The Merchant Navy Ratings Pension Fund Trustee's Climate Change report for the year ended 31 March 2024

Website where this report can be found:
https://www.mnrpf.co.uk/library.php

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Section 1: Introduction and Chair Foreword

A foreword from the Chair of the Merchant Navy Ratings Pension Fund

We are very pleased to present our second Climate Change Report. In this report we deal with the impact of climate risk on the MNRPF, detailing the approach we take to manage climate-related risks and opportunities, the actions taken to date, the assessment of the Fund's and Participating Employers' exposures and the potential impact of climate change on the MNRPF over time.

We believe that Sustainable Investment (SI) has a material financial impact on investments and is therefore integral to the successful mission delivery for our members. Given the importance of this topic we consider the possible climate-related impacts on MNRPF's investments, security of members' benefits, Participating Employers and the support these can provide to ensure those benefits are paid.

Reporting on climate change is still in its infancy. We should note there are still some limitations around the data available, and we continue to work on improving this. We expect data quality to improve over time. We have added more granularity to the disclosures on data quality in this year's report, for instance we have included Scope 3 carbon emissions data for the first time.

We have set ourselves a target to reduce the carbon footprint of the MNRPF to net-zero by 2040 or sooner, and an interim 50% reduction by 2030. As we note above, the evolving nature of data quality and availability is an area of ongoing focus for improvement. This limits direct conclusions which can be derived from the reported metrics (particularly over short time periods), but we have reflected that this provides a good starting point for ongoing longer-term monitoring of the 2040 goal. Our focus at present is on continuing to work on improving our knowledge, monitoring and reporting in this area, acknowledging that the broader industry is evolving to be able to better collate and report data. We look forward to sharing our progress again with you next year.

Doug Ross

Chair of the Trustee of the Merchant Navy Ratings Pension Fund

1 Introduction

The Trustee of the Merchant Navy Ratings Pension Fund (hereinafter referred to as the "Trustee" and the "Fund", respectively) presents its annual report under the Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 (the "Regulations") for the year ended 31 March 2024. The Fund is a multi-employer scheme.

The Fund is subject to the requirement to produce climate change disclosures in line with the above regulations. The aim is to improve and increase reporting of climate-related financial risks and opportunities.

This report sets out the Trustee's approach to compliance in each of these four areas.

The climate change framework requires disclosures in four broad categories:

Governance: around climate-related risks and opportunities

Strategy: the actual and potential impact of climate-related risks and opportunities on the strategy and financial plans of the Fund under different climate scenarios

Risk management: how the Fund identifies, assesses, and manages climate-related risks

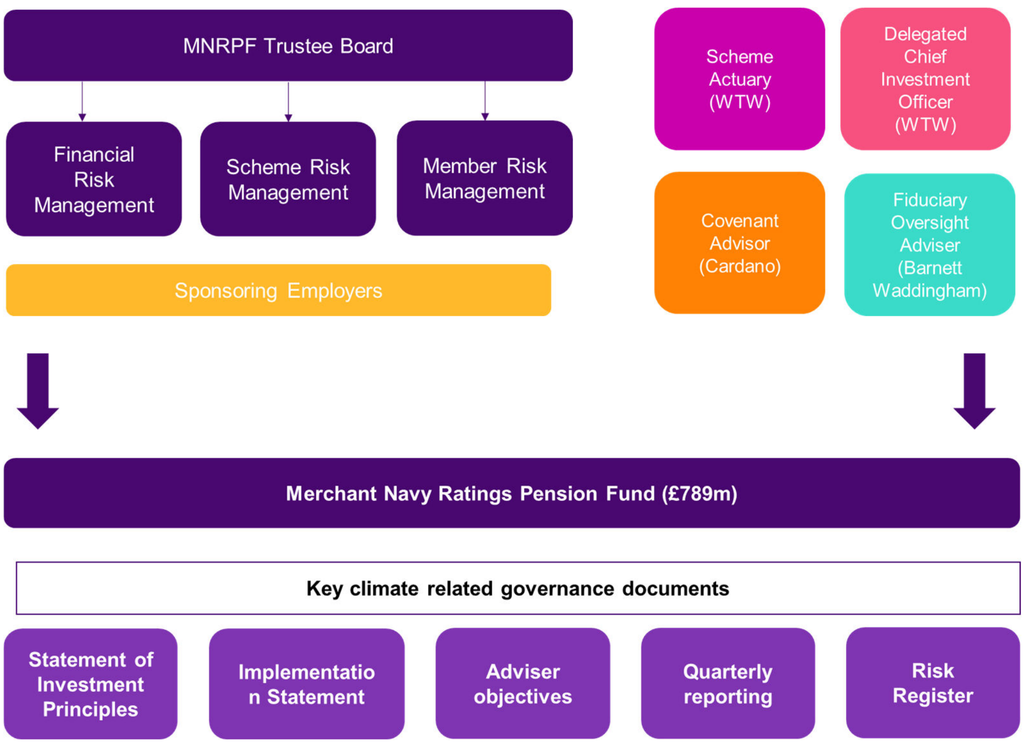
Metrics and targets: the metrics and targets used to assess and manage climate-related risks and opportunities

Section 2: Governance

Overview of strategy, investment portfolio and supporting context and changes over the year

Overview of investment structure

The Merchant Navy Ratings Pension Fund governance structure is outlined in the graphic below. The Trustee of the Merchant Navy Ratings Pension Fund is responsible directly for the Fund and is involved in day-to-day governance of the Fund. The Trustee does however make use of sub-committees to efficiently govern and conduct Fund matters. As shown in the graphic below, the Fund's investment assets totalled £789m as at 31 March 2024.



Overview of context

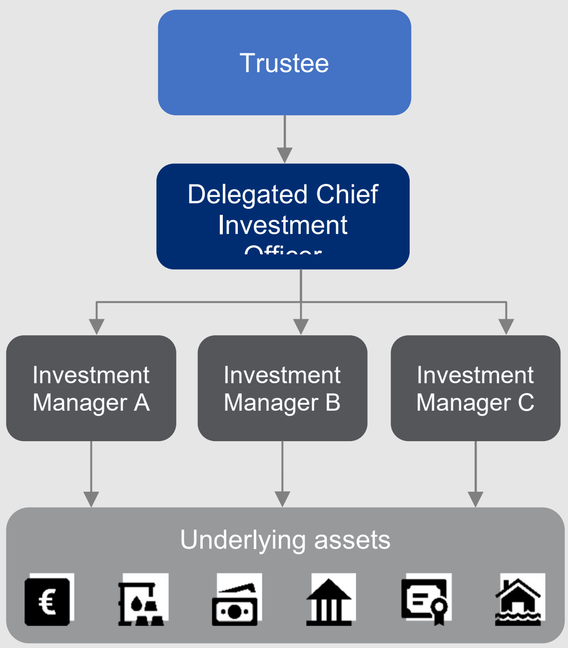
The Fund was 88.7% funded on a Gilts+0.5% basis as at 31 March 2024. The Fund has a deficit on a low-risk basis as well as on a technical provisions basis., Therefore the Trustee is currently expecting to receive additional deficit contributions from the sponsoring employers. The Fund is aiming to build up a funding surplus gradually over time in a low-risk manner and achieve 105% funding on gilts+0.5% by March 2030. In order to achieve this, the Fund has an investment return target of Gilts+2.1% pa (reducing over time to Gilts+0.8% pa) and seeks to hedge 100% (as % of assets) of the interest rate and inflation sensitivity in the Fund's liabilities. The duration (weighted average time) of the Fund's liabilities is estimated to be 10 years.

As can be seen below, the Fund invests more than half of its assets in liability driven investments (largely UK Government Bonds), protecting the funding position against changes in interest rate and inflation. It holds a diversified portfolio of return generating investments that support the return target of gilts +2.1% pa.

The Fund also has an allocation to illiquid income generating assets which include renewable energy assets, real estate, and other infrastructure assets. Whilst the Trustee continues to place a high-level of priority on further engaging with, monitoring, and seeking to manage climate change risks and opportunities, this broader context does mean the Trustee will have fewer tools at its disposal than other pension schemes, given the nature of the assets it holds. This does not suggest complacency on the part of the Trustee but is instead mentioned to provide context to the broader report and the rationale behind the time and resources spent on governance in this area which the Trustee is pleased to share.

Fund Breakdown as at 31 March 2024

How are the Fund's investments managed?



