FOR PROFESSIONAL CLIENTS ONLY

DERBYSHIRE PENSION FUND

Climate Risk Management Report

FOURTH EDITION • JANUARY 2024 • PUBLIC

PREPARED BY LGPS CENTRAL LIMITED

LGPS Central Limited

About this Report

This report represents the fourth edition of the Derbyshire Pension Fund's ("The Fund" or "DPF") analysis of its approach towards climate-related risks and opportunities. Previously titled the "Climate Risk Report," the name has been altered to "Climate Risk Management Report" in this edition to avoid any confusion with the Department of Levelling Up, Housing, and Communities' (DLUHC) climate-related disclosure requirement also named the "Climate Risk Report." This iteration follows the same structure as the previous editions released by DPF since 2020.

Section 1 of the report assesses the Fund's climate risk management framework and disclosure practices. It aims to evaluate the Fund's alignment with DLUHC recommendations on climate-related risk management. Additionally, it examines the Fund's maturity in handling these risks within its investment portfolio.

This analysis references DPF's 2023 Climate-Related Disclosure report[1] and public policy documents such as the Fund's Investment Strategy Statement,[2] Funding Strategy Statement,[3] and UK Stewardship Code 2020 Signatory Application (Stewardship Code Application).[4] DPF has also provided us with a copy of its draft updated Climate Strategy, which is currently subject to public consultation.[5] Emphasising compliance, the Fund's Climate-Related Disclosure report meets Task Force on Climate-Related Financial Disclosures (TCFD) guidelines, satisfying DLUHC's annual Climate Risk Report requirement. Recommendations from prior Climate Analysis Reports are included for continuity where relevant.

Section 2 of this report explores the Fund's climate metrics more extensively, notably highlighted within its Climate-Related Disclosure report. This section is specifically devoted to conducting a thorough analysis of the Fund's carbon footprint indicators. Serving as a comprehensive information hub, it illuminates the Fund's various initiatives geared towards improving its carbon footprinting activities.

Peak District National Park, Derbyshire

[1] Derbyshire Pension Fund - Climate-related Financial Disclosures report
[2] Derbyshire Pension Fund investment strategy statement
[3] Derbyshire Pension Fund - Funding Strategy Statement
[4] Derbyshire Pension Fund - The UK Stewardship Code 2020 Signatory Application
[5] The latest Climate Strategy refers to the Fund's Draft 2024 Climate Strategy, which at time of writing is currently in a draft format, subject to a public consultation.

Executive Summary

Climate Analysis

Summary of Recommendations and Considerations:

Governance

- Consider providing disclosure of climate discussions at working groups within, or outside of its pool.
- Consider enhanced disclosure relating to the climate related training undertaken by the Committee.
- Integrate 'climate solutions' data into the CRMS once an industry-agreed definition is available.
- Establish a Net Zero Stewardship Programme. This includes mapping the Fund's financed emissions to existing engagements, creating a Net Zero Voting Policy, establishing an alignment framework, and defining a policy advocacy programme.

Strategy

- The Fund should continue to commission Climate Scenario Analyses as recommended by DLUHC, with an awareness that the content of these analyses will develop in line with industry best practice.
- Consider disclosing additional information regarding the choice of scenarios included within the scenario analysis and also consider including information specifically addressing how climate risks are managed/mitigated.
- While the Fund's Investment Strategy Statement provides signposting to the Fund's Climate Strategy, the Fund could consider including climate considerations within the Investment Strategy Statement itself.
- The Fund could consider disclosing case studies of advocacy as recommended by DLUHC.
- Using the analysis from this Climate Scenario Analysis and the overall Climate Risk Report, DPF is on track to get a better understanding of the portfolio's capacity to transition into a low carbon economy. We recommend using this analysis to evolve DPF's sustainable investment targets to include more ambitious climate objectives.

Risk Management

- The Fund could provide additional detail on the management of risks outside of stewardship activities.
- Consider preparing further disclosure of details relating to the identification and assessment of specific risks associated with climate change.
- Further integration of climate risk management could be included within the Fund's Investment Strategy Statement, or through the publication of a Risk Management Framework.

Metrics & Targets

- Future iterations of the TCFD report should include the four metrics required by DLUHC. Where necessary the Fund should include an explanation to restated values.
- The Fund should seek to formalise the climate data availability targets and other appropriate targets included within the Fund's Draft 2024 Climate Strategy.
- The Fund could consider providing additional information on the climate metrics included, such as use cases and added value.
- Consider detailing the metrics and targets which correspond to the Fund's engagement activities.

Executive Summary *(continued)*

Climate Metrics

Equities Weighted Average Carbon Intensity (WACI):

96.8 tCO2e/$M Revenue

↓ 49.8% vs 2020 weighted benchmark (restated)

↓ 36.9% vs Reference Index

Invested 30%

of the portfolio in low carbon and sustainable investments:

→ 30% Strategic Asset Allocation

→ 29% DPF (30% on a committed basis)

Equities Financed Emissions:

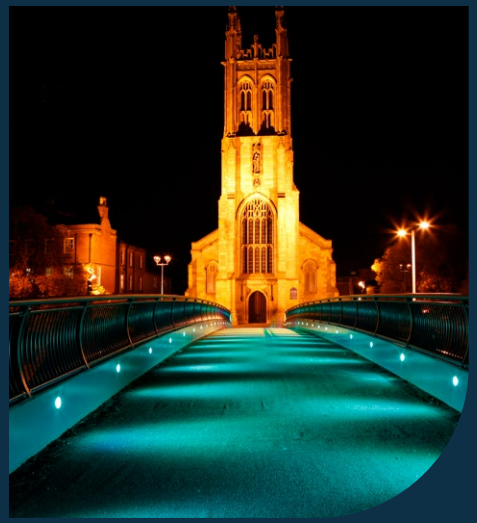
183,713 tCO2e

↓ 33.9% vs Reference Index

22.1%

of Equities financed emissions from companies which are 'Aligned' or 'Aligning' to Paris

↑ 10.6 pps vs FTSE AW



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Front Cover: Morning Mist in Peak District National Park, Derbyshire
Images (Clockwise): The Great Ridge, Peak District National Park, Derbyshire
St Mary's Church, Derby, Derbyshire
Hardwick Hall, Derbyshire

Section 1

Climate Analysis

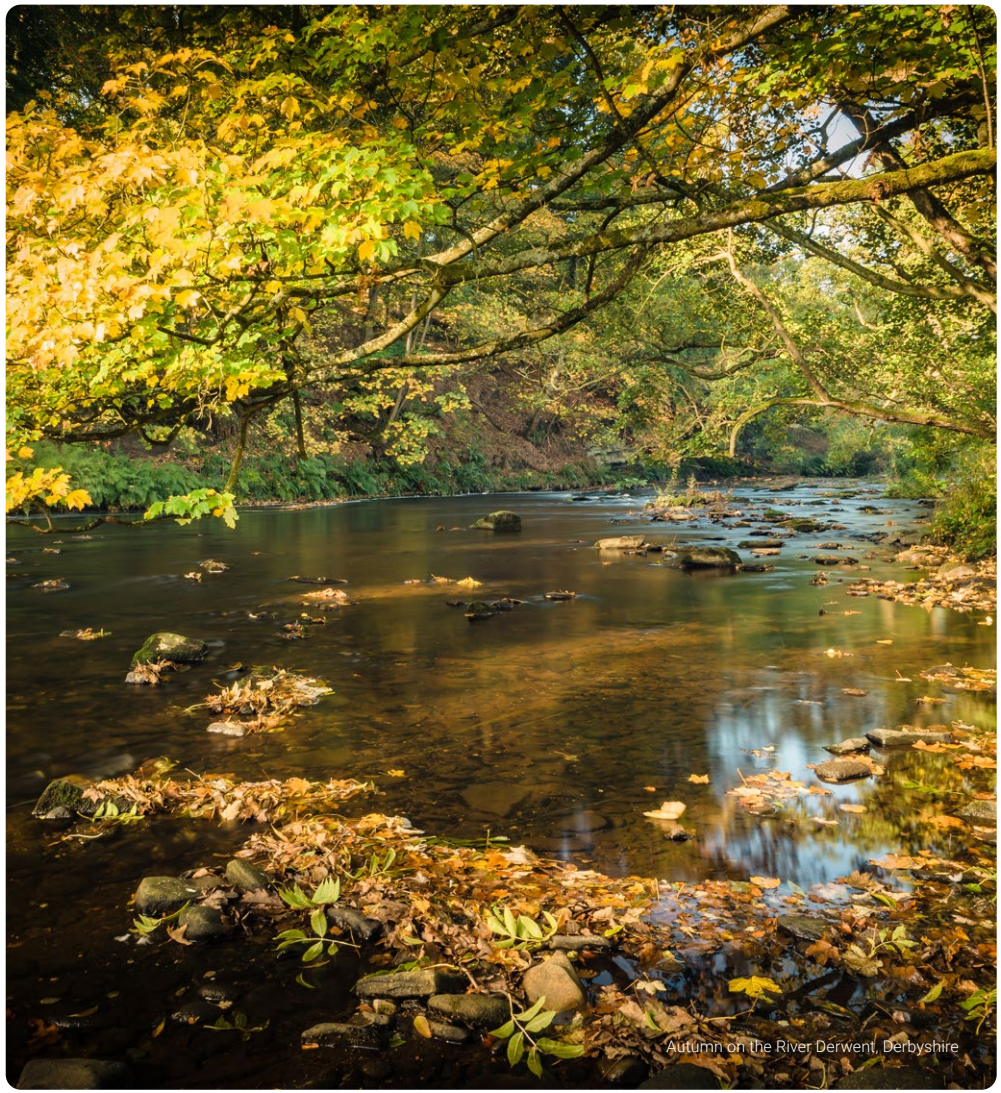
Landscape near Mam Tor Edale, Derbyshire

Introduction

The Fund has taken proactive steps in its climate-related reporting, voluntarily publishing annual reports aligned with the TCFD since March 2020. This demonstrates a strong commitment to addressing climate risks, even ahead of the anticipated mandate from DLUHC. The mandate is expected to require Local Government Pension Scheme administering authorities to identify, assess, and manage climate-related risks, aligning with TCFD recommendations.

