustee, is seeking the best investment opportunities related to the climate transition, as well as seeking to limit the Scheme's exposure to climate risk that is not adequately compensated. In addition, CPTI recognises the need to consider how climate risks and opportunities should be incorporated into the Scheme's expected returns framework, asset allocation and funding strategy.

This latter piece of work is ongoing and relies on advancing scenario analysis. It is crucial to recognise that the wider industry lacks a definitive answer on how and to what extent climate change, under different warming scenarios, physical risk and the transition will impact the global economy in terms of GDP and inflation. For instance, the work that has been done to date on this has, so far, indicated the likelihood of both inflationary and deflationary forces from climate, with the impact on overall inflation remaining unclear.

Moving forward, the next step for CPTI will be engagement with the investment managers to gain a more granular understanding of the geographical locations of the value chains of the companies/assets in the Scheme's portfolio. This work will enable CPTI to better pinpoint where the Scheme is most exposed to the physical risks associated with climate change, which will lead to more informed decision making.

During the most recent Scheme year the key developments around climate risk and opportunities are as follows:

- Greater understanding and decision making around significantly increased capex required in property and infrastructure for climate transition.
- Identification of elevated risk in water, gas and energy-from-waste utilities owing to climate transition.
- New investment in climate-aligned commodities.
- New investment in listed infrastructure (with an electricity focus).

Developments within specific asset classes are summarised in Appendix 1.

Risks and Opportunities

The Trustee continues to work to build an understanding of the possible impacts of climate across all areas of the portfolio. Each of the following areas of risk and opportunity are expected to be material to the Scheme:

- Physical Risk
- Transition Risk including Stranded Asset Risk
- Climate Opportunities and Solutions.

The Scheme's approach to each area is discussed below.

Physical Risk to the Scheme's Assets

Climate change/physical damage will directly impact the Scheme's holdings in physical assets such as buildings and infrastructure as well as equity and bond holdings in companies who own assets or have work forces, supply chains or client bases impacted by physical risk/changing weather patterns. All of the following could impact the value and cashflows of the Scheme's assets:

- Insurance premiums and availability will change materially with more regions moving outside of insurance provision and premiums rising. We already observe this in some areas of infrastructure in the UK and it is widely reported in the US and emerging markets.

- Financing new construction of property and infrastructure already increasingly considers physical risk with financing not available or at much higher cost for higher risk geographies.

- Cost of rebuild – countries will need to bear an increased and more regular cost of disaster recovery, prevention and rebuild which will impact growth levels and other areas of spending.

- Cost of adaptation – from greater need for heating and cooling in different areas, greater storm defence and repair and relocation of parts of the population or agriculture, this again represents a cost to companies and governments as well as an opportunity for innovative solutions.

- Agriculture will face significant challenges to productivity from the impacts of changing humidity, weather patterns and pests as well as increased incidence and severity of storms. In addition, the location of agricultural activities will need to change due to drought and flooding. This is an area of both risk and opportunity with agricultural technology and genetics seeking to find innovative solutions to some of these problems.

- Immigration – climate change is a key driver of immigration, and this is expected to increase with bigger temperature rises. In a 4-degree global warming scenario Professor Myers' (a leading British environmentalist) estimate of 200 million climate migrants by 2050 has become the consensus – cited in respected publications from the IPCC to the Stern Review on the Economics of Climate Change.

In terms of opportunities presented by changing weather patterns, the Scheme has allocated capital to a commodities strategy including agricultural commodities which are likely to be affected by physical risk and therefore the price of the commodities would likely rise due to supply issues. The Scheme also has exposure, for example, to a company seeking to improve the efficiency of building cooling within the Ninety One Climate Opportunities strategy.

Understanding Scheme Exposure to Physical Risk

The Trustee is in the early stages of understanding the Scheme's exposure to physical risks, with data and modelling in this area fraught with issues. To understand the Scheme's asset exposure to physical risk CPTI, on behalf of the Trustee, have:

1. For direct physical assets, CPTI have completed initial assessments of exposure to physical risk within the Nuveen Real Estate portfolio and the Greencoat fund. Nuveen used the *Munich Re* platform for the analysis, which provides detailed analysis and assessment of physical

risks related to climate change by leveraging the world's largest database for natural disasters and hazard modelling under different climate scenarios.

In order to manage and better understand potential risks, Greencoat undertakes physical scenario analysis to predict the chronic risks associated with climate change for the portfolio. The Manager assesses the potential vulnerability of assets to chronic risks as part of the pre-investment due diligence and screening process, including modelling of physical risks. The Manager also reviews the operational track record of new assets as part of the re-investment due diligence process, to predict long term energy yield and financial performance, to the extent possible. Further, they also implement measures to increase resilience to chronic risks such as purchasing of insurance coverage and diversification of asset locations.

Greencoat recognise that forward-looking models of physical climate change risks contain significant uncertainties, and the Manager intends to engage with industry players to identify or develop a standardised method to model climate impacts and build resilience.

2. CPTI plans to assess the risk to physical assets held by the companies that the Scheme owns and lends to.

3. CPTI plans to seek to understand secondary impacts around broad long term economic assumptions and scenarios across different regions, sectors and in aggregate.

To date, progress in this area has been limited. Outside of real assets, information on the location of assets is limited. Even within real assets reliable data and models are few and far between. Over the Scheme year the CPTI team held a number of meetings with strategic partners and data providers to better understand the models and data that currently exist for mapping public assets and is yet to find a broad solution in this area.

The Scheme has already started to see the impact of physical risk on the portfolio, as described in the case study below.

Case Study: Flooding – Bolsover Moor Solar Farm (Greencoat Solar II)

This site, built in an area once dedicated to a limestone quarry, has historically suffered from flooding problems affecting the access road, which is normally restricted to a few weeks in the winter months.

Recently the severe flooding prevented safe access to the site from November 2023 through to May 2024. During this period, the operations and maintenance (OM) operator was unable to attend the site and maintenance services were suspended as a consequence of the Force Majeure event.

The Quarry operator, who is responsible on behalf of the Quarry owners to address the matter, was unable to put in place effective measures on time. Thankfully, the asset performed relatively well with only an inverter module underperforming.

Greencoat are working with their OM, the Quarry operator and owners to build alternative access to the solar farm.

The site has also benefitted from selective grass cutting and the established natural wildflower meadow with greater planting expected to improve drainage.

The floods were widely linked to the growing impacts of climate change and extreme weather patterns. Following the devastating floods, which also claimed seven lives in the UK during the storm, a local council declared a climate emergency, highlighting the urgent need for action.

Images: Bolsover Moor Solar Farm (Chesterfield

BCSSS Approach to Transition and Stranded Asset Risk

Transition risk refers to how assets will perform under a transition to a low carbon economy. This can be an orderly and gradual scenario, or a more disorganised scenario when regulation comes in suddenly, over a shorter period, and with greater market impact. Transition risk also incorporates shifting consumer preferences towards environmentally friendly products and services.

Stranded asset risk refers to the risk that an asset currently assumed to have value may lose much or all of its worth in the future. An asset's worth is based on its assumed future cashflows and therefore if these are lower, or last for less time the asset is worth less. An asset can be stranded for regulatory reasons (i.e. not allowed to profit from the asset), or economic reasons (no longer profitable).

Overall, despite politically fraught coverage around some areas of climate transition the level of investment into electrification is huge. Energy investment should drive the transition while avoiding the risk of stranded assets. The "Planned Energy Scenario," a model that projects how the world's energy need may change over time, foresees cumulative sector-wide investments of USD 103 trillion between 2023 and 2050. About 60% of this investment is intended for transition technologies – mostly in renewables, efficiency, electrification, hydrogen and carbon removal. But 40% of planned investment remains aimed at fossil fuels. To keep the 1.5°C target within reach, both scale-up and re-allocation of investment in transition technologies are needed. Compared with the "Planned Energy Scenario," a 1.5°C scenario requires additional capital spending of USD 47 trillion, for a total of USD 150 trillion, and redirecting about USD 26 trillion in coal and oil based fossil fuel technologies towards transition technologies and infrastructure over the period to 2050.

The Scheme, like the vast majority of large asset pools and the market as a whole, has significant exposure to transition and stranded asset risk. Determining when assets are likely to become stranded and the right time to exit these in favour of other investments to maximise the financial benefits requires careful consideration. Fiduciary duty to members is the Trustee's first responsibility. As such, the first focus in this area is on assets with near term risks to pricing or profitability, or assets that CPTI expects to become difficult to sell over the medium term. This is likely to evolve as the transition progresses. In the first instance CPTI has focused on reducing the Scheme's exposure to the most inefficient assets – in particular, the Scheme has made changes in passive and quantitative equity and there are ongoing changes in both property and infrastructure.

Within the Scheme's portfolio the approach to transition risk and stranded assets is to focus on investing in Climate Opportunities and to reduce the risk of investing in inefficient companies or assets which do not have affordable transition plans. CPTI seeks to understand this risk through careful engagement with managers, particularly on assets or companies that are clear laggards within their sectors on emissions intensity or in designing Net Zero costings. The Scheme has not adopted any exclusions in this area nor a Net Zero target.

Climate Opportunities

The Trustee recognises substantial investment opportunities arising from the climate transition, new technology, and changing consumer preferences across various asset classes. To capitalise on these opportunities, the Scheme has initiated investments in public equity and commodities while beginning to align capital expenditure and sales in real estate and infrastructure around expected market recognition of risks in these areas.

The investments in Climate Opportunities are tracked in two ways:

1) Mandates and overlays focused on this area – this will include companies already contributing to or affected by climate transition and climate change as well as those expecting to transition in the near

term. Under this lens 22% of the portfolio (excluding cash and low-risk bonds) is considered aligned.

2) Quantitative assessment of companies/assets considered to already have a large part of their revenues driven by the transition. This will not include forward looking assessments as included in point 1. Under this lens 10% of the portfolio is counted. Exposure to climate opportunities has seen a 3% increase in the last Scheme year following new investments in commodities and listed infrastructure. Going forward, however, the Scheme's maturity, substantial exposure to legacy private assets, and the need to reduce illiquidity may limit its ability to add more climate opportunities.

Climate-related investments are inherently thematic, and like all thematic investments, they experience periods of both strong and weak performance. Despite the recent challenges faced by some of the investments within the *Climate Theme*, particularly in public equity, CPTI, on behalf of the Trustee, remains confident that the long-term tailwinds for these investments continue to be strong. These mandates are positioned to benefit from ongoing structural shifts toward sustainability, and CPTI believes they will contribute positively to the portfolio over time.

The following case study provides an example of the Scheme's investments in climate opportunities and Appendix 2 provides further examples across asset classes:

Case Study: Commodities

During 2022 The Scheme agreed a proposal to add commodities as a new asset class. The investment thesis was based on both an expected higher inflation environment and greater regionalisation, but also, critically, the impact of climate transition and climate change on commodity prices. This mandate is focused on those commodities needed for the climate transition as well as those whose prices will likely rise with greater physical risk. The mandate excludes less aligned commodities – coal, oil and livestock. The strategy instead emphasises valuation, macroeconomic, and technical factors to identify attractive investments across energy, metals, agriculture, and carbon credits.

Wellington was appointed to manage the commodities portfolio and is focused on ensuring it captures return opportunities from dislocations in commodity markets. The strategy focuses on commodities closely linked to long-term inflation and employs a "Climate Integration Framework" that ranks commodities by sustainability metrics.

Recognising the significant human rights and environmental issues associated with the underlying physical commodities Wellington actively engages with key stakeholders, including major exchanges to promote the development of sustainable commodity markets. This engagement extends to working with liquidity providers to encourage access to sustainable products across the asset class.

Over the past year, Wellington's Commodities team has specifically engaged with the CME and the Abaxx Exchange to discuss innovative solutions such as the development of a "Responsibly Sourced Gas" contract and the potential introduction of CORISA-compliant carbon instruments (a type of carbon offset credit). The discussions with Abaxx focussed on ensuring transparency regarding the origin of nickel, liquified natural gas, and voluntary carbon markets, reflecting Wellington's commitment to sustainability and transparency in commodities trading.

How the Scheme Implements its Climate Strategy

The Scheme looks to capture climate risk and opportunity at all levels of investment. From overall asset allocation to manager assessment, hiring and firing, mandate design, manager agreements and reporting requirements.

1) Strategy changes

In terms of high-level changes to funding strategy, asset allocation and planning, the Trustee and the broader market are still in the initial stages of considering how climate change will impact expected returns across asset classes, regions, sectors and in aggregate. That said the Scheme has made a commitment to a new asset class, commodities, for which the climate transition is expected to be a significant driver of growth in many of the underlying exposures. The Scheme also made a new investment in listed infrastructure which focuses on renewable energy and electrification as a key theme. The Trustee plans to re-run climate scenario modelling in 2025 in-line with regulatory requirement but note these models remain very flawed.

2) Manager assessment

For all new appointments, CPTI assesses external fund managers' understanding of and positioning around climate change, looking for assurance that risk is appropriately considered and priced, and opportunities are not being missed. This is documented as part of each investment decision and in ongoing monitoring.

In the extreme, a manager relationship could be discontinued if risks and opportunities are not sufficiently considered and integrated. One example is the Scheme's historic investment in a semi-active China equity fund where CPTI became uncomfortable with the exposure to environmental laggards and very high carbon intensity companies with this risk not being assessed as part of the process. Within real assets CPTI is seeking to ensure the Scheme's capital expenditure aligns with market preferences around lower intensity assets and the Scheme's exposure to high emissions intensity infrastructure assets is reduced – again this has contributed to manager changes. Where CPTI has concerns around a manager's investment approach or stewardship in this area it will place the manager on a formal watchlist, which is presented to the Trustee on a quarterly basis and is subject to increased scrutiny until a decision on how to proceed is made.

For legacy private equity and debt exposures where CPTI cannot easily make changes, the priority is to understand the Scheme's exposure to risk and engage with the managers. This is currently a work in progress and is discussed in more detail under the section on data providers.

3) Mandate design

In the design of mandates with external managers, where appropriate CPTI is seeking to explicitly set out the expectations around TCFD reporting in order to improve data coverage. CPTI is also adding reporting requirements around reporting on some of the worst environmental offenders and those which have breached the UN Global Compact's 10 Principles as well as laggards in any of the E, S or G categories. This enables CPTI to focus its engagement with managers.

Key mandate changes have included a focus on climate transition risk within investment grade credit and passive equities. In real estate, decisions are being made to bring the portfolio in line with upcoming regulation around building energy efficiency requirements and ensure capex and sales focuses on climate risk and opportunity. More detail on these examples is provided in the Appendix 3.

4) Investment Management Agreements (IMAs)

Where appropriate, CPTI is updating the Scheme's IMAs to ensure manager compliance with TCFD reporting requirements.

5) Reporting requirements

CPTI is looking to ensure all managers report on their exposure to climate risk and opportunities as well as their engagement and voting in this area.

Stewardship

The Trustee views stewardship as a key tool for enhancing value through reducing risk and focusing on opportunities. Climate change has been formally identified as a key focus of the Scheme's stewardship efforts.

The Scheme's role as a steward applies across all assets and geographies in which the Scheme invests. As the Scheme delegates the management of individual assets to its investment managers, the Scheme's key levers of control and influence in stewardship are (a) the appointment of aligned managers and stewardship providers; and (b) ongoing engagement, oversight and challenge of those managers and providers.

The following case study provides an example of where engagement has been a key tool in the Scheme's ongoing stewardship efforts, performed by an aligned manager. Ninety One is the Scheme's public equity manager focussed on companies believed to contribute to positive environmental change through sustainable decarbonisation. Appendix 2 provides further examples of stewardship, across asset classes.

Case study: Ninety One – Orsted

Rationale: Orsted, a global leader in offshore wind farms, faced challenges in the US market, leading to a negative market reaction and a loss of confidence in its management. Despite this, Ninety One chose not to exit the position due to the stock's significant discount to asset value, opting instead for an engagement strategy to restore confidence and value.

Ninety One's Actions:

- Communication with Chair: Established an open line of communication with the Chair.
- Meetings and Letters: Conducted in-depth meetings with CEO and CFO, had two meetings with the Chair, and sent a letter to the Orsted Board with key recommendations.
- On-site Meeting: Held an on-site meeting in Copenhagen with Orsted's CEO and interim CFO.
- External Consultation: Collaborated with industry experts and met with Orsted's competitors for additional insights.

Key Concerns Raised:

- Project Governance and Risk Management: Emphasized the need to strengthen the management team and implement safeguards for development capex.
- Funding Gap: Urged clarification on funding sources for new projects.
- Dividend Protection: Questioned the relevance of protecting dividends in the current environment, emphasizing investor preference for capital protection and dilution risk removal.

Outcome and Next Steps: Orsted implemented initial management changes aligned with Ninety One's proposals, leading to a positive market response. The Board and management are actively addressing investor concerns, as evidenced by their focus on key issues in the Q4 results. Renewed confidence in a large-scale project and the ability to "self-fund" addressed some concerns, particularly in relation to project governance and risk management and estimated funding gap and the need to clarify sources of funds for new projects.

