DS Smith Group Pension Scheme (the “Scheme”)

Climate Change-related Disclosures

Report Prepared In Line With the Recommendations of The Task Force On Climate-related Financial Disclosures (TCFD)

Reporting period: 12 months to 30 April 2023

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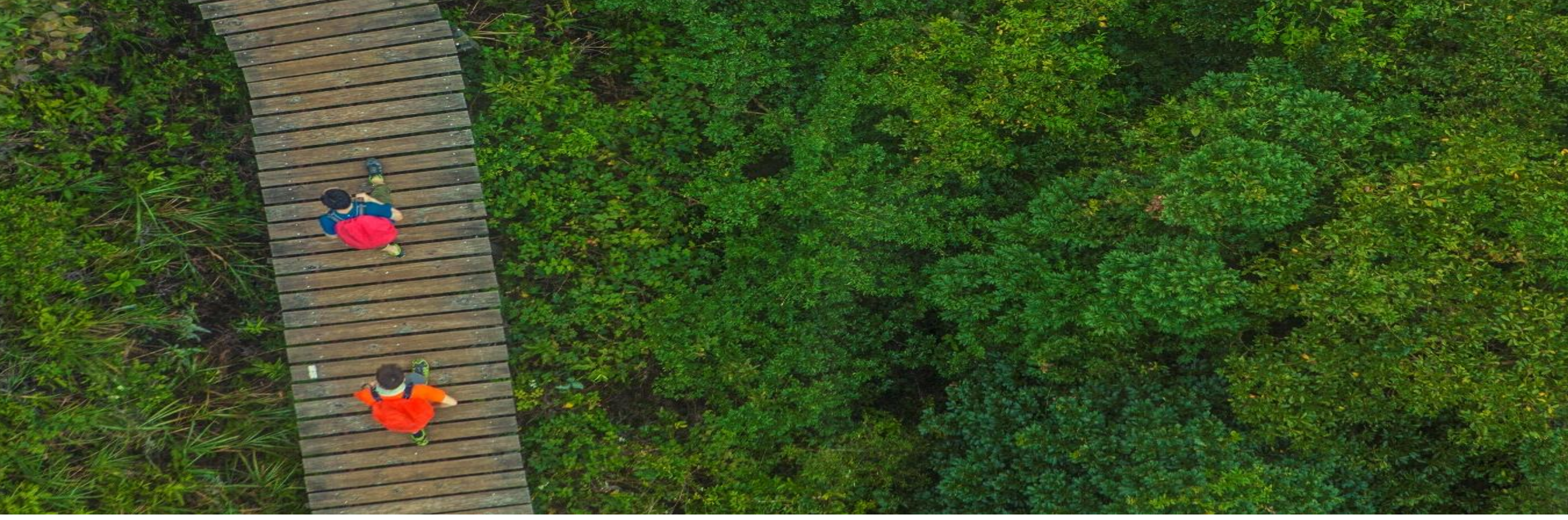


INTRODUCTION

The DS Smith Group Pension Scheme (the "Scheme") is a UK-registered occupational pension scheme with assets held on behalf of members. It is managed by DS Smith Pension Trustee Limited (the "Trustee"). The Trustee recognises that climate change is one of the most important issues of our time, which will impact all countries, companies and individuals. As a result the Trustee recognises climate change as a significant financial risk that could impact the financial security of members' benefits if it is not properly measured and mitigated. As well as providing risks to the Scheme, the transition to a lower carbon economy and the mitigation of, and adaptation to, the physical risks of climate change may create new investment opportunities if managed appropriately.

This report has been prepared to comply with the Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 and the Occupational Pension Schemes (Climate Change Governance and Reporting) (Miscellaneous Provisions and Amendments) Regulations 2021 using the DWP's statutory guidance. The report covers the year to 30 April 2023 and represents the Trustee's first such disclosure.

The majority of the Scheme's assets are in respect of defined benefit pension provision. Less than 1% of the Scheme's assets are in respect of DC benefits, this is a closed DC arrangement primarily held in cash and analysis has therefore not been provided for these benefits. Although the Scheme has different benefit structures the funding isn't sectionalised, and so has been deemed appropriate to report on all of the assets and liabilities together.

The report explains how the Trustee has established and maintained oversight and processes to satisfy themselves that the Scheme's relevant climate-related risks and opportunities are considered appropriately by all stakeholders involved in the day-to-day management of the Scheme. The sub-headings in this report address the specific disclosure requirements in the statutory guidance and which are based on the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD).

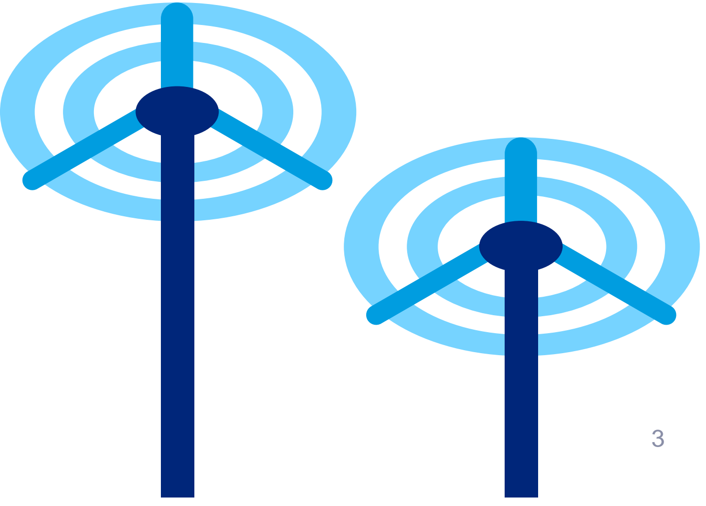
The Trustee invests the assets of the Scheme in a fiduciary arrangement with Mercer Limited (Mercer). Under this arrangement Mercer are appointed as a discretionary investment manager and day-today management of the Scheme's assets is by investment in a range of specialist pooled funds (the Mercer Funds). The funds are managed by Mercer Global Investments Europe ("MGIE") and Mercer Alternatives Luxemburg.

This report discloses a range of climate-related information pertaining to the Scheme with the intent of improving transparency toward members, the Pensions Regulator and the pension sector generally, as well as ensuring that the Trustee is thorough and rigorous in identifying, assessing and managing climate risk.

The Trustee recognises that climate issues are currently more relevant and readily implementable and observable for some parts of the portfolio than others. This statement outlines where governance of climate risk and opportunities has been applied. We will seek to expand the remit of this reporting to cover the entirety of the portfolio as and when the ability to monitor these risks becomes more achievable via improved availability of data. The Trustee is aware that there can be limitations in modelling and therefore it will regularly review the assumptions used within the scenario analysis.

As always, members are encouraged to contact the Trustee if there are comments you wish to raise.

Gary Saunders, Chairman of the Trustee



EXECUTIVE SUMMARY

This report covers the following four areas, which comprises the TCFD framework:

- **Governance**: How the Trustee maintains oversight and incorporates climate change into its decision making;
- **Strategy**: How potential future climate warming scenarios could impact the Scheme's assets, liabilities, funding level and strength of the corporate sponsor to continue to support the Scheme;
- **Risk Management**: How the Trustee incorporates climate–related risk in its risk management processes; and
- **Metrics and Targets**: How the Trustee measures, and monitors progress against different climate related indicators known as metrics and targets.

The key messages from this report are:

- Climate change risk can have an impact on the long-term funding outcomes for the Scheme.
- The Trustee has processes in place to identify, assess, manage and mitigate climate change risk.
- Five metrics have been chosen to assist the Trustee to measure and monitor the exposure of the Scheme's assets to climate change.
- The Trustee has set a target to reduce the level of carbon exposure within the Scheme's asset portfolio. This is based on the credit mandate which is a large proportion of the assets and expected to grow over time.
- The Trustee has de-risked the Scheme's portfolio over time which has primarily involved selling equities, The lower risk, bond based portfolio is expected to be less exposed to climate risk.
- Climate risk will largely be the result of "transition risk" than physical risks in the short term. Over the longer term, physical risks will have a larger impact.
- Climate change could result in a low-to-medium term impact on the strength of the Sponsor covenant over the short and medium term.
- Mortality changes arising from the direct and indirect impact of climate change may be material to the funding strategy in the longer term. The Trustee will keep this under review, and in the meantime review this triennially as part of the actuarial valuation.

Recent developments

- Over recent years the Trustee has made significant steps to access and improve the level of integration of Environmental, Social and Governance (ESG) factors within their investment decision-making. In particular, the Trustee has worked with their Investment Consultant and fiduciary manager, Mercer, to quantify the level of ESG integration through carrying out the Responsible Investment Total Evaluation (RITE) assessment.
- The Trustee noted that the RITE rating for the Scheme's DB Assets is an A++ as at Q3 2022. Some of the actions which have led to this rating include:
- Dedicated sustainable investments
- Undertaking a review of the ESG credentials of all managers the Scheme invests with.
- Restrictions within the investments to the worst carbon emitters
- The planned introduction of a climate target

Conclusions and next steps

The Trustee recognises that further progress needs to be made to consider climate-related risks and opportunities in a balanced and proportionate approach. The ultimate responsibility of the Trustee is to pay members their benefits and the Trustee is aiming to do this in the most sustainable way as possible.

In future reports the Trustee will examine the impact over a longer time horizon which is expected to highlight an increased impact from physical risks.

The Trustee supports the goals of the Paris Agreement that seeks to limit warming to well below 2°C relative to pre-industrial temperatures. The Trustee believes that climate risk can have an impact on securing long-term financial returns and considering climate risk is in the best long-term interest of Scheme members.

The Trustee has set a target to reduce absolute carbon emissions (associated with Scope 1 and 2) associated with its segregated credit portfolio by at least 25% from March 2023 levels by 2030. Further details of the metric and rationale underpinning this target is set out in the "Metrics and Target" section of this report. Mercer has set targets with the underlying investment manager for this credit mandate to assist the Trustee with working towards this target.

In addition, over the next 12 months, the Trustee expects to :

- Regularly review the climate-related risks and opportunities in the Scheme and maintain compliance with regulatory requirements, with support from the Scheme's advisors.
- Ensure that they are well equipped with sufficient knowledge of developments around climate change risk through training and a review of skills.
- Annually consider the suitability of the Scheme's investment arrangements to achieve the agreed carbon reduction target.
- Continue to monitor the potential impact of climate change on the Sponsor covenant.

THE TCFD FRAMEWORK

The Financial Stability Board, an international body established by the G20 that monitors and makes recommendations about the global financial system, created the TCFD framework in 2015. TCFD was created to improve and increase reporting of climate-related financial information that can promote more climate-informed investments.

This climate change-related disclosure report is prompted by that drive for transparency and fulfils the Trustee's regulatory obligation in relation to climate change and governance reporting. The Trustee's aim is that members and stakeholders can better understand the climate-related risks and opportunities within the Scheme through its ownership of companies and other investments.

Figure 1: TCFD Framework

TCFD recommendations are categorised under four pillars: Governance, Strategy, Risk Management, Metrics and Targets:

Governance
The Trustee's governance of the Scheme around climate-related risks and opportunities.

Strategy
The actual and potential impacts of climate-related risks and opportunities on the Scheme's investments and funding of member benefits. .

Risk Management
The processes used by the Scheme to identify, assess, and manage climate-related risks.

Metrics and Targets
The metrics and targets used by the Trustee to assess and manage relevant climate-related risks and opportunities.

Asset owners like the Trustee sit at the top of the investment chain and, therefore, have an important role to play in influencing the organisations through which they invest (such as asset managers) and companies in which they ultimately invest to provide better climate-related financial disclosures. Disclosure of climate-related risks and opportunities by asset owners allows beneficiaries and other audiences to assess the asset owner's investment considerations and approach to climate change.

In setting the Scheme's investment strategy, the Trustee has incorporated the available and relevant climate-related financial information into their investment decision making. The Trustee believes that their climate-related financial disclosures encourage better disclosures across the investment chain, from asset owners to asset managers to underlying companies.

GOVERNANCE

Describe the Trustee's oversight of climate change-related risks and opportunities

The Trustee and its sub-committees are solely responsible for making Scheme-wide decisions in identifying, assessing and managing climate-related risks and opportunities relevant to those activities, on the advice of and with the support of their advisers. Further details are in the Standalone Climate Governance Statement appended at pages 30-33

The Trustee maintains a Statement of Investment Principles (SIP), which details the key beliefs, risks and approach to ESG including climate change. This is reviewed on an annual basis or more frequently as required.

The Trustee's key investment beliefs on climate risk are:

- Long-term sustainability issues, particularly climate change present risks and opportunities that increasingly may require explicit consideration including dedicated investments.
- Climate change poses a systemic risk, and investors should consider the potential financial impacts of both the associated transition to a low-carbon economy and the physical impacts of different climate change outcomes.
- Stewardship (or active ownership) helps the realisation of long-term shareholder value by providing investors with an opportunity to enhance the value of companies and markets.

Research into how climate-related risks and opportunities impact financial markets is constantly evolving and expanding. The Trustee will undertake stochastic modelling on a annual basis to keep up-to-date with developments in this space.

Over the course of 2021, 2022 and 2023, the Trustee, had several meetings where ESG factors were discussed including training on the potential implications of climate change on the Scheme and its sponsor. This training was undertaken by Mercer (as investment advisor, fiduciary manager and actuary) and PWC as covenant advisor.

Climate change is an explicit agenda item for the Investment Funding Committee (which comprises all of the Trustee) at least annually, but usually every six months. The Trustee is satisfied that the amount of governance time spent is reasonable and proportionate in light of the risks and opportunities currently posed by climate change (relative to other risks and opportunities facing the Scheme) and will allocate more time at future meetings if any analysis or wider industry research requires additional Trustee review and consideration.