Trustee - The Trustee's key objective is to ensure sufficient assets to pay members' benefits as they fall due. The Trustee retains overall responsibility for the Fund's investment strategy but delegates some responsibilities to ensure they are undertaken by somebody with the appropriate skills, knowledge, and resources.

Delegated Chief Investment Officer (WTW) – The Trustee appoints a Delegated Chief Investment Officer (DCIO) to implement the Trustee's investment strategy. The DCIO allocates the Fund's assets between asset class and investment managers.

Investment managers – The DCIO appoints underlying investment managers using pooled and segregated vehicles. The DCIO will look for best in class specialist managers for each asset class.

Underlying assets – The investment managers pick the underlying investments for their specialist mandate e.g. shares in a company or government bonds.

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Overview of key climate activities conducted over the year

Over the Fund year to 31 March 2024, the Trustee undertook a number of actions in line with the policies outlined above and to help achieve the ultimate aim of managing climate change risks and opportunities.

Stewardship	Portfolio updates	Governance updates
EOS at Federated Hermes – The Fund's Alternative Credit manager uses EOS at Federated Hermes, a leading stewardship provider, with over $1.8tn under advice. The EOS platform adds another level of direct corporate engagement in addition to the underlying managers and facilitates greater collaborative stewardship impact. Over 2023 this included 1,041 company engagements on 4,272 issues and 128,101 voting recommendations, with 22,716 against management. EOS also continued to be an active participant in several initiatives such as Climate Action 100+, Principles for Responsible Investment and the Institutional Investors Group on Climate Change. **Stewardship priorities** – The Trustee consider that stewardship is an important tool for managing risk and improving the financial outcomes of the Fund. However, the Trustee also acknowledges that stewardship can be multifaceted and therefore it makes sense to have a small number of stewardship priorities to focus engagements in the short term. One of the selected priorities was "climate change" reflecting the Trustee's belief that this is currently the single biggest ESG risk and therefore requires specific attention. Climate change has been an area where the Trustee has carried out engagements with their managers in the past, and they will continue to prioritise this in the future.	**ESG action within the credit portfolio**: As the DCIO increased its minimum standards and expectations over time in relation to Sustainable Investment, one manager became a clear laggard relative to other exposures in the portfolio, lacking a framework for both ESG integration and engagement. The DCIO communicated its concerns with the manager and stopped allocating new capital to this manager while they developed a plan to significantly improve their capabilities and resources spent here. The manager has now made significant process on their SI capabilities, as well as the commitments made as part of the engagement process.	**Trustee training** – The Trustee undertook training, facilitated by the DCIO, on ESG integration within the investment portfolio including a qualitative assessment of the sustainable investment practices of the Fund's investment managers and a quantitative assessment of the fund managers to get a snapshot of the carbon exposure of the portfolio. **Risk register updates** - a detailed review of the risk register was undertaken over the year. This included the key metrics used to assist in monitoring and managing climate change risk **Member communications** - The Trustee is also committed to keeping the Fund's members informed of the work carried out in the responsible investment space and how it impacts member benefit security. The Trustee provided one update to members during the year and are also planning to publish a member friendly summary of the outcome of last year's climate change report. **Adviser review** – The Trustee reviewed the Fund's advisers against their objectives over the year which included an assessment of their work in climate change. The Trustee continues to encourage further work on improving data and enhancing stewardship activities.

Over the fund year to 31 March 2024, the DCIO has also carried out several activities to help the Trustee meet it's climate goals including:

- Confirmed UK Stewardship Code adherence for 1 January 2022 to 31 December 2022 and have recently applied for the year ending 2023
- Partnership with EOS
- The DCIO's Thinking Ahead Institute was selected by the Principles for Responsible Investment (PRI) board to undertake research specifically on stewardship resources in the industry
- Maintained climate as their top theme for engaging with investment managers
- Led the updating of the Investment Consultants Sustainability Working Group(ICSWG) Engagement Reporting Guide
- Active members of the UK Government's Transition Plan Taskforce working to improve organisations' climate transition planning
- Over the year engaged with over 150 mangers and almost 300 products on the topics of sustainability and stewardship
- Invested in a new portfolio construction tool incorporating climate metrics
- Researched over 140 sustainability themed strategies with a focus on climate
- Engaged with and responded to several government consultations

Below are some examples of the DCIO's engagement in practice.

Case study: Engagement with UK pensions and climate regulation

Our DCIO had several meetings with the Pensions Regulator covering several topics including:

- how climate scenario analysis can be made more robust and decision useful,
- how the regulations might be applied to smaller pension schemes
- whether the regulations themselves had achieved their main purpose of getting trustees to take more steps to appropriately monitor and manage climate change risks and opportunities.

As part of this our DCIO talked through client examples and internal thought pieces. They continue to actively engage with the Pensions Regulator to input into the positive development of these regulations.

Case study: Creating investment solutions integrating sustainability factors

This year our DCIO worked with an index provider to launch the WTW Global Equity Diversified Index (GEDI) – an index which aims to provide 'whole of equity portfolio' smart beta exposures whilst integrating various sustainability factors in a way that is expected to deliver meaningful excess returns over a market capitalisation exposure at a reduced cost.

GEDI's approach integrates sustainability, climate, and net zero, including incorporation of WTW's Climate Transition Value at Risk (CTVaR). It has rules for excluding stocks based on certain criteria. The strategy includes a net zero target consistent with WTW Investment's commitment to target net zero greenhouse gas emissions by 2050 across their fully discretionary delegated portfolios and includes an interim goal of a 50% reduction by 2030 which is consistent with plausible pathways to net zero as set out in the current climate science.

Case study: Engagement with a Latin American high yield debt strategy

We recognise that some areas of the portfolio will have higher emissions than others, but we believe it is important to engage to try to improve the level of emissions where possible. Our DCIO found that the opportunity set for Latin American high yield debt was heavily weighted towards high carbon emitters.

The DCIO wanted to explore ways the manager could bring down the emissions of the portfolio over time, recognizing energy companies are a core part of the Latin universe and WTW were not in a position to dictate the guidelines of the pooled fund in question. The DCIO engaged with the portfolio managers and ESG team within the strategy and provided feedback on the managers privileged position to negotiate better ESG policies with their borrowers.

In response the manager took the feedback on board and as part of a project it had undertaken on a Chilean thermal coal company, negotiated with the company to develop a plan to shut down its plants in the coming years (consistent with Chilean regulations to shut down coal fired plants by 2040), therefore managing risk for investors in the company. Our DCIO continues to engage with them on ESG reporting.

Overview of approach to climate change

The Trustee has identified climate change, alongside other Environmental, Social and Governance (ESG) factors, as an important risk and opportunity which requires oversight and management over the long-term.

The Trustee has received training provided by its DCIO, WTW, and its Covenant adviser, Cardano Advisory Limited (Cardano), on climate risk and the requirements of the regulations and recommendations of the Task Force for Climate Related Financial Disclosures (TCFD), which has now ceased to exist. Given the pace of progress around corporate sustainability and Sustainable Investment, trustee training on climate and ESG has increased over recent years and is expected to remain a priority going forwards.

The Trustee's key overarching investment policies (including those in relation to climate) are detailed in the Trustee's Statement of Investment Principles (SIP) which can be found online at the following link: https://www.mnrpf.co.uk/library.php

Over the year the Trustee reviewed the risk register and incorporated the risks and opportunities associated with climate change, ESG investment beliefs, as well as their stewardship priorities. The Trustee monitors the Fund's risk register which details the controls and monitoring that the Trustee has in place to appropriately manage these risks and opportunities. The risk register is a standing item on the agenda of the quarterly Trustee Board meetings.

Whilst the Trustee may delegate certain aspects of its investment arrangements, the Trustee retains ultimate responsibility for setting the Fund's strategy, policies, and actions in this area and the Trustee ensures that such third parties are closely monitored and held accountable for the work they do on behalf of the Fund. The Trustee regularly reviews their external consultants and advisers and will be explicitly considering their risk expertise, capabilities, and resources and how they incorporate climate change into their advice as part of the next formal review process. The main parties to which the Trustee delegates some form of responsibility for implementing its policies in relation to climate change and Sustainable Investment more widely are outlined below.

Sub-committees - To ensure the effective management of the Fund, the Trustee has established a three-pillar governance structure comprising of a Financial Risk Management Pillar (FRM), a Fund Risk Management Pillar, and a Member Risk Management Pillar. The FRM is responsible for progressing actions relating to TCFD, and the Trustee is supported by the DCIO, DCIO Oversight, covenant and actuarial advisers.