Investment Position and Future Engagement: Ninety One increased its position in Orsted during engagements, witnessing a share price recovery. Ongoing engagement aims to build further confidence in the management team and the funding roadmap to realise value for clients.

Escalation and Exclusions

A key part of engagement is escalation. CPTI must determine if the investment managers and third party providers' engagement is effective and, if it is not, CPTI must determine whether investing in a particular manager, sector, company or asset still makes sense. For particular areas with elevated levels of risk of financial loss the Trustee may consider exclusions. Thus far the Trustee has a formal engage and/or exclude policy for investments that violate the UN Global Compact principles. As discussed elsewhere in this report there have already been examples of reviewing mandates and managers where necessary. The Scheme has additionally changed voting and engagement responsibilities between fund managers and stewardship services provider, EOS within public equities according to views on the provider's stewardship capabilities.

Monitoring and Engagement on Exclusions, Laggards and Controversies

In line with the Scheme's Stewardship Policy the Scheme will focus stewardship on material factors relating to environmental, social or governance issues.

CPTI has access to data from two ESG data providers, MSCI and Sustainalytics, which facilitates the process of monitoring these factors. Within private markets, eFront has been onboarded which will help assess risk data. eFront collates company-level carbon data from private market managers and also provides proxied carbon data for use in carbon reporting, although this remains a work in progress and CPTI hopes to have more useable data from the platform over 2025.

The eFront platform includes RepRisk, a controversy screening service. RepRisk is the world's largest ESG technology company that leverages advanced machine learning and human intelligence to systematically analyse public information and identify material ESG risks on companies, real assets, and countries. CPTI has recently developed a framework for use of RepRisk's rating analysis to identify ESG laggards in private markets. RepRisk analysis is also leveraged to identify UNGC violators.

The Trustee monitors the Scheme's exposure to ESG laggards, controversies and UNGC Watchlist companies on a quarterly basis. Where the data providers highlight a relevant holding, CPTI will contact the manager responsible for the position and engage with them on their rationale for holding and understanding of the risk and the data provider's view. This rationale will be documented, and CPTI will continue to engage on a regular basis whilst the position is held. This engagement will also feed into CPTI's overall view of the manager's approach.

Case Study: Wellington – Americold

As an example, CPTI contacted Wellington about Americold, an Environmental Laggard in the Scheme's Global Opportunistic value mandate due to its high carbon intensity and lack of commitment to carbon reduction. Wellington expressed concerns with the company about potential long-term issues as investor focus on environmental matters grows.

Wellington stressed the importance of science-based carbon reduction targets for Americold, given its carbon intensity is nearly double the global REIT (Real Estate Investment Trust) industry average. Despite Americold's challenges in setting targets due to acquisitions, Wellington provided examples such as T-Mobile to illustrate feasibility.

Despite Americold's interest in science-based targets for Net Zero, Wellington exited the position in 2023 due to diverging fundamentals and lower earnings growth expectations. Despite earlier engagements, Americold had not made progress in setting targets which was a contributing factor in Wellington's decision to reallocate resources to areas with better growth prospects.

Voting

The Scheme seeks, wherever practicable, to vote on every resolution at all meetings of companies in its portfolios. Voting is regarded as an important part of the Scheme's stewardship activities and as a means of achieving positive change.

CPTI also monitors the Scheme's voting on key themes, including climate-related management and shareholder resolutions which CPTI expect to be considered by managers and third-party engagement providers during voting. As voting is outsourced, CPTI has appointed an external advisor to enable better understanding of the voting conducted by the Scheme's managers and third-party engagement provider and also to provide a basis for CPTI engagement. The analysis so far has been encouraging and indicates that the third- party provider, EOS, displays independence of thought in this area. The analysis has also been helpful in highlighting some questions and areas where CPTI can provide challenge on voting policies with some of the other managers, which has led to meaningful engagement.

An example of where the Scheme has voted against management on a climate resolution is included below.

Case study: EOS - TotalEnergies

During 2023, EOS, the Scheme's stewardship overlay provider, recommended a vote against management in relation to approving TotalEnergies' *Sustainability & Climate Progress Report*. Reasons for the vote against management included:

1. Strategy still reliant on maintaining and growing fossil fuels with insufficient consideration of growing transition and stranding risk for investors.

2. Weaknesses in Scope 3 accounting methodologies; and

3.. Capital expenditure policies for further fossil fuel investment not clearly aligned to 1.5°C.

On balance, EOS believed that, despite some progress in reducing emissions and some improvements in the ambition of the company's strategy, the lack of ambition in Scope 3 targets was an overriding concern.

Consequently, EOS considered the company's targets to remain materially misaligned to 1.5°C scenarios and therefore recommend a vote **against** management.

Summary of Progress Across Asset Classes in integrating Climate Risk and Opportunity

For a detailed summary of progress across all asset classes, please see Appendix 1.

Climate Related Risks and Opportunities – Funding

Funding Strategy

The Trustee's primary funding responsibility is to pay all future member benefits (i.e. the Scheme's liabilities) from the Scheme's assets. In addition to member benefits, the future payments also include payment of an Adjusted Reserve to the Guarantor by 2033 if the assets are sufficient. In the period up to 2033 the Adjusted Reserve effectively acts as a funding buffer.

In order to meet the future payments, the Scheme's assets need to generate a return in excess of that available on "risk-free" assets such as UK Government Bonds. As such, the Scheme invests in a proportion of return seeking assets.

Ultimately, if the Scheme's funding strategy is unsuccessful (i.e. there are insufficient assets available to meet member's benefit payments), funding will be provided by the UK Government who is the Scheme's Guarantor.

Climate Related Risks and Opportunities

Given the Scheme invests in return seeking assets, the biggest climate related risk and opportunities to the funding strategy are those that impact such investments. These risks and opportunities have been covered in detail above.

Climate change could also impact the level of benefit payments that the Scheme makes to members, either as result of changes in mortality levels or due to changes to future levels of inflation. Here, the maturity of the Scheme is likely to be a key factor, as the average age of members (weighted by pension amount) is around 78 and around 65% of the Scheme's future payments (in real terms) are expected to be made over the next 10 years.

So, for climate change to have a meaningful impact on the future benefit payments from the Scheme it is likely that these impacts will need to happen in the next 10 years.

It is unlikely that climate change is going to have a material impact on the life expectancy of the Scheme's members (and therefore the associated pension payments to members), particularly given the vast majority of members live in the UK where the physical risks of climate change are less extreme, relative to other parts of the world. And whilst, for example, climate change could increase the number of heat-related deaths in the summer, this may well be offset by a reduction in cold-related deaths in the winter.

A more meaningful area of impact on future benefit payments could be the impact climate change has on inflation, as around 70% of members benefits increase each year in line with inflation.

Covenant Risk

Whilst the Scheme does not have a sponsoring employer, should the Scheme's funding strategy fail, funding will be provided by the UK Government under the terms of the Government guarantee. As such, climate change is not expected to affect the ability of the Scheme's sponsor to support the Scheme.

Overall Progress on Strategy

The Trustee continues to work to integrate climate risk and opportunity throughout the funding strategy. Whilst some areas, for example physical risk and climate scenarios, remain in early stages, regular reporting and discussion on transition risk and opportunities has been rolled out across the majority of Scheme assets for a number of years. Qualitative understanding and interrogation of climate risks and opportunities is a key part of manager selection and monitoring, and climate change is a core focus of the Scheme's stewardship efforts. Over the next year, CPTI will focus on finding more decision-useful forms of climate scenario analysis, and embed these into the Scheme's strategic decision making, while also continuing to identify risk and opportunities that it believes merit changes to positioning.

Section 3 – Risk management and monitoring

The Trustee's goal is to identify, monitor and manage climate risks and opportunity across the whole portfolio, public and private. Whilst this remains a work in progress for the Scheme and wider industry, the Trustee now has a substantial level of information included in regular reporting around risks and opportunities in this area.

Risk Appetite

While climate risk has not altered the Trustee's overall risk appetite, it has led to some changes to the Scheme's portfolio, approach and providers. The Trustee expects to make further changes as and when appropriate in order to meet the Scheme's objectives in an environment where climate transition and physical risks will change the risk/return dynamics across investments.

Incorporating Climate Risk and Opportunities Into Overall Investment Strategy

CPTI, on behalf of the Trustee, is in the early stages of considering how climate change will affect the Scheme's expected returns across asset classes, regions and sectors and likely economic scenarios. That said, detailed work has been conducted around the most likely near-term affected areas. CPTI expects to continue incorporating climate change across all areas of strategy through 2024 and 2025. Opportunities identified in global infrastructure and commodities have led to CPTI advising greater investment in these areas.

How the Trustee Assesses the Risks and Opportunities

Climate risk assessment is relatively new and continues to evolve. CPTI expects the tools and data available to continue to expand and improve. CPTI, on behalf of the Trustee, relies on both quantitative and qualitative approaches to assess climate risk.

Qualitative assessment involves understanding how different scenarios can play out at the asset class, sector and regional level and having detailed discussions with managers and other research providers on evolving expectations in this area. CPTI receives qualitative assessments of company risks from the Scheme's ESG data provider MSCI and stewardship provider EOS. Discussion of both company and broad market/asset class risks and opportunities are also part of regular ongoing conversations with the Scheme's managers, advisors and broader network including ESG and stewardship collaborative groups. Given limited data coverage and quality, particularly in certain areas of the portfolio, taking a qualitative approach as well as quantitative is critical.

In preparing quarterly reporting for the Investment sub-Committee (ISC), CPT and CPTI collate reports using data directly extracted from tools available in-house in conjunction with data sourced from third party managers. The reports are designed, reviewed and overseen by the Head of Responsible Investment and signed off by the CIO before being presented to the Trustee.

The following quantitative data is reported to ISC quarterly:

- ESG laggards
- Controversy exposure
- Carbon emissions and intensity across the portfolio (Scope 1, 2 and 3)
- Degree of Paris Alignment
- Level of investment in climate opportunities

At present full coverage of the portfolio is not available but CPTI continues to work to build this up through new data providers and engagement with managers. In the absence of reported data, the most sensible available proxies will be used. As discussed above there is currently limited data and understanding around physical risk, as such, CPTI and the broader market continue to seek better information and models here.

Another key tool for understanding climate risk and opportunity is scenario analysis – both quantitative and qualitative. Whilst the Scheme has not undertaken new analysis this year, considering how climate change will affect various investments and overall economies is a key consideration in decision making. For example, analysis around opportunities has led to investments in commodities and listed infrastructure in 2023. Climate risk analysis also continues to be a major factor in the analysis and positioning of the Scheme's investments in UK property and infrastructure.

Monitoring of Risk Metrics

The ISC reviews climate risks and TCFD metrics on a quarterly basis. The Trustee Board formally reviews climate risks (including metrics and targets) at least once a year ahead of the publication of the Scheme's TCFD report.

The TCFD recommends that trustees should increase the frequency of monitoring if risk levels approach pre-determined risk appetites. The Trustee has not yet determined tolerances in this area given data and methodologies are still being constructed but will continue to develop its approach here as discussed in greater detail below.

To the extent possible, climate risk metrics are monitored for every asset class in the portfolio, however some areas remain a work in progress. More broadly the Trustee acknowledges that all areas of its assets and the broader economy are exposed to some level of climate risk and opportunity and that these risks are systemic and cannot be fully divested or diversified away.

Physical Risk: Generally speaking, limited data or acceptable scenario modelling is available here for many asset classes. As mentioned earlier in the report, Nuveen have performed some physical risk analysis for the real estate portfolio through the *MunichRe* platform, spanning multiple risks including river flooding, sea level rise and heat stress. More work is to be done in the coming years.

Transition Risk:

- Carbon emissions: absolute and change over time; scopes 1, 2 and 3.
- Carbon emissions intensity: absolute and change over time.
- Climate Stress Testing – conducted in 2021 and will update in 2025.
- Paris Alignment.

Stranded Asset Risk: The above transition risk metrics also relate to stranded asset risk. As the price of carbon increases, the risk of stranded assets increases with the most carbon intense assets at greatest risk. As part of this, the most carbon intensive sources of power are monitored: coal reserves and oil sands. Others will be added through time as the energy market develops.

ESG Scores: Scores absolute and versus the benchmark, along with exposures to laggard companies.

Controversies: Exposure to UNGC violators, watchlist and broader controversies including coal reserves and oil sands as mentioned above.

Some of the process and controls surrounding the investment section of the risk register remain in development and will be a subset of the broader risk reporting ISC already receives on a quarterly basis. There has been no change in the Scheme's prioritisation of relevant risks for the TCFD report and no tolerances have been proposed. CPTI continues to incorporate and evaluate climate risks and opportunities into the investment process and reports back to ISC on all major developments. Understanding and assessing climate risk and opportunity remains an area of development for both the Scheme and the broader market. The Trustee will continue to evolve its approach accordingly to ensure risks or opportunities are not missed.

That said, more broadly the qualitative understanding of climate risk and opportunities has led to both sales and new investments as discussed elsewhere in this report.

Data Providers, Advisors, and Tools

In addition to data provided directly from managers, CPTI uses MSCI for ESG and climate risk assessment in public markets, supplementing this with additional data from EOS, Sustainalytics and Bloomberg.

In private markets, Blackrock eFront collects and collates reported ESG data for private companies, on an annual basis. The work being done by eFront remains a work in progress due to a combination of factors: legal challenges relating to data ownership; manual data cleansing to ensure that there are no mistakes or outliers within the data set; and the fact that many private companies simply do not yet report, or even collect, ESG and climate data. This final hurdle is expected to be overcome from 2025 onwards when TCFD-aligned disclosures become mandatory for many private companies, meaning that many more private market companies will be collecting and reporting on this data.

Lastly, CPTI engaged with a number of consultants and its key external fund managers in this area, for training purposes. CPTI, on behalf of the Trustee, has significantly increased the Scheme's available data in this area since 2021 and continues to work to further build this out.

Section 4 – Scenario Analysis

The Trustee has reviewed the available options and concluded that it would not conduct new scenario analysis in the 2024 Scheme accounting year given the results would not be significantly different and the available models remain flawed, particularly in relation to modelling physical risk. The Trustee agreed to instead wait for the availability of new or improved scenarios or modelling capabilities, or events that might reasonably be thought to impact key assumptions underlying scenarios. As required by regulation, new scenario analysis will be undertaken in 2025.

In preparation for the next round of scenario analysis, the team at CPTI met with a number of service providers over the first half of 2024. While the offering in this space has improved since the last round of analysis was completed for the Scheme, the team do not believe that any of the proposed models are fit for purpose or worth the cost. The models on offer continue to underestimate climate risk and often focus on very long-term scenarios with smoothed impacts.

As the Scheme has not conducted new scenario analysis in this Scheme year, the previous analysis has been moved to Appendix 3 of this report. As a result, numbers within the scenario analysis may be inconsistent with the same updated numbers in the main report.

Section 5 - Metrics and Targets

Overview

In compliance with TCFD regulations, the Trustee agreed three climate metrics and a target in 2021. Two of these metrics, total carbon emissions and carbon intensity, are required by statutory guidance. The third metric, data quality, was also agreed in 2021 alongside an ambitious target of 90% reported emissions by the end of 2024. As the end of 2024 approaches, the Trustee acknowledges that this target will not be met and plans to review this and agree a new target ahead of the next report. A fourth metric on Paris Alignment was added in 2023 to meet regulatory requirements.

CPTI, on behalf of the Trustee, is engaging with the Scheme's investment managers to improve data availability across the Scheme's assets. Enhanced data on emissions and trends will enable the Trustee to measure the impact of portfolio changes and engagement success. Subsequent pages detail Scheme data under the mentioned metrics.

Carbon Emissions Data Quality/Coverage by Asset Class

Data Quality: The accuracy, completeness, and reliability of information pertaining to carbon emissions, used to effectively assess the Scheme's financed carbon emissions.

Figure 1

The following table shows the data quality currently available by asset class and at the total Scheme level as of 31st March 2024:

Asset Class	% coverage (including proxy and reported data)	% coverage (reported data only)	% of total Scheme NAV (excluding cash)
Public equity	98%	86%	19%
Private equity	91%	6%	11%
Private debt	9%	0%	7%
Government bonds*	100%	100%	13%
Investment grade credit	96%	86%	19%
IG Securitised credit	100%	0%	7%
EMD Corporate	100%	95%	1%
EMD Sovereign	100%	100%	1%
HY Securitised Credit	100%	0%	2%
Special situations debt	100%	2%	6%
Infrastructure	84%	84%	3%
Property	99%	84%	11%
Total (reflecting asset allocation)	**91%**	**60%**	**100%**

Source: MSCI and managers; * Absolute emissions data is not yet available for government bonds as there is not yet an agreed methodology of apportioning this data to investors. Therefore, coverage for government bonds relates to carbon intensity metrics only.

From 30th September 2021, when measurement of the Scheme's emissions began, to 31st March 2024, data coverage has increased by 37% including both proxy and reported data, and by 21% for coverage including reported data only. Figure 2 below shows the trend in data quality through time.