Therefore, the Trustee will continue to ensure that appropriate governance resources (such as the Investment Sub-Committee) are available for developing and implementing ESG and climate change related governance policies.

On an annual basis, these committees will be monitoring (and reporting back to the Trustee) on the carbon emissions metrics produced in this report and against the agreed carbon emissions reduction target set by the Trustee. It will also consider climate-related risks and opportunities in conjunction with investment strategy reviews and with the results reported by the Sponsor.

On at least an annual basis, the Trustee reviews the Scheme's risk register which includes ESG risks (including climate change).

The Investment Funding Committee (which involves all of the Trustee) meets at least four times a year where investment performance and risk management are reviewed, of which climate-related risks form part of the wider assessment. Some of the actions which have led to the improvement in ESG integration over the course of the past 18 months include:

- Making dedicated sustainable investments.
- Carrying out climate change scenario analysis and tracking carbon metrics including a commitment to reduce the level of carbon exposure of the Scheme's investment portfolio.
- Undertaking a review of the ESG credentials of all managers the Scheme invests with.
- Reviewing voting and engagement activity carried out on its behalf by the sub-investment managers.

Describe the role of those advising the Trustee on governance activities.

Ultimate oversight for managing climate risks and opportunities is the responsibility of the Trustee. In exercising its duties with regards to climate change oversight the Trustee will consult with advisers who will provide support and technical expertise on various climate issues which may impact the Scheme.

The Trustee takes independent investment advice from Mercer and PWC to help assess climate risks and opportunities, and looks to ensure that any decisions continue to support the Scheme's ability to provide pensions over the long-term. Pages 30-33 contains fuller details of the roles of those undertaking scheme governance activities in identifying, assessing and managing climate-related risks and opportunities relevant to those activities.

- During the year to 30 April 2023, the Trustee received training and advice from, Mercer Limited, covering climate-related investment risks and opportunities. It also received training on the reporting requirements in line with the TCFD recommendations. Mercer provides climate scenario analysis, advice and training on the selection of climate metrics for the Scheme to monitor. Mercer will assist the Trustee in producing the Scheme's climate change-related disclosures report on an annual basis
- The Trustee is responsible for setting the broad strategic direction. It has then appointed Mercer Limited as fiduciary manager. The Trustee delegates the asset allocation decisions to Mercer, but Mercer is mandated to undertake these decisions in line with the Trustee's ESG beliefs which includes where possible investing in dedicated sustainable investments.
- Mercer is responsible for agreeing investment guidelines for the investment managers. This includes exclusions to the worse carbon emitters and climate reduction guidelines
- Mercer Limited has delegated to MGIE and Mercer Luxemburg the appointment and monitoring of a suitably diversified portfolio of specialist third party investment managers. Those managers are in a position to engage directly with underlying companies/issuers in order to improve their performance in the medium to long term. As part of the sub-investment manager selection and monitoring process, MGIE consider the level and extent to which sub-investment managers take into account ESG factors, including climate change, in their investment process and stewardship activities (such as voting and engagement with the underlying companies or issuers they invest in).
- Mercer Limited (as Actuary) advises the Trustee on the funding position including an understanding of the potential funding impact resulting from changes to financial or demographic assumptions driven by climate change. It also provides input to enable strategic asset allocation decisions to be made considering the impact of climate risks on funding strategy;.
- PWC assists the Trustee with assessing and reviewing the impact of climate change risk on the Sponsor's ability and willingness to continue to support the Scheme. Further details are set out in the Climate Governance Policy Statement which is provided in the Appendix under "Ongoing workstreams and frequency

The Investment Sub-Committee and Trustee works with its advisors to ensure that climate-related risks and opportunities are considered as part of their integrated risk management framework and expects their advisors (Scheme Actuary, Investment Consultant andCovenant advisor) to ensure the Trustee is compliant with the regulatory requirements when considering climate change risks and opportunities.

Describe the Trustee's process for ensuring those advising the Trustee take adequate steps to identify and assess any climate-related risks and opportunities.

Mercer's investments team has been set climate related objectives within its strategic objectives and these are reviewed by the Trustee on an annual basis.A third party evaluator also reviews the activity of Mercer Investments on a quarterly basis and reports to the Trustee (via the Investment Funding Committee). Their annual assessment includes specific scoring on how Mercer has integrated ESG considerations and climate change into its decision making. The Trustee reviews and considers this in detail.

The Trustee periodically reviews and challenges the work of the Investment Sub-Committee and will continue to do so.

MGIE, acting on behalf of the Trustee, will engage with underlying investment managers where they are perceived to be lagging their peers in terms of ESG integration and climate risk management, and to ensure the investment managers are voting and engaging with the investee companies. MGIE also consider climate risk management practices when tendering for asset managers and with the corporate bond manager has a requirement for the manager to measure carbon emissions in the investment manager agreement. The Trustees when reviewing the managers consider the same areas in detail.

The Trustee has also set climate objectives for the Scheme Actuary and Covenant advisors' and review these regularly.

The Trustee has worked with their Investment Consultant, Mercer, to ensure that the appropriate governance framework is in place to consider climate change and expect to review the processes in place as part of their ongoing review of Scheme documentation, notably the Statement of Investment Principles.

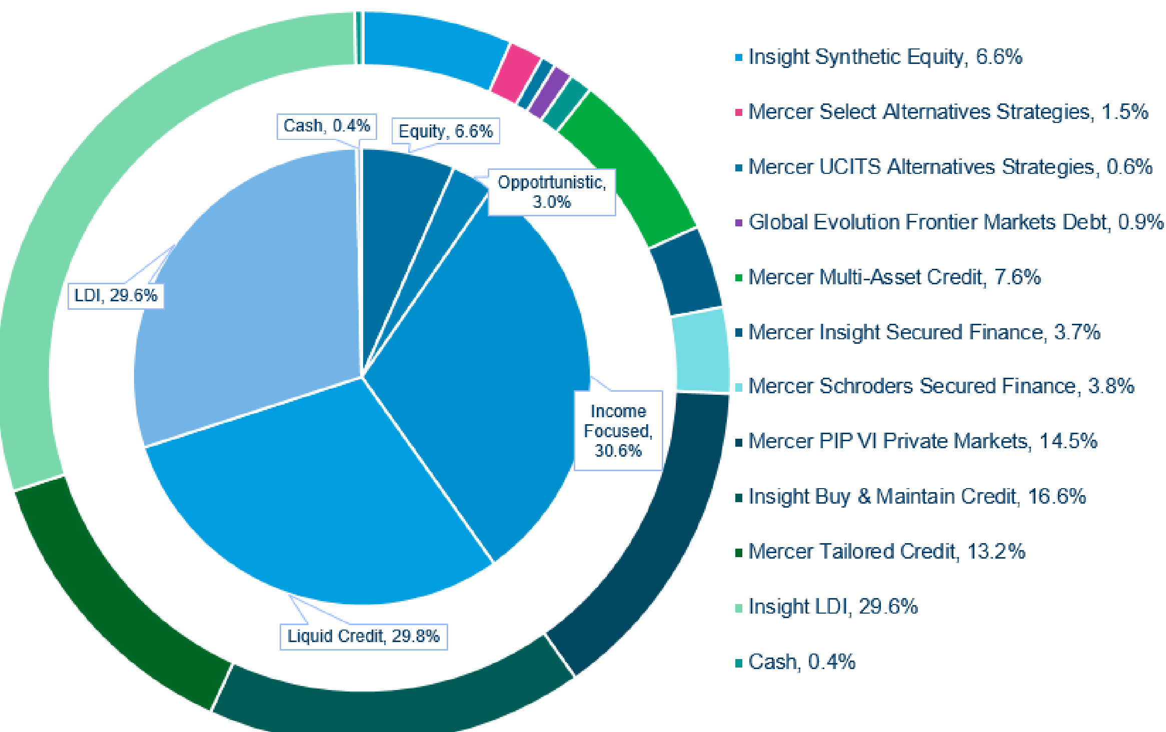
The contracts the Trustee has with third party advisers contain provisions requiring those advisers to declare conflicts of interest to the Trustee, so that those conflicts can be managed. The Trustee has a robust, written policy for managing conflicts of interest. To date, no conflicts of interest have emerged or been reported to the Trustee in relation to the subject matter of this report.

STRATEGY

Summary of the Scheme's DB Assets

The Trustee has implemented a de-risking framework in order to reduce the level of risk in the investment and funding strategy as the funding position improves. De-risking triggers have been agreed that when reached, will automatically reduce the allocation of growth assets in favour of bonds. De-risking triggers have been reached over the last few years and the asset allocation is now primarily invested in bonds. The potential impact (and influence) over climate change has reduced as the Scheme has de-risked.

Figure 2: Summary of assets within the investment strategy as at 30 April 2023.



This TCFD report covers the impact on investment strategy (i.e. strategic asset allocation, selection of investment mandates, portfolio construction) and funding strategy (strategy by which the trustees expect to have sufficient assets to pay benefits) of climate-related risks and opportunities over the agreed time horizons (5, 13, 20 years) on pages 13-17.

Time periods which the Trustee have determined should comprise the short, medium and long term:

The time horizons identified by the Trustee for the purposes of the investment scenario analysis are detailed below. Different time periods have been used for the covenant and longevity analysis.

Term	Duration
Short	5 years (covers the period to 2028, when the Trustee expects to have made progress towards reaching full funding on the low-risk basis)
Medium	13 years (covers the period to 2035, when the Trustee expects to reach full funding on the low-risk basis)
Long	20 years (covers the period where the total benefits paid will reduce as the membership ages)

Climate-related risks and opportunities the Trustee has identified over the short, medium and long term

The Trustee recognises that the risks and opportunities arising from climate change are diverse and continuously evolving. This is demonstrated well in Figure 3 which was taken from the Final Report issued by the TCFD.

Figure 3: Climate-related risk and opportunities.

Transition Risks
Policy and Legal
Technology
Market
Reputation
Physical Risks
Acute
Chronic
Risks
Opportunities
Opportunities
Resource Efficiency
Energy Source
Products/Services
Markets
Resilience
Strategic Planning
Risk Management
Financial Impact
Revenues
Expenditures
Income Statement
Cash Flow Statement
Balance Sheet
Assets & Liabilities
Capital & Financing

Source: TCFD Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, October 2021

Describe the climate-related risks and opportunities the Scheme has identified over the short, medium and long term

- Climate change presents risks over the short, medium and long-term, which the Trustee aims to better understand and mitigate where possible. The Scheme's allocation to fixed income assets is expect to increase over time, and these assets are less exposed to transition and physical risks compared to other asset classes such as equities. The Trustee will consider the following short, medium and long-term drivers of risk going forward. Further detail can be found in pages 28-31 of the Appendix.
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Over the short term, risks may present themselves through rapid market re-pricing relating to climate transition as:

- Scenario pathways become clearer. For example a change, in the likelihood of a below 2°C scenario occurring becoming higher and driving the transition risk to occur.
- Market awareness grows. For example, the implications of the physical impacts of climate change become clearer to markets and impact asset valuations.
- If policy changes unexpectedly surprise markets. For example, if a carbon price or significant regulatory requirements are introduced across key markets to which the Scheme's assets are exposed.
- Perceived or real increased pricing of greenhouse gas emissions.
- Substitution of existing products and services with lower emission alternatives may impact the assets held by the Scheme
- Litigation risk relating to dangerous warming becoming more prevalent.
- Increases in the energy/heat efficiency of buildings and infrastructure.
- Investments in transition aligned strategies may provide the Scheme with a partial hedge against climate transition risks.

The ability of the Trustee and its investment managers to consider these short-term changes can position the Scheme favourably, for example taking advantage of the climate transition by avoiding and reducing investment in high-emitting carbon sensitive businesses that do not support the transition to a low carbon economy (where available and appropriate).

Over the medium term, the importance of physical risk will be increasing, but transition risks are still expected to be more material, whilst physical impacts are less material. In relation to transition risks, policy, legislation and regulation are likely to also play a key role at the international, national and subnational level. Technology and policy changes are likely to produce winners and losers both between and within sectors. Advancement of transition is likely to have started to crystallise stranded asset risks. In relation to physical risk, material long term physical risks could be priced in by markets. The ability of the Trustee and the investment managers to understand these changes and price drivers can position the Scheme favourably, for example by increasing investments in new emerging technologies while avoiding exposures to physical risks. MGIE seeks to select managers and choose indices (where available and appropriate) that can identify potential emergence of low carbon opportunities and the decline of some traditional sectors.

Over the long term, transition risks are still important, but physical risks start to become more visible. This includes the impact of natural catastrophes leading to physical damages through extreme weather events. Availability of resources is expected to become more important if changes in weather patterns (e.g. temperature or precipitation) affect the availability of natural resources such as water. A successful transition leads to enhanced projected returns. A changing climate may directly impact the viability of some assets or business models (for example, flood risk for real estate, or drought / fire risk for timberland assets). The ability of the Trustee and investment managers to understand these changes can position the Scheme favourably, for example by increasing investments in sustainable investment projects that display a high level of climate resilience (where available and appropriate).

Describe the climate-related risks and opportunities relevant to the Scheme over the agreed time periods and the impact of these on the Scheme's investment strategy.

Climate-related Risks

One of the greatest impacts to the Scheme's from climate change is investment risk. The performance of the Scheme's investments is directly aligned to the value of the underlying assets, which are increasingly impacted by climate-related risks and opportunities.