The section's primary emphasis is on pinpointing pathways for advancing the Fund's action and disclosure regarding climate-related risks and opportunities. Our approach involves a thorough analysis of potential regulatory requirements and industry best practices to benchmark the Fund's existing approach. This process yields various observations and recommendations, providing actionable insights for the Fund's consideration and potential implementation.

This report adheres to the structure of the TCFD, with each section analysed according to the framework outlined above. Throughout this analysis, we identify best practices that often go beyond the scope of DLUHC requirements. It's essential to note that some other pension schemes and financial institutions are already ahead in implementing climate-related practices due to varying regulatory frameworks. While we recognise that the Fund may be considered ahead of the curve compared to other LGPS schemes, the primary purpose of this report is to drive further progress and improvement.



Autumn on the River Derwent, Derbyshire

Introduction *(continued)*

In our evaluation, we have undertaken several key steps to assess the Fund's preparedness for potential regulatory requirements:

Step 1

We scrutinised the consultation document released by DLUHC on 1 September 2022,[6] using it as a valuable reference for our analysis. While awaiting the final decision from DLUHC, we leveraged the information within the consultation to inform our assessment.

Step 2

Using the TCFD Maturity Map[7] as a foundational framework, we assessed the Fund's current climate reporting. This evaluation aims to pinpoint opportunities for enhancing the Fund's reporting, progressing towards best practice. The TCFD maturity map is a framework for gauging an organisation's maturity in understanding, managing, and addressing climate change matters. Although not industry-specific, this map helps assess how well an organisation has implemented the four pillars of TCFD recommendations—Governance, Strategy, Risk Management, Metrics, and Targets—along with identifying improvement opportunities over time. The matrix categorises maturity into three levels: Limited, Moderate, and Full.

Step 3

To gain broader insights, we reviewed TCFD reports published by diverse organisations within the Financial Services industry. This review encompasses both asset owners and asset managers, allowing us to gauge industry best practices and actions taken to achieve 'full disclosure' status within the TCFD Maturity Map. We use these actions as benchmarks to measure the Fund's progress.

Step 4

We conducted an in-depth analysis of the Fund's public disclosures, scrutinising its approach to identifying, assessing, and managing climate-related risks and opportunities. This analysis was based on the Fund's publicly accessible information, including but not limited to its Investment and Funding Strategy Statements, Responsible Investment Framework, Climate Strategy, and its most recent climate-related disclosure.

Step 5

Based on this assessment, we offer recommendations and considerations to guide the Fund in advancing its climate-related management and reporting. This ensures it remains well-prepared to meet potential regulatory requirements and aligns with industry best practices.

[6] https://www.gov.uk/government/consultations/local-government-pension-scheme-england-and-wales-governance-and-reporting-of-climate-change-risks/local-government-pension-scheme-england-and-wales-governance-and-reporting-of-climate-change-risks

[7] TCFD Maturity Map, The Prince's Accounting for Sustainability Project. Found here: https://www.tcfdhub.org/resource/tcfd-maturity-map/

Governance

Proposed DLUHC Requirements

Administering Authorities ("AA") will be expected to establish and maintain, on an ongoing basis, oversight of climate related risks and opportunities. They must also maintain a process or processes by which they can satisfy themselves that officers and advisors are assessing and managing climate-related risks and opportunities.

Disclosure Maturity Map

GOVERNANCE DISCLOSURE	LIMITED DISCLOSURE	MODERATE DISCLOSURE	FULL DISCLOSURE
	• The board's oversight of climate-related risks and opportunities. • Management's role in assessing and managing climate-related risks and opportunities. • A published policy or commitment statement on climate change.	• A statement on how the board is actively considering climate-related risks and opportunities on a regular basis. • Measures to increase board knowledge on climate-related risks and opportunities such as compulsory training or use of an expert advisory board. • A named individual or committee responsible for climate change at board level. • Clear consideration of physical, transition and liability risks. • Commitment to reducing or avoiding impact on, and of, climate change, with short-, medium- and long-term targets.	• Capacity and competence of the board to respond to climate-related risks and opportunities effectively. • Climate-related risks and opportunities are integrated into standard board agendas. • Full and clear consideration of physical, transition and liability risks over short-, medium- and long-term time horizons. • Financial incentives for executives on progress towards achieving short-, medium- and long-term climate targets.

Governance *(continued)*

Industry Best Practices

Signposting

Several asset managers such as abrdn, Royal London and Schroders included website links to specific sections of their annual report in the TCFD. The annual report contains the profiles of these asset managers' board of directors, including their competency in environmental, social and governance (ESG) issues such as climate. This signposting practice enhances accessibility and facilitates the reader's navigation of relevant information.

Governance Structures

Most financial institutions either have a specific board-level sustainability committee or discuss climate-related risks at the board's audit and risk committee. Liontrust also named a specific Non-Executive Director responsible for all ESG matters. Whilst not compulsory, establishing a dedicated board committee for climate-related matters provides expertise, accountability, strategic alignment, transparency, risk mitigation, opportunity identification, regulatory compliance, stakeholder engagement, and a long-term perspective. This proactive approach ensures organisations effectively address climate challenges and opportunities while fulfilling their responsibilities to stakeholders and society.

Transparency

To demonstrate how climate-related risks are integrated into board agendas on a regular basis, Scottish Widows summarised topics discussed, and key decisions made on climate matters throughout the year. Including examples and case studies in a report enhances reader engagement by providing real-world, practical illustrations that make complex concepts more accessible and relatable. It adds credibility, inspires, and fosters problem-solving, making the content more informative and actionable.

Remuneration

Financial institutions which are listed on the stock exchange are required to disclose its Key Management Personnel's (KMP) remuneration. There are various examples of the climate-related metrics that these institutions use to measure KMP's performance for remuneration purposes. Most include climate-related metrics in their long-term incentive plans, but Royal London include ESG metrics in both short- and long-term incentive plans. While we believe this disclosure is reflective of industry best practice, we also acknowledge that this measure is neither feasible nor appropriate for an LGPS pension fund.

Governance *(continued)*

DPF Current Disclosures and Practices

Governance Structures

The Fund's TCFD report provides transparency and accountability of the key decision-making body within the Fund, the Fund's Pensions & Investments Committee (Committee), which is responsible for approving the Fund's Investment Strategy Statement, Responsible Investment Framework and Climate Strategy. The Fund's Committee receives annual Climate Risk Reports provided by LGPS Central Limited (LGPS Central or LGPSC) and receives ongoing responsible investment and climate-related risks and opportunities training. The Committee is also supported by an Independent Investment Advisor who provides advice on climate-related risks and opportunities. As the Fund's Committee is ultimately responsible for the Fund's approach to climate risks, disclosures regarding climate orientated training and access to resources demonstrates the credentials of the Committee and an ability to challenge the Fund's approach to climate risk.

Additional details regarding the training received by the Fund's Committee are disclosed within the Fund's Stewardship Code Application. This report contains examples of recent training sessions, including Global Sustainable Equities, Climate Stewardship, Responsible Investment Framework, and Introduction to New Climate Strategy. The inclusion of the additional training details provides credibility to the Committee's ability to understand and manage climate related risks within the Fund.

Signposting

The Fund's Governance Policy and Compliance Statement provides a greater level of information regarding the organisational structure of the Fund, the specific responsibilities of the different bodies within the Fund (e.g., Pensions and Investments Committee and Derbyshire Pension Board) and how the day-to-day management of the Fund is delegated. This is signposted within DPF's TCFD reporting, complementing the report and providing additional transparency and accountability to the Fund's governance.

DPF has demonstrated integration of climate consideration through the publication of their Responsible Investment Framework and Climate Strategy, which are both signposted within the Investment Strategy Statement, as well as the publication of other climate orientated reports. Climate risk and TCFD reporting is also briefly discussed within the Funding Strategy Statement.

Considerations and Recommendations

Although a climate-specific sub-committee may not be appropriate for an LGPS pension fund, we acknowledge the Fund's active participation in the Practitioners' Advisory Forum Responsible Investment Working Group for the LGPS Central Pool. This working group engages in discussions related to climate matters, allowing the Fund to broaden its understanding of these issues. Similarly, we recognise the Fund's membership in the Institutional Investors Group on Climate Change (IIGCC), as disclosed in the Fund's TCFD report. The Fund also participates in working groups arranged by the IIGCC and has discussed its current draft Climate Strategy and targets with the IIGCC. Enhanced disclosure of these discussions and the topics discussed during these working groups would help demonstrate the Fund's collaborative approach to managing climate risk.