There has been an amendment to the methodology used when calculating data quality. For this third TCFD report, some asset classes have been excluded from the metrics and targets data due to there being no way to calculate or indeed assign emissions to them, which is in line with DWP guidance. The reported data coverage total excludes these assets. For the Scheme this is mainly cash and derivative based assets such as Brevan Howard and commodities, which in total represent 4.3% of total Scheme valuation as at end March 2024. For a detailed explanation of the methodology used to calculate data quality, see the methodologies section.

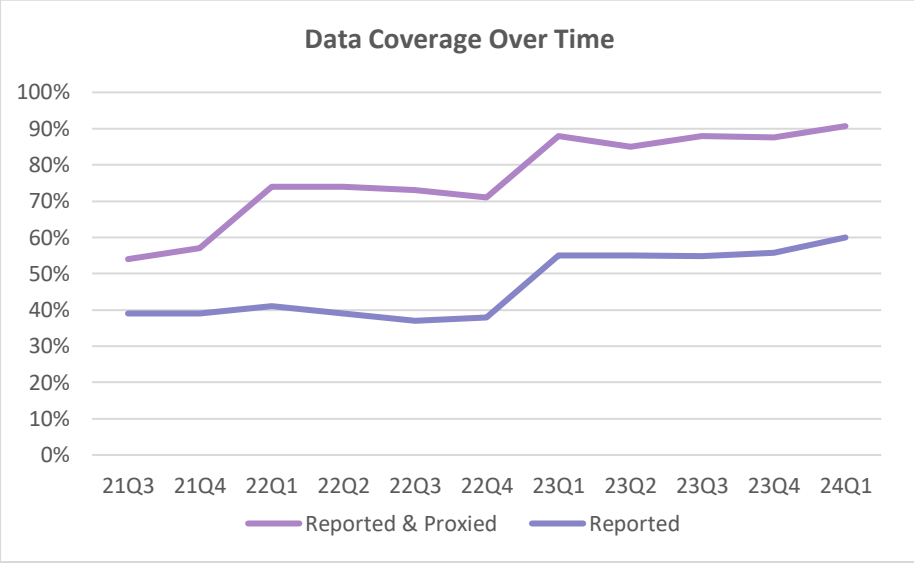
There have been improvements in the level of reported data across most asset classes over the year, with the largest impact arising from improved data in infrastructure and the inclusion of the new emerging market debt portfolio, which comprises of corporate and sovereign bonds (95% and 100% reported data respectively). In order to have hit the 90% target by the end of 2024 significant improvement needs to be seen in private equity, private debt and special situations debt data coverage (or a decrease in allocations to these areas). Both of these things are expected to occur over time, however not by the end of 2024. In particular, data coverage is expected to increase in the next annual data outreach cycle conducted by the data provider, eFront.

Over the reporting year, CPTI has worked with the public market managers to identify where and why there are discrepancies in company level reported data between the Scheme's data source (MSCI) and the data available to managers via the managers' other data sources. Some of the managers confirmed that MSCI is their only data source for carbon data, while others provided some additional data to close these gaps. Currently CPTI are working on understanding this data and the different methodologies, and plan to engage with MSCI to fill these gaps ahead of the next TCFD report where possible. The team have also engaged with the public market managers to encourage them to pressure their investee companies to report carbon data where it is not yet being reported.

The Scheme invested in a new public equity healthcare mandate during 2024. The nature of the investments made within this portfolio mean that there is generally less information on emissions as compared with the wider public equity market. This is largely due to the broader investment theme of emerging healthcare companies, which often involves small-cap or earlier-stage companies. GHG emissions scope 1, 2, and 3 reporting requires financial and personnel resourcing that some small companies do not have or choose not to focus on. As these companies grow, then it is possible that their priorities will change, and emissions reporting will become more readily available.

Whilst the lack of data is a concern, CPTI couples this with a qualitative understanding of the portfolio assets and the approach taken to climate risk and opportunity by each asset manager. As such, whilst it is key the Trustee sees data improve, this data quality metric alone does not imply that changes are required to the investment strategy.

Figure 2



Total Scheme Scope 1 and 2 Carbon Emissions and Intensity

Carbon Emissions: refers to the absolute greenhouse gas emissions associated with the portfolio, expressed in tons of CO2. Total emissions are what must be reduced in order to limit the carbon dioxide in the atmosphere and the degree of planetary warming.

Carbon Intensity: is the portfolio's exposure to carbon-intensive companies, expressed in tons of CO2 per the enterprise value of the company/asset including cash (EVIC). It allows a comparison between companies and assets of varied sizes.

Scope 1 & 2: Scope 1 and 2 emissions are those directly produced by the companies/assets through burning fossil fuels or indirectly through purchased energy.

Scope 1 and 2 total carbon emissions are reported at each asset class level where possible and aggregated at the Scheme level. The Scheme is focused on collecting reported data for Scope 1 and 2 emissions but will use proxied data to fill in any gaps.

The metrics and methodology in each asset class have been chosen in-line with industry consensus, more information can be found in the methodologies section.

Figure 3

The following table shows the Scope 1 and 2 carbon emissions and intensity by asset class and at the total Scheme level as of 31st March 2024:

Asset Class	Scheme emissions (thousands of tonnes of CO2)	Benchmark emissions (thousands of tonnes of CO2)	Scheme Intensity (EVIC)	Benchmark Intensity (EVIC)
Public equity	82	100	55	68
Private equity	71	61	79	68
Private debt	2	6	28	120
Government bonds	N/A	N/A	139	TBC
Investment grade credit	52	101	42	74
Securitised Credit	16	TBC	27	TBC
EMD Corporate	23	31	269	354
EMD Sovereign	N/A	N/A	1144	TBC
HY Securitised Credit	4	TBC	25	TBC
Special situations debt	42	43	85	88
Infrastructure	20	TBC	78	TBC
Property	5	TBC	5	TBC
Total*	**316**	**427**	**50**	**68**

Data in this report is based upon the best methodologies available at this point in time and may be subject to change as methodology and interpretation continues to evolve in this area.

Carbon intensity is calculated based on emissions by £m invested for all asset classes except government bonds which is based on emissions per GDP. The total Scheme level intensity excludes government bonds.

Carbon data is as of March 2024 for public equity and investment grade credit, December 2023 for infrastructure, and December 2023 for property, private debt, private equity and special situations debt.

*The benchmark total is the Scope 1 and scope 2 emissions of the FTSE All World Index for the asset value we have data for.

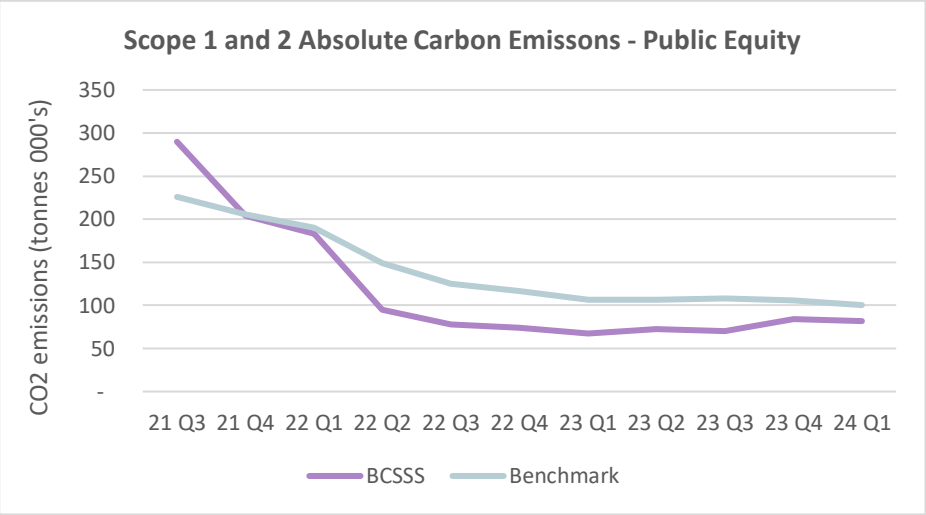
As indicated in the table above, the Scheme's absolute emissions and emissions intensity are both lower than the relative benchmarks for each asset class as of 31st March 2024 across all asset classes where data is available. This reflects the overlay of the climate theme across asset classes.

Whilst the Scheme has no set targets, carbon emissions and intensity have continued to fall despite the substantial increase in data coverage. Over the

past year, this has largely been driven by the sales within the infrastructure portfolio and improved data in real estate. There has been an increase in emissions within the public equity portfolio, which largely reflects the new investment in listed infrastructure, a sector which generally emits more than the market as a whole.

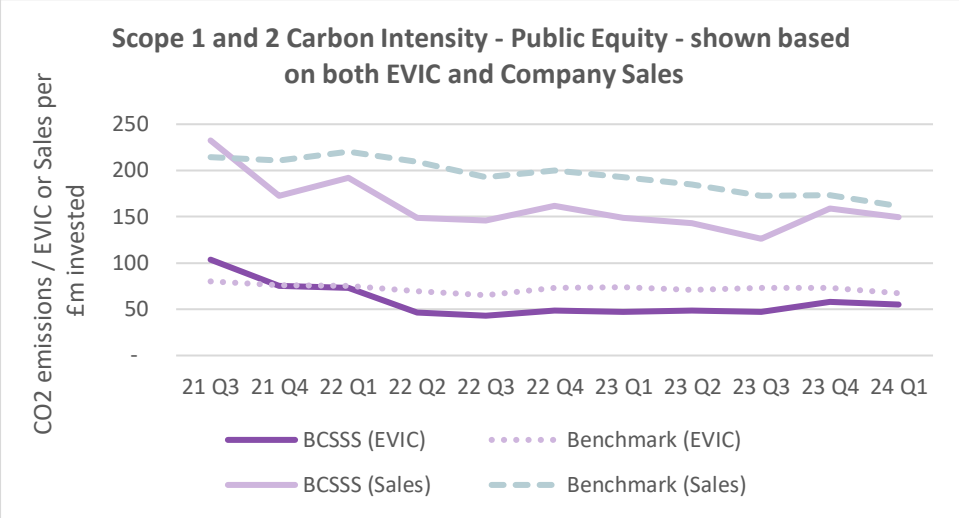
Figures 4 and 5 show the total carbon emissions and carbon emissions intensity for the Scheme's public equity portfolio at the end of each quarter from Q3 2021 when the metrics were agreed, and tracking began. Carbon intensity is shown by the chosen metric of emissions (EVIC) and also relative to sales as an additional measure relevant to these assets. In each case, changes through time are shown as well as the comparison with the relevant asset class benchmark.

Figure 4



Source: MSCI

Figure 5



Source: MSCI

Both absolute carbon emissions and carbon intensity within the public equity portfolio have fallen since tracking of these measures commenced. The trends shown in Figures 4 and 5 above illustrate the changes made to the portfolios in respect of emissions intensity since September 2021. These reductions predominantly relate to the transition of the passive mandate in Q4 2021, the termination of a semi-active equity mandate in Q2 2022 and the introduction of climate focussed equity mandates that by design will have lower carbon emissions intensity.

In recent months, the intensity number has increased slightly, however it remains materially below the index emissions. The Scheme's emissions intensity is expected to vary up and down through time with asset class shifts, regional and sector views. For example, investing in emerging market credit has increased the Scheme's emissions intensity.

Whilst the Scheme has not set a target around absolute emissions or intensity, CPTI believes a fall in intensity reflects appropriate inclusion of climate risk in the approach into the management of the Scheme's equity assets.

Figure 6

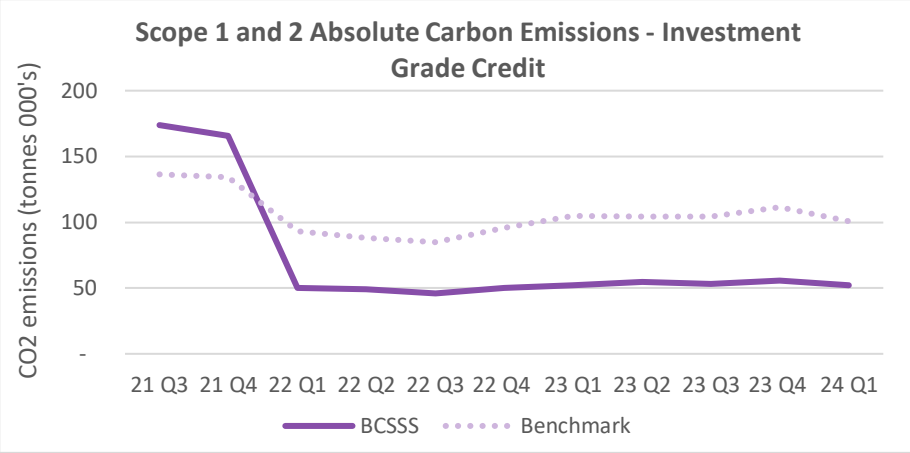
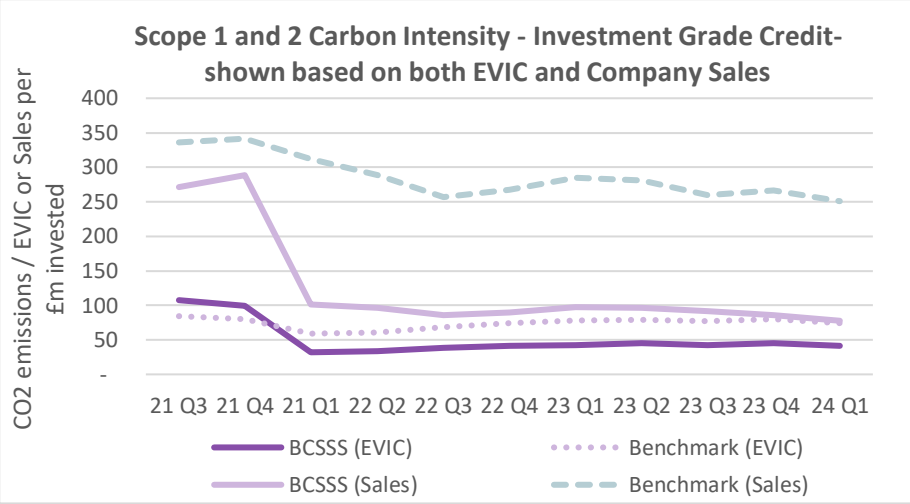


Figure 7



Source: MSCI, Benchmark: BBG Global Aggregate Corporate Hedged Index

Both absolute emissions and emissions intensity within investment grade credit have fallen following the transition in February 2022 to mandates with a direct focus on and guidelines around risk in this area. Over the last reporting year these metrics have remained largely the same reflecting the managers' contractual commitments to remain materially below the benchmark.

Scope 3 Carbon Emissions

Scope 3: refers to indirect greenhouse gas emissions both upstream and downstream of an organisation's main operations.

Upstream: refers to indirect greenhouse gas emissions that occur prior to the company's operations, including those from the production and manufacture of purchased goods and services.

Downstream: refers to indirect greenhouse gas emissions that occur after the company's operations, including those from the distribution, use, and end-of-life stages of sold goods and services.

Scope 3 emissions, constituting 90% of the equity benchmark's total emissions, encompass indirect impacts throughout a product's life cycle. Focusing solely on Scope 1 and 2 emissions may neglect supply chain issues and promote the use of opaque and lengthy supply chains by both companies and countries. Understanding Scope 3 emissions, including the full life cycle of a product, is crucial for risk management, robust corporate governance, and future planning.

Challenges: Addressing Scope 3 emissions poses challenges related to limited data access and varying methodologies across suppliers, leading to potential inaccuracies. Aggregating data faces difficulties, with upstream emissions for one company becoming downstream for another, causing double or triple counting in total portfolio emissions.

Double or triple counting is a deliberate feature of Scope 3, used to create shared responsibility – the double counting also leads to fast downward curves when emissions are cut.

Data reporting in Scope 3 is currently extremely limited. Even where data is reported, methodologies vary hugely. As such, unlike with Scope 1 and 2, best practice is to use estimated, not reported, data to allow like for like comparisons.

Therefore, the approach adopted for this round of TCFD reporting on Scope 3 is to use estimates provided by MSCI. For their modelling, MSCI use the publicly available Greenhouse Gas Protocol (GHGP) framework for Scope 3 emissions accounting.

The Scheme's approach to measuring Scope 3 emissions currently covers public markets and real estate. MSCI's coverage of Scope 3 data covers the Scheme's public markets and real estate Scope 3 emissions have been provided by the manager. CPTI fully expect to extend the reach of Scope 3 reporting across other asset classes in due course, but currently the lack of data and coverage in other asset classes currently remains too low for inclusion into the Scheme's report.

The following two tables show the Scope 1, 2 and 3 carbon emissions and intensity by asset class and at the total Scheme level as of 31st March 2024:

Figure 8

Asset class (NAV)	Carbon emissions (thousands of tonnes of CO2)			
	Scheme Scope 1 & 2	Scheme Scope 3	Scheme Scope 1, 2 & 3	Benchmark Scope 1, 2 & 3
Public equity (£1.5bn)	82	583	664	755
Investment grade credit (£1.6bn)	52	603	654	702
Property (£742m)*	2	4	6	TBC

Figure 9

Asset class (NAV)	Carbon intensity (EVIC/NAV)			
	Scheme Scope 1 & 2	Scheme Scope 3	Scheme Scope 1, 2 & 3	Benchmark Scope 1, 2 & 3
Public equity (£1.5bn)	55	393	447	509
Investment grade credit (£1.6bn)	42	484	525	515
Property (£742m) *	2	6	8	TBC

*Scope 3 property emissions and emissions intensity relate only to the Nuveen Portfolio.