Mercer ensures that the Scheme's investment strategy is well-diversified, and applies ratings to the investment managers to reflect that they have an appropriate understanding of both the companies and assets in which they invest in and the risks to which they are exposed.

The Trustee monitors on an annual basis the carbon intensity of the Scheme's portfolio and how this changes over time, where the information is available. The carbon intensity for each of the component funds has been reported (where available) within the "Metrics and Targets" section of this report.

Climate-related Opportunities

There are significant opportunities for investing in companies and assets that may benefit as financial markets transition to a lower carbon environment.

The Scheme has invested in the Mercer Sustainable Opportunities Fund since 2021, which targets unlisted sustainable investments.

Under the fiduciary management arrangement, Mercer assesses whether there are attractive sustainability-orientated investment opportunities on an ongoing basis. The Scheme did invest in Mercer's (listed) Sustainable Equity Fund, when the equity allocation was larger.

Addressing Future Risks and Opportunities

Mercer seeks to make further progress in this area specifically for reducing climate-related risks over the short to medium term. For example:

1. Liaising with investment managers around reducing the carbon exposure of their portfolios (where available and appropriate);

2. Allocating to more sustainable assets;

3. Investing with managers that can demonstrate a higher degree of integration for Environmental, Social and Governance issues (as measured by Mercer's ESG ratings).

The Trustee expects Mercer, as the Scheme's investment advisor and fiduciary manager, to provide support and consider potential investment and implementation opportunities to reduce the Scheme's exposure to climate-related risks over time.

However, the Trustee recognises a balance is needed to be maintained between meeting the investment objectives of the Scheme and considering these risks. Climate-related risks, but also opportunities, will be monitored as part of regular ongoing investment strategy reviews for the Scheme.

SCENARIO ANALYSIS

Describe the resilience of the Scheme's funding strategy, taking into consideration different climate-related scenarios, including a 2˚C or lower scenario

The Trustee supports the goals of the Paris Agreement that deliver a below 2°C temperature increase against pre-industrial levels and believes that climate-risk may impact on securing long-term financial returns and considering climate-risk is in the best long-term interests of members.

Climate change scenario analysis, as modelled by Mercer, has been undertaken on the funding strategy of the Scheme's portfolio, to assess the potential implications of climate change under three scenarios (Rapid, Orderly, and Failed Transitions) and over three time periods (5, 13 and 20 years).

- **A Rapid Transition** – Average temperature increase of 1.5°C by 2100 relative to pre-industrial levels in line with the Paris Agreement. This scenario assumes sudden large-scale downward re-pricing across multiple securities in 2025. This could be driven by a change in policy or realisation that policy change is inevitable, consideration of stranded assets or expected cost. To a degree the shock is sentiment driven and is therefore followed by a partial recovery across markets. The physical damages are most limited under this scenario.

- **An Orderly Transition** – Average temperature increase of less than 2.0°C by 2100. This scenario assumes political and social organisations act quickly and in a co-ordinated way to implement the recommendations of the Paris Agreement to limit global warming to below 2°C. Transition impacts do occur but are relatively muted across the broad market.

- **A Failed Transition** – Average temperature increase above 4°C by 2100. This scenario assumes the world fails to co-ordinate a transition to a low carbon economy and global warming exceeds 4°C above pre-industrial levels by 2100. Physical climate impacts cause large reductions in economic productivity and increasingly negative impacts from extreme weather events. These are reflected in re-pricing events in the late 2020s and late 2030s.

At a market level transition risks are reasonably priced in, however longer term physical risks are more likely to be mispriced. Transition risks remain at sector level and at the market level due to the potential for more extreme transition scenarios to occur. Mercer expresses this view by modelling scenarios relative to a baseline scenario. Mercer's climate-informed baseline assumes a composite scenario with the following weightings priced in: 40% Orderly Transition, 10% Rapid Transition, 10% Failed Transition, the remaining 40% represents low impact scenarios and the potential for the transition to have an overall positive impact. The analysis is based on scenarios developed by Mercer working with Ortec Finance

Figure 4: Mercer's Climate Scenarios

One way to illustrate scenarios is by plotting the transition risk against the physical risk. This is shown in the chart below, which builds upon the Climate Scenarios Framework developed by the Network for Greening the Financial System.

Looking at example uses of the scenarios, each tests key elements of climate resilience:

- Is the portfolio resilient to the financial effects of the rapid decarbonisation of the economy to meet Paris Agreement goals (**Rapid Transition**)?
- What is the exposure to the risks/opportunities from the systemic drivers of an orderly transition and locked-in physical risk (Orderly Transition)?
- Is the portfolio resilient to the risks of plausible, severe climate change impacts (Failed Transition) and is your stewardship strategy consistent with the need to avoid the scenario?

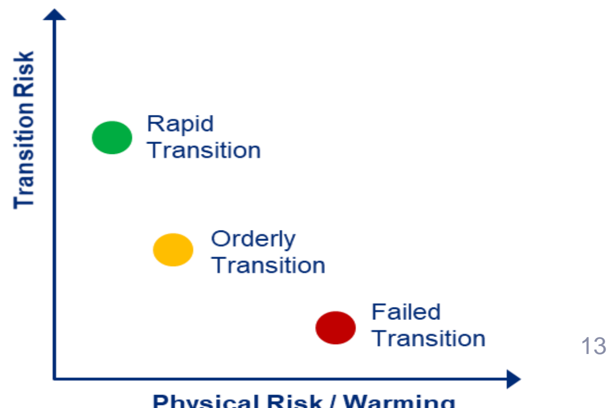


Figure 5: Strategic Asset Allocation

The chosen scenarios help the Trustee understand the resilience of the Scheme's portfolio to different potential warming pathways covering eventual temperature increases over different timeframes. While a lower warming pathway (sub-2°C scenario) is one which governments, businesses and society should aim for, there is a possibility that a failure to reduce greenhouse gas emissions quickly enough could set off irreversible feedback loops that significantly warms the planet (4°C scenario or greater).

The Trustee notes that the modelling may understate the true level of risk and uncertainty is likely to be greater for higher warming scenarios, in particular due to the difficulty in being able to accurately predict the future. Please note, climate-related scenario analysis is an ever evolving space and as such the scenarios modelled will be subject to review in future periods.

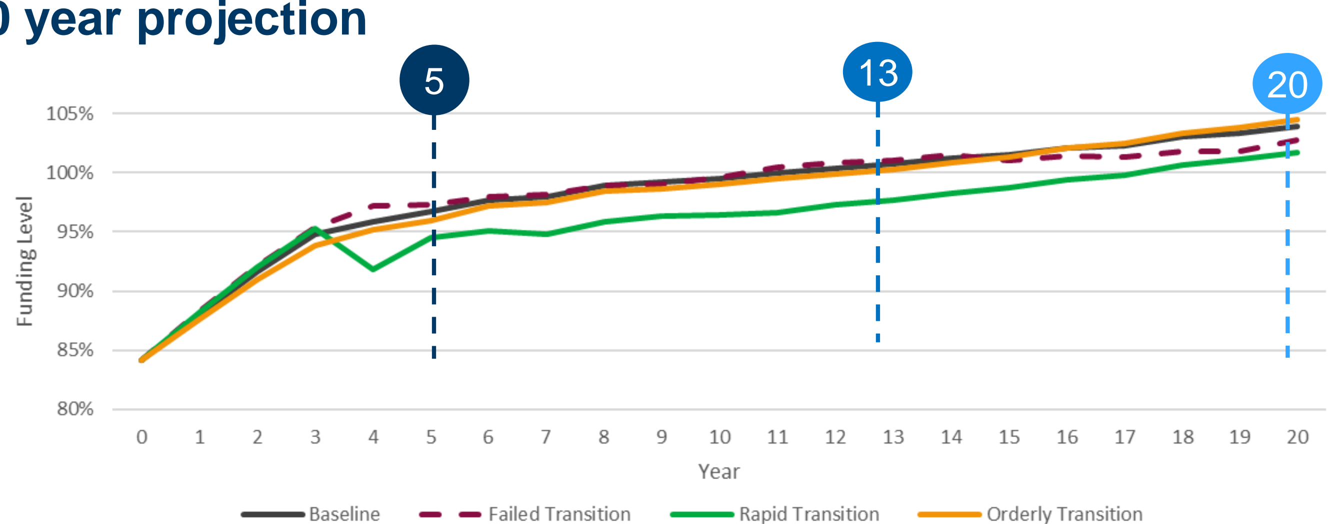
The table below shows the Strategic Asset Allocation (SAA) as modelled for the DS Smith Group Pension Scheme. Analysis is focused on the investment and funding strategy, The charts represents projections of asset value/funding level/annualised returns from an analysis date of 30 September 2022 and assumes for continued de-risking out of growth assets and into bonds.

Figure 6: Strategy Modelling

Asset Allocation	Year 1-3	Year 4-6	Year 7-9	Year 10-12	Year 13-20
World Equity	8%	4%	2%	-	-
Multi-Asset Credit	12%	6%	6%	6%	6%
Global Investment Grade Credit	7%	11%	13%	15%	15%
Global Senior Private Debt	4%	6%	6%	6%	4%
Global Private Debt	4%	6%	6%	6%	-
UK Investment Grade Credit	20%	20%	20%	20%	20%
ESG Private Equity	1%	1.5%	1.5%	1.5%	-
UK Floating Rate Note IG Credit	2%	2%	2%	2%	2%
US Floating Rate Note IG Credit	4%	4%	4%	4%	4%
Infrastructure	2%	3%	3%	3%	-
Sustainable Infrastructure	1%	1.5%	1.5%	1.5%	-
UK Sovereign Bonds	31%	33%	34%	35%	49%
Cash	4%	2%	1%	-	-

*The sovereign bonds allocation also includes any cash collateral positions supporting the Liability Driven Investments.

Figure 7: Cumulative Annualised Returns



Key points at different time frames

The graph above show the funding level analysis. It takes into account the impact of interest rates and inflation expectations upon the value of the liabilities. Of note, realised inflation is expected to be elevated under the Rapid Transition, resulting from damages to agriculture and change in food prices, increasing the value of benefits with inflation-linked increases. These impacts are fully hedged by the Scheme's allocation to Liability Driven Investment holdings. It does not, however, explicitly take into account the impact of changes to mortality.

Key points at different time frames:

5 Years – transition risk dominates with the Rapid Transition having the most impact, and translates into a c. 2.2% reduction in funding level. This could be driven by unprecedented policy action, with markets initially overreacting before recovering.

13 Years – over the medium term, transition risks are still material with the Rapid Transition scenario with a c.3.0% reduction in funding level. Physical impacts are not yet material, as the Failed Transition remains in line with the baseline.

20 years – transition risk impacts are still important with cumulative losses under the Rapid Transition scenario amounting to a reduction in funding level of c. 2.2% relative to the baseline but physical risks start to become more visible with losses under the Failed Transition scenario amounting to a reduction of c.1.2% in funding level relative to the baseline. With a longer period than 20 years you would expect to see more impact from physical damages of a Failed Transition

Highlights from the scenario analysis

The analysis illustrates that there is risk under a Failed or Rapid Transition. A longer term horizon would show more risk from a Failed Transition This supports the view that long term investors collectively trying to bring about an effective transition is aligned to their fiduciary duty to seek the best return within risk, liquidity and complexity restraints.

Figure 8: Sector Divergence (cumulative impact on different sectors within corporate bonds)

Climate exposure varies greatly by sector. This is illustrated by the chart below which shows the cumulative impact on different sectors within corporate bonds over a 20 year time frame. Under the Failed Transition there is a positive return impact for coal & manufactured fuels, fossil based utilities and oil & gas. This is because the companies have more revenue than they were expecting. Under the Rapid Transition there is a positive impact for Low Carbon Energy and Wind & Solar that is intuitively expected to gain, as they are expected to ear more revenue.

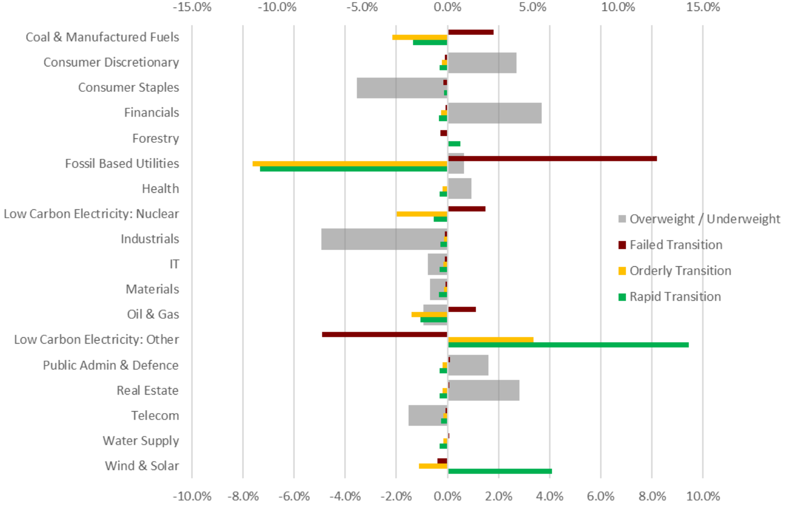
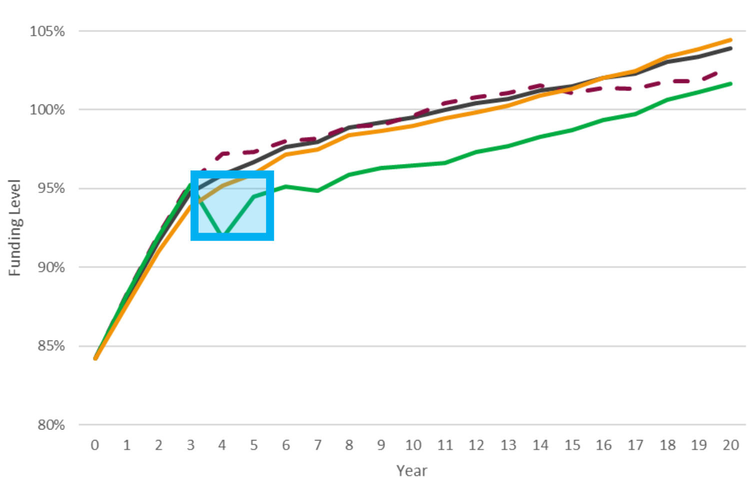


Figure 9: Climate stress testing

In reality, sudden changes in return impacts are more likely than neat, annual averages. This means that longer-term impacts, including transition impacts and particularly physical damages, could impact portfolios earlier than they occur. Our analysis has considered this through what we called “stress tests”. In this analysis repricing shocks are included within scenarios.