The Fund discusses climate training within the TCFD report. However, it does not include the level of detail that is disclosed within their Stewardship Code Application. We also recognise that the Stewardship Code Application discloses the Pensions and Investments Committee members' attendance, including participation in training sessions. The Fund could consider disclosing which members attended training sessions with climate considerations, as well as highlighting any other climate credentials members may have. This would not need to be included in the TCFD report but could be signposted from within the report.

Carried Over Recommendations and Considerations

Integrate 'climate solutions' data into the Climate Risk Management Service (CRMS) once an industry-agreed definition is available.

Establish a Net Zero Stewardship Programme. This includes mapping the Fund's financed emissions to existing engagements, creating a Net Zero Voting Policy, establishing an alignment framework, and defining a policy advocacy programme.

Strategy

Proposed DLUHC Requirements

AAs will be expected to identify climate-related risks and opportunities on an ongoing basis and assess their impact on their funding and investment strategies.

AAs will be required to carry out two sets of scenario analysis. This must involve an assessment of their investment and funding strategies. One scenario must be Paris-aligned (meaning it assumes a 1.5 to 2 degree temperature rise above pre-industrial levels) and one scenario will be at the choice of the AA. Scenario analysis must be conducted at least once in each valuation period.

Disclosure Maturity Map

STRATEGY DISCLOSURE	LIMITED DISCLOSURE	MODERATE DISCLOSURE	FULL DISCLOSURE
	• Operational greenhouse gas ("GHG") emission reductions.	• Climate-related risks and opportunities the organisation has identified over the short-, medium- and long-term. • The impact of climate related risks and opportunities on the organisation's businesses, strategy and financial planning. • Involvement in domestic and international efforts to mitigate climate change.	• The potential impact of different climate scenarios, including a 4°C, a 2°C and a 1.5°C scenario, on the organisation's businesses, strategy and financial planning. • The organisation's internal carbon pricing strategy. • Vocal advocacy for action on climate change and collaboration with peers and other stakeholders to achieve change.

Strategy *(continued)*

Industry Best Practices

Climate Scenario Analysis

USS's climate scenario analysis discussed the impact of climate change to both its investment and funding strategies. The rationale behind the chosen scenarios and time horizons were clearly described. Further, USS also illustrated how climate change impacts their defined contribution members' investments returns. While we understand that scenario analysis remains an evolving tool, it still provides a valuable insight into how climate change could impact investment returns under different scenarios, highlighting the importance of conducting and disclosing the findings of climate scenario analysis. As this tool is still evolving it is important to demonstrate an understanding and provide a justification of the parameters surrounding the analysis, including the scenarios chosen and time horizons, which should be clearly defined.

Industry Collaboration and Engagement

Partnerships, initiatives and collaborations were discussed in plenty of detail in Scottish Widows' TCFD report. They also produced a case study of a collaborative engagement on the topic of deforestation. Collaborative engagement allows funds to pool their influence as to drive change in the industry, it is considered industry best practice to not only collaborate in these initiatives, but to also demonstrate the impact derived from these collaborative engagements through case studies.

Sunrise along The Great Ridge, Peak District National Park, Derbyshire

Strategy *(continued)*

DPF Current Disclosures and Practices

Climate Scenario Analysis

The Fund commissioned scenario analysis during 2020 and 2022 and has disclosed the estimated impact to the Fund's holdings under a Failed Transition, Orderly Transition, and Rapid Transition scenario, in the Fund's TCFD report, aligning with full disclosure. The Fund provides clear definitions of the scenarios utilised and examples of the short-, medium- and long-term risks, demonstrating an understanding of how climate risks can materialise in the Fund. While the Fund believes the use of carbon risk metrics and climate scenario analysis currently provides an appropriate method to support a strategy to integrate climate risk into investment decisions, DPF also recognises the challenges of utilising climate scenario analysis for investment strategy decisions, demonstrating an appropriate and measured approach to this relatively nascent analysis.

The Fund has incorporated climate-related risks within the funding strategy, considering the resilience of the strategy through climate scenario stress testing which contributes to the modelling exercise during the 2022 valuation. This disclosure also briefly discusses the findings of this exercise. Further to this, the Fund's 2022 Valuation Report recognises climate-related risks as a significant source of funding risk and discloses the results of the climate scenario analysis. These disclosures demonstrate the Fund's integration of scenario analysis beyond the investment strategy, exhibiting strong progress towards industry best practice and readiness for future mandatory reporting.

Engagement

The Fund's Climate Strategy describes how engagement fits within the Fund's strategy. The Fund's TCFD report, Responsible Investment Framework and Stewardship Code Application provides additional disclosures on this topic including detailing the Fund's stewardship partners/collaborative engagements. Overall, these publications demonstrate the Fund's ability to integrate engagement into the Fund's strategy and participate in collaborative engagements. The Fund's Stewardship Code Application also provides examples of the Fund's engagement via their managers and through collaborative engagements, providing credibility to their engagement strategy.

Peak District National Park, Derbyshire

Strategy *(continued)*

Considerations and Recommendations

The Fund should be commended for its use of scenario analyses, both looking at the impacts of climate on its investments but also on its funding. The Fund should consider including this information within the Fund's TCFD report, or signposting to where this information can be found. From a more long-term perspective, the Fund should consider updating its climate policies to reflect impacts on its funding as well as investments. This is in line with a direct recommendation provided by DLUHC.

The Fund could also consider providing additional information regarding the choice of the scenarios as well as an explicit focus on how climate related risks and opportunities can best be mitigated or exploited, this would help the Fund move towards industry best practice. Regular horizon scanning may be an effective way to identify emerging climate risks. This analysis could be linked to the Fund's risk register and further incorporated into its Climate Stewardship Plan.

While the Fund's Responsible Investment Framework and Climate Strategy discuss climate considerations in detail, the Fund's Investment Strategy Statement only provides signposting to these documents. The Fund could consider integrating a greater level of detail into the Investment Strategy Statement.

Finally, full disclosure according to DLUHC includes a summary of the Fund's advocacy for action and collaboration on climate change. Although the Fund does list its collaborative partners on topics including climate change, this could be reinforced with concrete examples of climate advocacy. Such disclosures are often found in stewardship reports, which, although third party sources are frequently referenced by the Fund, could be made more explicit as part of its wider climate disclosures.

Carried Over Recommendations and Considerations

Using the analysis from this Climate Scenario Analysis and the overall Climate Risk Report, DPF is on track to get a better understanding of the portfolio's capacity to transition into a low carbon economy. We recommend using this analysis to evolve DPF's sustainable investment targets to include more ambitious climate objectives. Please note that this recommendation was included in the Fund's 2022 Climate Risk Report. While this recommendation has not yet been fully satisfied, the Fund has included more ambitious targets within the Fund's Draft 2024 Climate Strategy.

Matlock Bath, Peak District National Park, Derbyshire

Risk Management

Proposed DLUHC Requirements

AAs will be expected to establish and maintain a process to identify and manage climate-related risks and opportunities related to their assets. They will have to integrate this process into their overall risk management process.

Disclosure Maturity Map

RISK MANAGEMENT DISCLOSURE	LIMITED DISCLOSURE	MODERATE DISCLOSURE	FULL DISCLOSURE
	• Acknowledgement of the need to assess and respond to climate-related risks.	• The organisation's processes for identifying and assessing climate-related risks. • The organisation's processes for managing climate-related risks.	• How processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management.

Risk Management *(continued)*

Industry Best Practices

Risk Management Policy and Transparency

Schroders' risk management section clearly outlines how climate risk fits in its three lines of defence, the risk owners at each line, and how its oversight structure works – from business unit to its board audit and risk committee. Schroders also details its actions to identify, assess and manage climate-related risks. Inclusion of these details provides accountability and transparency with regard to risk management and demonstrates the funds' ability to identify and mitigate climate risks through appropriate practices.

Asset-specific Risk Management

Abrdn included a table that maps its existing climate tools against asset classes to give a view of the applicability of tools for various investments strategies. This also assists in demonstrating the Fund's industry best practices to identify and mitigate climate risks.

DPF Current Disclosures and Practices

Risk Management Policy and Transparency

The Head of the Pension Fund and Investments Manager hold responsibility for the identification and management of climate-related risks, and implementation of the Fund's Climate Strategy. This is disclosed within the Fund's Climate Strategy and provides accountability and transparency regarding the responsibility of climate-related risk management within the Fund.

The Climate Strategy also discloses how the Fund identifies climate related risks, including the use of a suite of carbon metrics, providing both top-down and bottom-up analysis, provided by LGPS Central. As the Fund is largely externally managed, the implementation of identification and management of climate related risks is delegated to the external portfolio managers. As the Fund discloses within their TCFD report, external managers are assessed on their approach to integrate climate considerations into investment decisions during the initial selection process. The Fund continues to monitor these managers on a regular basis. These practices demonstrate an appropriate level of risk management.

Asset-specific Risk Management

The Fund manages company-specific risk through stewardship including working alongside several selected stewardship partners which are disclosed within the Fund's TCFD Report. The Fund also utilises voting as to influence portfolio companies. As the Fund is primarily externally managed, voting activity is largely carried out by the external managers and stewardship partners, such as EOS. The Fund has also developed a Climate Stewardship Plan, as to focus the Fund's engagement resources. These disclosures demonstrate the Fund's appropriate management of company level risks.