Overall, whilst Scope 3 emissions are high, the Scheme's total emissions when including these remain below benchmark emissions. As we are still in the early stages of tracking Scope 3 emissions, a trend cannot yet be shown.

As covered earlier in the report, the metric used to calculate carbon intensity for public equity and investment grade credit is *tons of CO_2 per the enterprise value of the company/asset including cash (EVIC)*. For real estate, the team have used *tons of CO_2 per the Net Asset Value (NAV)*. The chosen metric aligns well with EVIC due to the fact that both metrics consider the total value of the assets and, as such, are somewhat comparable.

Paris Alignment: Definition and Scheme Relevance

The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP21 in Paris, France, on 12 December 2015 with the goal of limiting global temperature increases to below 1.5 degrees Celsius above pre-industrial levels. Since then, an ever greater number of countries, cities and companies have set targets or made commitments to cut emissions to align with The Paris Agreement.

Whilst the Scheme has not committed to a Net Zero target, the Paris Agreement remains relevant in understanding the portfolio's climate transition risk. As regulation and investment patterns rapidly shift around the climate transition it is critical for investors to understand the cost and path for each company or asset to reposition for Net Zero in the same way they consider other major investment scenarios.

The Trustee notes that, as with Net Zero, the Scheme is not required to set a Paris Alignment commitment although the Scheme is required to report on the extent to which its assets are Paris Aligned or not.

The Scheme's Approach

The Trustee has chosen to calculate the extent to which its assets are Paris Aligned by using a binary target measurement. The approach taken by CPTI looks at the company/asset level within each portfolio from data provided by either MSCI or directly from the managers. For some asset classes, this is relatively straight-forward while for others it is either more complicated or in some cases not possible. More information can be found in the methodologies section. For an asset to be Paris Aligned it must be on the pathway towards Net Zero at an appropriate pace rather than being Net Zero today.

Figure 10 shows the current look-through level of Paris Alignment across the total portfolio as at the end of March 2024. The Scheme as a whole was 16% Paris Aligned on the aggregate level.

This number rises to 21% if we remove the asset classes for which Paris Alignment is not an applicable metric, such as hedge funds. Taking it one step further, if we look only at the asset classes where we currently have data, this number rises to 37%, just slightly behind the FTSE AW.

Figure 10

Asset class	% of asset class that is Paris Aligned	
	March 2023	March 2024
Investment grade credit	35%	40%
Public equity	30%	40%
Infrastructure	11%	24%
Emerging market debt	--	10%
Short-dated bonds	20%	--
Private equity; Private debt; Special situations debt	*No Data*	*No Data*
Liquid securitised assets; Government bonds; Hedge funds; Commodities; and Other *	*N/A*	*N/A*
Total portfolio alignment	**13%**	**16%**
Alignment of assets where data has been provided	**28%**	**37%**
Total portfolio alignment (ex N/A assets)	**15%**	**21%**
FTSE All World alignment (science-based targets)	**37%**	**41%**

Source: Investment Managers/SBTi; * asset classes for which Paris Alignment is not an applicable metric.

Despite the disinvestment from the BlackRock ultra short-dated corporate bond portfolio, the level of alignment across the portfolio, to the extent this can be measured, has risen over the year from 28% to 37%, reflecting a combination of two things: Firstly, there are now more companies in the investment universe with SBTi approved targets. Secondly, the portfolio has higher exposure to certain companies with SBTi approved targets. It is also encouraging to see that, though a small proportion, some of the companies within the new emerging market corporate bond portfolio are Paris Aligned. However, the key conclusion overall is that neither the portfolio, nor the index, is Paris Aligned.

The Trustee expects to be able to report better alignment and higher levels of data in the Scheme's next report. Through time CPTI also expect to see the level of Paris Alignment across the portfolio increase as the managers continue

to incorporate transition risk and opportunities, and as individual assets and companies make progress in clarifying their transition plans and timing.

Climate Opportunities

Though not an official metric or target, the Trustee is focused on capturing investment opportunities within the Climate Transition theme and expects these to improve returns. CPTI reports to the Trustee the level of investment in Quantitatively assessed current *climate opportunities, as well as the performance of the overall theme,* on a quarterly basis.

The table below shows the percentage of the portfolio that is invested in companies or exposed to *climate opportunities* (as defined by MSCI for public markets and direct manager input in private markets).

Figure 11

Percentage of assets (excluding cash and low-risk bonds) invested in current (not future transition) Climate Opportunities (shown only for the asset classes invested in Climate Opportunities)

Asset class	March 2023	March 2024
Commodities	-	100%
Emerging market debt	-	40%
Infrastructure	20%	30%
Public equity	13%	14%
Private debt	1%	1%
Total of growth assets	**7%**	**10%**
Benchmark (FTSE AW)	10%	13%

During the year, the Scheme saw a 3% increase in exposure to climate opportunities due to a new allocation to commodities, which are fully classified as climate opportunities. Further increases were due to the investment during the year in listed infrastructure, which is shown as an increase to public equity exposure. Exposure within direct infrastructure also increased, though this was as a result of co-investment asset sales.

Overall, like many pension schemes, as the Scheme matures, its ability to invest in more climate opportunities may reduce. Large exposure to legacy private assets and the Scheme's requirement to reduce illiquidity also limit the ability to add to climate opportunities.

Examples of some of the Scheme's climate transition opportunities are provided in the case studies within Appendix 2.

Section 6 – Conclusion

This third statutory TCFD Report demonstrates the seriousness and commitment with which the BCSSS Trustee is addressing the financial risks and opportunities posed by climate change. The Trustee believes that addressing climate risk and opportunity within the Scheme's assets will be beneficial in meeting its fiduciary duty to members over the full remaining lifetime of the Scheme.

The Trustee has already taken significant steps to address climate risk and opportunity within the Scheme's assets as well as to increase the Trustee's knowledge and oversight of this area. However there remains much more work to be done to transition the portfolio to best address climate risks and opportunities. This work will take several years. The Scheme cannot move faster than the market as this could be to the detriment of members. The Trustee also acknowledges the high level of uncertainty around the data and modelling included in this report, which presents challenges to decision-making. Whilst this report has identified many areas of work in progress for the Trustee, and the industry, the Trustee is committed to continuing to develop its approach in this area, and to both challenge and partner with asset managers.

The Trustee is actively working to transition the portfolio at an appropriate pace, reducing exposure to unrewarded risks and adding to climate opportunities where this is seen to be likely to contribute to the financial return required to meet future benefit obligations. This is an ongoing process that will take several years.

The Trustee continues to make progress towards its target of significantly improving data quality on carbon emissions across the whole portfolio. The 90% target is ambitious, and the Trustee does not expect it to be achieved by the end of 2024. As such the target will be revisited ahead of the 4th TCFD report.

The Trustee notes that carbon emissions fell marginally over the year, albeit the Scheme has set no targets here and notes that such falls may not continue in a straight line as the Trustee may make commitments to asset classes with high starting levels of emissions as long as it is comfortable that these assets will be transitioned through time.

The level of Paris Alignment across the Scheme's asset is currently reported as low with increases expected over time, both as assets are transitioned, new investments in opportunities are made, and the level of data improves. The Trustee would expect to see Scope 3 carbon emissions fall through time as companies are pushed to take greater ownership of the impacts of their supply chains.

Governance in detail

As set out in the first TCFD report, The Trustee has an established governance framework for considering all investment opportunities and risks. The Trustee's approach to governance of climate, outlined below, was formalised in 2021 in the context of this and as an extension of existing governance arrangements. This section is largely unchanged since the Scheme's second TCFD report.

Committee of Management ("COM")

COM consists of all eight members of the Trustee board. COM retains responsibility for all key areas of policy which includes the overarching Responsible Investment ("RI") Policy. Climate has been an important theme within the RI policy and the most recent review of the policy in 2021 resulted in a dedicated section on climate (link). The key roles retained by COM are as follows:

- Managing the risk of climate on Funding Strategy.
- Approve and regularly review the RI policy, which includes a specific climate policy.
- Provide clear guidance to the Investment Sub-Committee within the Terms of Reference for overseeing implementation of COMs policy regarding climate.
- Establish climate metrics to monitor and report publicly as part of TCFD requirements. In 2021, COM agreed the following key metrics to report on:
  - Absolute carbon emissions across the portfolio.
  - Carbon emissions intensity across the portfolio.
  - Percentage of the portfolio on which acceptable (reported not proxied) carbon emissions data is available.
  - In 2023, as required by the TCFD regulation, COM also agreed to report on Scope 3 emissions and the degree of Paris Alignment across the Scheme's assets.
- Establish a climate target and report progress towards this target as part of TCFD requirements. In 2021, COM agreed the following target:
  - Increase the proportion of the Scheme on which acceptable (reported not proxied) carbon emissions data (Scope 1 and 2) is available to 90% by the end of 2024.
- Review progress against the climate data target, and whether the target remains relevant or needs replacing.
- Publish an annual TCFD Report within 7 months of the end of each Scheme year on a publicly available website, accessible free of charge.
- Ensure knowledge and understanding of climate issues across the Trustee and its advisors are sufficient to address the issues presented.

Investment Sub-Committee ("ISC")

ISC consists of four of the eight-member Trustee board and currently has two investment advisers who are non-voting members of the sub-committee. During the reporting period there were three investment advisers. COM delegates to ISC the ongoing oversight of investment risks and opportunities, including those relating to climate. ISC is responsible for:

- Implementation of investment strategy.
- Monitoring the agreed climate metrics to be reported publicly as part of the TCFD reporting, as well as any additional metrics that ISC believe are appropriate.
- Reviewing progress against the established climate target as set out above and acting as necessary to ensure the Scheme remains on track.

- Reviewing whether the agreed climate metrics should be changed through time and making any proposals to COM.
- Reviewing the climate scenario analysis and agreeing any investment changes required as a result.
- Setting and reviewing any additional metrics relating to climate and broader ESG risks as part of ongoing investment activity; and
- Overseeing CPTI's implementation of climate risk management and opportunity capture.

Climate and broader ESG metrics are reported in each quarterly ISC meeting pack. COM formally reviews the climate data and metrics following the end of each Scheme year.

Coal Pension Trustees Investment Limited ("CPTI")

CPTI is responsible for providing investment advice and investment management services to the Trustee. As set out in its Investment Management Agreement, CPTI is responsible for the implementation of the Scheme's RI policy, including in relation to climate and advising the Trustee on ongoing management issues. This includes:

- Ensuring climate risks and opportunities are assessed and addressed across all areas of the portfolio.
- Ensuring that the Scheme's providers are aligned in their management and reporting of climate risk and opportunity and stewardship of the Scheme's assets.
- Ensuring investment thinking evolves to stay on top of a fast-changing opportunity set.
- Advising the Trustee on governance, risk and opportunities, metrics and targets.
- Ensuring the TCFD mandated scenario analysis is conducted; and
- Providing all required reporting and market information.

Risk management

The ISC receives quarterly information on carbon emissions data, the level of investment in quantitatively assessed current climate opportunities, the performance of the climate theme and investments in potentially risky areas such as ESG laggards and controversies. This is discussed as part of the regular meeting agenda. The Scheme (and the market more broadly) is yet to build out an approach to systematically analyse physical risk data. Beyond these regular quantitative updates, CPTI assesses climate risks and opportunities as part of all regular review meetings with managers and any new manager due diligence. It is also a focus of all stewardship discussions. CPTI or the Trustee may also identify areas of risk and opportunities through external meetings, training and their own networks and studies. All of this is then fed back into the ongoing qualitative and quantitative evaluation of risks and opportunities.

Whilst there is no one risk indicator or target around climate change, the Trustee believes through the combination of the below, as well as ongoing developments, a good picture of potential risk and opportunity is being built:

- Monitoring carbon emissions and intensity data on an absolute basis and versus the benchmark.
- Monitoring investment in climate opportunities.
- Monitoring exposure to laggards and controversies and engaging on these.

The Risk and Assurance Sub Committee ("RASC"), which consists of four of the eight-member Trustee board, is responsible for overseeing overall compliance with policies and risk tolerances. As above, there are no formal risk limits or tolerances set for climate change. Aside from any issues raised by the sub-committees, COM will formally review climate risk annually before publishing the Scheme's TCFD report.

Knowledge, understanding and training

The Trustee is required by regulation to have the necessary expertise in relation to climate-related risks and opportunities and to ensure adequate knowledge from those appointed to advise it. The Trustee and its advisors look to regularly enhance their knowledge in this area as detailed below. Through COM and sub-committee meetings, the Trustee will challenge CPTI to ensure it takes adequate steps to identify, assess and manage any climate-related risks and opportunities on behalf of the Scheme. The Trustee has discussed climate change related issues at a number of ISC and COM meetings across the year.

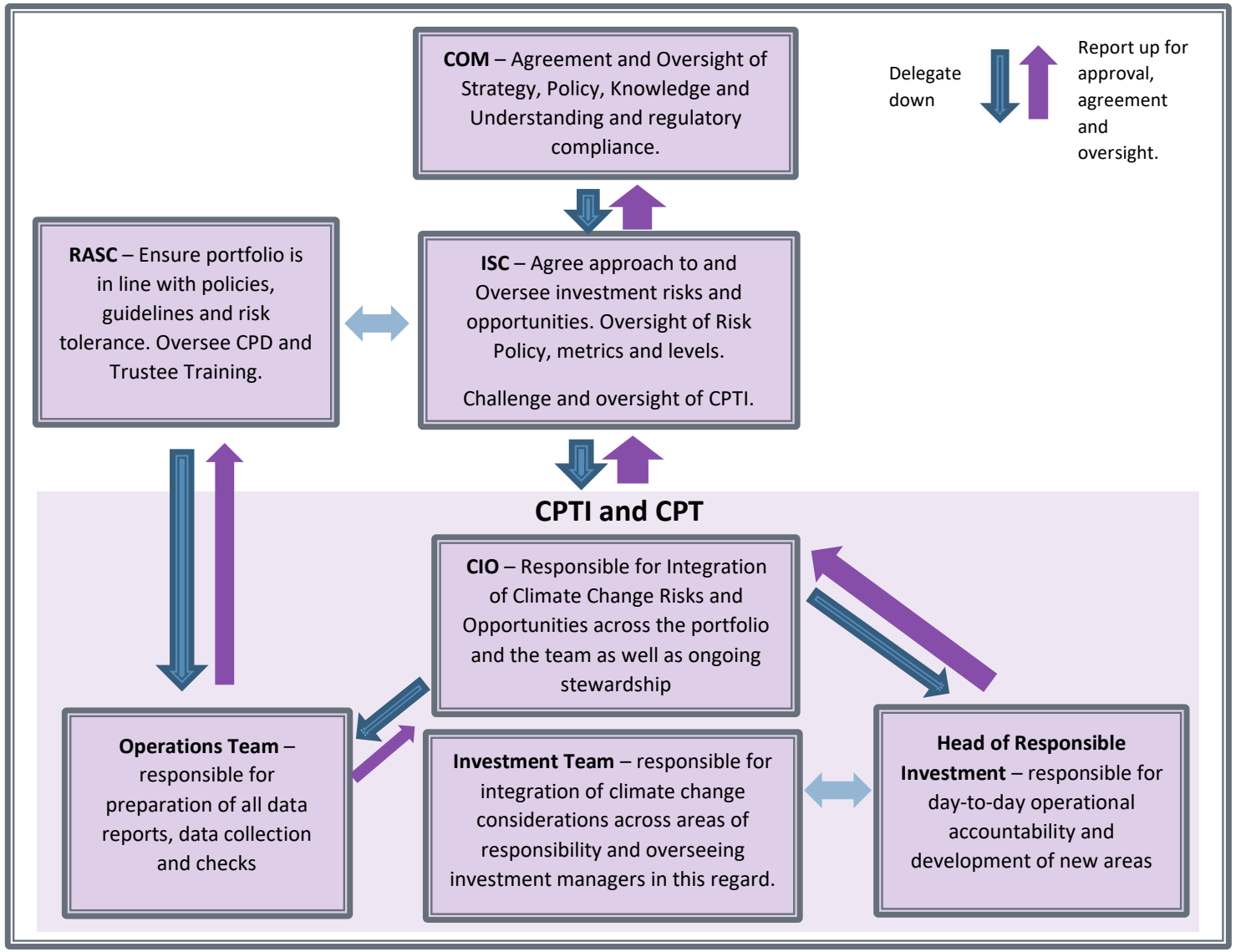
Trustee training is undertaken at Trustee meetings, sub-committee meetings and through other external training as appropriate and is monitored through a training register by Coal Pension Trustees. Coal Pension Trustees Services Limited is the in-house executive function for the two closed Coal Industry pension schemes, the Mineworkers Pension Scheme (MPS) and the British Coal Staff Superannuation Scheme (BCSSS). CPT is the parent company of CPTI. During the last eighteen months, the Trustee has had training/information sessions on climate change risks and opportunities, stewardship in this area, metrics and targets and specific investments affected. They also received externally provided legal training on TCFD regulation and their respective Trustee duties. The training register enables CPT to keep a watching brief of those subjects the Trustee Directors are voluntarily pursuing, with a view to providing supplementary training on matters of particular interest and to identify any gaps in the Trustee Directors knowledge and arrange for this to be addressed.