The Rapid Transition includes a shock (see blue box) around 2025 pricing in (and initially overreacting to a degree) to transition costs. While the exact timing of such shocks is unknowable, considering such shocks is important to risk analysis.

20 Year Projection

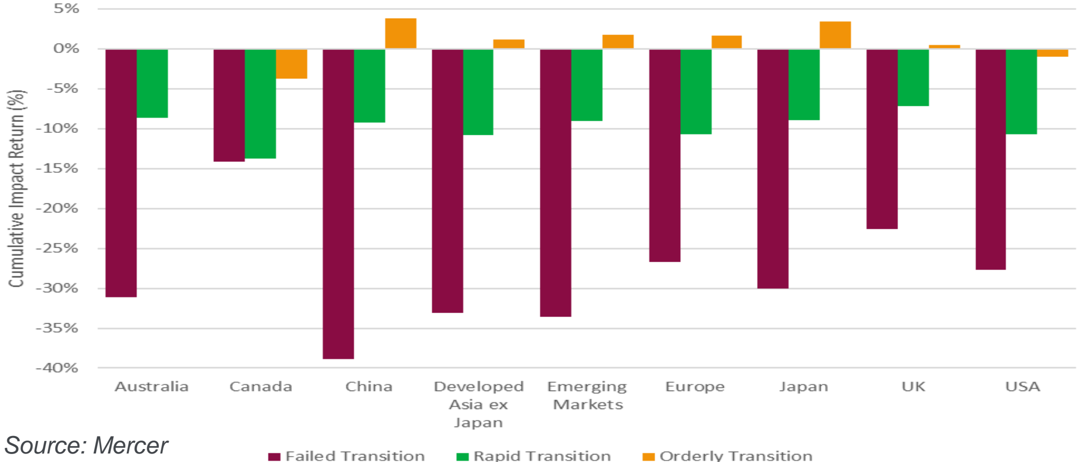


Regional resilience

We can look at the resilience of different asset classes under the different scenarios. The numbers in Figure 10 below are not influenced by the actual allocation levels in any particular scheme, they are the annualised performance impact on a regional basis (i.e. they are not specific to the Scheme). It is noted that there are limitations to modelling for regional exposures.

Regional analysis helps investors understand physical risk exposures under a Failed Transition. China, Emerging Markets and Developed Asia ex. Japan are the most exposed. The analysis illustrates that a Failed Transition is by far the worst in terms of long term returns across all regions shown.

Figure 10: Annualised climate change impact regional returns over a 20 year time horizon



Source: Mercer

Asset Return Impact

- Over 5 years and 13 years, transition risk dominates and could reduce the baseline return under the Rapid Transition scenario by around -0.5% p.a. over 5 years. Under the Orderly and Failed Transition the impacts are minimal.
- Over 20 years physical impacts and, to a lesser extent, transition risks are evident. The baseline return under a Failed Transition could decrease by -0.1% p.a., indicating that physical risks are more dominant.
- Overall the impacts are relatively low reflecting the more fixed income orientated portfolio. However, risks would expect to be larger over a longer-time horizon as physical risks increase.
- All of the analysis considered here informs the Trustee's thinking in relation to managing climate-related risks.

Figure 11: Impact Summary

Climate Impact	Annualised Returns (%)
Rapid Transition (1.5°C)	
Impact at 5 years	**-0.5%**
Impact at 13 years	**-0.2%**
Impact at 20 years	**-0.1%**
Orderly Transition (2.0°C)	
Impact at 5 years	**-0.1%**
Impact at 13 years	**0.0%**
Impact at 20 years	**0.0%**
Failed Transition (above 4.0°C)	
Impact at 5 years	**0.1%**
Impact at 13 years	**0.0%**
Impact at 20 years	**-0.1%**

MORTALITY IMPACTS FROM CLIMATE CHANGE

The Trustee has carried out an analysis of the potential mortality impacts from climate-related scenarios, including:

Transition risks – risks from policy changes, reputational impacts and shifts in market preferences, norms and technology. For example, these may impact on GDP, with consequent impact on wellbeing and longevity

Physical risks – dangers or perils related to the physical or natural environment that pose a threat to people. This includes the direct impact on changes to heat/cold related deaths.

The modelling indicates the following scenario outcomes, each compared to mortality assumptions constructed with no explicit allowance for climate-related risks:

- A temperature rise of 1.5-2ºC from pre-industrial levels might mean 6.6% higher Scheme liabilities and 21 months higher life expectancy for older generations.*

- A temperature rise of around 3.5-4ºC from pre-industrial levels might mean 1.9% lower Scheme liabilities and over 5 years' lower life expectancy for younger generations. *

Based on this analysis, mortality changes arising from the direct and indirect impact of climate change may be material to the funding strategy in the longer term. The Trustee will keep this under review, and in the meantime review this triennially as part of the actuarial valuation, including when considering the Scheme's Long Term Funding Target mortality assumption (in line with the Long Term Funding Target requirements).

The balance between transition and physical risks will vary over different time horizons.

In modelling scenarios for mortality impacts, the Trustee's advisors have made use of:

- Representative Concentration Pathways (RCPs) and Shared Socioeconomic Pathways (SSPs) as defined by the UN Intergovernmental Panel on Climate Change (IPCC), including estimated projected temperatures.

Relationships between each SSP and a range of socioeconomic and other variables as published by the UK Climate Resilience Program, and modelling of how changes to those variables would affect UK mortality rates.

- UK-based climate projections from the Met Office, with correlations between past climate data and mortality rates being used to predict future influences.

** It is important to note that these "Results" are based on longevity projection models and third-party data which may produce output that differ materially from actual outcomes. The Results are set out for informational purposes only and should not be used for any other purpose. In particular, the Results should not be relied upon and they are not suitable for repurposing, copying, redistributing or modifying. The model provider disclaims all liability and makes no representations about the suitability for any purpose of the Results and such content is supplied on an as is basis, without any warranty of any kind.*

COVENANT IMPACTS FROM CLIMATE CHANGE

Covenant Scenario Analysis

The Trustee (advised by PWC) have over the last year considered the impact of climate-related exposures that could have a positive or negative impact on the strength of the Sponsor's covenant over a series of different time periods – short term (up to 2030), medium term (2050) and longer term (2100). Over these time periods it has reviewed a range of temperature increases from 1.5 ºC to 6 ºC outcomes. In particular, the Trustee's focus has been on the ability for the Sponsor to continue to support the Scheme over these time periods.

The sponsor has a climate target that aligns with the Paris Agreement of 1.5 ºC by 2100.

Climate Risks

PWC has assessed the impact of climate change on the covenant as at the lower end of medium risk over the short and longer term, with a slightly increased risk over the longer term.

Key challenges for the corrugated cardboard packaging industry include:
- reducing the energy intensity of paper production,
- reducing the carbon footprint of packaging solutions and reducing waste.

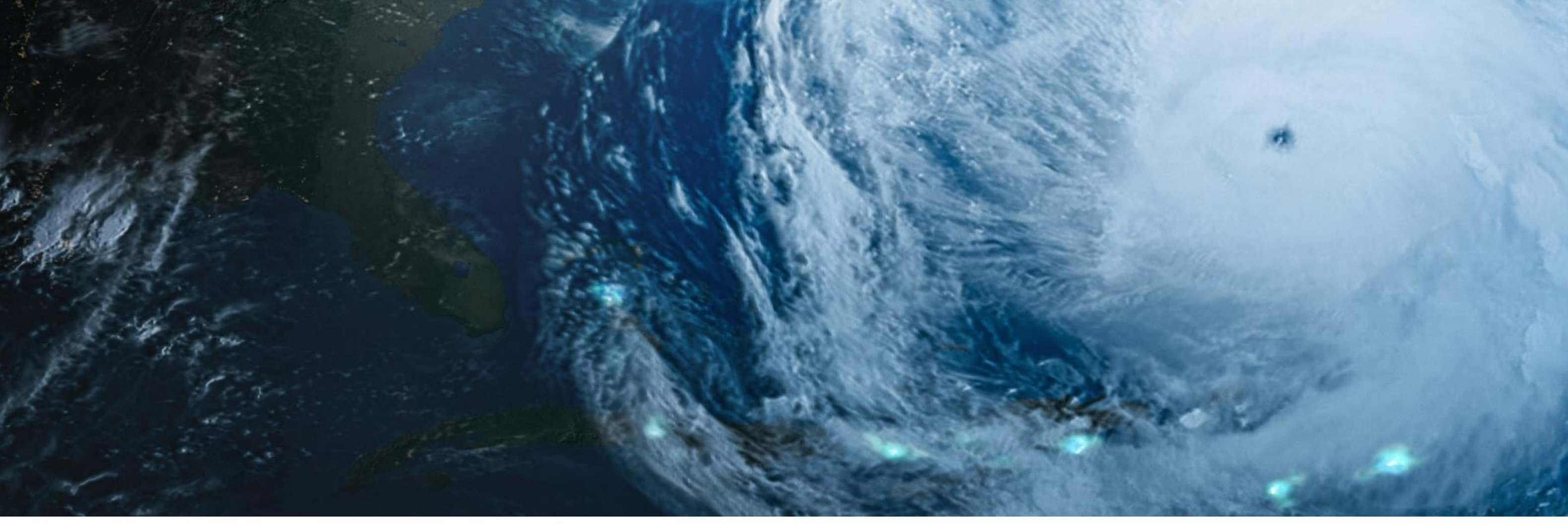
Key risks include the cost of carbon taxes, increasing cost of raw materials/threat to supply, and increasing likelihood of water stress.

Climate Opportunities

There are also climate opportunities for the Sponsor, with increased demand for recyclable packaging and through leveraging its market leading position to drive decarbonisation of its supply chain and adapt to new climate-related regulations. Such opportunities could lead to market share growth and higher revenues, which is positive for covenant.

The Sponsor has considered mitigating actions to climate change, such as implementing an effective climate change strategy and transitioning to renewable fuel sources, which they anticipate will reduce the impact of management's identified risks.

The Trustees will continue to regularly review the implications of climate change on the sponsor by monitoring progress against its Net Zero strategy and corresponding targets and milestones.
The Trustee will monitor:
- Total energy consumption and percentage of energy and electricity consumption from renewable sources.
- Total waste and recycling rate.



RISK MANAGEMENT

Describe the Scheme's process for identifying and assessing climate change-related risks

The Trustee recognises that climate-related risks can be financially material and that the due consideration of climate risk falls within the scope of the Trustee's fiduciary duty. Given the long-dated nature of the Scheme's investments and the timeframe in which climate risks could materialise, a total portfolio approach to risk management covering all sectors and all relevant asset classes has been taken.

The Trustee seek to identify and assess climate change-related risks from both a top down and bottom up perspective. The climate change scenario modelling (described in the previous section) provides a top down strategic assessment of climate change risks. From a bottom up perspective, the Trustee and Mercer seeks to identify key sources of company and sector-level carbon risks using carbon emissions analysis and non-carbon emissions climate-related metrics (described in the next section).

The Trustee receives quarterly investment performance reporting, which includes ESG investment manager ratings produced by Mercer for the Scheme's investment managers. These ratings assess the degree to which managers integrate ESG considerations, including climate change, into their investment processes and active ownership activities. If a manager is considered to be "lagging the market", Mercer will engage with the relevant investment manager(s) to strongly encourage that they improve in policies and practises in this area.

The Trustee also receives annually an ESG Manager Ratings review which analyses the ESG ratings of the funds used comparing these against the wider universe of strategies across various asset classes that are researched by the Investment Consultant.

A summary of the managers' voting statistics and a selection of the Trustee's most significant votes (aligned with the Trustee's stewardship priorities) cast over the year are disclosed in the Scheme's Implementation Statement which is reviewed on an annual basis by the Trustee.

The Trustee is actively considering ways to further enhance the process of identifying and assessing climate-related risks and opportunities. The Trustee annually reviews Scheme documentation including the SIP and risk register. The Trustee has strengthened its policy in relation to ESG within the SIP and ESG risks (including climate change) are reflected in the Scheme's investment beliefs and risk register. The risk register is used to effectively identify, prioritise, manage and
monitor risks associated with the Scheme and the escalations of risk are managed by internal controls in place. The Trustee also has an Integrated risk Management Framework which allows it to consider the impact of climate change holistically.

Describe the Scheme's process for managing climate change related risks

The Trustee manages risk by prioritising those risks that it believes may be most financially material. These risks are identified in the SIP. In addition, the Trustee reviews the Scheme's risk register annually to ensure that risks are effectively managed.