The Fund's robust approach to stewardship was recognised in 2023 when the Fund became a signatory to the 2020 UK Stewardship Code.

Considerations and Recommendations

While the Fund disclosures how climate risks are identified, the Fund could consider providing a greater level of detail regarding how these risks are mitigated and managed outside of stewardship activities.

Consider preparing further disclosure of details relating to the identification and assessment of specific risks associated with climate change (i.e., the time horizon of specific risks and how these may materialise in a portfolio) could support the Fund's approach to management of climate risk.

The Fund may also wish to consider incorporating its existing climate risk management processes into its Investment Strategy Statement, or publishing a Risk Management Framework which includes these considerations.

Metrics and Targets

Proposed DLUHC Requirements

AAs will be expected to report on metrics as defined in supporting guidance. The proposed metrics are set out below.

- Metric 1 will be an absolute emissions metric. Under this metric, AAs must, as far as able, report Scope 1, 2 and 3 greenhouse gas (GHG) emissions.
- Metric 2 will be an emissions intensity metric. We propose that all AAs should report the Carbon Footprint of their assets as far as they are able to. Selecting an alternative emissions intensity metric such as Weighted Average Carbon Intensity (WACI) will be permitted, but AAs will be asked to explain their reasoning for doing so in their Climate Risk Report.
- Metric 3 will be the Data Quality metric. Under the Data Quality metric, AAs will report the proportion the value of its assets for which its total reported emissions were Verified, Reported, Estimated or Unavailable.
- Metric 4 will be the Paris Alignment Metric. Under the Paris Alignment Metric, AAs will report the percentage of the value of their assets for which there is a public net zero commitment by 2050 or sooner.

Metrics must be measured and disclosed annually.

AAs will be expected to set a target in relation to one metric, chosen by the AA. The target will not be binding. Progress against the target must be assessed once a year, and the target revised if appropriate. The chosen metric may be one of the four mandatory metrics listed above, or any other climate related metric recommended by the TCFD.

Metrics and Targets *(continued)*

Disclosure Maturity Map

METRICS AND TARGETS DISCLOSURE

LIMITED DISCLOSURE	MODERATE DISCLOSURE	FULL DISCLOSURE
• Scope 1 and Scope 2 GHG emissions.	• Scope 1, Scope 2 and, if appropriate, Scope 3 GHG emissions, and the related risks. • Measurement methodologies for these are clearly defined and in line with recognised guidance. • The organisation's quantified targets to reduce GHG emissions in relative or absolute terms (Scopes 1, 2 and/or 3) and performance against these.	• The metrics used to assess climate-related risks and opportunities in line with strategy and risk management process. • The targets used to manage climate-related risks and opportunities, including use of science-based targets, and performance against these targets. • Assurance of reported GHG emissions under International Standard on Assurance Engagements (ISAE) 3410, Assurance Engagements on GHG Statements.

Metrics and Targets *(continued)*

Industry Best Practices

Discussion of Metrics, Methodology and Limitations

USS discussed its data sourcing and methodology in great detail and included an explanation of data limitations. In its report, USS also reviewed the organisations climate performance against its net zero target pathway. Disclosing information regarding the methodologies, data limitations, and how metrics should be interpreted demonstrates an understanding of the data challenges and provides credibility to the findings derived from the data. This information also means the data can be more easily interpreted by the reader.

Transparency around Restated Data

Schroders explained its annual emissions recalculation process and highlighted data that is restated. As data coverage and reliability continues to evolve it is important to ensure the most accurate data is reported. However, this can lead to data being restated. As this can lead to a lack of consistency as reported data is retrospectively amended, it is important for the Fund to disclose how data has been restated and the purpose of the restatement, minimising inconsistency from one report to the another.

Data Assurance

Abrdn included an independent assurance statement that provides limited assurance of its selected sustainability performance indicators. This statement is included in the company's sustainability disclosures, providing reported metrics with additional credibility and reliability.

Derwent Dam, Derbyshire

Metrics and Targets *(continued)*

DPF Current Disclosures and Practices

Discussion of Metrics, Methodology and Limitations

The Fund's TCFD Report includes the Fund's carbon metrics for both listed equities and investment grade bonds. The report proceeds to provide definitions, limitations and explanations on how key metrics should be interpreted, demonstrating a strong understanding of the data, as well as providing ease of interpretation for the reader. Where appropriate, the Fund has further demonstrated an understanding of the climate metrics by providing analysis on the values presented.

The Fund's TCFD Report includes the Fund's climate targets which were established alongside the Fund's 2020 Climate Strategy. The Fund's current targets are concerned with the reduction of the Fund's weighted average carbon intensity and proportion of NAV invested in low carbon & sustainable investments, as well as a Net Zero 2050 ambition. The TCFD report provides progress on these targets against the initial baseline. The Fund demonstrates good practice by reviewing these climate targets at least every three years, ensuring targets remain appropriate and aligned with the Net Zero 2050 ambition.

The Fund's latest Climate Strategy (which is currently in draft format subject to public consultation) demonstrates the progress made in regard to the Fund's climate metrics. The draft Climate Strategy includes a greater ambition for the Fund's carbon intensity reduction and low carbon and sustainable investments exposure targets, following the progress made on existing targets. The draft Climate Strategy also includes additional targets for absolute emissions, engagement coverage and data availability. While not formalised, these proposed targets demonstrate the Fund's commitment to managing climate risk in the long term.

Transparency around Restated Data

The Fund's TCFD report acknowledges current data limitations, and while not specifically discussing the restating of climate data the Fund recognises changes in data quality and availability can have the potential to materially impact the Fund's progress towards targets. This demonstrates a strong understanding of climate data and the importance of data quality, which is a key consideration within DLUHC recommendations. Detailed metrics which present a more complete picture of the fund's exposure to climate risk are presented in Section 2 (Climate Metrics) of this report.

Considerations and Recommendations

Future iterations of the TCFD report will include the four metrics required by DLUHC. These should be reported in addition to the metrics which have been reported over previous years, adding further context and nuance to the Fund's climate analysis. Metrics provided within this report will be subject to retrospective amendments, while an explanation to these restated values is provided below, the Fund should consider including this explanation where necessary in other climate reporting.

The Fund's latest Climate Strategy includes specific targets regarding climate data availability, as the Fund recognises the importance of measuring and improving climate data. The Fund should consider formalising this, and other appropriate targets included within the Fund's Draft 2024 Climate Strategy.

The Fund has successfully included definitions, interpretations and drawbacks of metrics presented within the TCFD Report. The Fund should consider adding more detail in this area, including the use case of the metrics, the value added from the inclusion of each metric, additional detail around drawbacks and why these metrics were initially chosen.

While the Fund discusses their approach to engagement and stewardship in other sections of the report, inclusion of engagement statistics within the TCFD report could add value to the Fund's climate reporting.

Other Requirements / Recommendations

Proposed DLUHC Requirements

	DLUHC Requirement	LGPS Central Proposals
Disclosure	AAs will be expected to publish an annual Climate Risk Report. This may be a standalone report, or a section in the AA's annual report. The deadline for publishing the Climate Risk Report will be 1 December, as for the AA's Annual Report, with the first Climate Risk Report due in December 2024.	The Fund has been complying with this recommendation since the publication of its first climate report in 2020. We propose that scheme members are informed that the Climate Risk Management Report is available in an appropriate way.
Scheme Climate Report	DLUHC proposes that the Scheme Advisory Board (SAB) should prepare an annual Scheme Climate Report including a link to each individual AA's Climate Risk Report (or a note that none has been published) and aggregate figures for the four mandatory metrics.	This exists in the consultation, and could have implications for the Fund's carbon risk analyses going forwards. While this is more relevant for the SAB than the Fund in particular, we feel it is important for the Fund to remain aware of any developments in this area as it may have implications for the Fund's future carbon reporting.
Proper Advice	DLUHC proposes to require that each AA take proper advice when making decisions relating to climate-related risks and opportunities and when receiving metrics and scenario analysis.	Although this section requires no concrete action at this time, we recommend that the Fund remains aware of potential future developments. The Fund may wish to conduct a review of its provision of advice to ensure that its metrics and scenario analyses remain 'proper', as per DLUHC requirements.

Conclusion

The Fund's Overall Readiness / Maturity

Based on its current processes and disclosures, we consider that the Fund is well positioned to meet DLUHC's potential requirements on climate change governance and disclosures. The items in the table below would push the Fund towards full compliance.

On average the Fund is disclosing at Moderate level when assessed against the TCFD Maturity Map. The TCFD Maturity Map ranks disclosures into three categories, Limited, Moderate and Full, although it should be noted that, based on our analysis, no single peer is able to achieve leader status (i.e., full disclosure) across all elements. The Fund does have the potential to move towards leader status in several elements, and is most advanced within its disclosure of its governance structures, including climate training and inclusion of climate considerations within the Funding Strategy/Valuation Report.

Please note, some considerations and recommendations have been carried forward from the previous climate risk report. Finally, it should be restated that some of the observations discussed in the section above may not require action from DPF as best practice of investment managers is not always appropriate for local government pension funds. These observations were included to flag best practice and to ensure the Fund remains cognisant of emerging best practices.