Further training was undertaken during 2023 on Paris Alignment and Scope 3 carbon emissions in line with the additional requirements for the Scheme's second TCFD report. This was provided by subject matter experts within CPTI. In February 2024, BlackRock presented an update on the LCTR portfolio at the ISC meeting. This presentation provided additional training around m*ega trends and the low carbon transition.*

The Trustee also has two independent investment advisors who attend all ISC meetings and provide expert investment opinions and challenge on behalf of the Trustee.

All CPTI Senior Managers and certified staff are required to fulfil training and competency requirements and are internally certified under the FCA's Senior Managers and Certification Regime (SM&CR). CPTI employees are given access to ongoing training, including training on climate-related risks and opportunities each year.

Climate Oversight Governance Structure



Methodologies

The following section goes into detail on the methodologies used to calculate the metrics relating the Scheme's TCFD report, as well as identifying the data resources used by CPTI. Any changes to methodologies or resources over the reporting year have been covered earlier in the report.

Data quality

CPTI assesses reported data coverage using information from independent data providers in public markets (public equity and public credit). Reported data is available on the majority of Real Assets which is received directly from the managers and based predominantly on actual energy use. In private equity and private debt, limited reported information is available, some of which is provided by managers based on underlying company information and the remaining portion of data is approximated via proxies based on company sector and geography. The data collected is aggregated at the asset class level and then shown at the portfolio level in the main body of the report.

As of 31st March 2024, 60% of the Scheme's data comes from reported company or asset data. As such, the actual carbon emissions of the Scheme could differ significantly from what is reported in this report using best estimates and proxies as well as noting the level of unreported data. That said, the most robust methodologies are being used for estimates and the Trustee has clear sight of the areas of the portfolio that are more or less carbon intensive. As some areas of the portfolio are not currently covered, the total emissions number in this report is expected to be an underestimate. Increasing data coverage and accuracy is a key focus for the Trustee. Where proxy data is used, this is based on the actual sector and regions of the assets where available and thus is expected to be an indicative (if not accurate) estimate of actual data.

In line with DWP guidance, some asset classes have been excluded from the metrics and targets data due to there being no way to calculate or indeed assign emissions to them. These asset classes include commodities futures, hedge funds and cash. Specifically for the Scheme, the majority of excluded assets are cash, derivative based assets such as Brevan Howard (the hedge fund manager) and commodities, which represent 4.3% of total Scheme valuation as at end March 2024. The total reported data coverage shown in the main report excludes these assets and the equivalent figure for March 2023 has been recalculated for comparison.

In the case of commodities, where investments are made through liquid futures instead of direct physical commodity purchases, determining emissions is challenging due to the absence of a specific emissions-generating entity linked to the futures. Additionally, the complex nature of measuring emissions from commodities like cotton, influenced by factors such as type, usage, and harvesting methods, coupled with a lack of sufficient data, supports the decision to exclude this asset class from total portfolio-level emissions reporting.

Similarly, hedge funds pose a challenge as there is no clear emissions-generating entity associated with instruments like rate and currency futures. Brevan Howard notes the absence of an industry standard for calculating emissions in the instruments they trade, reinforcing the practical impossibility of assigning emissions to this asset class.

Carbon Emissions and Intensity

While there is little ambiguity when it comes to calculating carbon emissions, there are a number of different methods for calculating carbon intensity. The Trustee has chosen to calculate intensity based on absolute emissions relative to the enterprise value of the company/asset including cash (EVIC). This metric has been chosen as it is in-line with industry consensus, although there is a greater degree of variability in metrics used here versus absolute emissions and the metric used may change in future. Additional metrics are monitored where appropriate to particular assets, for example looking at intensity/sales in public equities and intensity per square meter in real estate or per unit of

energy produced in certain infrastructure assets. Scope 3 emissions are shown in the main body of the report where possible – currently this is just proxy data for public assets and some reported data provided by the manager for property.

Methodologies used for calculating carbon emissions and intensity figures differ across asset classes. These are outlined below:

Public equity and investment grade credit: For public equity and investment grade credit, Scope 1 and 2 carbon data is sourced from MSCI and is based primarily on company reported emissions with proxy data used to supplement any gaps. Carbon emissions are apportioned to the investor based on investors share of the EVIC of a company.

Property: Scope 1 and 2 property emissions are received from the managers on an annual basis and are based on landlord energy use only.

Infrastructure: Infrastructure emissions are received from the managers on an annual basis, based on reported energy use at the asset level.

Private equity and private credit: For private equity fund of funds we have used proxied data provided by eFront, based on MSCI public market equivalent emissions. This data is applied by sector allocation of the underlying assets where available. Outside of fund of funds, private equity fund data is a combination of reported data and estimated data through ClarityAI provided by eFront. Over time we expect the proportion of the reported data to increase as eFront continue to roll out their data programme, and this process is likely to be accelerated by CPTI's own engagements with these managers.

For private credit data is a combination of data received from investment managers and a proxy based on a 50/50 public equity/loan index.

Government bonds: Government bond emissions intensity is calculated as the emissions of a country shown per GDP (source: World Bank and manager). We do not report absolute emissions as there is currently no agreed methodology of apportioning country-level emissions to investors.

Securitised: Data for securitised assets has been calculated and provided by the manager using proxy estimates based on a similar securitised fund. Proxies are created at the deal level quantifying expected carbon from each underlying asset backing the particular securitisation.

Paris alignment

The approach taken to assessing Paris Alignment for each asset class is outlined below:

Public equities, investment grade credit and emerging market debt (Corporate):

CPTI has assessed Paris Alignment in public markets based on a single metric: whether or not a company has a carbon emissions reduction target approved by the Science Based Targets initiative (SBTi). Targets are considered science-based if they are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement. We note that using this metric alone results in a conservative final number, as a company may be aligned but not yet have had its target approved by SBTi.

As with public markets, CPTI has assessed Paris Alignment in the emerging market debt portfolio, though only for the portion of that portfolio that is invested in corporate bonds (as mentioned earlier in the report, there is no agreed methodology as of yet to deem whether or not a government bond is Paris Aligned.) The same SBTi metric is used here.

Infrastructure:

The infrastructure holdings exhibit varying degrees of alignment. One manager has identified their holdings as 100% Paris Aligned, reflecting investments tailored to support a low-carbon economy. Conversely, another manager has not yet conducted a formal assessment against Science-Based Targets (SBTs) for climate impact, resulting in their holdings being categorised as "Not Aligned" for the current reporting period. The Scheme is in the process of exiting some of this latter portfolio.

Real estate:

Carbon Risk Real Estate Monitor (CRREM) analysis (based on benchmark assumptions of carbon intensity) show that all the real estate assets would be stranded by 2050 and are therefore currently not Paris Aligned. However, this is purely based on a snapshot of the assets in their current state, with no improvements made between now and 2050, so is not a good indicator of what will actually occur. As units become vacant and undergo refurbishment, a large part of the refurbishment will focus on reducing the carbon intensity of the property. The Scheme's property manager has a Net Zero target of 2040. Given this is ahead of the Paris Alignment target, the Scheme will expect all properties to comply with the Paris Agreement once fully incorporated into asset level business plans.

Other asset classes:

The Scheme's Private Debt, Private Equity and Special Situations Debt allocations include a large number of commitments made several years ago. These assets are in gradual run-off, and we expect much of these investments to be paid out to the Scheme over the next several years. Given this we are focusing our Paris Alignment assessment on the remainder of the Scheme's assets.

For some asset classes in which the Scheme is invested such as government bonds, securitised credit, commodities and hedge funds, there is no current market accepted methodology for assessing Paris Alignment and thus these portfolios have been classified as N/A and will be excluded from the overall calculation – noting what percentage of the total portfolio falls under this category.

Climate opportunities

The quantitative assessment of current (not future) *Climate Opportunities* bucket, includes the following within each asset class:

1. **Public equities**: companies that MSCI classifies as "solutions" for the transition or companies deriving more than 25% of their revenue from clean technology. These screens are applied across **all** public equity mandates, not just those that fall within the theme.
2. **Commodities** and **Infrastructure (real):** the managers of the commodities and Greencoat portfolios have confirmed that the entire portfolios are climate opportunities. As such 100% of the Scheme's commodities are opportunities and 30% of the Scheme's infrastructure portfolio are opportunities.
3. **Emerging market debt:** Focusing on green bonds and sovereigns ranked highly on the Net Sero Sovereign Index. The manager has confirmed that 40% of the portfolio is invested in these.

The *Climate Opportunities* portion accounts for a lower percentage of the growth portfolio compared to the *Climate Theme*, and reflects a more conservative measure.

Appendix 1 – Summary of progress across all asset classes

Asset Class	Physical Risk		Transition/Stranded Asset Risk		Climate Opportunities	
	Progress in Scheme Year End March 2024	**Next Steps**	**Progress in Scheme Year End March 2024**	**Next Steps**	**Progress in Scheme Year End March 2024**	**Next Steps**
Public Equities	Limited progress around obtaining further data or analysis. Scenario analysis of high warming scenario completed - albeit results are believed to be extreme underestimates of this risk.	Source appropriate risk metrics and tools for assessment. Manager engagement on risk heat mapping for company assets and supply chain.	Appropriate risk metrics identified and tracked. Engagement and/or exclude process implemented around UNGC violators and laggards. Passive equity includes transition risk overlay.	Continue to monitor and evolve risk metrics. Ongoing monitoring of managers and engagement around risks and opportunities.	Manager appointed and funded for new listed infrastructure mandate (assigned article 8).	Continue to monitor and increase exposure to climate opportunities. Continue to review metrics in this space.
Private Equities	Scenario analysis of high warming scenario completed based on proxies. Build out analytics in this area. Engage with managers on assessment of risk in this area.	Ongoing engagement with managers on assessment of risk in this area.	Initial analysis of risk metrics completed using proxy data. Engaging with managers around approach and assessment of risks and provision of direct data. In the process of onboarding with data provider.	Look to assess risk data once implementation of the new analytics provider is complete. Continue to engage with managers around approach to this area and better provision of data.	Limited new commitments for Scheme given maturity and total illiquidity.	Explore metrics available to assign climate opportunities exposure within private markets portfolio.
Commodities	Commodity pricing expected to be impacted by climate change, this is directly part of the investment thesis within the agricultural complex.	Continue to develop data in this area.	Commodity pricing expected to be impacted by climate transition - this was key part of thesis for investment.	Continue to develop data in this area.	Commodity pricing expected to be impacted by climate transition - this was key part of thesis for investment.	Continue to develop data in this area.

Asset Class	Physical Risk		Transition/Stranded Asset Risk		Climate Opportunities	
	Progress in Scheme Year End March 2024	**Next Steps**	**Progress in Scheme Year End March 2024**	**Next Steps**	**Progress in Scheme Year End March 2024**	**Next Steps**
Government Bonds	Actively seeking market consensus for data approach in this area. Engaged with managers on approach in this area and consideration of ASCOR overlay. New EMD mandate funded in January 2024 with the manager using the ASCOR tool.	Continue to clarify approach on data and assessing risk more broadly.	Begun reporting Carbon Intensity Data in government bonds. Considered implications of the new allocation to Emerging Market Sovereign Debt	Continue to monitor risk data and engage with managers. Continued thinking on approach to transition risk and financing in emerging market debt.	N/A	Continue work on approach to transition risk and financing in emerging market debt.
Investment Grade Credit	Continued discussions with managers on beginning to collect data and complete modelling in this area - remains in early stages. Scenario analysis of high warming scenario completed - albeit results are believed to be extreme underestimates of this risk.	Source appropriate risk metrics and tool for assessment. Manager engagement on supply chain mapping.	Review of providers in this asset class included rigorous review of approach in this area and appropriate changes to managers and mandates made. New mandates in this area include commitment to reduce emissions versus the benchmark by 50% in corporates.	Continue to monitor and evolve risk metrics. Ongoing monitoring of and engagement with managers. Continue to develop best in class approach within securitised credit.	Mandates in this area may take advantage of green bonds or other opportunities where appropriate.	Continued thinking on approach to transition risk and financing in investment grade credit.

Asset Class	Physical Risk		Transition/Stranded Asset Risk		Climate Opportunities	
	Progress in Scheme Year End March 2024	**Next Steps**	**Progress in Scheme Year End March 2024**	**Next Steps**	**Progress in Scheme Year End March 2024**	**Next Steps**
Property	Used external data provider for formal analysis of physical risk at regional level albeit view this data as of limited use. Manager collaborating with peers and providers on more useful scenario analysis in this area.	Collaborate with manager on assessment and mitigation/capex/new investment spending in this area. Where specific flooding risk has been flagged during portfolio flood risk analysis, more in depth flood risk assessments have been arranged to determine site specific risk.	Data on emissions and intensity received and reviewed. Net Zero building assessments ongoing. Capex and sales plans incorporating the above being developed.	Formalise plan on sales and spending to align portfolio with risks and opportunities and regulation in this area.	As discussed in transition risk.	Investigate opportunities around Net Zero buildings.
Private Debt	Scenario analysis of high warming scenario completed based on proxy data. Data provider identified.	Build out analytics in this area. Engage with managers on assessment of risk in this area.	Completed full review of managers approach in this area. Continued work on receiving greater proportion of reported data and understanding at risk areas.	Look to assess risk data once implementation of the new analytics provider is complete. Continue to engage with managers around approach to this area and better provision of data.	In rundown for legacy assets.	Continue to review opportunities around transition lending.
Special Situations Debt	Scenario analysis of high warming scenario completed based on proxies. Tool for assessing risk identified and contract in progress.	Build out analytics in this area. Engage with managers on assessment of risk in this area.	Initial analysis of risk metrics completed using proxy data; More managers providing direct data or planning to; In the process of contracting with data provider.	Look to assess risk data once implementation of the new analytics provider is complete; Continue to engage with managers around approach to this area and better provision of data.	No investments thus far.	Review investment opportunities investments in this space.

Appendix 2 – Case Studies on Climate Integration

Type 1 – Climate Transition Opportunities

The Scheme has begun identifying attractive opportunities to invest for members which have been created by the ongoing climate transition. We have detailed several of these below.

Case Study 1: Climate Opportunities Mandate in Public Equities - Ninety One

As part of the work around the climate theme, CPTI identified a significant opportunity to invest in climate opportunities in public equities. CPTI wished to implement a mandate focusing across the full spectrum of this theme from energy transition to waste management to the future of food. Additionally, CPTI identified opportunities in both growth companies and value companies who are transitioning their model to align with the transition.

After a thorough selection process, the Scheme appointed Ninety One to run this mandate. Ninety One is an Anglo-South African asset management business, based in London and Cape Town and dual-listed on the London Stock Exchange and the Johannesburg Stock Exchange. At the start of 2022, the Scheme invested c.£181 million in the climate opportunities mandate. The mandate aims to outperform broad global markets over the long-term, whilst also delivering a quantifiable impact through both carbon savings and company engagement. The aim is to invest in companies that will deliver strong and sustainable long-term returns through exposure to decarbonisation, including renewable energy, electrification, and resource efficiency.

Two examples of the companies that we invest in through this mandate are outlined below.

i) Voltronic

Investment rationale

Voltronic is a design and manufacturing service (DMS) supplier for uninterruptible power systems (UPS) and photovoltaic (PV) inverters. PV inverters are a crucial part of solar power generation systems and Voltronic's UPS drive improved energy efficiency, particularly in emerging markets.

Structural growth

Given the global focus on energy independence, Ninety One expect the PV inverter segment to grow c.20% annually in the medium term. 2022 was a particularly strong year, supported by strong demand in Europe, South Africa and Pakistan. The compound annual growth rate of the UPS industry has been >5% historically, but 2023 was also impacted by destocking headwinds. As the environment normalises, Ninety One expect Voltronic's growth to return to its historical double-digit level. Over the long-term, they believe stable growth will continue in developed markets due to the build-out of datacentres and enterprise servers. In emerging markets, there are even larger growth opportunities, where greater infrastructure development is required. In addition, the company continues to benefit from outsourcing trends among tier-1 customers. Its product suite now includes energy storage systems and electric vehicle chargers.

Sustainable returns

Voltronic has delivered an average ROE of c.40% over the last 10 years, partly driven by global customers increasingly outsourcing UPS production to lower cost manufacturers. It offers a quality service that Ninety One believe will enable it to maintain these returns over the longer term.

Metrics & engagement (2023)

- Carbon avoided increased by +31% (YoY change) with strong UPS and PV inverter sales.