The Trustee's approach to climate change risk management is guided by climate change scenario modelling, carbon emissions analysis and an assessment of a manager's ability to integrate ESG issues, including climate change considerations, into their investment processes.

The Trustee and Mercer equally sees its target to reduce the level of carbon intensity within the Scheme, as a means to manage climate transition risks. Equally, the Trustee and MGIE expects companies in which it invests to manage climate change risks.

The Trustee recognises the challenges with various metrics, tools and modelling techniques used to assess climate change risks. The Trustee aims to work with its investment consultant and investment managers to continuously improve the approach to assessing and managing risks over time as more data becomes available.

Describe how processes for identifying, assessing and managing climate change-related risks are integrated into the Scheme's overall risk management

Both climate change-related risks and wider investment risks are considered as very important by the Trustee. Where possible, climate change and wider investment risks are treated in a holistic manner by recognising they are often interrelated. The Trustee adopts an integrated approach to climate risk management across assets, covenant and liabilities. The below table summarises the primary climate-related risk management processes and activities.

Governance	• The Trustee's **Statement of Investment Principles** is reviewed at least annually and sets out how ESG risks including climate change are managed and monitored. • The Trustee maintains a **risk register** to monitor and mitigate financially material risks to the Scheme. On an annual basis, the Trustee reviews the Scheme's risk register which includes reference to ESG risks (including climate change) to ensure the assessment of the likelihood and impact continue to remain appropriate for the Scheme. • The Investment Sub-Committee and Trustee receive regular **training** on climate-related issues, including market updates. The training allows the Trustee to better understand how climate-related risks and opportunities can have an impact on the Scheme. • Mercer as the Scheme's fiduciary manager, publishes a Sustainable Investment Policy, which is updated regularly. • The Trustee has established a climate governance statement setting out how its governance processes to examining climate risk and its impact on the Scheme. • A benchmarking analysis of the extent to which ESG factors are integrated into investment decision making at the portfolio level is undertaken by Mercer on an annual basis. Mercer's Responsible Investment Total Evaluation (RITE) assesses the extent to which pension schemes integrate ESG factors. The 2022 score for the Scheme was A+. This shows that the Trustee is ahead of its peers in this area.
Strategy	• The Investment Sub-Committee, will take an integrated approach considering the impact to the Scheme's liabilities, covenant and assets when taking climate-related risks and opportunities into account as part of any **wider strategic investment advice** provided to the Trustee. This includes highlighting the expected change in climate-risk exposure through proposed asset allocation changes. Additionally, Mercer as the Scheme's fiduciary manager take account of climate-related issues when considering portfolio construction. • **Climate scenario analysis** for the Scheme will be reviewed annually. A summary of the Trustee's latest climate scenario analysis has been included in this report and is the primary tool to help the Trustee understand the materiality of climate-related risks that could impact the Fund over time. • The Trustee has set **strategic objectives for its investment consultant** which includes an expectation that climate-related risks and opportunities are given due consideration. An assessment against these objectives is carried out by the Trustee annually
Reporting	• Annual reports of **climate-related metrics** and progress against climate-related targets will be reviewed by the Trustee. The Trustee may use the information to engage with the investment managers and will take the information into account in triennial investment strategy reviews. • The Trustee produces an annual **Implementation Statement** which includes commentary on how the investment managers choose to vote and engage on climate-related issues (among other ESG issues), where applicable.
Manager selection and retention	• For the underlying Mercer Funds managed by MGIE, MGIE will consider an investment manager's firm-wide and strategy-specific approach to managing climate-related risks and opportunities alongside other ESG factors when either **appointing** a new manager, in the ongoing **review** of a manager's appointment, or as a factor when considering the **termination** of a manager's appointment. • MGIE reviews investment managers on the extent of **integration of ESG factors** (including climate change) into their investment processes. A manager's stewardship process forms part of the rating assessment. This is considered at the firm level and at the investment strategy/Scheme level. The ratings are presented in quarterly investment performance reports and are reviewed by the Trustee..

METRICS AND TARGETS

Disclose the metrics and targets used to assess climate-related risks and opportunities in line with strategy and risk management process

This report presents climate metric analysis for the Scheme's DB Assets as at 30 September 2022. As highlighted at the start the Scheme has a very small proportion of DC benefits which are primarily invested in cash and have therefore not been included here.

Due to practical data availability, the Scheme-level figures quoted in the report assume that companies not covered by the analysis are represented within the range of companies that have been covered in the analysis, the 'pro-rata approach' (i.e. it is not assumed that companies not covered have emissions of 0) in line with statutory guidance.

The Trustee recognises that the availability of accurate data for some asset classes is an industry-wide issue and will look to engage with the investment managers to improve their climate reporting.

Carbon risk metrics aid the assessment of potential climate-related risks to which the Scheme is exposed, and help to identify areas for further risk management, including engagement, monitoring, retention and selection.

The Trustee has agreed to report on the following five metrics:

- **Carbon Footprint –** measures the carbon emissions (in metrics tons) per million $ dollars invested. This is the DWP's recommended metric for measuring carbon emission intensity.
- **Weighted Average Carbon Intensity ("WACI")** – this is an alternative carbon emission intensity metric and measures the carbon emissions (in metric tons) per million $ dollars revenue generated. The contribution of each issue is weighted according to portfolio allocation weights. For example, a company with a very high carbon intensity but a low portfolio allocation might contribute to the WACI measure to a lesser extent than a company with a lower carbon intensity but a higher portfolio allocation.
- In respect of sovereign debt investments, the Trustee follows the Partnership for Carbon Accounting of Financials ('PCAF') to derive absolute emissions. Recognising the different methodologies used to calculate absolute emissions for sovereigns and corporates, the Trustee reports sub totals at the corporate and sovereign levels as well as grand total Greenhouse Gas Emissions figures.
- **Absolute Emissions** – represents each company's reported or estimated greenhouse gas emissions, where available (includes scope 1 and scope 2 emissions). It includes various scopes of emissions:
  - **Scope 1 "direct" emissions:** those from sources owned or controlled by the company (e.g. direct combustion of fuel from vehicles); and
  - **Scope 2 "indirect" emissions:** those caused by the generation of energy (e.g. electricity) purchased by the company.

  Scope 3 emissions are currently not included in the climate metrics fs it is not required but will be included for future reports.

  Implied Temperature Rise ("ITR") – analyses the warming scenario that the investment is aligned with. As a reminder, the 2015 Paris Agreement was to keep global temperature rises to below 2 ºC above pre-industrial levels. It allows for tilting of the Scheme's investments towards companies with a <2ºC implied temperature rise, to show alignment with the Paris Agreement ambition.

  The Trustee has selected to use Implied Temperate Rise as a means to measure portfolio alignment. Implied Temperature Rise is a forward-looking metric which helps infer the degree of portfolio alignment with the goals of the Paris Agreement. The Trustee recognises that very few companies are currently aligned with net zero pathways but that this will change as companies transition their business models.
- **Climate Value at Risk (cVaR)** – aims to measure the size of the financial loss attributable to climate-related risks a portfolio may experience, within a given time horizon, if a particular scenario unfolds.

METRICS

Figure 12: Climate-Related Metrics (as at 30 September 2022)

Asset Class	Manager	30-Sep-22 Allocation (% total assets)	Absolute GHG emissions	Emissions intensity		Other (non-emissions)				Notes
			Total GHG Emissions (Scope 1 & 2)	Carbon Footprint (Scope 1 & 2)	WACI (Scope 1 & 2)	Implied Temp. Alignment	1.5C Agg. Policy Risk Security Climate VaR	Agg. Company 1.5C Company VaR	Data Coverage	
Equity	Insight	7.8	2,854	45.8	145.0 Rev	2.7°C	-11.0	-11.4	100.0%	Market weighted passive equity used as a proxy.
Opportunistic	Mercer UCITS Alternative Strategies Fund	2.7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Climate metric data unavailable for hedge fund portfolios largely composed of derivative positions.
	Mercer Frontier Market Debt	1.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Data not available.
Income Focused	Mercer Absolute Return Fixed Income	0.1	26	32.8	97.7 Rev 399.6 GDP	2.8°C	-2.6	-9.3	79.0%	
	Mercer Multi-Asset Credi	9.8	11,298	144.4	368.2 Rev 233.3 GDP	3.3°C	-7.7	-20.8	35.3%	
	Insight Secured Finance	4.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Data not available.
	Schroders Secured Finance	4.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Data not available.
	Mercer Private Markets	12.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Data not available.
Liquid Credit	Segregated corporate bonds	15.6	4,291	34.5	103.0 Rev 535.8 GDP	2.0°C	-3.9	-12.8	74.8%	
	Tailored Credit Fund	7.2	2,557	44.5	156.5 Rev 148.2 GDP	1.9°C	-3.4	-15.0	91.0%	
LDI	Insight	34.7	118,906	200.9	124.8 GDP	1.5°C – 2.0°C	n/a	n/a	n/a	Source: Investment Manager. Total GHG emissions' unit is tCO2e. Scope 1 & 2 only.
Total (metric data excluding LDI)		100.0	50,455	63.2	180 Rev 360 GDP	2.4°C	-6.1	-14.5	42%	Based on rebased portfolio using data where available within the analysis tool.

Please be aware that these figures are being provided purely for informational purposes only in order to demonstrate the results of integrating sustainability risk into your portfolio and the funds within it. While the underlying funds may promote environmental and/or social characteristics (please see the fund offering documents for full information on such commitments where relevant) your portfolio itself does not promote environmental or social characteristics nor does it commit to making investments in sustainable investments unless explicitly stated. Please note the total values for the climate-related metrics do not account for the alternatives and the other assets are rescaled to 100%.

Climate-Related Metrics Analysis

Figure 11 shows the funds that are used within the investment strategy. The estimated 1.5°C climate VaR is c.£6.1m across both physical and transition risks.

Given the nature of the structures within the alternatives assets, secured finance and private markets reliable TCFD information is not yet available and so has been omitted from this iteration. As TCFD reporting becomes better developed, greater and more reliable data around these asset classes should become available.

TARGETS

Disclose the target used to assess climate-related risks and opportunities in line with strategy and risk management process

The Trustee will keep the following targets under review to ensure they remain appropriate and relevant, taking into account any changes to the investment strategy of the Scheme, the availability of data and wider market developments. **The Trustee has set a target to reduce absolute carbon emissions (scope 1 and 2) associated with its segregated corporate bond portfolio by at least 25% (from March 2023 levels) by 2030.**

The Trustee's target is based on Weighted Average Carbon Intensity ("WACI"), this metric has been chosen as a method of monitoring and reducing the levels of carbon exposure in line with the Trustee's fiduciary duties to invest in the best financial interests of the Scheme's membership.

The Trustee will monitor progress in achieving the carbon reduction goal on at least an annual basis.

The Trustee will be working closely with Mercer (who will be working closely with the underlying manager). To achieve this climate reduction target Mercer has set mandate guidelines with the manager with consideration for climate goal alignment, and other risk and return factors, in line with the Trustee's fiduciary responsibility.

The Trustee will keep its target under review to ensure it remains appropriate and relevant, taking into account any changes to the investment strategy of the Scheme, the availability of data, the balance between portfolio and real world decarbonisation as well as wider market developments. With this in mind the Trustee may change its target in the future.

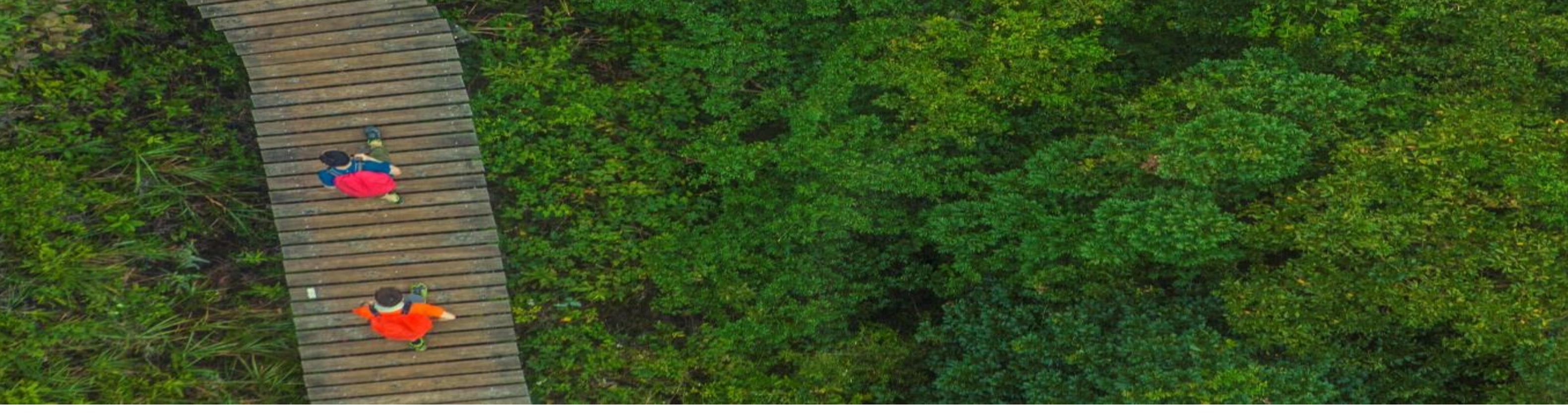
CONCLUSIONS AND NEXT STEPS

The key messages from this report are:

- Climate change risk can have an impact on the long-term funding outcomes for the Scheme
- The Trustee has processes in place to identify, assess, consider and mitigate climate change risk when making decisions.
- Climate risk will largely be the result of “transition risk” than physical risks in the short term. Over the longer term, physical risks will have a larger impact.
- It is likely that assumptions will change over time and therefore the Trustee need to keep the potential impacts under review.
- At the moment, due to the primarily bond orientated portfolio the risks appear low, however, the Trustees and Mercer will continue to monitor and work with the managers to reduce any impact and improve the variability of data.
- Five metrics have been chosen to monitor the progress against climate change risk (Carbon Footprint, Weighted Average Carbon Intensity, Absolute Emissions, Implied Temperature Rise and Climate VaR).
- A target to reduce the level of carbon exposure of the Scheme’s segregated corporate bond assets, has been set and Mercer will oversee the move towards the agreed target.
- Climate change could result in a low-to-medium term impact on the strength of the Sponsor covenant over the short and medium term.
- Mortality changes arising from the direct and indirect impact of climate change may be material to the funding strategy in the longer term. The Trustee will keep this under review, and in the meantime review this triennially as part of the actuarial valuation.