Summary of Considerations / Recommendations

Section	Considerations / Recommendations
Governance	– Consider providing disclosure of climate discussions at working groups within, or outside of its pool. – Consider enhanced disclosure relating to the climate related training undertaken by the Committee. **Carried Over Recommendations and Considerations** – Integrate 'climate solutions' data into the CRMS once an industry-agreed definition is available. – Establish a Net Zero Stewardship Programme. This includes mapping the Fund's financed emissions to existing engagements, creating a Net Zero Voting Policy, establishing an alignment framework, and defining a policy advocacy programme.
Strategy	– The Fund should continue to commission Climate Scenario Analyses as recommended by DLUHC, with an awareness that the content of these analyses will develop in line with industry best practice. – Consider disclosing additional information regarding the choice of scenarios included within the scenario analysis and also consider including information specifically addressing how climate risks are managed/mitigated. – While the Fund's Investment Strategy Statement provides signposting to the Fund's Climate Strategy, the Fund could consider including climate considerations within the Investment

Conclusion *(continued)*

Section	Considerations / Recommendations
Strategy (continued)	Strategy Statement itself. – The Fund could consider disclosing case studies of advocacy as recommended by DLUHC. **Carried Over Recommendations and Considerations** – Using the analysis from this Climate Scenario Analysis and the overall Climate Risk Report, DPF is on track to get a better understanding of the portfolio's capacity to transition into a low carbon economy. We recommend using this analysis to evolve DPF's sustainable investment targets to include more ambitious climate objectives. Please note that this recommendation was included in the Fund's 2022 Climate Risk Report. While this recommendation has not yet been fully satisfied, the Fund has included more ambitious targets within the Fund's Draft 2024 Climate Strategy.
Risk Management	– The Fund could provide additional detail on the management of risks outside of stewardship activities. – Consider preparing further disclosure of details relating to the identification and assessment of specific risks associated with climate change. – Further integration of climate risk management could be included within the Fund's Investment Strategy Statement, or through the publication of a Risk Management Framework.

Section	Considerations / Recommendations
Metrics and Targets	– Future iterations of the TCFD report should include the four metrics required by DLUHC. Where necessary the Fund should include an explanation to restated values. – The Fund should seek to formalise the climate data availability targets and other appropriate targets included within the Fund's Draft 2024 Climate Strategy. – The Fund could consider providing additional information on the climate metrics included, such as use cases and added value. – Consider detailing the metrics and targets which correspond to the Fund's engagement activities.

Section 2

Climate Metrics

FYE 31 March 2023

Ladybower Reservoir, Upper Derwent Valley, Derbyshire

Climate Metrics

Scope of Analysis

The following Climate Metrics offer a detailed, bottom-up analysis with the following objectives:

Observing climate transition risks and opportunities within the portfolio.

Identifying opportunities for engagement with companies.

Facilitating the monitoring of climate risk management by managers.

This analysis encompasses public market investments reported by the Fund as of 31 March 2023. It includes holdings in listed equity and fixed income funds. The exclusion of unlisted asset classes is due to limited data availability. The assets under management (AUM) within the report's scope totalled approximately £3.3bn (56.6% of total investment assets) as of that date, with the specific funds outlined in the chart below. Initial analysis encompassed funds totalling approximately £3.9bn in AUM (66.4% of investment assets). However, two UK gilt funds (conventional and index-linked sovereign bonds), were found to have limited data coverage. To be included within aggregation, portfolios must meet a threshold of 60% data availability when calculating financed emissions. The Fund's investment assets totalled £6.0bn on 31 March 2023.

LGPS Central has been calculating carbon footprint metrics for Derbyshire Pension Fund since 2020. The scope of analysis has expanded over time as the Fund effected asset allocation decisions during this period. This report summarises the evolution of the Fund's carbon footprint up to 31 March 2023.

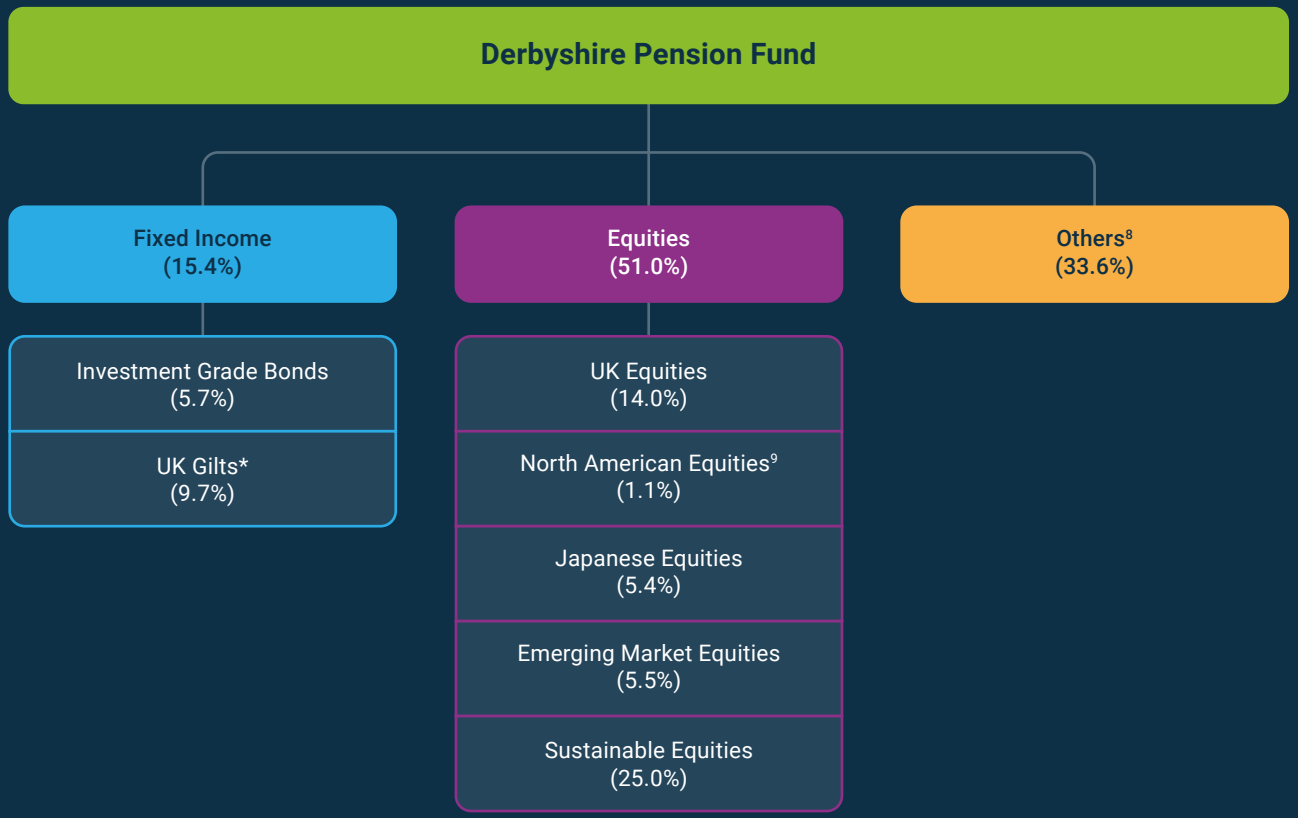
As an asset owner, it is crucial to consider all financially significant risks and opportunities that impact investment decisions. The Fund already integrates risks and opportunities associated with climate change into its investment decisions, in accordance with its Investment Strategy Statement.

The Pensions and Investments Committee has agreed a long-term investment strategy that aims to maximise the returns from investments within acceptable levels of risk, contributes to the Fund having sufficient assets to cover the accrued benefits, and enables employer contributions to be kept as stable as possible.

Woodland in Derbyshire

Climate Metrics *(continued)*

FIGURE 1: BREAKDOWN OF FUNDS INCLUDED IN THE ANALYSIS



* Data availability for the funds are below the threshold of 60% and is not included in the aggregation.

[8] All other assets include private credit, infrastructure, private credit, diversified multi-asset credit, property, and cash. These are not included in the carbon risk analysis due to insufficient data coverage. LGPSC is engaging with the data providers to be able to include this analysis in future reports.

[9] Subsequent to 31 March 2023, the Fund has fully divested of its holdings in North American Equities.

Climate Metrics *(continued)*

The analysis is based on a dataset provided by MSCI ESG Research LLC (MSCI).[10] We utilised data that was downloaded from MSCI on 1st September 2023. The table on pages 51-56 provides an overview of the types of carbon metrics utilised.

Carbon footprint metrics were selected to comply with the results of Department for Levelling Up, Housing & Communities' consultation,[11] which were published in September 2022. That document sets out an expectation that AAs report on four proposed metrics:

- **Absolute emissions metric –** financed emissions.
- **Emissions intensity metric –** normalised financed emissions and weighted average carbon intensity (WACI).
- **Data quality metric.**
- **Paris alignment metric.**


Mam Tor, Peak District National Park, Derbyshire

[10] Certain information @ 2023 MSCI ESG Research LLC. Reproduced by permission. Attention is drawn to Section 8.0 Important Information.

[11] https://www.gov.uk/government/consultations/local-government-pension-scheme-england-and-wales-governance-and-reporting-of-climate-change-risks/local-government-pension-scheme-england-and-wales-governance-and-reporting-of-climate-change-risks

Climate Metrics *(continued)*

On top of the headline DLUHC-proposed metrics, we also calculate multiple other metrics as listed in the definition table. We believe carbon footprint metrics apply only one lens, whereas additional metrics – including fossil fuel exposure, clean tech exposure, and carbon risk management – provide a deeper and broader assessment of climate risk and opportunity. Further detail of these metrics can be found on pages 51-56.