- The company has not yet committed to setting a science-based net-zero target through the SBTi. However, it has set targets to be Net Zero in its operations by 2035 and to have a net-zero supply chain by 2050. While the intentionality is present (in addition to making practical progress towards decarbonisation in its operations), Ninety One believe a decarbonisation target is best set within an SBTi framing, hence they will continue to engage on this topic.

ii) Power Grid of India

Investment rationale

Power Grid is a majority state-owned enterprise primarily engaged in the bulk transmission of power through its extra-high voltage alternating current (EHVAC) and high voltage direct current (HVDC) transmission network in inter-state / inter-regional domains in India.

India's power-generation mix is expected to undergo a massive shift towards renewable energy (target 500GW by 2030) over the next decade to meet increasing energy demands in a sustainable way. Power Grid, as a principal transmission developer /operator, is well placed to benefit from the build-out of the grid to integrate renewables.

Structural growth

Over the next decade, India's planned capital expenditure on inter-state transmission is >R2.8 trillion (US$34 billion). As the transmission company with the largest market share, Power Grid should be a beneficiary of this expenditure, driving its structural growth.

Sustainable returns

With a regulated ROE of >15% and a realised ROE in the high 'teens' as a percentage, Power Grid has a sustainable return profile, positive value creation well above its cost of capital, and a strong cashflow profile.

Metrics and engagement

For carbon avoided (22,013,234 tCO2e FY23), they currently rely on estimated but hope to move to reported numbers over time.

2023 engagement miles compromised of:

- **Board composition.** Ninety One expressed their strong preference for a more independent and gender-diverse board by voting against the re-election of two directors and have engaged with the company on this. They understand that the appointment of executive directors comes under the purview of the President of India, and the appointment of government nominees and independent directors comes under the purview of Department of Public Enterprises. Power Grid is in talks with the latter to make the requisite director appointments to achieve much needed diversity and independence.
- **Emission disclosure.** Ninety One sought disclosure of Scope 2 and 3 (the company already disclosed Scope 1). The company has now disclosed Scope 2 and Ninety One hope to see Scope 3 disclosures in the future.
- **Science-based target setting**. Ninety One have made the company aware of the organisation and the need for carbon-reduction goal setting.

Case Study 2: Private Equity – JPM PEG Aggregator 2021 - RENK

Private equity arguably provides the Scheme with the best opportunities to invest in companies early in the growth journey which can deliver high multiple returns to the Scheme. Within the Scheme's private equity portfolio, the managers have identified a number of very attractive opportunities presented by the climate transition. These companies represent both a chance for significant financial gains but also the opportunity to solve some of the problems currently impeding the transition.

An investment example from the PEG Aggregator 2021 portfolio is RENK, a global manufacturer of transmissions, engines, hybrid drive and vehicle suspension systems, who are a global leader in propulsion technology. RENK has signed up to setting SBTs and committed to achieve Net Zero by 2040. As electricity is an important source of energy for RENK, they are pushing ahead strongly with projects to increase energy efficiency at all sites. In the reporting year (2023), RENK reduced CO2 emissions in relation to revenue in their own operations by 10% (previous year: 25.5 kg CO2e per € 1,000 in revenue). Their switch to CO2-neutral energy sources played a crucial role in this, of which the share of energy sourced renewably increased in the reporting year too. At the same time, responsibility is a priority for RENK across the entire supply chain. Last year, they began making their complex supply chains transparent.

Case Study 3: Newmarket

In January 2022, the scheme made a £60m commitment to a flagship strategy run by Newmarket to gain exposure to Strategic Risk Transfer ("SRT") transactions with banks, which provides a capital management solution and improves balance sheet efficiency for the counterparty. The Fund provides the Scheme with access to underlying pools of ESG-aligned, high quality, senior loans made by the leading banks in each respective area, primarily renewables and affordable housing. Beyond ESG investing Newmarket aims to generate tangible impact. This can be in the form of catalysing new impactful lending or offering financial incentives to borrowers to improve the credentials of lending. Examples include transactions that have catalysed nearly $3 billion of new environmentally friendly lending, as well as fresh capital release to more than $1 billion of US affordable and sustainable housing assets. The latter has resulted in creating over 11,500 of affordable housing units. Newmarket participated in a first of its kind risk transfer emphasising social change and incentivising additional MW of renewable energy investing.

Investment Highlight on Project Bocarte

In 2022, Newmarket completed the Project Bocarte transaction with Banco Santander which incorporates a number of structural impact and sustainability features, and the initial portfolio is comprised of nearly 50% renewable energy assets. There are two components that comprise Bocarte's impact feature.

The first is related to the replenishment of the portfolio. During the replenishment period, Santander is incentivised to propose renewable energy assets for inclusion over time, thereby "greening" the portfolio based on the classification system outlined in Santander's robust SFCS platform.

The second impact feature focuses on incentivising Santander to increase its renewable energy lending over time, extending across the bank's entire portfolio in such a way that demonstrates the catalytic nature of synthetic securitisation's impact potential and how both Newmarket and Santander have sought to tap into that potential. Newmarket believe Bocarte's growth hurdle targets speak to Santander and Newmarket's aligned ambition in accelerating renewable energy growth.

Project Bocarte was the winner of GlobalCapital's European Securitisation Most Innovative Deal of the Year 2023 and SCI's Impact Deal of the Year 2023.

Case Study 4: Greencoat Solar Fund II

In 2018 the scheme made a £70m commitment to Greencoat Solar Fund II. The Fund was formed to primarily acquire and manage a portfolio of ground mounted solar panels in the UK with the objective of providing stable cashflows and inflation protection over a long-term horizon. The Fund has built a portfolio of over 150 assets with an installed capacity of 1,383MW, generating sufficient power for 332,000 homes and has avoided generating 358k tonnes of carbon emissions in the process of doing so.

Case Study 4: Listed Infrastructure

In 2023, the Scheme agreed to invest in a new mandate focusing on listed infrastructure. The investment proposition is grounded in the belief that by investing in companies exhibiting significant capex investment and faster growth in asset bases (which should lead to subsequent higher future earnings) this should result in higher returns than the existing public equity portfolio while capitalising on the Scheme's climate change/energy transition theme. The mandate will focus on electrification, renewables and data infrastructure and is expected to generate higher income than other active equity mandates, while providing downside and inflation protection. BlackRock was appointed to manage the mandate, and investment was made in October 2023.

Case Study 5: Emerging Market Debt

In 2023, the Scheme agreed to invest in a new mandate focusing on Emerging Market Debt. Approximately 40% of the portfolio is classified as 'climate opportunities' based on a combination of factors. This includes investments in designated labelled bonds, such as green and sustainability-linked bonds, as well as sovereign issuances from countries scoring 'High' or 'Very High' on the Net Zero Sovereign Index. Additionally, corporate issuances from entities either committed to transition or acting as transition enablers are included. The analysis extends beyond labelled bonds to incorporate bonds from companies or countries that are market leaders or best in class regarding climate opportunities.

Type 2 – Climate stewardship

Stewardship of assets is a key tool to address risk and ensure opportunities are developed for the Scheme. The Trustee has a core belief in stewardship and is a signatory of the UK Stewardship Code. Climate change is a key stewardship priority for the Scheme as discussed in the body of this TCFD report.

Case study 1: Stewardship in public markets

EOS company engagements

EOS is the Scheme's Stewardship overlay provider.

i. Westpac

Rationale: EOS' engagement with Westpac, initiated in 2019, stemmed from a heightened focus on climate change and the role of banks in aligning with a 1.5°C Paris Agreement pathway. Despite Westpac's historical leadership in climate change, the absence of specific targets for reducing fossil fuel exposure raised concerns. EOS aimed to challenge and encouraged the bank to adopt more ambitious strategies, particularly in line with the Paris Agreement goals.

EOS' Actions: In 2019, they recommended support for an advisory shareholder resolution, urging Westpac to disclose its strategies for reducing fossil fuel exposure, including the elimination of thermal coal exposure in OECD countries by 2030. This recommendation was reiterated in 2021. Face-to-face meetings, including one in August 2022, were conducted to press Westpac on disclosing more robust targets.

Outcomes and Next Steps: Westpac responded positively by committing to a 1.5°C Paris Agreement-aligned pathway. In 2022, the bank joined the Net Zero Banking Alliance (NZBA), committing to set emissions reduction targets for carbon-intensive sectors within 18 months. The bank pledged to phase out lending to companies with >5% revenue from thermal coal mining by 2030.

Additionally, it committed to a 23% reduction in Scope 1, 2, and 3 absolute financed emissions by 2030.

The bank's detailed paper on target establishment and actions taken was deemed satisfactory. Targets for carbon-intensive sectors were welcomed, and ongoing engagement was planned to review new targets. Corporate lending will continue if customers have credible transition plans by 2025, with transparency on assessment processes. Further engagement will focus on evidence of robust processes for assessing customer transition plans and the publication of a report based on the Taskforce on Nature-related Financial Disclosures (TNFD) framework released in September 2023.

ii. Sika

Rationale: The engagement with Sika AG began in response to the company's limited focus on climate impact, reporting, and targeting only its Scope 1 and Scope 2 emissions reductions targets in 2021. Recognising the potential significant climate impact in its supply chain and customers product use (Scope 3 emissions), EOS urged Sika to broaden its assessment and targets to include these aspects, aligning with a more comprehensive approach to climate responsibility.

EOS' Actions: They challenged Sika AG to delve into its Scope 3 emissions, particularly those related to its supply chain and the use of its products by customers. The company acknowledged the need for this assessment and confirmed the initiation of an internal analysis of its Scope 3 emissions, though the details were not publicly available at the time.

Outcomes and Next Steps: By the end of 2022, Sika AG completed a two-year initiative to systematically identify, calculate, and report its material Scope 3 greenhouse gas emissions. This revealed that 56% of emissions were linked to purchased goods and services, and 29% were related to product end-of-life and disposal. The company externally assured its 2022 Scope 1, 2, and 3 emissions figures and set emissions reduction targets for 2032 and 2050, aligned with a 1.5°C Paris Agreement pathway. Sika committed to having these targets validated by the Science Based Targets initiative.

The engagement, marked as completed in March 2023, continues with a focus on further disclosure, particularly concerning hazardous chemicals production and supply chain due diligence. Ongoing dialogue aims to enhance transparency and responsibility in these areas.

iii. Baillie Gifford – Amazon

Baillie Gifford is the Scheme's public equities manager focussed on long-term Global growth.

Rationale: Since 2004, the engagement with Amazon has covered various issues, with recent emphasis on climate change alignment. Amazon committed to The Climate Pledge in 2019, aiming for net-zero carbon by 2040, net-zero shipments by 2030, and 100% renewable energy by 2025. However, Amazon's decision to step back from the Science Based Targets initiative (SBTi) in 2023 raised concerns.

Baillie Gifford's Actions: Despite Amazon's withdrawal from SBTi, the manager views it as a credible standard and raised concerns about the shift during engagements in September and December 2023. Additionally, discussions centred on the narrow boundary of Amazon's chosen Scope 3 emissions, representing only 1-2% of sales. The manager urged Amazon to expand the boundary to include all first-party platform sales, fostering broader engagement with suppliers.

Outcomes and Next Steps: The engagement continues, and the manager was invited to Amazon's shareholder roundtable on ESG topics in December 2023. Reassurance was gained that feedback is considered, and expectations for progress in 2024, particularly on extended supply chain standards, were expressed. Engagement also included discussions with the Public Policy Director for Global AI. Overall, Amazon's considered approach, openness to

challenge, and continual improvement in disclosure were noted and appreciated.

iv. Ninety One – NextEra

Rationale: NextEra Energy, a major player in the electric power and renewable energy industry, was engaged by Ninety One on environmental, governance, and social/ethical objectives. The engagement included a joint effort with a US asset owner on Scope 3 emissions reporting and subsequent discussions on supply chain decarbonisation. Additionally, direct engagement took place due to allegations of the previous CEOs political involvement in the Florida Senate elections.

2023 Engagement Goals:

- Reporting Scope 3 emissions.
- Science-based targets.
- Independent chair.
- Diversity and inclusion.

Ninety One's Actions:

Scope 3 Emissions & Supply Chain Decarbonisation: Collaborative engagement involved an in-person meeting and a joint letter emphasising the benefits of Scope 3 reporting and targets, particularly in the supply chain. Discussions also touched on NextEra's role in the US green hydrogen opportunity. A Q4 meeting with NextEra's CEO delved into decarbonising upstream emissions, notably those from steel use.

Political Involvement/Lobbying: Separate engagement, including an in-person meeting with the CFO, focused on issues related to the former CEO's political involvement in Florida Senate elections.

Outcomes and Next Steps:

Scope 3 Emissions & Supply Chain Decarbonisation: NextEra has shown progress in CDP reporting, carbon avoidance, and its Real Sero plan targeting carbon neutrality by 2045 without offsets. While the company is considering science-based targets, Ninety One encourages quicker progress. Positive outcomes include NextEra's interest in further engagement on supply chain decarbonisation, with a focus on decarbonising the steel supply chain.

Political Involvement/Lobbying: NextEra underwent a comprehensive review, making governance improvements and personnel changes following the former CEO's political involvement. Ninety One acknowledges errors in judgment but sees positive steps, such as revamped hiring processes and a new internal committee overseeing donations.

Next Steps: Continued engagement with NextEra on supply chain decarbonisation, embedding Scope 3 emissions targets, and monitoring regulatory developments in green hydrogen for the steel sector. Recognition of NextEra's efforts to address governance issues related to political involvement.

v. Case study: Ninety One – Croda

Rationale: The engagement with Croda aimed to understand their contributions to sustainable practices, particularly in their new flavours and fragrances business acquired in 2020 and 2021.

Ninety One's Actions: They conducted onsite visits to Croda's manufacturing plants in Spain and the UK in the second and fourth quarters of 2022, respectively. These visits focused on understanding the chemical production process, research and development facilities, and the contribution of recent acquisitions to environmental sustainability. Discussions with Croda included topics such as bio-based feedstocks, research and development pipelines, and emission calculations. Additionally, Ninety One engaged with the Managing Director of Croda's crop protection business to discuss land/biodiversity

targets, including the Land Positive Commitment and the company's efforts to become "nature positive."

Outcomes and Next Steps: The site visits enhanced Ninety One's understanding of Croda's commitment to decarbonisation and the challenges and opportunities in the chemical sector. Confidence was gained in Croda's ability to meet ambitious goals, including increasing bio-based feedstock and reducing upstream Scope 3 emissions. The discussions on land/biodiversity targets led to a better understanding of Croda's methodology and goals, with ongoing monitoring planned for 2023. The engagement highlighted Croda's early-stage efforts to develop a science-based target for its impact on nature. Further disclosures and follow-up discussions are expected, especially regarding emission baselines, calculations, and the company's exposure to biologically sensitive areas, which Ninety One will continue to monitor in the coming year.

vi. Investment Grade Credit manager – BP

Rationale: The engagement with BP aligns recognises the significant role major companies play in the transition to a net-zero world. Understanding the transition strategy of each company is crucial for portfolio investment decisions.

Manager's Actions:

- The engagement was conducted by the Fixed Income ESG team.
- Q2 2021: Initiated regular engagement with BP's funding and ESG teams to exchange views on ESG strategy. BP provided updates, and the manager explained how ESG is integrated into client funds.
- Q3 2021: As BP's business model shifted, the company determined that they needed to change their funding mix. The manager offered anchor support for a longer duration multi-currency transaction in September 2021.
- Q4 2021: BP sought feedback from the manager on improving access to longer duration markets to support their transition.
- Q3 2022: Discussions with BP focused on the measurement of scope 1,2, and 3 emissions, with the manager emphasising the importance of clarity in transition planning.
- Ongoing: Periodic engagement to ensure BP's strategy continues to align with the company's stated long-term commitments.

Outcomes and Next Steps: The engagement and understanding of BP's transition strategy have led to comfort in owning longer-dated BP transactions, provided they are appropriately priced. This approach enables capturing inefficiencies in pricing.

Case study 2: Stewardship in Private Equity

The Scheme has committed capital to a diverse selection of managers over a long period. Climate change, Net Zero, broad-ESG and diversity all continue to be a focus of our stewardship in PE in ongoing reviews and in particular where CPTI are part of Advisory Committees.

In private equity, investments in funds and co-investments are regularly evaluated. For example, consideration of ESG factors for both fund and co-investment opportunities are a critical input to the monitoring process as well as in the ongoing stewardship. The majority of BCSSS' private equity investments are via the PE advisor JP Morgan. Here JP Morgan will function as a steward of the underlying assets on the Scheme's behalf and raise any queries or challenge with the underlying manager. This includes taking Limited Partner Advisory Committee (LPAC) seats where possible and pushing for agendas to include ESG priorities. BCSSS has LPAC seats with 12 funds currently. Several examples of the ESG approach in this area are detailed below:

Action, a leading international non-food discount retailer, has made significant strides in its sustainable practices over the past year, underscoring its commitment to environmental stewardship. The company has focused on reducing its carbon footprint by optimizing its supply chain logistics and increasing energy efficiency across its stores and distribution centres. Notably,

Action has expanded its range of eco-friendly products, ensuring that more items are sourced from sustainable materials and certified suppliers. The retailer has also implemented robust waste management programs, emphasizing recycling and reducing single-use plastics. In terms of stewardship, Action has engaged in community initiatives and partnerships aimed at promoting environmental awareness and conservation efforts. These developments reflect Action's dedication to integrating sustainability into its core business operations, demonstrating a proactive approach to corporate responsibility and environmental stewardship.