In the longer term, the Trustee expects to:

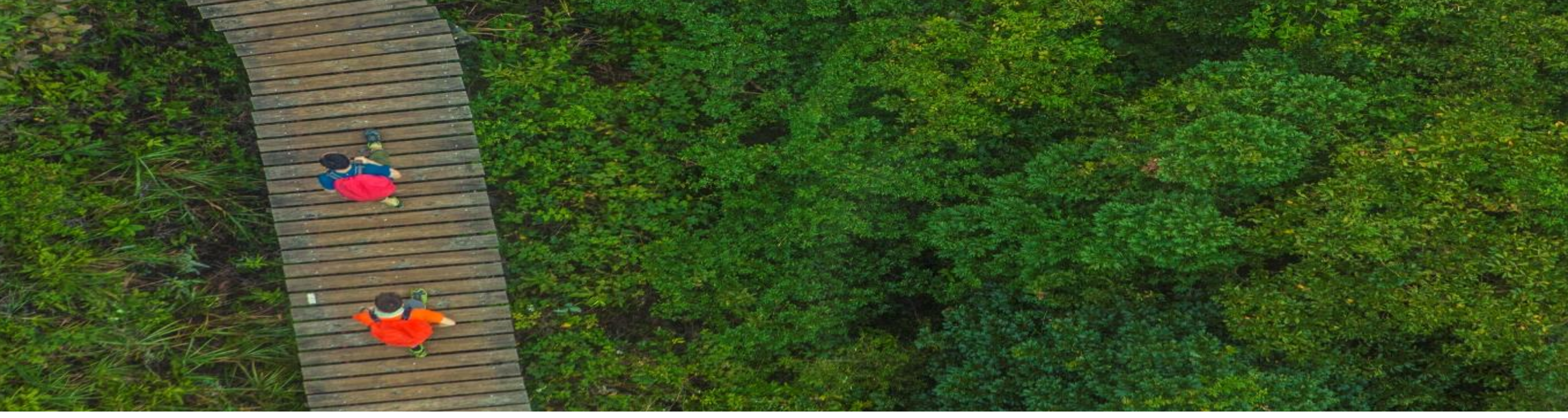
- Regularly review the climate-related risks and opportunities in the Scheme and maintain compliance with regulatory requirements, with support from the Scheme’s advisers.
- Continue to monitor the potential impact of climate change on the Sponsor covenant, investment strategy and funding.
- Ensure it is well equipped with sufficient knowledge and developments around climate change risk.
- Annually consider the suitability of the Scheme’s investment arrangements to achieve the agreed carbon reduction target.
- The Trustee will continue to monitor integration of ESG factors into their decision making.



Technical Appendix
DB Section – Investment Strategy (30 April 2023)

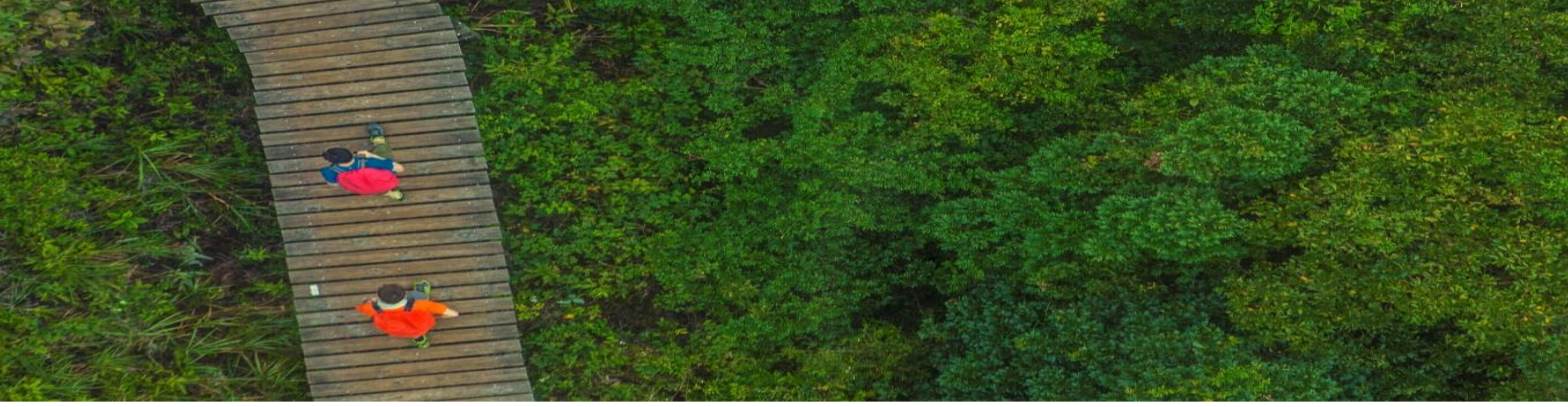
Fund	Value (£m)	Allocation (%)
Insight Synthetic Equity	51.9	6.6
Mercer Select Alternatives Strategies	11.9	1.5
Mercer UCITS Alternatives Strategies	5.0	0.6
Frontier Market Debt	6.7	0.9
MGI UK Cash Fund	0.0	0.0
Multi-Asset Credit (Hedged)	59.9	7.6
Insight Secured Finance	28.7	3.7
Schroders Secured Finance	29.7	3.8
Absolute Return Fixed Income (Hedged)	7.8	1.0
PIP VI - Senior Private Debt	35.1	4.5
PIP VI - Credit Opportunities	26.1	3.3
PIP VI - Infrastructure	18.6	2.4
PIP VI – Sustainable Opportunities	12.4	1.6
PIP VI - Private Debt	21.6	2.8
RLAM Credit	0.1	0.0
Tailored Credit	103.8	13.2
Insight Buy and Maintain	130.5	16.6
Insight LDI	232.8	29.6
Cash	2.7	0.3

*Valuations as at 31 December 2022



DB Assets – Fund Benchmarks

Fund	Benchmark
Insight Synthetic Equity	17.4% Euro Stoxx 50 65.8% S&P 500 Composite 4.7% FTSE 100 12.1% Nikkei 225
Mercer Select Alternatives Strategies	FTSE GBP 1 Month Euro Deposit Index
UCITS Alternatives Strategies	FTSE GBP 1 Month Euro Deposit Index +2.0% p.a.
Global Evolution Frontier Markets Debt	JP Morgan EMBI Global Diversified Composite Hedged
MGI UK Cash	FTSE GBP 1 Month Euro Deposit Index
Mercer Multi-Asset Credit	FTSE GBP 1 Month Euro Deposit Index +3.0% p.a.
Mercer Insight Secured Finance	FTSE GBP 1 Month Deposit Index
Mercer Schroder Secured Finance	FTSE GBP 1 Month Euro Deposit Index
Mercer Absolute Return Fixed Income	FTSE GBP 1 Month Euro Deposit Index +1.5% p.a.
Mercer Private Markets (PIP VI) – Private Debt	As Portfolio
Mercer Private Markets (PIP VI) – Credit Opportunities	As Portfolio
Mercer Private Markets (PIP VI) – Sustainable Opportunities	As Portfolio
Mercer Private Markets (PIP VI) – Infrastructure	As Portfolio
Mercer Private Markets (PIP VI) – Senior Private Debt	As Portfolio
Mercer Tailored Credit Fund	As Portfolio
RLAM Corporate Bonds	As Portfolio
Insight Buy & Maintain Credit	As Portfolio
Insight Liability Driven Investment	As Portfolio



Technical Appendix

Modelling assumptions
Cumulative Impact on Asset Classes (relative to central return expectations):

	Annualised Returns (%)		Funding Level	
	Expected Return (Baseline)	Climate Impact	Baseline Funding Level (%)	Impact (%)*
Rapid Transition				
Impact at 5 years	6.7%	**-0.5%**	96.7%	*-2.2%*
Impact at 13 years	6.3%	**-0.2%**	100.7%	*-3.0%*
Impact at 20 years	6.0%	**-0.1%**	103.9%	*-2.2%*
Orderly Transition				
Impact at 5 years	6.7%	**-0.1%**	96.7%	*-0.8%*
Impact at 13 years	6.3%	**0.0%**	100.7%	*-0.5%*
Impact at 20 years	6.0%	**0.0%**	103.9%	*0.6%*
Failed Transition				
Impact at 5 years	6.7%	**0.1%**	96.7%	*0.6%*
Impact at 13 years	6.3%	**0.0%**	100.7%	*0.4%*
Impact at 20 years	6.0%	**-0.1%**	103.9%	*-1.2%*

Data as at 30 September 2022

Limitations associated with climate modelling

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

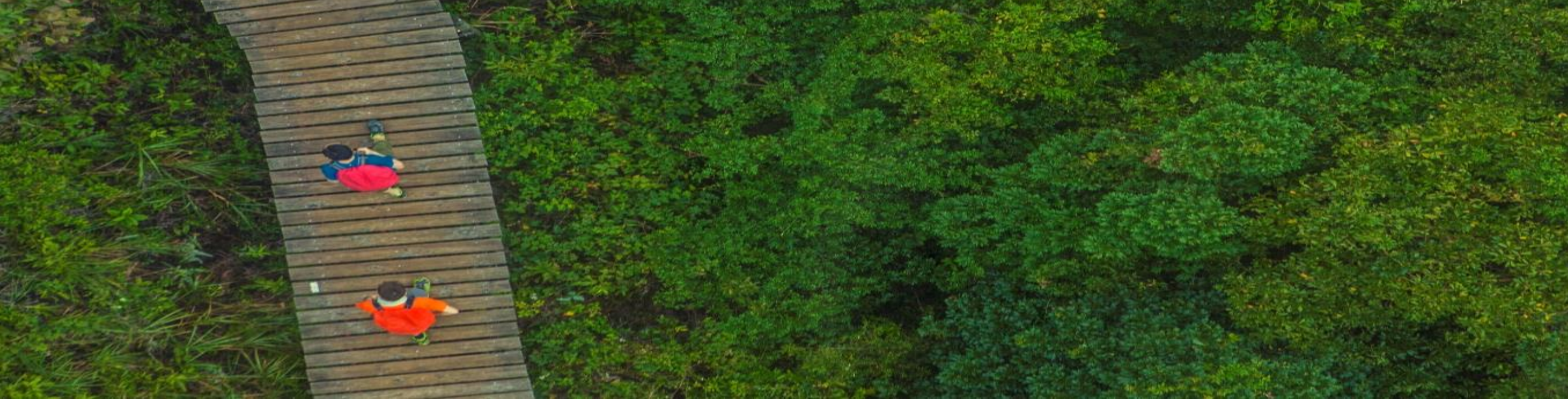
- The further into the future you go, the less reliable any quantitative modelling will be.
- There is a reasonable likelihood that physical impacts are grossly underestimated. Feedback loops or 'tipping points', like permafrost melting, are challenging to model particularly around the timing of such an event and the speed at which it could accelerate.
- Financial stability and insurance 'breakdown' is not modelled. A systemic failure may be caused by either an 'uninsurable' 4°C physical environment, or due to the scale of mitigation and adaption required to avoid material warming of the planet.
- Most adaptation costs and social factors are not priced into the models. These include population health and climate-related migration.
- New and emerging risks, such as the impact of climate change on biodiversity loss, and vice versa, is expected to be integrated into climate scenario modelling over time once the supporting science and impact on econometrics and finance is better understood.