The analysis looks at the headline metrics first, before delving into asset class assessment.

The Headline Metrics

Carbon Footprint Metrics

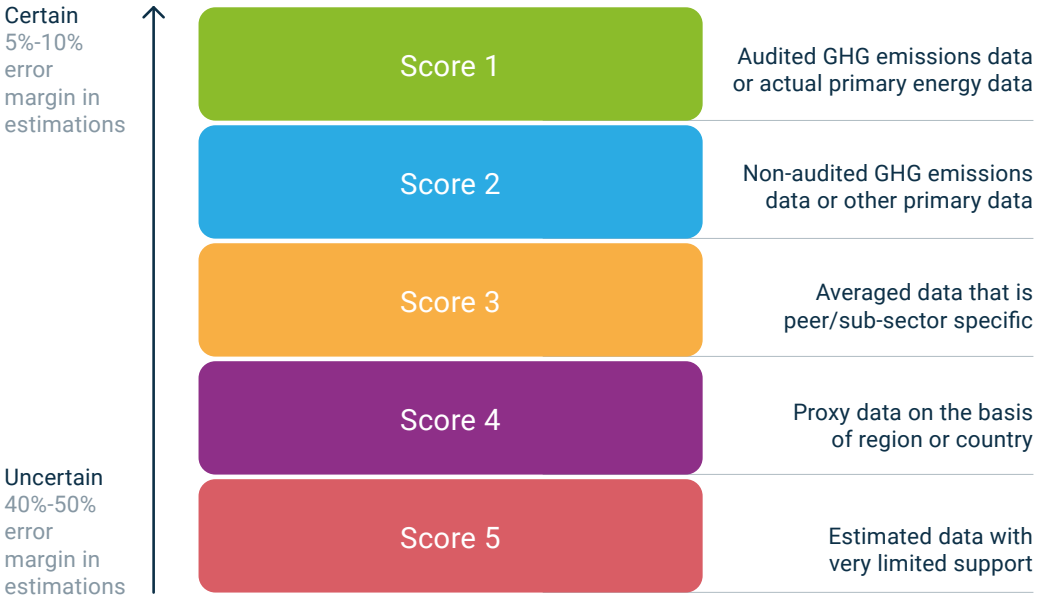
Metrics	Financed Emissions	Normalised Financed Emissions	Weighted Average Carbon Intensity (WACI)
Absolute / Intensity	Absolute	Intensity	Intensity
Definition	Financed emissions calculates the absolute tonnes of CO2 equivalent for which an investor is responsible.	This metric measures the Financed Emissions for every £1 million invested.	WACI measures a portfolio's exposure to carbon-intensive companies.
Question answered	What is my portfolio's total carbon footprint?	What is my portfolio's normalised carbon footprint per million GBP invested?	What is my portfolio's exposure to carbon-intensive companies?
Unit	tCO2e	tCO2e / £m invested	tCO2e / $m revenue
Comparability	No; does not take size into account	Yes; adjusts for portfolio size	Yes
Data needs	Medium • Notional amount invested • Carbon emissions of issuer • EVIC or Total Equity + Total Debt *(Sovereign: PPP-Adjusted GDP)*	Medium • Notional amount invested • Total portfolio AUM • Carbon emissions of issuer • EVIC or Total Equity + Total Debt *(Sovereign: PPP-Adjusted GDP)*	Low • Portfolio weights • Carbon emissions of issuer • Sales of issuer *(Sovereign: Nominal GDP)*

Climate Metrics *(continued)*

Data Quality Metric

Score between 1 and 5; with 1 being the most preferred which relates to actual audited data. Score 5 is the least preferred, which relates to estimated data with limited support.

This system enables reporting on financed emissions even if data is not available, whilst providing transparency over the accuracy of the information provided. The source of the score is MSCI.



Source: The Global Carbon Accounting Standard for the Financial Industry: Draft version for public consultation (August 2020), Partnership for Carbon Accounting Financials (2020).


Rural Derbyshire

Climate Metrics *(continued)*

Paris Alignment Metric

A company will be considered at least Aligning to Paris Agreement by LGPS Central if:

The Company score above **Median** in **Low Carbon Transition score**

\+ and it meets **one** of the following criteria: +

The Company has a **science-based target**

or

The Company has an **implied temperature rise** rating of 2.0°C or lower

Low Carbon Transition Score

Score from 0 (worst) to 10 (best) measuring companies' exposure to and management of risks and opportunities related to the low carbon transition. Source of rating: MSCI. Score of more than 5 (median) required to be considered at least Aligning.

and

Science-Based Target

Issuer commits to a medium- and long-term net zero target that are considered science-based; i.e. in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement.

or

Implied Temperature Rise

Implied temperature rise (in the year 2100 or later) if the whole economy had the same over-/undershoot level of greenhouse gas emissions to the issuer. Below 2°C is required to be considered at least Aligning.

The valley of the River Wye, Derbyshire

Climate Metrics *(continued)*

MSCI Low Carbon Transition Risk Assessment[12]

MSCI ESG Research's Low Carbon Transition Risk[13] assessment is designed to identify potential leaders and laggards by holistically measuring companies' exposure to and management of risks and opportunities related to the low carbon transition.

The final output of this assessment is two company-level factors as described below:

1) Low Carbon Transition Category:

This factor groups companies in five categories that highlight the predominant risks and opportunities they are most likely to face in the transition (Exhibit 1).

2) Low Carbon Transition Score:

This score is based on a multi-dimensional risks and opportunities assessment and considers both predominant and secondary risks a company faces. It is industry agnostic and represents an absolute assessment of a company's position vis-à-vis the transition.

Calculation methodology

The LCT Categories and Scores are determined by a combination of each company's current risk exposure and its efforts to manage the risks and opportunities presented by the low carbon transition. The 3-step process followed by MSCI ESG Research is explained below.

Step 1

The first step towards measuring the Low Carbon Transition Risk Exposure for a company is the computation of its Carbon Intensity profile – which is informed by its Product Carbon Intensity, Operational Carbon Intensity and Total Carbon Intensity.

Step 2

MSCI assess a company's management of risks and opportunities presented by the low carbon transition. This assessment is based on policies and commitments to mitigate transition risk, governance structures, risk management programs and initiatives, targets and performance, and involvement in any controversies.

Step 3

Low Carbon Transition Risk Exposure Category and Score that was calculated in Step 1 are adjusted for the strength of management efforts calculated in Step 2. Following this adjustment, Low Carbon Transition Risk Exposure Score of companies with top or second quartile risk management improves and some top and second quartile companies may move up one category.

[12] Source: MSCI Climate Change Indexes Methodology, pp17-18

[13] For more details on MSCI Climate Change Metrics, please refer to https://www.msci.com/climate-change-solutions

Climate Metrics *(continued)*

Scope 3 Emissions

Scope 3 emissions refers to the emissions released indirectly through business activities. More specifically, Scope 3 represents the emissions released through the value chain of the company, both upstream and downstream, emissions which are not otherwise captured in scope 1 and 2. This would include the emissions produced by a company's supplier when producing a product brought by the company, or the emissions released by a customer through a product supplied by the company.

Due to the nature of this measurement, for many industries and assets the associated scope 3 emissions of the company will often be significantly greater than those of the scope 1 and 2. When aggregated at portfolio level, scope 3 emissions will also be subject to double counting, a term which refers to aggregating an observation multiple times, despite being a single observation. Double counting will often occur due to overlapping value chains, a simple example of this can be explained through the use of a vehicle with an internal combustion engine. In such an instance such, scope 3 emissions will be associated with both the provider of fuel for the vehicle, as well as the vehicle manufacturer as well. Double counting will also occur across scope 1 and 2, to 3, as one companies scope 1 and 2 emissions, will often be another company's scope 3.

Despite the flaws within this metric, a company's scope 3 emissions are important to account for, as without this metric many companies' emissions would be significantly understated.

Engagement

Engagement can be observed in many different forms, but broadly refers to communication or interactions between investors and companies. Engagement figures included within this report are reflective of the engagement conducted directly or indirectly by LGPS Central. This will not include engagement conducted directly by the Fund, or by the managers which receive investment directly from the Fund, such as Legal & General Investment Managers (LGIM). This figure therefore serves as a minimum percentage of holdings within the Fund which are covered by some form of engagement program.