Delegated Chief Investment Officer (DCIO) – WTW is the DCIO for the Fund, responsible for ensuring climate change is considered as part of ongoing portfolio construction, the selection of the underlying investment managers and the conduct of its stewardship activities. WTW's approach to climate change and SI is a key focus point of the Trustee's ongoing monitoring. The consideration of sustainable investment is embedded in their investment processes. WTW works closely with the FRM and provides regular assessment of its views on the underlying managers capabilities and performance in relation to ESG and stewardship, and a quantitative assessment of the Fund's portfolio across a number of ESG criteria, including climate. The Trustee was satisfied with the work completed on its behalf over the year and noted the high sustainable investment ratings assigned to the managers in the portfolio by the DCIO. The Trustee has set the DCIO objectives against which they are assessed annually which includes reference to assisting the Trustee in assessing, managing, and measuring climate risks and opportunities.

Oversight Provider – The Trustee also appoints an Oversight Provider, Barnett Waddingham, who assists the Trustee with monitoring and holding the DCIO accountable for their actions around climate change. As part of its oversight activities, Barnett Waddingham compares WTW's SI-related activities against those of other fiduciary managers.

Investment Managers – Responsible for managing climate change risks and opportunities within their mandates, consistent with their investment guidelines. This includes the selection of assets as well as the managers' ongoing stewardship activities. The Trustee receives reporting on an annual basis to assess the underlying managers' competencies. This provides an assessment of the managers' approach to ESG integration and stewardship activities as well as consideration of a balanced scorecard of climate metrics which provides insight into the managers' underlying exposures to climate change risks and opportunities**.** The DCIO assesses the investment managers' approach to ESG integration and stewardship activities before investing on the Trustee's behalf, and on a periodic basis as part of its ongoing manager research activities.

Other advisors – The Trustee also takes advice from the Scheme Actuary, Legal Advisor and Covenant Advisor regarding the extent to which climate change may affect the funding strategy of the Fund and the ability of the sponsors to support the Fund.

The Trustee board met 9 times over the year and climate change was discussed regularly at those meetings. The Trustee recognises that climate change is a fast-evolving and complex area which therefore requires ongoing discussion and education. Over the last 12 months, the Trustee has received training from the DCIO on the Department for Work and Pensions (DWP) climate regulations, climate metrics, and annual sustainable investment monitoring reporting. All Trustee Board members are required to partake in these sessions as recognition of the responsibility of the whole group in evolving the Fund's approach in this area.

The Trustee has a strong belief that stewardship (voting and engaging with the underlying companies the Fund invests in) is an important way in which the Trustee can meaningfully influence outcomes. The Trustee has identified climate change as one of its current stewardship priorities. The Trustee delegates part of the implementation of this policy to the DCIO and underlying investment managers but retains overall responsibility and accountability for the policy. The Trustee considers the implementation of this policy on an annual basis.

Case Study – EOS at Federated Hermes

As outlined in our SIP, the Trustee recognises that the long-term financial success of our investments is influenced by a range of factors which includes appropriate management of environmental, social and corporate governance issues (including climate). As such, we typically invest with investment managers with the expectation of a long-term relationship, and we expect investment managers to take a similar approach with the companies that they invest in. The DCIO engages with our investment managers where appropriate on their approach to stewardship and engagement. We have identified climate change and human and labour rights as two key priorities in this area.

The DCIO also employs EOS at Federated Hermes, a stewardship service provider, to support the efforts of the appointed investment managers in their company-level engagement on a wide range of topics. EOS also carries out public policy engagement and advocacy on behalf of the Trustee. As at 31 March 2024 EOS represented $1.8trn of assets under advice. The DCIO has been working closely with EOS for many years, and a senior member of the WTW Investment Team chairs EOS' Client Advisory Board. The DCIO engages with EOS on behalf of the Trustee to help shape its engagement approach and voting policies. Over 2023, this included:

- Engagements with 1,041 companies on a total of 4,272 issues and objectives.
- 31 responses to consultations or proactive equivalents and 90 discussions with relevant regulators and stakeholders.
- Voting recommendations on 128,101 resolutions, including 22,716 votes against management.
- Active participation in a range of global stewardship initiatives.

Another example is Climate Action 100+ (CA100+), an investor initiative aiming to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change. It targets 167 companies globally. EOS is among over 615 investors, totalling $65tn under management, who have signed up to CA100+. EOS led or co-led the engagement on over 20 focus companies as part of this initiative.

Section 3: Strategy

Appropriately managing the risks and opportunities associated with climate change from a strategic perspective, is a key part of the Trustee's role. The Trustee recognises that climate change could have a material impact on the potential success of the overarching funding strategy and therefore seeks to ensure that this matter is given appropriate consideration. To support this, the Trustee undertakes climate change scenario analysis to test the resilience of the Fund's funding strategy under a range of plausible climate scenarios. Importantly, the Trustee recognises that climate change could have a material impact on the investments of the Fund, the life expectancy of the Fund's members and the support provided by the sponsors' covenants. All three aspects are therefore considered as part of this analysis. This scenario analysis was undertaken for the first time in 2022. The Trustee's intention is to repeat this analysis at least every three years or sooner should there be a material change in either the Fund's circumstances or the assumptions underlying the analysis.

To appropriately assess the impact of the climate change scenario analysis, the Trustee has agreed the following time horizons over which climate risks and opportunities should be considered:

Short term	to 2026/2027	This is the timeframe for the next Actuarial Valuation cycle during which the funding strategy will be revisited.
Medium term	to 2030	This is the timeframe over which significant climate action is expected, climate transition risks are expected to emerge and is aligned with the Trustee's agreed net-zero objective.
Long term	to 2040	This is the timeframe consistent with the Trustee's overall net zero target and the point at which a significant proportion of member benefits will have been paid out. At this point in time, we expect the Fund's liabilities could be managed by an insurer, following a buyout transaction.

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The Trustee has identified the following categories of climate-related risks and opportunities:

Transition risk	Physical risk	Regulatory risk	Reputational risk
The indirect impact arising because of changes in society and economies to combat or adapt to climate change	The direct impact arising because of chronic and/or acute changes in climate and extreme weather events	Regulators are increasing pressure on pension schemes and sponsors to explicitly consider and adapt to climate change	The increasing spotlight on pension schemes and climate change increases the risk of being "named and shamed" (which in turn could adversely affect the effective management of the Fund)
Examples:			
• Assets: Some industries become obsolete (e.g. coal), reinvent themselves or others emerge (electric vehicles) • Liabilities: Improvements in mortality from healthier lifestyles	• Assets: Damage to physical assets underpinning securities (e.g. real estate and infrastructure) • Liabilities: Excess deaths arising from extreme weather	• Implementation Statement • DWP Pensions bill • Mandatory climate change reporting	• 2018 EAC report on 25 biggest UK schemes

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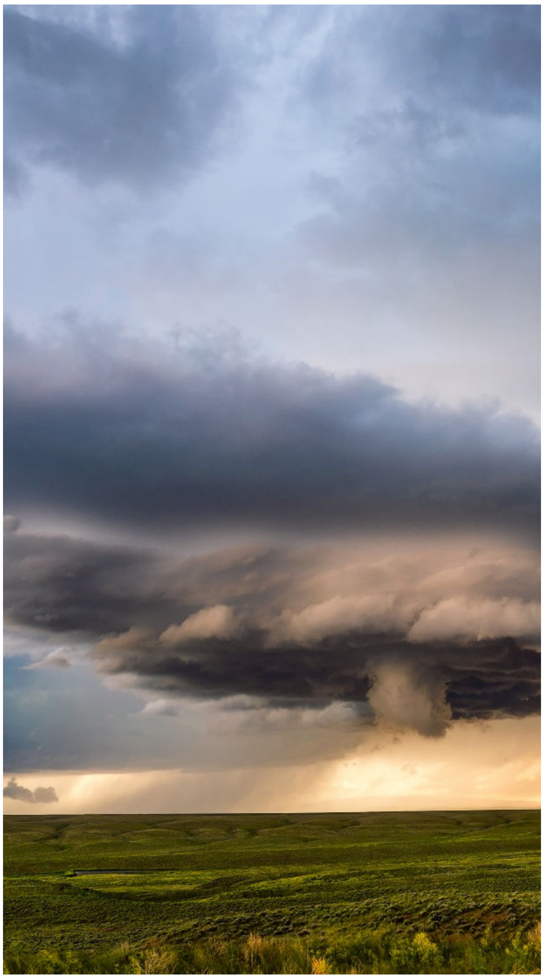
The Trustee has assessed how the categories identified are relevant to the agreed short-, medium- and long-term time horizons.