*Valuations as at 31 December 2022

Climate scenario narratives

Investment and Funding Climate Scenario Analysis Assumptions:

	Rapid Transition	Orderly Transition	Failed Transition
Summary	Sudden divestments in 2025 to align portfolios to the Paris Agreement goals have disruptive effects on financial markets with sudden repricing followed by stranded assets and a sentiment shock.	Political and social organizations act quickly and predictably to implement the recommendations of the Paris Agreement to limit global warming to below 2°C above pre-industrial levels by 2100.	The world fails to meet the Paris Agreement goals and global warming reaches 4.3°C above pre-industrial levels by 2100. Physical climate impacts cause large reductions in economic productivity and increasing impacts from extreme weather events.
Cumulative emissions to 2100	416 GtCO2e	810 GtCO2e	5,127 GtCO2e
Key policy and technology assumptions	An ambitious policy regime is pursued to encourage greater decarbonisation of the electricity sector and to reduce emissions across all sectors of the economy. Higher carbon prices, larger investment in energy efficiency and faster phase out of coal-fired power generation under a 'Rapid' transition.		Existing policy regimes are continued with the same level of ambition.
Financial climate modelling	Pricing in of transition and physical risks of the coming 40 years occurs within one year in 2025. As a result of this aggressive market correction, a confidence shock to the financial system takes place in the same year.	Pricing in of transition and physical risks until 2050 takes place over the first 4 years.	Physical risks are priced in two different periods: 2026-2030 (risks of first 40 years) and 2036-2040 (risks of 40-80 years).
Physical risk impact on GDP	Physical risks are regionally differentiated, consider variation in expected temperature increase per region and increase dramatically with rising average global temperature. Physical risks are built up from: Gradual physical impacts associated with rising temperature (agricultural, labour, and industrial productivity losses) Economic impacts from climate-related extreme weather events Current modelling does not capture environmental tipping points or knock-on effects (e.g., migration and conflict).		
Physical risk impact on inflation	Gradual physical impact (supply shocks) on inflation included through damages to agriculture and change in food prices. Total impact on a Global CPI Index is +2% in 2100.	No explicit modelling of physical risk impact on inflation (supply-side shocks). Impact on inflation follows historical	Severe gradual physical impact (supply shocks) on inflation included through damages to agriculture and change in food prices. Total



Climate Metric Analysis Approach

Data sources

- The Trustee considered the use of proxy metric data for hedge funds, private equity, private debt, synthetic equity and secured finance however the characteristics of the proxy funds was deemed to be too different from the invested assets to make informed investment and/or engagement decisions with the information. For now, no data on these asset classes has been presented. These assets represent c. 32% of the total actual asset allocation as at 30 September 2022

Scope of emissions

- Only Scope 1 and 2 emissions data has been included in this report except where noted. This means that for some companies the assessment of their carbon footprint could be considered to be understated. Scope 3 emissions will be included in the future.

Data coverage

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

  a. Some publically listed companies are not publishing climate-related data or are providing poor quality data. This is relevant to public equity and corporate bonds. Obtaining data for emerging market equity and debt can also be challenging due to general disclosure and transparency challenges.

  b. Many private companies do not currently produce climate-related data and coverage for private market assets, such as those funded by private equity and private debt, will be low, or zero for mature funds.

  c. Sovereigns, or governments, may not publish climate-related data in the public domain. This is a particular challenge for emerging market debt. For UK government debt, data is available but there is a delay in the data being published.

  d. Short-term instruments, such as some assets underlying secured finance portfolios, have limited data available due to the short-term nature of the individual assets.

  e. For the long dated property portfolio, the occupiers of the buildings in the portfolio have full operational control and there are no Scope 1 or 2 emissions associated with the investments. The asset managers are looking to improve the collection of Scope 3 emissions data – this includes occupier activities where they have direct utility supplier contracts.

- In this report, the Trustee has reported the climate metrics provided by each of the investment managers.

- The Trustee is working with the investment advisor and asset managers to address the data gaps, as far as they are able.

Climate Metric Analysis Approach

Ortec Finance

- Mercer has entered into a global agreement with Ortec Finance regarding the use of their climate scenarios by Mercer's clients.
- Climate scenarios have been prepared with care using the best available data. The scenarios may contain information provided by third parties or derived from third party data and/or data that may have been categorized or otherwise reported based upon client direction. The scenarios are for information purposes and are not to be construed as investment advice. Ortec Finance assumes no responsibility for the accuracy, timeliness or completeness of any such information. Ortec Finance accepts no liability for the consequences of investment decisions made in relation on information in this report. The scenarios are copyright of Ortec Finance. You may not, except with our express written permission, distribute or commercially exploit the content. All Ortec Finance services and activities are governed by its general terms and conditions which may be consulted on www.ortecfinance.com and shall be forwarded free of charge upon request.

TCFD Governance Policy:
Oversight of Climate-related Risks and Opportunities
15 February 2023

This is the Trustee's Standalone Climate Governance Statement, referred to in the first paragraph on page 6.

Background to policy

- DS Smith Pension Trustees Limited (the "Trustee") has prepared this TCFD Governance Policy document (the "Policy") for the DS Smith Group Pension Scheme (the "Scheme") and consulted upon it with the Scheme's advisers.
- The Policy is reviewed periodically, and the date of the most recent review can be found at the top of this document.
- The Policy addresses the TCFD (Task Force on Climate-related Financial Disclosures) recommended governance disclosure and is in accordance with the statutory guidance that supports the Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 "the Regulation" which came into force on 1 October 2021.
- The Policy describes the roles and responsibilities of the Trustee and their appointed advisers in meeting the climate governance and risk reporting for pension schemes in line with the Regulation.
- The Investment Sub-Committee ("ISC") is responsible in supporting the Trustee in the delivery and publication of the Scheme's inaugural TCFD report, due on or before 30 November 2023.

Responsibilities for climate change oversight

Ultimate oversight for managing climate risks and opportunities is the responsibility of the Trustee. In exercising its duties with regards to climate change oversight the Trustee will consult with advisers who will provide support and technical expertise on various climate issues which may impact the Scheme.

A summary of the key roles and responsibilities are listed below:

- **Trustee Chair**
  - It is the Trustee Chair's responsibility to ensure that sufficient time is allocated for consideration and discussion of climate matters by the Trustee and its advisers, taking into account sponsor covenant, funding, investment and operational factors.
- **Trustee**
  - In broad terms, the Trustee is responsible for the following, some of which it may choose to delegate to the Investment Committee:
    - ensuring the Trustee Directors have sufficient knowledge and understanding of climate change to fulfil their statutory and fiduciary obligations, and that they are keeping this knowledge and understanding up to date. This will include knowledge and understanding of the principles relating to the identification, assessment and management of climate-related risks and opportunities for the Scheme;
    - putting in place effective climate governance arrangements;
    - determining short-, medium- and long-term time periods to be used when identifying climate-related risks and opportunities to the Scheme (with input from the ISC – see below);
    - identifying and assessing , on an ongoing basis, the main climate-related risks and opportunities for the Scheme (including both physical and transition risks) and documenting the management of these in the Scheme's Risk Register;
    - incorporating climate-related considerations into strategic decisions relating to the Scheme's investments and funding arrangements;
    - allowing for climate-related considerations (if relevant) when monitoring the strength of the sponsoring employer's covenant and any insurance provider which may be used by the Scheme in the future.
    - selecting and regularly reviewing (at least annually) metrics to inform its assessment and management of the Scheme's climate-related risks and opportunities, and setting and monitoring (at least annually) targets to improve these metrics over time where appropriate – again, with input from the ISC;
    - reviewing the approach that the Scheme's managers take to incorporate climate considerations in their decision making and using this as one of the criteria for selecting managers.

TCFD Governance Policy:
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  - ensuring that the Scheme's actuarial, investment, fiduciary and covenant advisers have clearly defined responsibilities in respect of climate change risks and opportunities, that they have adequate expertise and resources, including time and staff, to carry these out, that they are taking adequate steps to identify and assess any climate-related risks and opportunities which are relevant to the matters on which they are advising, and that they are adequately prioritising climate-related risk;
  - considering and documenting the extent to which the advisers' responsibilities are included in any agreements, such as investment consultants' strategic objectives and service agreements;
  - ensuring that the Scheme's investment and fiduciary managers are managing climate-related risks and opportunities in relation to the Scheme's investments (with input from the ISC – see below), and have appropriate processes, expertise and resources to do this effectively; and
  - communicating with members and other stakeholders on the risk and opportunities associated with climate change where appropriate, including public reporting in accordance with The Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021, the Occupational and Personal Pension Schemes (Disclosure of Information) Regulations 2013 (together "TCFD Regulations") when required.

- **Investment Funding-Committee (at times delegated to the Investment Sub-Committee)**

  - In relation to climate risk, the ISC's remit includes:

    - Receiving and reviewing periodic written reports prepared by the Scheme's investment consultant covering the Scheme's investment managers' investment performance, and their integration of environmental, social and corporate governance risks and opportunities (including climate risk) into their investment processes;
    - Meeting with the appointed investment managers to review investment performance, asset allocation and engagement with investee companies (including in relation to climate risk); and
    - Reporting back to the Trustee on key issues raised at the Investment Funding Committee, and the exercise of any delegated powers.

  - In broad terms, the IFC is initially responsible for understanding the requirements of TCFD on the Scheme, and for supporting work towards ensuring the Scheme comply with those requirements, and to undertake any other actions as delegated to the IFC by the Trustee.

  - The IFC's remit includes:

    - arranging training as the IFC believe is necessary to improve Trustee knowledge and understanding on climate risk;
    - taking advice on and making recommendations to the Trustee on appropriate climate metrics to monitor;
    - taking advice on and making recommendations to the Trustee on appropriate climate-related targets; and
    - providing input into (and agreeing the scope of) investment and funding (including covenant) climate-related scenario analysis to be provided by advisers (in particular, agreeing the relevant short, medium and long-term time periods to assess, and the scenarios to consider).

  - Both the Trustee and the FSC will, when appropriate, question and challenge the information and advice provided to them by their advisers, investment managers and/or insurers in relation to their governance responsibilities. The Trustee will also describe in its TCFD reporting, the rationale for the time and resources it has spent on the governance of climate-related risks and opportunities.

TCFD Governance Policy:
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- **Investment consultant/ Fiduciary Manager**

  - In broad terms, the Scheme's investment consultant/fiduciary manager is responsible, as agreed by the Trustee, for:

    - providing training and other updates to the Trustee on relevant climate-related matters;
    - helping the Trustee to formulate its views in relation to climate change risks and opportunities and reflecting these in the Scheme's investment policies and strategy;
    - advising how climate-related risks and opportunities might affect the different asset classes in which the Scheme might invest over the short-, medium- and long-term, and the implications for the Scheme's investment strategy;
    - Ensuring the appropriateness and effectiveness of the Scheme's investment managers' processes, expertise and resources for managing climate-related risks and opportunities, given the Trustee's investment objectives and beliefs;
    - advising on the inclusion of climate change risks in the Scheme's governance arrangements, working with the Trustee and its other advisers as appropriate;
    - leading on the preparation of the Scheme's TCFD reporting, working with the ISC and the Trustee, and its other advisers as appropriate; and
    - assisting the Trustee in identifying and monitoring suitable climate-related metrics and targets in relation to the Scheme's investments, including liaising with the Scheme's investment managers.

- **Actuarial adviser**

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

    - providing training and other updates to the Trustee on relevant climate-related matters;
    - advising how climate-related risks and opportunities might affect the Scheme's funding position over the short-, medium- and long-term and the implications for the Scheme's funding strategy and long-term objectives; and
    - working with the Scheme's other advisers to assist the Trustee in incorporating climate change risks in its investment and covenant monitoring, and communication with stakeholders as appropriate.

- **Covenant adviser**

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

    - supporting the Trustee in a proportionate way to understand as part of its covenant monitoring framework, how climate-related risks and opportunities might affect the Scheme's sponsoring employer and any insurance provider over the short-, medium- and long-term; and
    - working with the Trustee's other advisers if and when requested, to assist the Trustee in incorporating climate change risks in its governance arrangements and monitoring framework as appropriate.

- **Legal adviser**

  - The Scheme's legal adviser is not advising or assisting the Trustee with the scheme-wide decisions which are the subject of this TCFD report. They are responsible for:

    - supporting the Trustee in understanding the legal requirements of their climate change obligations under pensions legalisation.
    - reviewing the TCFD report before publication.

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- **Investment managers**
  - In broad terms, the Scheme's investment managers are responsible for:
    - identifying, assessing and managing climate-related risks and opportunities in relation to the Scheme's investments, in line with the investment management arrangements agreed with the fiduciary manager;
    - exercising rights (including voting rights) attaching to the Scheme's investments, and undertaking engagement activities in respect of those investments, in relation to climate-related risks and opportunities in a way that seeks to improve long-term financial outcomes for the Scheme's members; and
    - providing information to the Scheme's investment adviser/fiduciary manager on climate-related metrics in relation to the Scheme's investments, as agreed from time to time, and using their influence with investee companies and other parties to improve the quality and availability of these metrics over time.

Climate governance meeting agenda

The IFC as part of the regular meeting schedule, in conjunction with Mercer, will allocate agenda time to climate change topics, amongst other ESG topics, to cover the various workstreams listed in the next section. Those responsible for each workstream will make sure any documents or information is distributed in advance of the meeting to allow the IFC time to digest the advice. There will be sufficient time allocated in meeting agendas to discuss the advice and meeting minutes including actions agreed will be circulated after the meeting to allow all parties to review the discussion.

In addition the Trustee and IFC will receive training on climate change topics on a regular basis to ensure that there is a sufficient level of knowledge and understanding to identify, assess and manage climate-related risks and opportunities. The current approach should be documented within the standalone climate governance statement.