Mam Tor, Peak District National Park, Derbyshire

Climate Metrics *(continued)*

Headline Metrics	DPF FY2023	
Absolute emissions metric: – Financed emissions	Equities:	– Scope 1 and 2: 183,713 tCO2e – Scope 3: 2,059,719 tCO2e
	Fixed Income:	– Scope 1 and 2: 17,036 tCO2e – Scope 3: 83,014 tCO2e
Emissions intensity metric: – Normalised financed emissions – Weighted Average Carbon Intensity (WACI)	Equities:	Normalised Financed Emissions – Scope 1 and 2: 63.2 tCO2e/£M Invested – Scope 3: 712.6 tCO2e/£M Invested WACI – Scope 1 and 2: 96.8 tCO2e/$M Revenue
	Fixed Income:	Normalised Financed Emissions – Scope 1 and 2: 71.3 tCO2e/£M Invested – Scope 3: 349.0 tCO2e/£M Invested WACI – Scope 1 and 2 (excluding sovereign): 174.6 tCO2e/$M Revenue
Data Quality metric: – Data availability – MSCI data quality metric	Equities:	– Data availability: 96.6% *of AUM with data coverage for financed emissions calculation* – Data quality: 2.1 *(Weighted Average of available data quality)*
	Fixed Income:	– Data availability: 71.8% *of AUM with data coverage for financed emissions calculation* – Data quality: 2.2 *(Weighted Average of available data quality)*
Paris Alignment metric: Combination of – MSCI Low Carbon Transition Score – Science-Based Target – MSCI Implied Temperature Rating	Equities:	– LCT Score: 39.0% *of financed emissions has above median score* – SBT: 32.4% *of financed emissions are covered by a science-based target* – ITR: 28.1% *of financed emissions has an implied temperature of 2°C or below*
	Fixed Income:	– LCT Score: 26.1% *of financed emissions has above median score* – SBT: 39.7% *of financed emissions are covered by a science-based target* – ITR: 38.9% *of financed emissions has an implied temperature of 2°C or below*

Climate Metrics *(continued)*

The Fund's Progress Against its Climate Targets

Derbyshire Pension Fund's Climate Strategy was approved by the Fund's Pension and Investment Committee in November 2020. The table below summarises the Fund's climate targets and the progress that the Fund has made to date.

Targets

Target	Progress as of 31st March 2023
Reduce the Weighted Average Carbon Intensity (Scope 1 & 2) of the Fund's listed equity portfolio by at least 30% relative to the weighted benchmark in 2020 by the end of 2025.	WACI has decreased by 47.0% relative to the previously reported 2020 weighted benchmark and by 49.8% relative to the restated 2020 weighted benchmark.

	2020 weighted benchmark (Previously reported)	2020 weighted benchmark (restated)	2023
WACI	182.8	192.8	96.8

Invest at least 30% of the Fund portfolio in low carbon & sustainable investments by the end of 2025.	
Basis of Calculation	Allocation (%)
Strategic Asset Allocation	30%
DPF	29% (30% on a committed basis)

The Fund is currently in the process of updating its Climate Strategy. As discussed in Section 1 of the report, the Fund's Draft 2024 Climate Strategy includes more ambitious targets regarding the Fund's reduction of carbon intensity and exposure to low carbon and sustainable investments. The draft also includes targets regarding climate data availability, absolute emissions, and engagement coverage.

Climate Metrics *(continued)*

Our Approach to Climate Data

Climate data is an evolving field, and methodologies are continuously updated by governments, data providers, and companies. The data accessible through our data provider (MSCI) undergoes frequent revisions as estimated data gets replaced by reported data, estimations are refined for greater precision, and data coverage expands.

We recalculate our emissions annually and may revise previously reported greenhouse gas (GHG) data to incorporate the most current information. When possible, we align our holding period with the period in which emissions from the underlying issuer occurred. Consequently, there may be variations between data reported in previous documents and the figures presented in this report due to these restatements. The impact of these variations can be significant. Our metrics employ methodologies aligned with those used by the Partnership for Carbon Accounting Financials (PCAF) and MSCI.

Ladybower Reservoir, Peak District National Park, Derbyshire

Climate Metrics *(continued)*

A summary of restated values are as follows:

Total Equities

Data	Data as of	Previously Reported Value	Previously Reported Benchmark	Restated Portfolio Value	Restated Benchmark Value	Change from Restatement (Portfolio)	Change from Restatement (Benchmark)
WACI	31-Jul-19	149.2	182.8	165.7	192.8	11.1%	5.5%
	31-Mar-21	114.5	158.0	107.5	149.7	-6.1%	-5.3%
	31-Mar-22	102.2	137.6	91.7	151.7	-10.3%	10.3%
Financed Emissions	31-Jul-19	282,355	-	261,547[14]	-	-7.4%	N/A
	31-Mar-22	181,227	-	185,275	-	2.2%	N/A
Weight in Fossil Fuel Reserves	31-Jul-19	10.3%	11.7%	7.8%	9.4%	-250 bps	-232 bps
	31-Mar-22	7.3%	8.3%	6.5%	8.2%	-79 bps	-10 bps
Weight in Thermal Coal Reserves	31-Jul-19	2.4%	3.2%	2.1%	3.1%	-32 bps	-13 bps
	31-Mar-22	2.6%	3.4%	2.9%	3.1%	35 bps	-31 bps
Weight in Coal Power	31-Jul-19	0.5%	1.2%	0.1%	0.2%	-40 bps	-97 bps
	31-Mar-22	0.5%	0.9%	0.0%	0.1%	-47 bps	-78 bps
Weight in Clean Technology	31-Jul-19	30.4%	33.2%	29.7%	33.0%	-65 bps	-22 bps
	31-Mar-22	35.8%	36.9%	38.2%	39.1%	244 bps	221 bps

[14] Previously reported 2019 financed emissions included exposure to Russian assets, which contributed 6,459 tCO2e. Due to the sanctions against Russia, our data provider has withdrawn its coverage of Russian issuers. Therefore, all restated values exclude data from Russian issuers. If we assume emissions from Russian issuers are unchanged at 6,459 tCO2e (as calculated during 2019), the restated financed emissions will be 268,006 tCO2e.

Climate Metrics *(continued)*

Investment Grade Corporate Bonds

Data	Data as of	Previously Reported Value	Previously Reported Benchmark	Restated Portfolio Value	Restated Benchmark Value	Change from Restatement (Portfolio)	Change from Restatement (Benchmark)
WACI	31-Mar-21	135.9	170.0	163.3	184.5	20.2%	8.5%
	31-Mar-22	217.4	177.9	200.5	163.4	-7.8%	-8.1%
Financed Emissions	31-Mar-22	18,336	-	24,825	-	35.4%	N/A
Weight in Fossil Fuel Reserves	31-Mar-21	4.2%	4.7%	4.7%	6.5%	51 bps	180 bps
	31-Mar-22	4.8%	4.3%	5.9%	6.7%	110 bps	240 bps
Weight in Thermal Coal Reserves	31-Mar-21	0.6%	0.6%	2.4%	1.4%	184 bps	82 bps
	31-Mar-22	1.8%	0.6%	3.2%	1.4%	143 bps	85 bps
Weight in Coal Power	31-Mar-21	0.4%	0.9%	0.0%	0.2%	-44 bps	-72 bps
	31-Mar-22	2.1%	0.9%	0.1%	0.2%	-196 bps	-69 bps
Weight in Clean Technology	31-Mar-21	9.2%	14.9%	22.6%	27.7%	1340 bps	1280 bps
	31-Mar-22	11.6%	14.5%	22.9%	29.0%	1126 bps	1450 bps

Equities

The below table shows the Fund's aggregated climate risk metrics for each portfolio in the equity asset class. Please see pages 51-56 for definitions of each of these metrics.

FIGURE 2: EQUITIES CLIMATE DASHBOARD

Equity Asset Class	Multiple Fund Classification	Multiple Fund Manager	£3,013,069,302 NAV	Blended Reference Index	Q1 2023 Period

Carbon Footprint Metrics					Data Availability	
		Portfolio	Reference	Previous Year	Portfolio	Reference
Total Financed Emissions	Scope 1+2	183,713	277,979	185,275	96.6%	98.3%
tCO2e	Scope 3	2,059,719	2,527,164	2,016,019	96.4%	98.0%
Normalised Financed Emissions	Scope 1+2	63.2	93.7	62.6		
tCO2e/£M Invested	Scope 3	712.6	851.5	685.8		
Weighted Average Carbon Intensity	Exclude Sovereign	96.8	153.4	91.7	96.6%	98.3%
tCO2e/$M Revenue	Include Sovereign	96.8	153.4	91.7	96.6%	98.3%

Top 10 Emissions Contributors

Issuer	PF Weight	Ref Weight	% Financed Emission		% WACI		Scope 1+2	Scope 3	Engagement	Focus	Data	LCT	ITR	SBT
SHELL PLC	1.9%	2.1%	18.4%	1	7.1%	1	137.7M	1,174.0M	Yes	Yes	2	2.9	2.5	No
Taiwan Semiconductor Manufacturing Co., Ltd.	1.7%	1.1%	0.9%	13	3.4%	4	11.3M	35.0M	Yes	Yes	2	5.8	2.9	No
BP P.L.C.	1.0%	1.2%	4.3%	3	1.6%	9	35.5M	640.7M	Yes	Yes	2	2.8	2.4	No
RIO TINTO PLC	0.7%	0.8%	3.3%	4	3.9%	2	30.3M	583.9M	Yes	No	2	5.5	5.9	No
EOG RESOURCES, INC.	0.4%	0.1%	1.6%	7	1.5%	11	10.5M	146.1M	No	No	2	2.7	3.7	No
ANGLO AMERICAN PLC	0.4%	0.4%	1.4%	9	1.6%	10	13.3M	335.2M	Yes	No	2	5.8	5.5	No
INTERCONTINENTAL HOTELS GROUP PLC	0.3%	0.1%	1.4%	10	2.9%	5	2.5M	3.5M	No	No	2	5.3	4.9	Yes
CRH PUBLIC LIMITED COMPANY	0.3%	0.4%	5.7%	2	3.6%	3	33.8M	22.4M	Yes	No	2	4.9	1.8	Yes
CEMEX, S.A.B. de C.V.	0.1%	0.0%	2.7%	6	1.7%	8	39.3M	14.8M	Yes	No	2	4.0	1.9	Yes
ULTRATECH CEMENT LIMITED	0.0%	0.0%	1.2%	12	2.4%	6	62.5M	5.3M	No	No	2	1.8	3.7	Yes

Recommendations / Observations

- The Fund's equity investments are underweight to sectors which are difficult to abate, such as Materials and Energy, which led to substantial outperformance against the blended benchmark.
- YoY, slight increases in WACI and normalised financed emissions are associated with increased exposure to Energy and Consumer Discretionary. This increase was mitigated by the stock selection within the Materials sector.