	Short Term	Medium Term	Long Term
Timeframe	To completion of next Triennial Actuarial Valuation (2026/2027)	Expected timeframe of 50% reduction in total emissions by 2030	Expected timeframe of net zero by 2040
Primary types of risk	• Regulatory • Reputational • Transition	• Reputational • Transition	• Transition • Physical
Key risk exposure	The Trustee is exposed to regulatory risks, including fines, if it does not comply with evolving regulatory requirements. The Trustee is exposed to reputational risks if the Trustee's policies are misaligned with peers and/or sponsor expectations.	The Trustee is exposed to reputational risks if the Trustee's policies are misaligned with peers and/or sponsor expectations. The Trustee is exposed to the impact on insurer pricing of climate risk, including the impact on future expected returns and other financial and demographic assumptions. Given the long-term nature of these risks, there is a high level of uncertainty in terms of the likely effect and the potential magnitude of their impact.	The Fund may be exposed to transition risks through its holdings in various asset classes (including equity, credit, property and infrastructure). The Fund may be exposed to physical risk through its holdings in various assets, in particular real assets including property and infrastructure. In an extreme left-tail event, exposure to, and poor management of these risks may weaken the strength of any insurer and ability to meet pensioner benefits. Given the long-term nature of these risks, there is a high level of uncertainty in terms of the likely effect and the potential magnitude of their impact.
Potential opportunities	Encouraging existing funds to consider and where possible reduce exposure to transition risks and engage with companies to develop a strong transition plan.	Aligning the Fund's investments with the ESG policies of leading insurers may increase the likelihood of credit assets being taken in specie, marginally reducing the cost of buyout.	Encouraging fund managers to follow best practice with regard to climate risks

Climate scenario analysis

Annual review of climate scenario analysis



The Trustee updates the climate scenario analysis at least every 3 years. In the intervening years, the Trustee reviews whether any factors have changed materially to warrant an additional update to the analysis. Over the Fund year the Trustee conducted this review and agreed that updating the climate scenario analysis was not warranted as there were no material changes to the funding objectives and strategy of the Fund. This included limited changes to the Fund's asset allocation, membership, and the underlying climate scenarios available to test the robustness of the funding strategy. However, as a result of a changing regulatory and corporate environment, the Trustee has undertaken an updated review of the Fund's sponsors' exposure to climate risk. The Trustee is therefore continuing to progress the previous actions identified as part of the previous analysis which are outlined in Appendix I taking account of this updated covenant analysis. As we note in the summary of the analysis, the Trustee is aware of concerns in the industry about the severity of some of the climate scenarios and expects to address this as part of future iterations of this analysis.

Employer covenant - scenario analysis

The Fund is a non-aligned multi-employer scheme, supported by employers from across the UK shipping industry and beyond, with a particular concentration in the areas highlighted below:

Ferries	Ports	Freight	Ship Services	Government related	Marine Services	Oil & Gas

Based on the distribution of employers and noting the high level of impact expected from climate change, the updated covenant climate scenario analysis continued to focus on the shipping industry, with some additional analysis of employers in the oil and gas sector.

As the impact of climate change on specific sub-sectors could vary materially depending on emission profiles, services, supply chains and financing needs, the scenario analysis adopted a granular approach. Employers were assigned to specific sub-sectors and the possible impact of scenarios on their business and prospects was considered before the potential overall impact on the Fund's employer covenant was considered. In some cases, employers were assigned to more than one sector.

The updated analysis carried out by Cardano in 2024 considered the employers' exposure to two climate change scenarios which are consistent with Lowest Common Denominator and Global Coordinated Action scenarios used by WTW and Cardano in 2023:

	Orderly Transition (<2°C) ***NGFS 'Below 2°C' scenario***	**Failed Transition (+3°C)** ***NGFS 'Current Policies' scenario***
Scenario outline	Global decarbonisation **starts now**, so policies intensify gradually but are implemented immediately. Large transition changes will happen quickly with limited variation in regional decarbonisation policies	**The world fails to meet the Paris Agreement goals**, which leads to continued increase in GHG emissions and rise in global temperatures
Physical risks	**Long-term physical risks are reduced** but deviations from the present climate are still expected	More **pronounced physical risks** – particularly over the longer-term
Transition risks	**Highest in the near-term** as policies are implemented immediately	**Limited transition risks** over above existing commitments and policies
Macro-economic impact	Sudden divestments have **disruptive effects on financial markets**. Following initial shock there is partial recovery	UK and global **GDP growth permanently lower**, with the impacts of this increasing over time. Macroeconomic uncertainty rises
Alignment with advisors	Broadly aligned to WTW's Global Coordinated Action scenario[1]	Broadly aligned to WTW's Lowest Common Denominator scenario[2]
Change from 2023 Report	Our analysis is based on the **latest NGFS scenarios (Phase IV)**. Key updates since the scenarios used in the 2023 Report include (1) reflecting new country-level policies to reach net zero emissions (e.g. as part of the EU Fit for 55, the US IRA), with a cut-off date of March 2023; (2) latest GDP and population data from the IMF World Economic Outlook 2022; (3) current geopolitical context; (4) latest trends in renewable energy technologies and key mitigation technologies. **The overarching impact of these updates is a shift towards a more 'disorderly' transition, reflecting climate policy delays and recent developments in energy markets in the current geopolitical context.**	

Notes: [1,2]See Appendix I for an overview of WTW's scenarios
NGFS stands for Network for Greening the Financial System

Employer risk assessment

The scenario analysis identified broad risks to the Fund's employer covenant as a result of climate change, which were considered over the chosen short, medium and long time horizons.

	Risk factor	Description	Transmission channel
Transition risks	**GHG emissions**	A requirement to offset emissions (Scope 1 & 2, and possibly 3) could increase operating costs for Employers. The cost could stem from carbon tax / ETS, which will vary across jurisdictions, or through increased capex to transition assets / operations to a low-carbon business (for example, capital investment required to adapt vessels to run on low-carbon fuels or replace vessels entirely).	Supply chain Operations
Transition risks	**Renewable energy**	Ability to access renewable or low-carbon energy sources is crucial for shipping companies seeking to transition towards net zero targets. Greener alternative fuels face challenges such as high costs, limited availability, and technological barriers that need to be overcome before they can be more widely adopted. For O&G companies, the shift away from fossil fuels associated with renewable energy will impact end-market demand and profit.	Operations End-market
Transition risks	**Regulatory environment uncertainty**	Most Employers have a multinational footprint and are subject to different climate-related regulations. The risk is likely to be heightened where there is uncoordinated regulatory response from different governments on decarbonisation strategies and industry targets (such as low-carbon fuels and associated infrastructure).	Supply chain Macro
Transition risks	**End-market preference**	End-market customer / consumer preference may shift towards greener products and services. Increasing adoption of renewable energy sources and push for decarbonisation will lead to a decrease in demand for fossil fuels. This could result in loss of business for companies that do not transition as quickly as competitors.	Competition End-market
	Macro-economic conditions	Broader macro-economic uncertainty / recessionary conditions driven by climate-change could reduce availability of financing to support transition and impact customer spend. Access to financing may also be impacted as lenders face increased scrutiny regarding financed emissions.	Macro-economic
Physical risks	**Supply chain/ operational disruption**	Supply chains, shipping routes, vessels, ports or other infrastructure could be disrupted as a result of more acute / chronic climate events such as storms / sea level rise. This could lead to higher operational / maintenance costs to repair any damage and remediate the disruption, and increased insurance premiums.	Supply chain Operations
Physical risks	**Permanent displacement of population**	Employees working at key operating sites (incl. manufacturing sites and offices) or populations making use of products / services are permanently displaced as a result of more frequent and severe acute / chronic climate events, such as coastal flooding, heat stress, etc.	Operations End-market

Employer covenant scenario analysis results

	Near-term *2024-2026*	Mid-term *2027-2030*	Long-term *2031-2040*
Orderly	**Lower risk**	**Medium risk**	**Medium risk**
Failed	**Lower risk**	**Medium risk**	**Higher risk**

The results of Cardano's analysis suggest that risks to employers from climate change appear low in the near-term due, predominantly, to their diversity.