Ongoing workstreams and frequency

There are a number of workstreams that are to be completed in order for the Trustee to fulfill its responsibility for managing climate risks and opportunities. It is important to note that many of the workstreams will cover wider ESG risks other than just climate change risk, as the Trustee does not consider climate risks in isolation but holistically alongside the various other ESG risks the Scheme may be facing. The workstreams are listed below as well as the frequency of which each task will be carried out:

- Climate change training session (on a regular basis)
- Scenario analysis modelling the investment strategy and funding strategy (minimum frequency = first year and every 3 years thereafter)
- Review appropriateness of undertaking scenario analysis in light of a) data availability changes b) material changes in investment strategy / funding position (on a regular basis)
- Metrics data collection (minimum frequency = annual)
- Target setting / target appropriateness review (minimum frequency = annual)
- Progress against target assessment (minimum frequency = annual)
- Review of manager ESG ratings, climate policies(on a regular basis for the largest investments of the Scheme)
- Stewardship (Engagement Policy Implementation Statement) (minimum frequency = annual)
- Risk frameworks update/review e.g. risk registry (minimum frequency = annual)
- Climate covenant assessment (on a regular basis)
- Drafting annual TCFD report (minimum frequency = annual)

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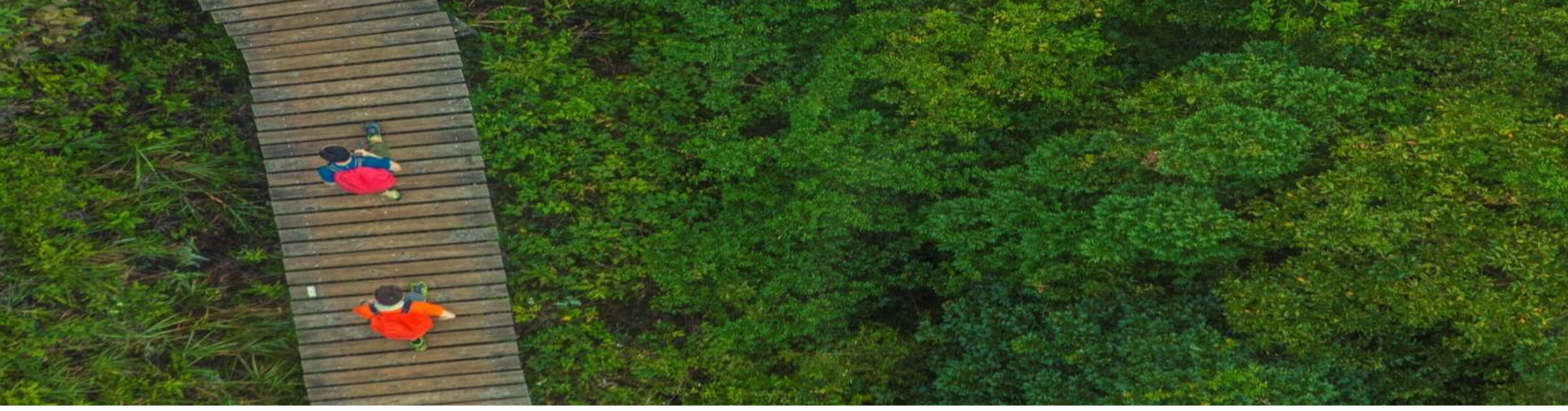
Statutory disclosures

In line with the Regulation the Trustee assumes responsibility for ensuring all required disclosures will be made, these include:

- Publishing TCFD report on a publicly accessible website
- The website link to the TCFD report will be provided via
    - Trustee report and accounts
    - Annual benefit statement
    - Annual funding statement
- The Pensions Regulator will also be provided with a link to TCFD report in the annual scheme return

Ensuring quality of advice and expectations for the investment consultant

The Trustee aims to ensure that the advisers who provide support and technical expertise on various climate issues have the appropriate level of climate-related risk expertise and resources to enable them to carry out their duties. In light of this the Trustee has incorporated climate considerations into the investment objectives it has set for its investment consultant.



Responsible Investment Total Evaluation (RITE)

Responsible Investment Total Evaluation (RITE) assesses the extent to which the DB Assets of the Scheme integrates ESG factors. Pension Schemes are scored on a scale from 0-100, with those scores then mapped to a rating scale of C / C+ / B / B+ / A / A+ / A++, as set out on the side.

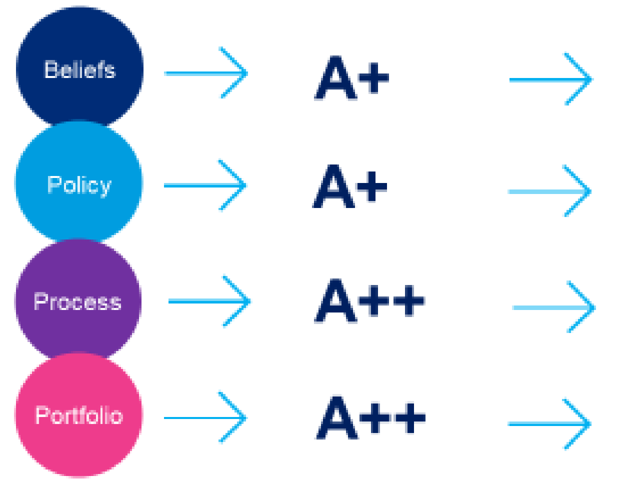
Benchmarking analysis is carried out against Pension Schemes with a similar level of assets under management and by sector of the company/sponsoring employer. Any rating/score has been determined at the sole discretion of Mercer Limited, as professional adviser to the Fund. Mercer Limited does not accept any liability or responsibility to any third party in respect of these findings. RITE is an evaluation at a point in time, informed by Mercer's Sustainable Investment Pathway, more details on the Pathway can be found here: https://www.mercer.com/our-thinking/wealth/pathway-to-responsible-investing.html.

The current certificates of the 2022 RITE assessment carried out for the DB Assets of the Scheme is shown below:

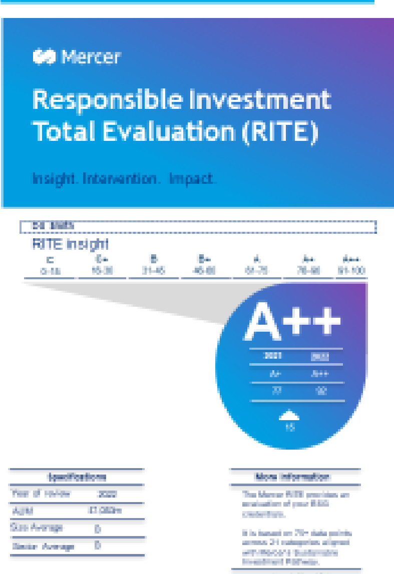
Insight

RITE Score

Pathway



Insight



Rating	Score
A++	91% +
A+	76 – 90%
A	61 – 75%
B+	46 – 60%
B	31 – 45%
C+	16 – 30%
C	0 – 15%

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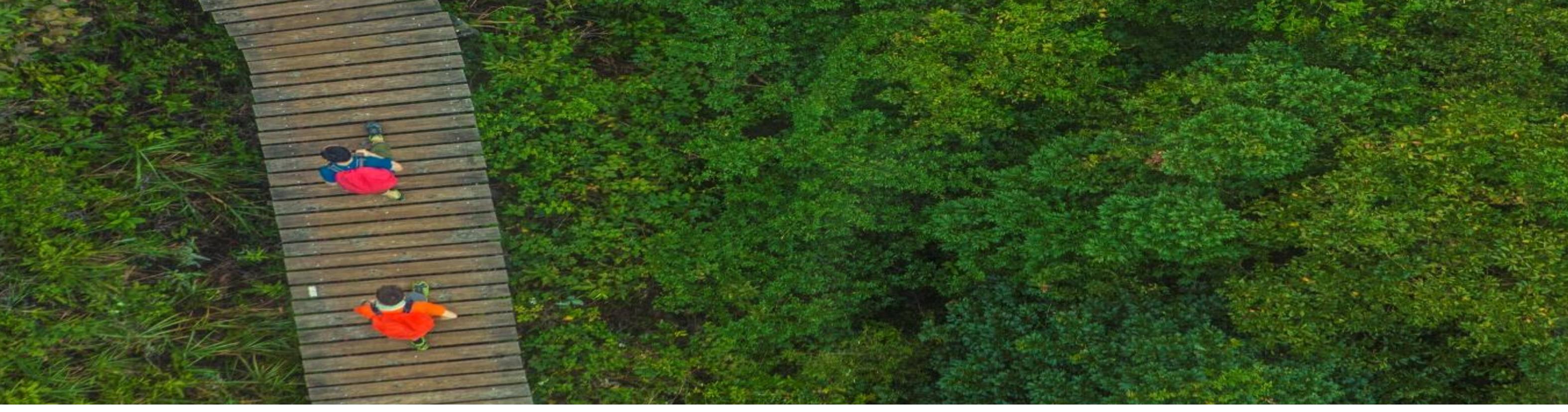


Climate Change Glossary

C

Carbon footprint

The amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organization or community. Carbon footprint is calculated for each company as (Scope 1 and 2 carbon emissions / $m investments). See also Scope 1, 2, 3 emissions and Weighted average carbon intensity (WACI).

Carbon intensity

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

Carbon price

The price for avoided or released carbon dioxide (CO_2) or CO_2-equivalent emissions. This may refer to the rate of a carbon tax, or the price of emission permits. In many models that are used to assess the economic costs of mitigation, carbon prices are used as a proxy to represent the level of effort in mitigation policies.

Carbon neutrality

Achieved by offsetting emissions by paying for credits (usually certified via new forestry equivalents that provide carbon removal). Carbon neutrality is similar to net zero targeting – the latter requires actual emissions reductions to meet targets though (rather than purchasing offsets). See also Net zero CO_2 emissions.

D

Decarbonisation

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

Global warming

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

Greenhouse gases

Gases in our planet's atmosphere which trap heat. They let sunlight pass through the atmosphere but prevent heat from leaving the atmosphere. Greenhouse gases include: Carbon Dioxide (CO_2), Methane (CH_4), Nitrous Oxide (N_2O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulphur Hexafluoride (SF_6), Nitrogen Trifluoride (NF_3).

I

Inevitable policy response

A scenario that expects an acceleration of climate-related policy announcements in 2023−2025, which has been supported by the Principles for Responsible Investment (PRI).

M

Mitigation (of climate change)

A human intervention to reduce emissions or enhance the sinks of greenhouse gases.

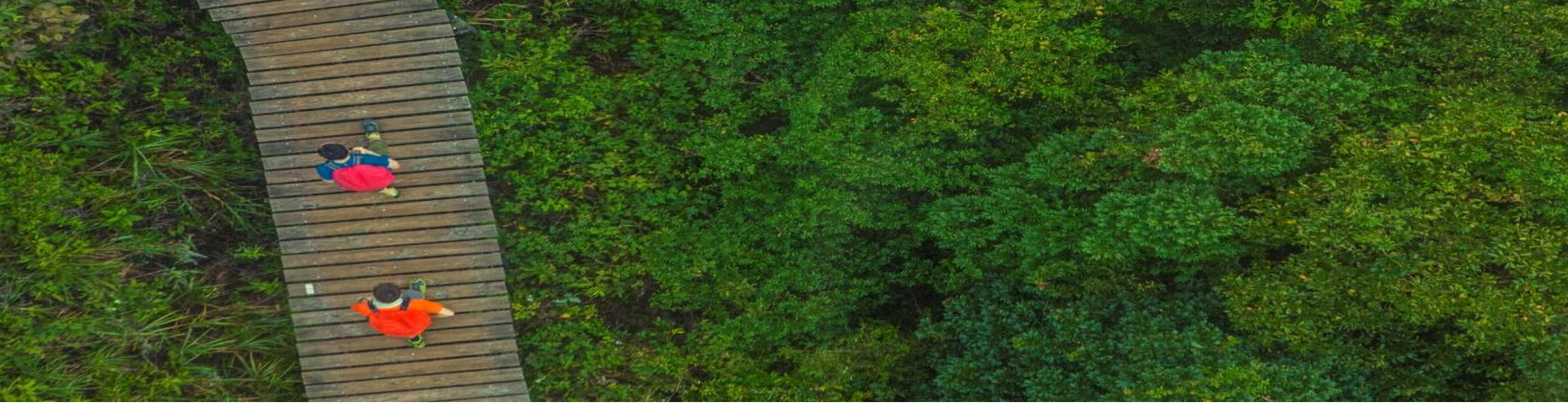
Mitigation strategies

In climate policy, mitigation strategies are technologies, processes or practices that contribute to mitigation, for example, renewable energy (RE) technologies, waste minimization processes and public transport commuting practices.

N

Net zero CO_2 emissions

Net zero carbon dioxide (CO_2) emissions are achieved when CO_2 emissions are balanced globally by CO_2 removals over a specified period. The term "net zero" is also typically associated with the 2050 date or earlier, as this is aligned with the scientific recommendations to achieve a 1.5°C scenario. See also Carbon neutrality (which differs slightly).



Climate Change Glossary

P

Paris Agreement

The Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) was adopted on December 2015 in Paris, at the 21st session of the Conference of the Parties (COP) to the UNFCCC.

The agreement, adopted by 196 Parties to the UNFCCC, entered into force on 4 November 2016 and as of May 2018 had 195 Signatories and was ratified by 177 Parties.

One of the goals of the Paris Agreement is “Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels”, recognising that this would significantly reduce the risks and impacts of climate change.

Additionally, the Agreement aims to strengthen the ability of countries to deal with the impacts of climate change.

Physical risks

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

Pre-industrial

The multi-century period prior to the onset of large-scale industrial activity around 1750. The reference period 1850–1900 is used to approximate pre-industrial global mean surface temperature (GMST).

Principles for Responsible Investment (PRI)

Non-profit organisation which encourages investors to use responsible investment to enhance returns and better manage risks. It engages with global policymakers and is supported by, not but part of, the United Nations. It has six Principles for Responsible Investment that offer a menu of possible actions for incorporating ESG issues into investment practice. Mercer is a founding signatory of these Principles.

R

Resilience

The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganising in ways that maintain their essential function, identity and structure while also maintaining the capacity for adaptation, learning and transformation.

Scope 1, 2, 3 emissions

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

Stranded assets

Assets exposed to devaluations or conversion to “liabilities” because of unanticipated changes in their initially expected revenues due to innovations and/or evolutions of the business context, including changes in public regulations at the domestic and international levels.

Transition

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

Transition risks

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

Weighted average carbon intensity (WACI)

The carbon intensity of a portfolio, weighted by the proportion of each constituent in the portfolio. Carbon intensity is calculated for each company as (Scope 1 and 2 carbon emissions / $m sales). See also Carbon footprint.

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