Action has four sustainability levels: People, Product, Planet and Partnership. Below highlights a single KPI for each and recent progress.

1. **People:**
   - KPI: Employee Engagement and Satisfaction Score
   - Current Progress: Action has focused on creating a positive work environment and enhancing employee well-being. They have implemented various training and development programs. Action has made strides in employee engagement, although specific scores are not disclosed. They emphasize their commitment to diversity, inclusion, and providing a safe workplace.

2. **Planet:**
   - KPI: Reduction in Carbon Emissions
   - Current Progress: Action has committed to reducing its carbon footprint by 60% by 2030. In absolute terms, for 2023 Action has reduced CO2 emissions from its own operations (scope 1 and scope 2) by 46% compared to the 2021 base year. Several measures contributed to this. The Action owned trucks, operated in the Netherlands, run on HVO 100 fuel. 99% of all stores were equipped with energy-saving LED lighting. A further 300 stores were switched from gas to electricity and all new stores operate on electricity only.

3. **Product:**
   - KPI: Percentage of Sustainable Products in Inventory
   - Current Progress: Action has increased its focus on sustainable products. As of the latest update, 94% of the timber products sold by Action are FSC-certified, ensuring they come from responsibly managed forests. Additionally, they are expanding their range of eco-friendly products, including those made from recycled materials, for example 100% of cotton is sourced following standards like Better Cotton/organic/recycled.

4. **Partnership:**
   - KPI: Number of Community and Environmental Partnerships
   - Current Progress: Action has established several key partnerships aimed at promoting sustainability and community well-being. For example, they have partnered with local organizations to support recycling initiatives and community clean-up projects. They are also involved in various charitable activities, contributing to social causes and environmental conservation efforts.

Type 3 – Improvements made to the Portfolio following Work on Climate

The following case studies provide examples of changes made to Scheme's asset allocation following the introduction of the *climate theme.* The case studies largely represent the addition of new mandates which have been chosen with the climate mega trend in mind, while of course also considering each mandate's place within the asset allocation of the Scheme, with a focus on positioning over the coming years. As the Scheme matures and CPTI work to shift the portfolio into more liquid assets, the new mandates largely represent public (liquid) markets.

Case Study 1: Improvement to Passive Equity (December 2021)

In 2021 the Scheme undertook a review of the Scheme's passive equities in light of concerns highlighted by ESG data. Whilst the Scheme's active equity managers were effectively addressing climate risk, the passive equity portfolio was exposed to a high proportion of environmental laggards, as well as controversies, and very high emitters. Clearly when bought in a passive manner these risks are not considered. Following a full review of ways to address climate risk in passive portfolios, CPTI, on behalf of the Scheme, decided that off the shelf products were not sufficiently forward looking. Instead of seeking to invest in companies making changes many climate solutions in this area just skewed the sector mix of investments to focus heavily on the lower emitting technology sector. CPTI was looking for the Scheme to retain balanced exposures across sectors, both to ensure diversification and access to opportunities, as well as noting all sectors need to transition. Investing only in current lower emissions sectors does nothing to address issues or capture the evolving opportunity set.

Following a comprehensive search, CPTI, on behalf of the Scheme, appointed BlackRock to implement a climate aware passive equity solution. The LCTR (Low Carbon Transition Readiness) strategy seeks to overweight companies that are deemed more aligned with a transition to a low carbon economy and to underweight those deemed less prepared. This evaluation is done within each sector of the market so that each company is compared to its peers in that sector. At the same time CPTI, on behalf of the Trustee, appointed EOS to engage and vote for the Scheme on the whole of these portfolios.

The LCTR strategy measures companies along five dimensions of transition readiness:

1. Energy Production	Involvement in the extraction, refinery, generation and ownership of carbon emitting energy
2. Clean Technology	Involvement in renewable energy, energy efficiency, green building, low carbon transportation
3. Energy Management	Energy use, mix, efficiency and indirect emissions through electricity consumption
4. Water Management	Water consumption, withdrawal, efficiency, physical stress, and recycling practices
5. Waste Management	Company waste generation, recycling, and toxic emissions management

The portfolio targets include the following:

- Maintain a risk profile within stated ranges with respect to the benchmark. This includes holding bounds for individual security weights, sector weights, and country weights.
- Provide the greatest exposure possible to the companies that best capture the LCTR strategy's five dimensions consistent with the risk parameters for the portfolio.

One result of switching the Scheme's passive equity mandate was a measurable drop in the carbon intensity of the Scheme's passive equities. On 30 June 2021 the Scheme's passive equity allocation had a carbon intensity value of 77.9 t/$m EVIC, but as of 30 September 2021, the Scheme's passive equity allocation had a carbon intensity value of 79 t/$m EVIC but 12 months later, following the LCTR inclusion, the carbon intensity value of the Scheme's passive public equities fell to 45 t/$m EVIC.

Case Study 2: Aligning Investment Grade Credit (May 2020)

During a portfolio restructure focused on cost, complexity and current strategy, CPTI reviewed how current managers were integrating climate risk and opportunity within investment grade credit. When CPTI selected the go forward managers and wrote the new investment guidelines, managers were required to explicitly address these issues given the lower liquidity, limited upside and relatively longer holding period in these portfolios versus equities. The new mandates CPTI have put in place for the Scheme, which were funded in May 2020, have targets for emission levels to be at maximum 70% of the benchmark. As of 31st March 2024, the portfolio emissions for the BlackRock investment grade credit mandate are at 55% of the benchmark and the PGIM investment grade credit mandate are at 46.9% of the benchmark.

Case Study 3: Climate and China (2021-2023)

CPTI was previously invested with a quantitative manager in China. The portfolio operated based on quantitative drivers. In 2021 CPTI, on behalf of the Trustee, decided to terminate the position in this China A fund. Whilst this review reflected a number of factors including cost, diversification and a changing view of the appropriateness of a quant-based approach to a high-risk region, the managers approach to climate risk and opportunity was also a key factor as well as their limited stewardship in this area. As of 30th December 2021, the quantitative China portfolio had the public equity portfolios worst Carbon Intensity value of 401.3. To put this value into context, the next worst performer in regard to Carbon Intensity had a value of 205.2 t/$m EVIC. The quantitative approach taken incorporated no view or consideration of climate risk. This mandate has now been fully exited.

Case Study 4: Real Estate – Nuveen Appointment (December 2022)

On 2nd December 2022, Nuveen Investment Management International Limited were appointed as the Property Investment Manager to the Scheme. Nuveen were appointed based on their strong track record and commitment to sustainable property investing which aligned to the Scheme's targets. Below is a list of some of the current industry commitments, standards and benchmarks that are supported by Nuveen:

- Nuveen Real Estate is one of 37 Better Buildings Partnership member companies to have become a signatory to their Climate Change Commitment. It is also one of 34 ULI Greenprint member companies to have publicly announced their alignment with the Net Zero goal.
- Nuveen monitors key performance indicators in line with GRI (Global Reporting Initiative) and INREV (European Association for Investors in Non-listed Real Estate Vehicles).
- Nuveen sets annual targets and benchmarks against the wider industry using the GRESB (Global Real Estate Sustainability Benchmark. Several of its Funds are 5-star rated.
- Nuveen Real Estate has set a goal to achieve for Net Zero carbon by 2040.
- Nuveen is rated 4 stars by the UN Principles for Responsible Investment for its direct real estate capability.
- Nuveen was named a '2023 ENERGY STAR Partner of the Year – Sustained Excellence Award' winner for their ongoing commitment to outstanding energy management practices and reductions in greenhouse gas emissions. The 2023 award marks their 17th consecutive year as a Partner of the Year.

Property Investment Management Agreement

Key commitments have been agreed to within the Property Investment Management Agreement focusing on the importance of ESG within the management of the Scheme. The agreement requires ESG risk factors to be integrated within the investment and business planning processes, with a material focus on promoting Net Zero Carbon and climate related transition risk. Further to this, several ESG objectives have been agreed to be achieved over the first two years of Nuveen's appointment. These include:

- Achieving at least 90% accuracy of Scope 1 and 2 carbon emissions.

- Achieving 100% Scope 3 carbon emissions (tenant operational energy usage data).
- Prioritise Net Zero Carbon pathways on new acquisitions;
- Develop Net Zero Carbon business plans for all investments, focusing on best use of capital based on carbon savings per GBP invested.
- Reposition the Scheme's property portfolio towards more energy efficient investments via acquisitions, disposals, and capital expenditure.
- Shift the portfolio to a renewable energy Power Purchase Agreement.
- Develop asset level action plans which focus on the 3 pillars of community engagement: "Wellbeing of communities"; "Education for all"; and "Social equity and support".

In the period since Nuveen were appointed, the management team have focused on several ESG initiatives to support the Scheme objectives:

- A sustainability consultant has been appointed to provide 100% Scope 3 carbon emission data directly from tenants' utility providers.
- Tenant engagement has taken place to discuss installing solar photovoltaic panels on available roof space, focusing on assets which provide the largest carbon reduction. As part of this process, selected tenants have been approached with bespoke illustrative documents outlining potential savings available to them once the panels have been installed, along with an estimate of the reduction this will have on their carbon consumption.
- A new agreement with the portfolio's Property Manager is being negotiated which will modernise the property management mandate. The new agreement will focus on sustainable property management practices including securing sustainable power purchase agreements, paying contractors the living wage, supporting in the delivery of Net Zero Carbon asset plans, and improving tenant data collection for GRESB submissions.
- The portfolio has provided its first GRESB submission, based on data gathered throughout 2023. The assessment will score the portfolio on its sustainability performance, looking specifically at the management components such as policies, risk management, stakeholder engagement, along with performance measures such as energy data collection, emissions, water and waste. The portfolio will receive a GRESB Standing Investments Benchmark Report later in the year.
- A good example of an ESG-led refurbishment for the Scheme recently took place at Units 4b and 4c of Hayes Industrial Park, Hayes. Following an unexpected vacancy due to the tenant entering into administration, an opportunity to refurbish the units, improving both the rental value and the ESG credentials of the units presented itself. The units previously had EPC (Energy Performance Certificate) ratings of "C." A pre-refurbishment EPC improvement report was instructed to provide a pathway to EPC "A." The report showed that while this was achievable, the EPC would only reach a rating of "A" if solar PV were installed. Due to the lack of scale, this was not deemed financially viable. However, the following improvements were implemented to increase the EPC to "B":
    - Replaced the roof, increasing insulation.
    - Removed the gas supply.
    - Increased insulation within interior panels and loading door.
    - Installed daylight operating controls and LED lighting in the offices and warehouse.
    - Installation of destratification fans.
    - Currently 26% of the portfolios EPCs (Energy Performance Certificates) are rated either B or above. A large number of units with EPCs below B are within industrial estates where the asset management team are having success in increasing the EPCs scores by agreeing with tenants to remove the gas supply to the warehouse space and heating the units via electricity rather than gas. The presence of gas heating within

warehouse units has a significant impact on the EPC scores, so this is considered a priority in both refurbishments and lease renewals.

Where refurbishments form part of an asset's business plan, the manager targets a minimum EPC rating of "B," and a significant reduction in carbon intensity. If possible, this includes the capping off of gas supply, creating a fully electric building.

Alongside improving the ESG credentials of the portfolio, the Manager has sought to improve the energy performance data coverage. Through a freedom of information data request to tenants' energy providers, the Manager has been able to obtain accurate energy usage across the portfolio without the need for each tenants' permission. This allows for a better understanding of the carbon intensity in each property, and where to focus improvements.

Appendix 3 – Scenario Analysis

The Trustee has reviewed the analysis and concluded that it would not conduct new scenario analysis in the 2023 Scheme accounting year since the results would not be significantly different and the available models remain flawed, particularly in relation to modelling physical risk. The Trustee agreed to instead wait for the availability of new or improved scenarios or modelling capabilities, or events that might reasonably be thought to impact key assumptions underlying scenarios. The decision to conduct new scenario analysis will be revisited again in 2024, however as required new scenario analysis will be undertaken by 2025.

Approach

Understanding the performance of the Scheme's assets under various scenarios is a key part of the risk management and asset allocation approach. This applies to climate in the same way as inflation or recessionary scenarios are considered. The approach here is both quantitative where possible, understanding both risks and opportunities, and also qualitative in understanding how different assets may be positioned.

In terms of quantitative analysis, after reviewing a variety of providers and observing what other schemes had done, consultant Mercer was commissioned to undertake the first climate scenario analysis for the Scheme in 2021. Mercer was able to consider the whole portfolio for the analysis albeit proxies based on rough asset class definitions were used for private assets.

Scenario Analysis Methodology and Caveats

Mercers model works as follows:

1. Third party Cambridge Econometrics delivers assumptions on transition and physical damages inputs across different regions.
2. Each asset class and sector are linked in the model to an economic variable e.g. GDP and assigned a sensitivity to that variable. The model matches each risk factor (spending for transition or physical damages) to specific sectors and regions.
3. The risk factors and risk sensitivities are then applied to the portfolio under each scenario.

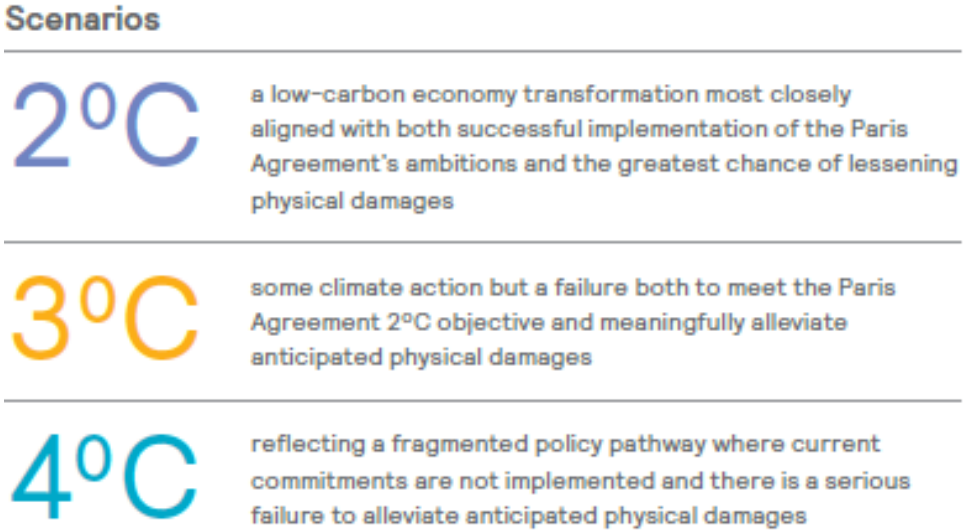
There are a number of things that have not been included in the model. Additionally, whilst this was a leading model as recently as last year, the methodology and data used is now somewhat dated in this fast-evolving area. Mercer is in the process of updating the model and data and expects a number of key changes. The following key limitations and aspects not covered in the model are:

- Physical impacts are underestimated (e.g., feedback loops like permafrost melting).
- Financial stability and insurance "breakdown" (e.g., systemic failure, inevitable policy response and uninsurable 4^0C).
- Most adaptation costs and social factors are not priced (e.g., population health, migration).
- Multi decade timeframes and mean returns used here lead to small average impacts rather than true stress tests. All of the caveats above also mean the impacts to our scheme of physical damages in particular are likely to be underestimated.
- The impact on future pension payments (i.e., the Scheme's liabilities) were not directly included in the model.

Given the above, in taking conclusions as discussed below, CPTI has advised the Trustee to focus on relative impacts and whether impacts are positive or negative, rather than the specific numbers in which we have low confidence and are likely to change each time we present this.

Chosen scenarios

The below figure summarises the three scenarios used for the analysis. The first scenario reflects a successful transition, limiting temperatures by the end of the century (albeit not keeping temperatures below 1.5 degrees) and the other two show increasing impacts of physical damage.



These scenarios were chosen in line with regulatory requirements and also to address the key areas of risk and opportunity. The lower temperature scenario demonstrates greater transition risk and opportunity, and the higher temperatures incorporates greater physical risk. While a 1.5-degree scenario was not run, the effects are expected to be in the same direction but of greater magnitude to the 2-degree scenario.

Results

Some of the result from the scenario analysis undertaken by Mercer are shown over the next pages. In each case Mercer have modelled the cumulative impact of different regulation, price change or physical events occurring vs not occurring.