However, in the mid-term, risk is expected to increase, driven by adverse climate events such as storm flooding and increasing decarbonisation costs as well as increased operational disruption through regulation and extreme weather events.

Over the longer term, employers' operational routes and sites are likely to be significantly impacted by extreme weather events (particularly in a failed transition), which may result in increased capital or operational costs. This is heightened by the fact many employers operate globally, making physical risks harder to avoid. In an orderly transition, physical risks are expected to be lower but decarbonisation costs and the risks of transitioning to a low-carbon economy rise materially, particularly for ferry and oil & gas sector employers.

To address these risks, the Trustee has considered the recommendations from the covenant adviser in each of the following areas:

- climate risks identified (e.g. emerging regulations, extreme weather events, renewable energy pricing and availability, and carbon pricing in key jurisdictions) will be integrated into the Trustee's annual employer covenant monitoring framework as well as their covenant assessment;

- the Trustee's covenant advisor will monitor news of new or emerging climate risks to the employers' sectors on an ongoing basis; and

- the impact of climate risk on the employer covenant over the mid and long-term will inform the Trustee's choice of long-term funding targets and time horizon.

Section 4: Risk Management

Climate change is a key risk and opportunity and therefore receives particular attention as part of the Trustee's ongoing risk management processes. The Trustee thinks about how it integrates climate into this in three ways:

Governance

Climate change is included within the Trustee's risk register which is monitored quarterly and reviewed in-depth annually. This clearly details the impact and likelihood of the risk, the controls in place and the actions the Trustee takes to manage, mitigate, and exploit both the risk and opportunity. Although the Trustee retains ultimate ownership, the risk register clearly sets out the parties that assist the Trustee in its responsibilities.

Top-down

The climate change scenario analysis shown in Appendix I provides the Trustee with a holistic overview of the potential impacts of climate change and how they may affect the Fund's funding strategy (across assets, liabilities, and covenant). This is an important risk management tool for a top-down risk and opportunity assessment.

Bottom up

As mentioned, the Trustee also conducts more granular analysis to manage the risks and opportunities associated with climate change. These include:

Security analysis – The Trustee calculates various climate change related metrics for the underlying securities within the portfolio. This includes metrics such as absolute carbon emissions, carbon footprint and exposure to climate opportunities. These provide the Trustee with a more detailed understanding of the Fund's exposures.

Manager analysis – The Trustee also conducts an annual review of the DCIO and underlying investment manager policies, processes, and actions in the area of SI, which includes a focus on climate change. The Trustee have been reassured in the results presented and the actions taken to date. The Trustee does however have a strict policy of engagement if any concerns are identified as part of this monitoring.

Employer analysis – The Trustee also conducts an annual review of the Fund's employers, which provides an opportunity to review their response to climate change risks and considers whether any specific risks have arisen that require mitigating actions from the Trustee.

Stewardship

One of the other risk and opportunity assessment tools the Trustee uses is stewardship. As mentioned in other parts of the report, this is a key way in which the Trustee can influence the actions of companies and broader industry and therefore mitigate the climate risk the Fund is exposed to and enhance the potential opportunities available as part of the transition. Over the Fund Year, the Trustee has undertaken, with support from its advisors and DCIO:

- Significant engagement via EOS at Federated Hermes with companies and industry (see governance section)
- Review of the stewardship practices of the underlying investment managers with a focus on assessing this relative to the Trustee's climate stewardship priority
- Contributed, via the DCIO, to a number of key industry initiatives, working groups and consultations
- Set stewardship priorities as a way to conduct focussed reporting and to communicate with the Fund's advisers.

Summary

By using the variety of risk tools referenced above, the Trustee has identified a number of key areas to continue further work to help exploit and manage the opportunities and risks associated with climate change. The key priorities are continuing to ensure that the investment managers are appropriately factoring climate change into their approach and stewardship activities as well as making sure that any future insurance activity includes due consideration to climate change as a factor.

Section 5: Metrics and Targets

Introduction and overview

A key facet of the Trustee's ongoing monitoring and management of climate change is having good data on the Fund's exposure in this area. Although there are limitations with some of the metrics presented and the completeness of data, the Trustee still has a strong belief that these can helpfully inform the ongoing monitoring and management of the Fund. The Trustee considers metrics across the Sustainable Investment spectrum, but the focus within this report is those on climate change.

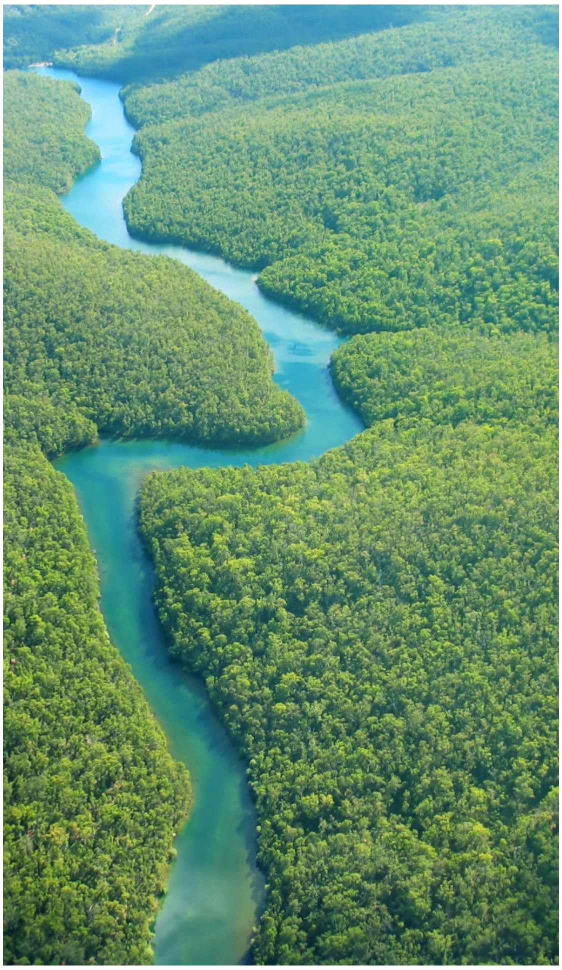
The metrics disclosed have been selected from the following categories:

- An absolute emissions metric
- An emissions intensity metric
- An alignment metric
- One additional climate change metric

It is also important to be clear which emissions are captured within the above metrics and therefore the Trustee have referred to the categories of emissions as follows:

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

Due to the nature of the emissions, Scope 3 emissions are significantly more difficult to calculate than Scope 1 or Scope 2 emissions for any given entity. It is also the case that, for some assets, even Scope 1 and Scope 2 emissions are difficult to calculate. The Trustee has included Scope 1, 2 and 3 emissions within this report. Scope 1 and 2 emissions are reported separately to Scope 3 emissions given their differences in data quality and application. Further detail is provided on this under the Scope 3 section.



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Overview of analysis

The following table details the rationale for choosing these metrics.

Metric	Definition	Rationale
Total Carbon Emissions ("tCO2e")	An 'absolute emissions' metric which gives a measure of carbon emissions attributable to the Fund. This is calculated in line with the Greenhouse Gas (GHG) protocol methodology and currently includes only Scope 1 and 2 emissions. The underlying emissions data has been sourced from MSCI and, in line with the protocol, includes all the major GHGs with a conversion into carbon emissions equivalent quantities. We have used each entity's enterprise value, including cash (EVIC) to attribute carbon emissions.	Mandated as part of the Department for Work and Pensions Statutory guidance
Carbon Footprint (tCO2e / $ invested)	An 'emissions intensity' metric which gives a measure of how many equivalent tonnes of carbon emissions each million invested causes. This uses a comparable methodology as the total carbon emissions referenced above for underlying data and emissions attribution for companies.	It provides a direct measure of absolute emissions, which ultimately impact global outcomes and provides a simple comparable measure across portfolios of different sizes
Percentage of assets with approved Science based targets ("SBTi")	A 'portfolio alignment' metric which is a forward-looking measure of the percentage of assets with targets validated by the Science-Based Targets Initiative.	It provides a consistent verification of a company's alignment to the Paris agreement.
Transition Management Score	This aims to assess exposure to the investments which are the most likely to benefit from transition to a low carbon economy and is calculated as a percentage of the Fund's assets with a reasonable or effective transition management programme (MSCI's Low Carbon Transition score).	This additional metric of 'transition management score' has been selected as this reflects the Trustee's belief that the global response to climate change can reward those who respond and adapt quickly as well as punishing the laggards.

Whilst data quality isn't one of the Fund's metrics, we believe it is important to monitor this as climate metrics are at an early stage and data is currently limited. We also believe that improved data quality and coverage is an area that we (through the Investment Consultant) can most influence our investment managers and improvements would allow better decision making on future carbon metrics.

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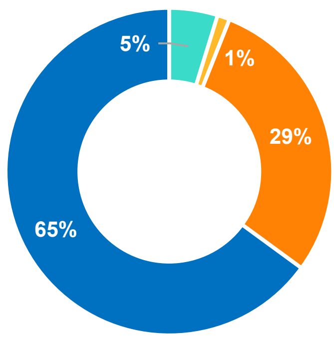
As at 31 March 2023	Allocation	Carbon Emissions Data: Absolute Emissions (tCO2e) – Scope 1 & 2	Carbon Emissions Data: Carbon Footprint (tCO2e / $m) – Scope 1 & 2	% of assets with approved SBTs	Transition Management Score
Total assets*		27,551	26	2.3	35
Equity	4%	1,162	1	1.7	4
Alternative Credit	7%	6,370	6	0.1	4
Private Markets	26%	16,872	16	0.0	23
Diversifiers	7%	3,147	3	0.5	4
Cash	11%	See further in report			
LDI	45%				
Data as at 31 March 2022 for comparison					
*Total assets**		*38,354*	*24*	*11.4*	*64*

*LDI assets have been classified as cash for the total asset figures reported above, consistent with the approach taken last year. We have provided further information on the LDI assets in the coming pages.

Carbon emission (CE) data quality for scope 1 & 2	Data quality
Actual holdings – CE reported by company	5%
Actual holdings – CE estimated by third party	1%
Proxied holdings	29%
No data*	65%



*LDI and cash holdings within the portfolio account for 56% of the "No data" data quality allocations.

Trustee observations of analysis

- The Trustee recognises the limitations associated with the climate metrics given the underlying data quality and the 'proxying' of assets required. That said the Trustee reflects positively on being able to assess the portfolio through this new lens and provide an assessment of the exposure to climate change risks and opportunities.

- The Trustee reflected positively that the Carbon Footprint for the majority of the Fund's assets is comparable to that of a similar standard market index. The Trustee noted that Carbon Footprint is not necessarily an indication of the Fund's exposure to climate risk (which the Trustee ultimately cares about) as the two are not always highly correlated.

- The Trustee recognises that the metrics associated with the private assets are not reflective of the holdings the Fund actually has, given the proxying required.

(continued on the next page)

Trustee observations of analysis (continued)

- The Trustee recognises that the definitions and calculation methods for various metrics will evolve over time. Indeed, the reduction in the percentage of Fund assets with approved Science based targets and the lower transition management score that is reported as at 31 March 2023, is due to a change in the calculation methodology.
    - The calculation methodology supporting the science based targets metric has changed since last year's report and proxy holdings are no longer included in the calculation.
    - The methodology for the transition management score scaled the total score to cover cash in the portfolio in the figures reported in last year's report. Industry best practice is to no longer scale the transition management score for cash held in the portfolio, therefore this year's transition management score appears significantly lower than last year and the majority of this reduction is due to the change in calculation methodology.
- While the absolute emissions have decreased over the year, over 2022 the carbon footprint has increased – resulting from a change in market conditions and the impact on the portfolio. We have discussed the increase in the carbon footprint over the year further in the target section of this report.

Recognising these limitations, the Trustee continues to use these metrics to inform the actions referred to later in this section and engage with the Fund's DCIO.

Government Bond investments

As referenced early in the report, the Trustee has agreed to exclude liability hedging assets from the Fund's target and to report the climate metrics separately. The reason for the separate disclosure is because the underlying methodology is materially different, as are the potential actions available to the Trustee.

For UK Government Bonds, for example, the carbon emissions are calculated as the territorial emissions in the whole of the UK i.e. those that take place within a country's territorial boundaries and include exports but omits imports. The denomination used to attribute emissions is the total amount of UK Government Debt outstanding.

The rationale then for the current exclusion of Government Bonds from the Fund's target is as follows:

- The Trustee primarily holds Government Bonds as assets to hedge the Fund's liabilities and as such, even if reducing exposure to these assets would lead to an overall improvement in climate metrics, it would open the Fund up to excessive funding and investment risk
- The Trustee recognises that it has limited capacity and capability to engage with the Government on climate related metrics
- The level of financial risk arising from these assets is perceived to be much smaller i.e. the influence of climate change on the price of Government Bonds in comparison to the other assets held is likely to be lower

Whilst the above provide the rationale as to why the Fund excludes liability hedging assets from the Fund's target, the Trustee still believes it is useful to monitor these figures over time. As such, the table below shows the climate metrics for the Fund's LDI portfolio. The Trustee, via their DCIO, does also continue to monitor that the manager of these Government bonds appropriately considers climate change in their actions, whether that be selecting bank counterparties for derivatives or engaging with industry discussions and consultations on climate related matters. The DCIO has also partnered with a manager in this space which the DCIO views very positively in their approach to climate change.

Scope 1 and 2 Emissions for government bonds

Metric	LDI portfolio
Total allocation	£395.5m
Total allocation (% of portfolio)	45.4%
Absolute Emissions (tCO2e)	92,457
Carbon footprint (tCO2e / £M invested)	175.3

The Trustee’s view on approaching scope 3 emissions

Scope 3 emissions data is critical to help build a better picture as we decarbonise our portfolios and economies. However, the Trustee believes that current reported scope 3 emissions data is largely inadequate for purposes including making accurate climate-informed investment decisions. Further, given data issues, the Trustee believes that disclosing the scope 3 emissions of investment portfolios at this stage will necessarily be limited in coverage, subject to large estimation errors, and not fit for meaningful comparison between investors or over time. At a minimum, the Trustee believes any scope 3 emissions disclosures should be disaggregated from Scope 1 and 2 emissions. The Scope 3 emissions are therefore outlined below separately.

Data providers, like MSCI, have tried to solve for this problem by providing scope 3 datasets using proprietary models and internally vetted methodologies. However, current solutions rely significantly on top-down sector emissions data with limited use of bottom-up data (which is company-specific). Models that rely on sector information limit users’ ability to distinguish companies from peers. While there is sizable support from the investment industry and others for better disclosures, we need to be realistic around the current issues of reliability of scope 3 data available.

Importantly, assessing risks and opportunities are not purely about emissions. A holistic picture that uses various metrics can be achieved through our DCIO’s Climate Dashboard approach. The Trustee believe that this balanced scorecard approach can helpfully inform investment decision-making and support the construction of robust and resilient portfolios.

Whilst scope 3 emissions disclosure is improving, we believe that the investment industry can play a proactive role in accelerating and supporting this trend. Our DCIO is working closely with and engaging data providers to promote better disclosures. Similarly, our DCIO engages extensively with the asset management community, including on pushing for better corporate disclosure, and for the adoption of generally accepted standards and methodologies. Our DCIO also undertakes direct and indirect policy engagement, advocating for the adoption of common standards and methodologies, including those of the International Sustainability Standards Board. Our DCIO believes the recently released IFRS S1 and S2, including provisions around scope 3 emissions, are a highly significant forward step.

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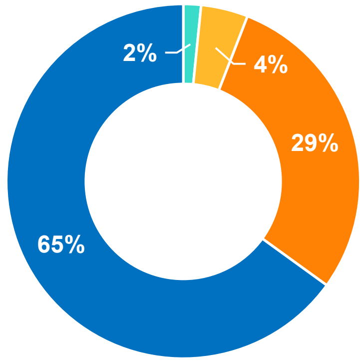
Scope 3 emissions

As at 31 March 2023	Allocation	Carbon Emissions Data Absolute Emissions (tCO2e) – Scope 3	 Carbon Footprint (tCO2e / $m) – Scope 3
Total assets*	54.2%	99,988	93

*LDI assets have been classified as cash for the total asset figures reported above, consistent with the approach taken last year and the figures reported for scope 1 and 2 emissions earlier in this report.

Carbon emission (CE) data quality for scope 3	Data quality
Actual holdings – CE reported by company	2%
Actual holdings – CE estimated by third party	4%
Proxied holdings	29%
No data*	65%



*LDI and cash holdings within the portfolio account for 56% of the “No data” data quality allocations.