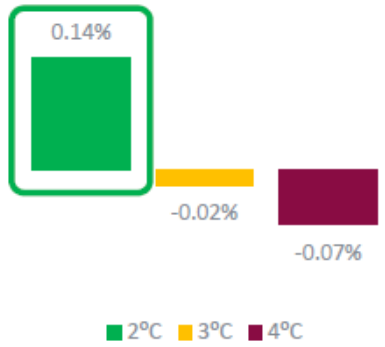
The first figure below shows the per year impact of the 2 degree (successful transition) and two unsuccessful, physical impact scenarios. The figure shows the performance impact of the scenarios on the total portfolio, these are assumed to be experienced every year for the whole period and so in aggregate are much larger than the single year impacts shown. While the analysis here shows the impacts smoothed over a long period, we expect many physical risks to impact prices in this decade (i.e. before 2030) and thus will impact our assets. The transition will also happen (or fail) this decade. As such the longer dated time frames remain relevant even though much of the Scheme's liabilities will be paid sooner. In the two-degree scenario, the portfolio benefits from an additional return of 0.14% per annum based on the asset allocation at the time of analysis. The 3 degree and 4-degree scenarios both detract from performance.

Total Portfolio to 2030 and 2050, Annualised

The results emphasise the physical damages risks and why a below 2°C scenario is most beneficial, and the 4°C and 3°C scenarios are to be avoided, from a long-term investor perspective.

SAA – 2030

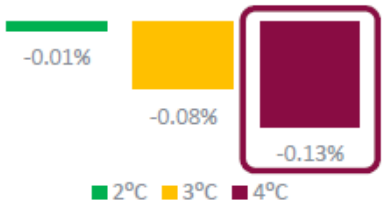
Under 2°C to 2030, the SAA is expected to benefit from the low carbon transition. This provides a +1.7% return benefit, on a cumulative basis.



Climate change impact on return (% p.a.)

SAA – 2050

Under high carbon scenarios to 2050, particularly 3°C and 4°C, physical risks act as a negative drag on returns. Fund returns are expected to degrade by -4.1% on a cumulative basis.



Climate change impact on return (% p.a.)

The Coal Pension Scheme SSS Fund has exposure to infrastructure, which is driving the positive result under 2°C to 2030. In general, the positive expectations for infrastructure are given the more stringent climate change policy in this scenario driving a period of significant investment in this asset class. Mercer also expects exposure to clean technology innovation and renewable assets in most infrastructure allocations under a low carbon transition.

The above green bars for the 2-degree scenario indicate that in a transition our infrastructure assets will do well through the period to 2030. The numbers are smaller to 2050 as results are just averaged over a larger number of years. The yellow and red bars show that physical damages will hurt our portfolio in the period to 2030 and 2050 – the 2050 bar is bigger as more damages are modelled to happen by this period. The numbers above are due to happen each and every year so for the left chart need to be multiplied by nine for the total effect and the right chart need to be multiplied by twenty-nine for the total effect. Whilst the total numbers are bigger, we still expect these to be an underestimation.

This next figure shows how the portfolios SAA at time of analysis compares with what Mercer defines as a sustainable portfolio – one tilted to benefit from the climate transition. The Sustainable portfolio performs much better in the transition scenario and no worse in the other two scenarios. Again, these performance amounts are expected to occur each and every year for the time periods shown and so the aggregate numbers will be much larger. So, to 2030 the sustainable portfolio is expected to perform better than the current portfolio by 7% under a successful transition scenario.

The analysis shows the limited downside risk of 2°C scenario aligned investment, vs 4°C aligned 'business as usual' investment, as the modelled portfolios are similarly impacted under a 4°C scenario.

		SAA	SUSTAINABLE PORTFOLIO
		Climate change impact on return (% p.a.)	
2°C	2030	0.14%	0.72%
	2050	-0.01%	0.37%
	2100	-0.06%	0.11%
3°C	2030	-0.02%	0.04%
	2050	-0.08%	0.03%
	2100	-0.12%	-0.04%
4°C	2030	-0.07%	-0.06%
	2050	-0.13%	-0.10%
	2100	-0.19%	-0.14%

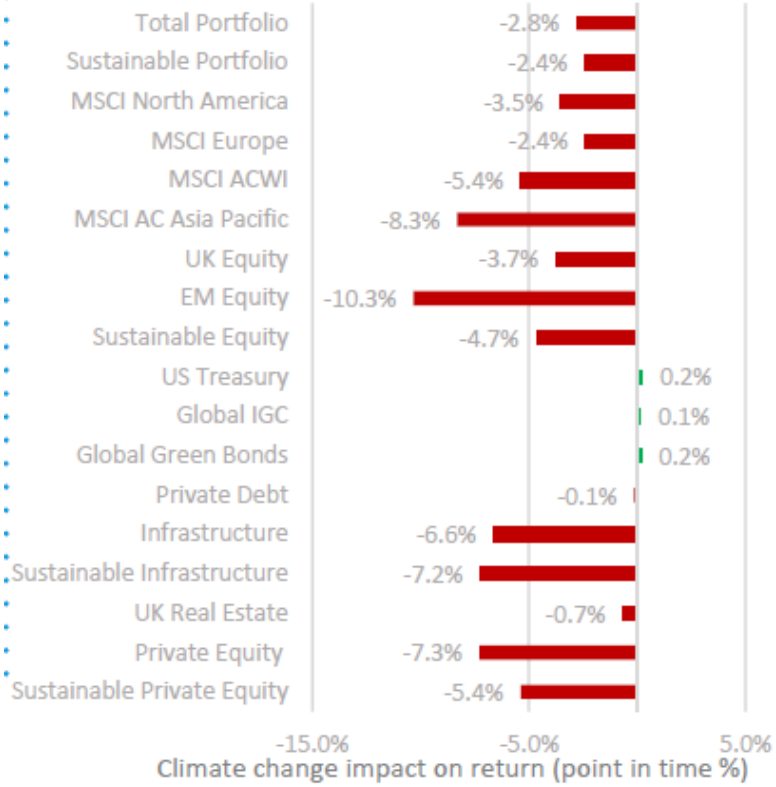
≤ -10 bps > -10 bps, < 10bps ≥ 10 bps

"Low carbon transition premium" is found under 2°C to 2030, 2050 and 2100 for the Sustainable Portfolio, as compared with just 2030 for the SAA.

The below figure shows the impact of the 4 degree scenario taken as a loss i.e. adding up the losses from each year. As with the above caveats this is likely to be a significant underestimate of actual losses but shows the relative impact across different areas of the portfolio as well as the general negative impact. So, for example Private equity on average will return 7.3% less than it otherwise would and sustainable equity 5.4% less than it otherwise would. Again, we would question whether in actual fact returns across the board would be absolute negatives.

STRESS TEST TOWARDS 4°C AND 80% MARKET AWARENESS

This situation could e.g. arise should multiple natural disasters occur across key markets (to which the portfolio is exposed), which act as a return detractor.



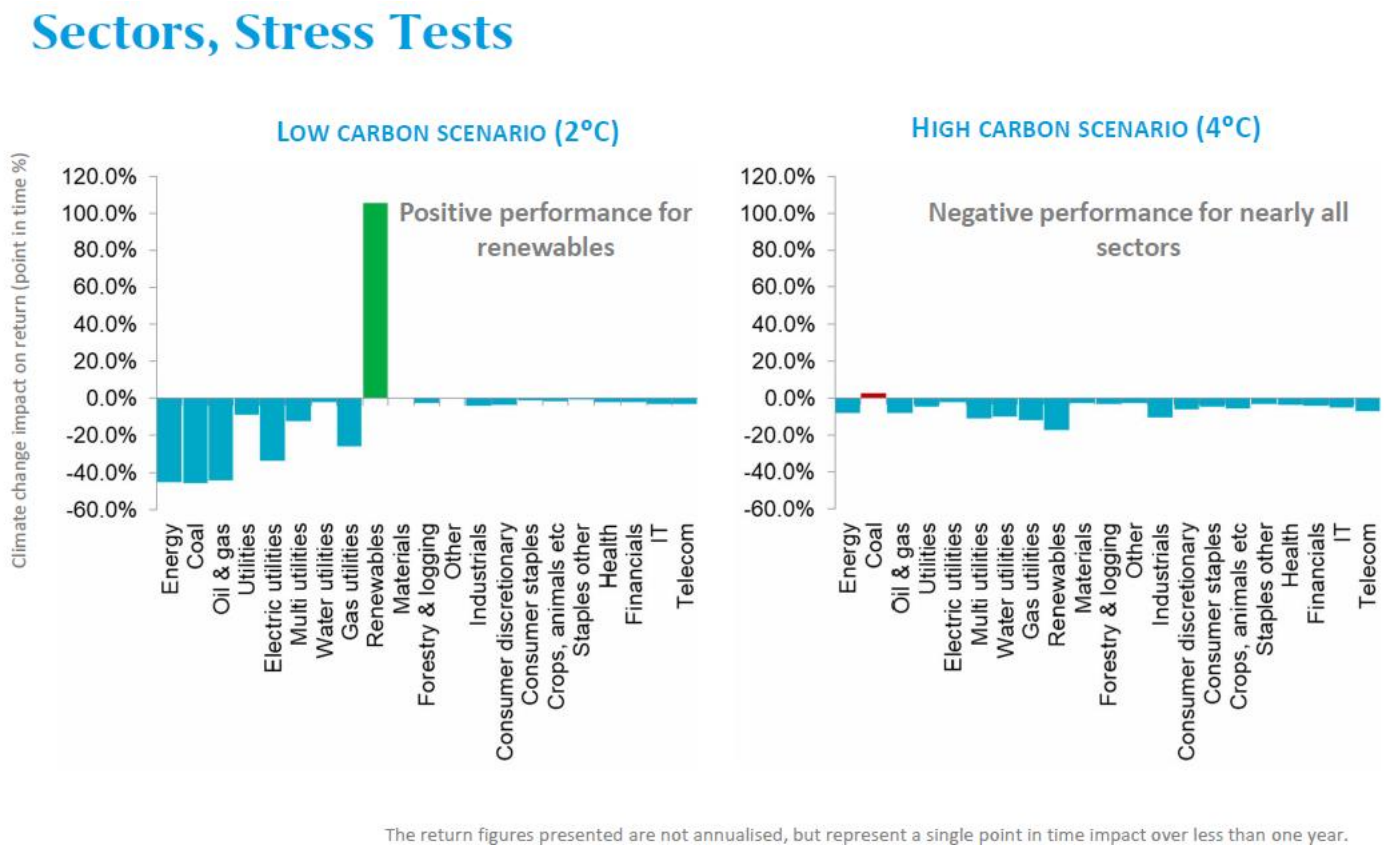
Under this stress test scenario, the expected return impact to the SAA is approximately -2.8% and for the Sustainable Portfolio is approximately -2.4%.

The largest negative impacts under 4°C are for real assets (in particular infrastructure) and equity exposed to quadrupling of physical risks as compared with today

Fixed income, in particular the US Treasury allocation, is less sensitive to modelled climate risks, which is partly due to modelling limitations, but also partly due to the asset class overall characteristic as a safe-haven asset.

The return figures presented are not annualised, but represent a single point in time impact over less than one year.

The figure below shows the impact on the portfolio of both the successful climate transition (LHS) and the worse physical risk scenario (RHS) both taken as a single number adding up the events that may occur across time. The impacts across each sector of the equity market are shown. Whilst the actual performance is likely an underestimation the relative performance of different sectors is a useful guide. The key thing we take from this chart is the opportunity to invest in areas of Climate Opportunity which could meaningfully outperform.



Liabilities and funding strategy

The Scheme liabilities (i.e. the future payments to be made from the Scheme assets) could be affected by climate change in two ways:

- If UK inflation rates change in future as a result of climate change.
- If the Scheme members live longer or die sooner as a result of climate change.

In both cases, it is also important to consider the timing of when climate change may influence these factors. This is because the average age of members (weighted by pension amount) is around 76 years old and over 65% of the Scheme's future payments (in real terms) are expected to be made over the next 10 years (i.e. over the short and medium term time periods defined by the Trustee). So, for climate change to have a meaningful impact on the future payments from the Scheme these impacts will need to happen sooner rather than later.

UK inflation rates

Whilst the scenario analysis modelling conducted by Mercer did not directly consider the impact on the Scheme's liabilities, they have considered what might happen to inflation in the scenarios they modelled. That in turn has then allowed the Trustee to consider any resulting impact on the Scheme's liabilities.

Under the 2 degrees Scenario the driver of the change in UK inflation rates is the transition to a low carbon economy. Most of these impacts would happen in the short to medium term (less than 10 years). There are a number of elements of the transition which have the potential to be inflationary, including:

- Additional costs of businesses transitioning being passed to customers.
- Carbon pricing increasing input costs and these again being passed-on
- Investment from both public and private sectors stimulating the economy.

An increase in inflation of the order of 0.25% to 0.5% pa over the first 10 years could be expected in this scenario.

Following the transition i.e., beyond 10 years, the impact of this scenario would likely be to reduce the rate of inflation. Reasons for this include:

- The move to renewable energy sources and development in technology would reduce energy costs. These savings may be passed to customers.
- Costs associated with paying back debt (private and public) would dampen economic growth and therefore inflation.

These impacts would be expected to offset some but not all of the cumulative increase in prices described above.

These changes in UK inflation would result in an increase of around 2% to 4% in the number of future payments to be made from the Scheme (i.e. the Scheme liabilities).

In this scenario it is expected that the current investment strategy would provide a cumulative additional return of around 2% over the period to 2030 (so 0% to 2% lower than the increase in liabilities) and a more sustainable portfolio (as modelled by Mercer) would provide an additional return of around 7% (so 5% to 3% higher than the increase in liabilities).

Therefore, it appears that the Trustee's funding strategy would remain broadly fit for purpose within this scenario, particularly noting the extra resilience

provided by the existence of the UK Government Guarantee should the Scheme's investments ultimately fail to provide the returns necessary to meet all future payments.

Under the 3 degrees Scenario, the transition would initially be muted and so there would be no material impact on inflation in the first 10 years. Beyond that time point, a mix of delayed transition efforts and the impact on physical damages, would likely increase the rate of inflation. Physical damages could impact inflation via the following:

- Increased water shortages.
- Food shortages due to the impact of both drought and flooding on agricultural productivity.
- Potential impacts on supply chains due to natural disasters and reduced willingness to trade scarce commodities.

These impacts could increase inflation by up to 0.25% pa from 10 years' time. Given the Scheme's maturity, this delay to the inflationary impact mutes the impact on the liabilities only resulting in an increase of around 1% in the number of future payments to be made from the Scheme (i.e. the Scheme liabilities).

Under the 4 degrees Scenario, the key driver in the changes to inflation would be the physical damages. As with the 3 degrees Scenario, these impacts could increase inflation by up to 0.25% pa from 10 years' time. In the longer time, the 4 degrees Scenario would likely bring about greater resource scarcity and higher inflationary pressures. However, these would be beyond the key time horizon for the Scheme so the impact on liabilities would broadly be expected to be the same as the 3 degrees scenario.

Under both the 3 degrees and 4 degrees scenarios, the impact on the assets would be negative which would put more pressure on the Trustee's funding strategy than under the 2 degrees scenario. This might make it more likely that the Scheme may have to rely on the UK Government Guarantee than in the 2 degrees scenario. But ultimately the existence of the Guarantee provides a resilience to the Trustee's funding strategy in both the 3 degrees and 4 degrees scenario.

UK life expectancy

The impact climate change will have on UK life expectancy is extremely hard to predict and will also depend on non-climate change factors (e.g. medical breakthroughs and health service funding). One possible consequence of climate change is that global warming leads to both warmer UK winters and summers. This would likely reduce the number of cold-related winter deaths but increase the heat-related deaths. It is hard to predict with any kind of certainty the overall impact of this.

Furthermore, given the maturity of the Scheme, it seems unlikely that the climate change impact on the life expectancy of the Scheme's members will be material, particularly over the next 10 years when the majority of the Scheme's liabilities are expected to be paid. As such, the Scheme's funding strategy is expected to be relatively resilient to the effects of climate change on life expectancy.

Conclusions from Scenario Analysis

The Scenario Analysis shown reinforced the conclusions the Trustee had already reached on the significance of climate risk and opportunities as discussed throughout this document:

- Climate change could have a significant impact on the financial outcome from the Scheme's investments and potentially on the Scheme's liabilities.
- There are significant opportunities and risks presented by climate change – both transition and physical.
- The risks and opportunities vary across asset class.
- There are options to shift the portfolio to better capture the opportunities and reduce the risks.

As such the scenario analysis reinforced the Trustee's desire to move forward with increasing the ability to assess the portfolios exposure to risk and opportunities and to continue looking to reduce unrewarded risks and take advantage of opportunities in-line with its fiduciary duty to deliver the best outcomes to all members.

The summary of actions taken is included in the main body of the report. As discussed above, whilst the greater understanding the Trustee has built around climate risk and opportunity has not changed the overall funding and asset strategies, it has led to changes within asset classes and around particular managers and mandates.

In terms of the scenario analysis itself, the impacts of a climate transition and of significant planetary warming are believed to be underestimated by this analysis. As such, no comfort can be taken in the magnitude of the numbers, particularly under the 3 and 4 degree scenarios.

That said, the existence of the Government Guarantee does provide welcome security to members benefits should the impact of climate change be such that the Scheme's assets generate insufficient returns to meet all future payments, with the Government required to provide any shortfall in funding.

Signed by the Chair of Coal Staff Superannuation Scheme Trustees Limited