Data quality

Whilst the Trustee has aimed to carry out the analysis as far as they are able, the availability of data is dependent on external factors which are largely outside the Trustee's control such as certain companies not disclosing their carbon emissions. The charts below show how the portfolio has been modelled, be it through the analysis of direct company holdings data, where it was available, or otherwise, using proxies. For the private assets the Trustee has proxied the exposure by using appropriate geographic and sector weights for the underlying holdings. The charts only show this breakdown in respect of the Fund's assets excluding LDI (Government Bonds) & Cash.

Whilst the Trustee, aims for 100% data quality for its underlying investments, it understands that there are limitations with data availability, particularly for private assets. The Trustee uses MSCI, a market leader in sustainability-related data, to provide ESG and Carbon metrics for the underlying companies. Whilst MSCI has a broad, constantly expanding and improving set of data, this primarily covers public companies due to the nature of the legislative requirements for these companies. Private companies, on the other hand, are not always subject to the same level of transparency and thus require proxying using characteristics that map to similar public companies. Our expectation is that data coverage will continue to improve as pressure from the investment industry leads, including from the Fund's investment managers, to further transparency for private market assets and the Trustee will continue to monitor and encourage this over time.

Where data was not available on the underlying holdings, the Trustee has followed the 'pro-rata approach' which involves scaling up the portfolio data that exists rather than assuming such positions have zero emissions. The Trustee believes this is a more accurate and prudent approach to take.

On the Trustee's behalf, the DCIO is working actively with its investment managers to improve the quality of the data supplied for these purposes over time. The Trustee will monitor how these metrics evolve over time on an annual basis and understand the drivers for change.

Target

The Trustee recognises that measurement of progress of the Fund and the whole investment industry in stewarding the transition to a net zero and climate-resilient economy is an important issue. There is no single definitive metric that can be used to adequately measure progress as climate is a multi-dimensional issue, and the data and analytics in this space are rapidly evolving. In line with the regulations, the Trustee has however set a target on a single metric which is outlined below. It is well acknowledged in the industry that there are several difficulties associated with measuring progress against a carbon footprint goal, such as data quality, backdating of metric information and the fact that changes in the metric are often driven largely by noise (e.g. a company value changing) rather than reductions in real world emissions. The Trustee therefore measures success by monitoring change in multiple metrics and by reviewing the actual actions taken by the Trustee board and the third parties that it collaborates with.

The Trustee has identified carbon footprint as the metric on which to set a target. This target is to reduce the Fund's carbon footprint of the non-government bond assets (Scope 1 and 2 emissions) by 50% by 2030 and to achieve net-zero by 2040 with a baseline of 2022. The Trustee is reassured that the DCIO has also made a commitment that is consistent with this objective and a key part of our responsibility will be monitoring the DCIO's progress against this objective over time. The Trustee intends that this goal will be achieved through engagement (with the Fund's underlying managers and companies invested in), impact investing (in assets such as green energy), strategic changes (investing in assets with lower climate risk) and as a result of the 'free-rider' effect. This recognises that although the Trustee has and will take positive actions, the Trustee won't be able to achieve this goal alone and will require the continued collaboration of the global community to combat climate change.

Medium Term Target
50% reduction in GHG footprint of the Group's portfolio of assets (excluding government bonds) by 31 March 2030 (Scope 1 & 2 emissions) from 31 March 2022

Long Term Target
Net-zero GHG footprint of the Group's portfolio of assets (excluding government bonds) by 2040 or sooner (Scope 1 & 2 emissions) from 31 March 2022

The Trustee has reported year on year progress below in relation to the carbon footprint (Scope 1 and 2 emissions) of the Fund's assets. This can be seen in the table below.

Over time, the Trustee expects that the longer-term trend of Fund's carbon footprint will continue downwards, towards the Trustee's net-zero target. The Trustee, however, also recognise that there may be short term deviations in some years. This could be due to changes in underlying holdings and ongoing developments within the industry (such as data availability and methodology changes). The Trustee also recognises that a key driver of change will be the actions of governments, consumers and corporates and while the Trustee will do what it can to ensure the objective is achieved, there is reliance placed on the actions of other.

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Change in carbon footprint over the 12 month period to 31 March 2024

Target	**MNRPF 2022** Carbon Footprint (tCO2e / $m) – Scope 1 & 2	MNRPF 2023 Carbon Footprint (tCO2e / $m) – Scope 1 & 2	Year on year change
Total assets*	24	26	+8%

*LDI assets have been classified as cash for the total asset figures reported above, consistent with the approach taken last year. We have provided further information on the LDI assets in the coming pages.

Steps taken over the year to achieve target

The Trustee has taken the following steps to help achieve the target outlined. These are in addition to the various other points referred to throughout this statement.

- Ensure the DCIO has made a commitment that is consistent with the Trustee's target. The Trustee assesses the DCIO annually.

- The Trustee reviewed the engagement activities of the DCIO over the year and was comfortable with the work being undertaken.

- The underlying managers continue to have strong policies and processes in these areas.

- The Trustee has reflected on the increase in carbon footprint over the year. We note that following the gilts crisis in 2022, the composition of the growth assets has changed as less liquid elements increased as a proportion of the total fund assets and the less liquid assets tend to have a higher carbon intensity. Due to the rise in gilt yields seen in markets in 2022, the Fund was required to increase the level of collateral in the Fund's LDI portfolio to maintain the liability hedging as far as possible. In order to do so, the Fund sold its more liquid holdings to top up the collateral within the LDI portfolio, therefore leaving the less liquid holding with a higher allocation within its growth portfolio. Another result of rising gilt yields over 2022, is that the total portfolio in Sterling terms was 29% smaller, which also increased the Carbon Footprint as at 31 March 2023. The Fund is intending to rebalance the distribution between illiquid and liquid assets in its growth portfolio. Further, the carbon footprint reported also increased over the year due to market movements.

Going forward

Next year the Trustee will be reviewing the target that his been set to consider whether it remains fit for purpose and to take account of some of the limitations referred to above. As mentioned, the target aside, the Trustee continues to focus on taking appropriate actions to manage the risks and opportunities and to monitor and balance the scorecard of climate metrics in line with the belief that climate change will have a material impact on financial outcomes in the future.

The Trustee is continuing to monitor the evolving climate measurement landscape with the expectation that the robustness of the metrics will improve over time. The Trustee looks forward to sharing updates on our progress in monitoring and managing climate risks and opportunities next year.

Appendix I – climate scenario analysis results

Previous climate scenario analysis – as at 2022

Working with its DCIO, the Trustee seeks to mitigate the risks and take advantage of opportunities which may occur to improve the likelihood of the Fund meeting its short- and medium-term funding and investment goals.

These time horizons, risks and opportunities are key inputs into the climate scenario analysis. The Trustee, in conjunction with the DCIO, Fund Actuary and Covenant Adviser, has conducted this scenario stress testing and presented the results within this section. The key climate scenarios that the Trustee has considered are:

	Lowest Common Denominator	Inevitable Policy Response	Global Coordinated Action	Climate Emergency
Description	A 'business as usual' scenario where current policies continue with no further attempt to incentivise further emission reductions.	A delay in meaningful action but a rapid shift in policy in the mid/late 2020s. Policies are implemented but not in a completely co-ordinated manner.	Policy makers agree on and immediately implement policies to reduce emissions in a globally co-ordinated manner.	An immediate, ambitious, and coordinated response in which aggressive policy is pursued and more extensive technology shifts are achieved.
Temperature rise vs pre-industrial levels	3.5ºC	2.0ºC	2.0ºC	1.5ºC
Renewable energy by 2050	30-40%	80-85%	65-70%	80-85%
Transition risk level (shorter term)	Low	High	Low – Medium	Medium – High
Physical risk level (longer term)	High	Low – Medium	Low	Low

The scenarios were created to reflect the differing paths that could be taken to meet, or fail to meet, the temperature rise target agreed as part of the Paris Agreement. The Paris target is to limit global temperature rises to well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. The scenarios differ in the size of the physical risks, based on the resulting temperature impacts, but also in the size of the transition risks. In the view of the Trustee, the four scenarios selected reflect an appropriate range of plausible decarbonisation pathways and are relevant in the context of the Fund's journey and funding plans. The Trustee recognises that there is the potential for more extreme outcomes than reflected in the chosen scenarios.

The Trustee has illustrated below the impact of the climate change scenarios on the Fund's funding level. The Trustee has considered these over a timeframe that is consistent with the Fund's longer term time horizon (c.15 years). The Trustee recognises that assuming such climate scenarios are priced in gradually, year by year, is an unrealistic expectation and in practice this is likely to be far less linear. The Trustee has therefore also included a one-off shock which seeks to illustrate the impact if climate change was to be reflected instantaneously. This assumes that markets immediately price in the transition and physical risks over the next 15 years and that the market initially overreacts to this news in struggling to price in the actual impact. Whilst this is potentially unrealistic, the Trustee thinks this helpfully stress tests the assumptions made in the analysis and helps consider how robust the funding strategy might be. The Trustee also recognises the uncertainty in the underlying assumptions and that the shocks experienced could be larger.

In some climate scenarios, the modelling process implies reduced life expectancies (relative to other scenarios and/or funds' central mortality assumptions) and therefore a relative reduction in the Fund's liabilities. This is a plausible potential outcome arising from the negative impacts of increasing climate change. This can suggest a relative improvement in the expected funding position for the Fund even when combined with associated reductions in the value of the Fund's assets. However, it is important to recognise that an assessment of what is in the best interests of the Fund and its members is a much broader question than the impact on funding level alone. Key considerations may be a reduction in the quality (and length) of members' lives, and the quality of the environment that they will retire into. Consequently, the results of any such modelling should not be assumed to reflect any complacency or acceptance (either implicit or explicit) that the Trustee considers global inaction or business-as-usual with respect to climate change to be in the best interests of the Fund or its members. The Trustee believes that climate change is a systematic risk of unprecedented scale and severity. Actions to address it are a collective priority, given the risks it presents to individual pension schemes, the ongoing resilience of the savings universe, and the planet as a whole.

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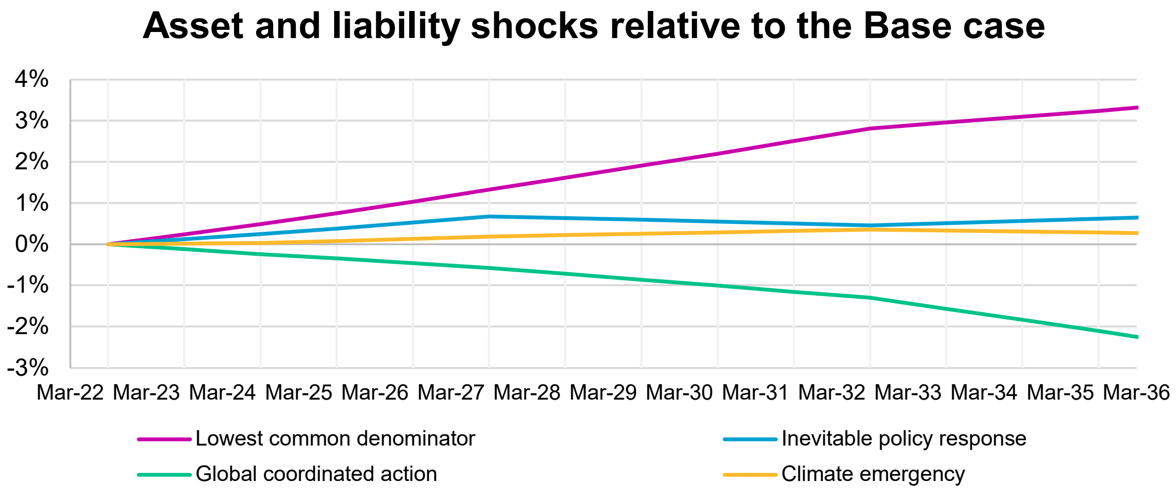
Impact of Climate Drags on the Fund's Funding Level relative to the Base Case



Scenario*	Asset return impact p.a.	Liability return Impact p.a.	Relative funding level in September 2030
Lowest Common Denominator	-0.05%	- 0.24%	2.2%
Global Coordinated Action	-0.01%	+ 0.14%	-1.0%
Inevitable Policy Response **	- 0.08%	- 0.12%	0.6%
Climate Emergency	- 0.03%	- 0.04%	0.3%

* Relative to the base case. Base case is assumed to price in Lowest Common Denominator transition costs.
** Asset return impact begins from September 2027 (i.e. 5 years from the projection date) in this scenario. This represents the potential delay in agreeing and implementing required action.
Analysis is based on the Fund's Journey Plan as at 30 September 2022, where the base case funding level represents 110.3% funding in September 2030.

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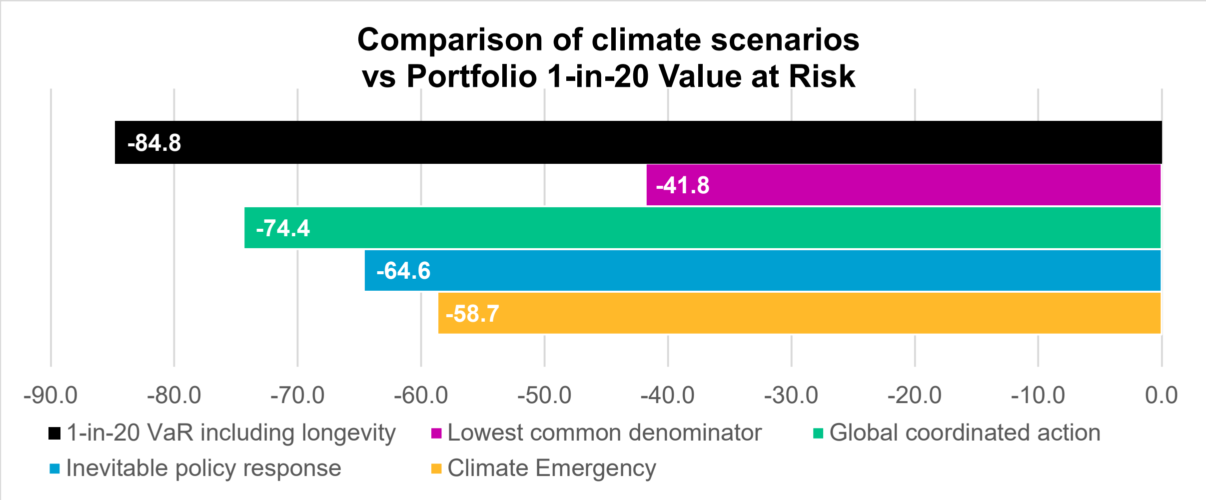
Impact of Climate Shocks on the Fund's Funding Level



Scenario	Asset shock (£m)[1]	Liability shock (£m)[2]	Increase in deficit (£m)[2]	Decrease in funding level
Least Common Denominator	- 76	- 34	42	4.7%
Global Coordinated Action	- 54	+ 20	74	7.4%
Inevitable Policy Response	- 82	- 17	65	6.9%
Climate Emergency	- 65	- 6	59	6.1%

1. The asset shock is estimated to be approximately twice the size of the per annum impacts over time as markets tend to overreact in more extreme scenarios.
2. Liability shocks are assessed on the Fund's gilts +0.5% liability basis.
3. Analysis is based on the Fund's position as at 30 September 2022

As a result of the combined analysis, the Trustee's assessment is that the investment and funding strategy of the Fund is resilient against climate risk, and that the Fund is expected to be relatively well protected against the impact of climate change both as a gradual impact and a sudden shock. This was driven by a key factor:

- **The diversified portfolio and allocation to climate positive investments** – The Fund has a sizeable allocation to investments which are expected to benefit from the transition to a low-carbon economy. These include investments in wind, solar and opportunistic renewable energy investments.

Although the analysis provided the Trustee with some reassurance on the robust nature of the Fund's funding strategy, it did clearly highlight that climate change could have an impact on the Fund's outcomes. This reiterated to the Trustee that it warrants continued focus as part of the Trustee's broader SI strategy and should remain a priority area for portfolio monitoring, stewardship activities and manager engagement. In terms of next steps, the Trustee is focussing on the following:

- The Trustee is investigating the introduction of longevity hedging
- The Trustee is continuing to engage with its DCIO to ensure its investment managers maintain a focus on the risks and opportunities associated with climate change
- The Trustee uses a dashboard of climate and ESG metrics together with an assessment of stewardship policies/activities to monitor the portfolio annually

As mentioned earlier, the Trustee intends to update this analysis at least every three years and will be testing annually whether this needs to be done more frequently, including if there have been material changes to the scenarios used or the Fund's funding strategy.