Worst YoY Contributors	Stewardship Focus
BP P.L.C.	Yes
CRH PUBLIC LIMITED COMPANY	No
EOG RESOURCES, INC.	No

High Impact Sectors / Climate Solutions Exposures (Portfolio vs Benchmark)

Fossil Fuel Exposure		Fossil Fuel Revenue		Thermal Coal Exposure		Coal Power Exposure		Cleantech Exposure		Cleantech Revenue	
5.7%	8.5%	2.0%	3.8%	1.9%	3.0%	0.0%	0.1%	38.5%	38.5%	5.3%	5.2%

Portfolio Alignment & Engagement

Engagement	Data Quality	LCT	ITR	SBT	Alignment
63.5%	2.1	39.0%	28.1%	32.4%	22.1%

Equities *(continued)*

We analysed 16 funds totalling approximately £3.0bn in NAV as of 31 March 2023.

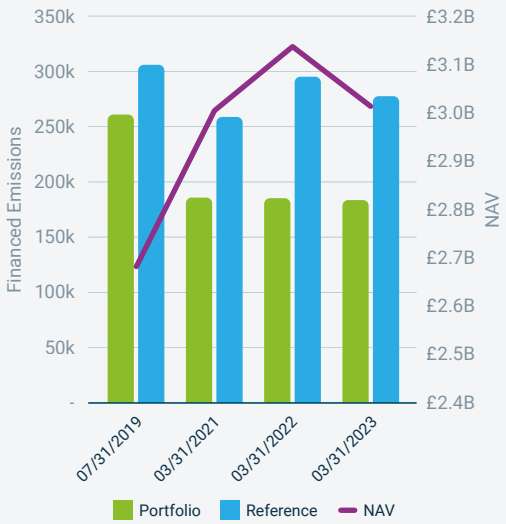
Since our initial analysis in 2019, the funds in scope of the analysis have changed significantly. The total count of equity funds in scope has decreased from 28 in 2019. Total NAV of the funds in scope has also increased from £2.6bn in the same period. Major additions during the period include LGIM MSCI World Low Carbon Target Index Fund, LGPSC Climate Multi Factor Fund, Baillie Gifford Positive Change Fund and RBC Global Equity Focus Fund. The reallocation to Global Sustainable Equity funds reflects the Fund's efforts to meet its climate targets (see above).

The carbon footprint of each fund is assessed based on the market index in which it primarily invests. The table below provides a summary of the reference indices we have used for this evaluation.

Strategic Asset Allocation Benchmark	Reference Index
UK Equities	FTSE UK All Share Index
Japan Equities	FTSE Japan Index
Emerging Markets Equities	FTSE Emerging Index
Global Sustainable Equities	FTSE All-World Index
North American Equities	FTSE All-World Index

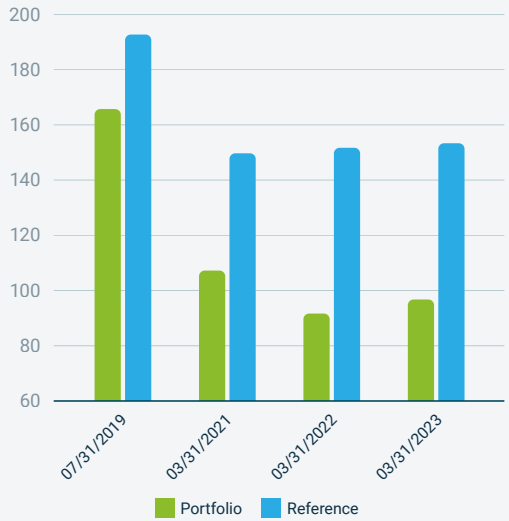
Carbon Footprint Metrics

Equities: Financed Emissions Over Time



Equities: Normalised Financed Emissions Over Time

Equities: WACI Over Time



Equities *(continued)*

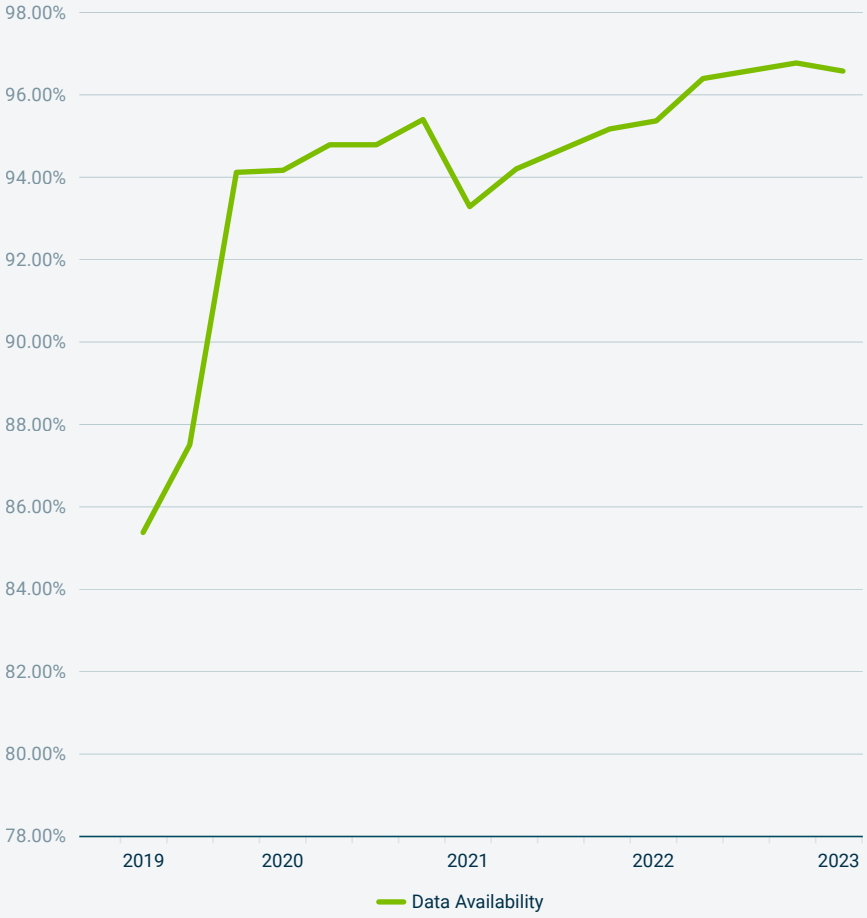
Since 2019, financed emissions has declined by 29.8% despite an 12.3% increase in AUM in scope. As a result, financed emissions normalised by AUM has declined by 44.6% in the same period. Financed emissions dipped in 2020 and 2021 – attributable to the slowdown in economic activities due to the COVID-19 pandemic – and has since rebounded. AUM increased at a similar rate which led to normalised financed emissions curve staying relatively flat since 2021.

Equities' exposure to carbon intensive companies also declined since 2019. This is evidenced by WACI, which declined by 41.6%. Allocation to hard-to-abate sectors is relatively stable during the period. Weight in Energy, Materials and Utilities declined by approximately 30bps, 50bps and 20bps, respectively. These are somewhat offset by the weight in Industrials which increased by approximately 120bps. During the same period, average carbon intensities of companies within high emitting sectors declined, partially driven by revenue growth that outstripped emissions growth.

Nonetheless, carbon metrics for equities have consistently outperformed its reference indices. All actively managed portfolios have lower carbon metrics compared to its market index. This suggests that delegated managers are managing climate risk exposure in their respective portfolios.

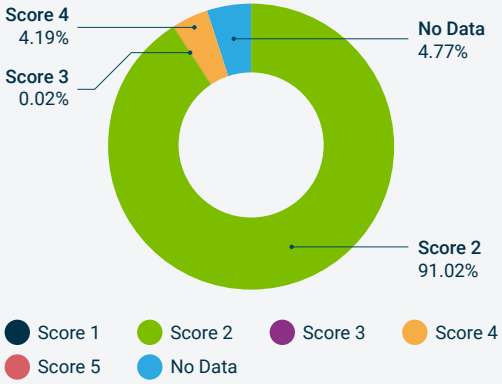
Data

Equities: Data Availability Over Time



Equities *(continued)*

Equities: Breakdown of Data Quality Score (March 2023)



We have consistently had access to a substantial amount of equity data since we began calculating carbon footprint metrics. Our current primary focus is to enhance the quality of the data used in these calculations. At present, the majority (91.0%) of the data analysed, as meaured as a percentage of the total value of equity funds, is sourced from company-reported data with a rating of 2. To attain a higher rating, company-reported data should undergo independent verification. In practice, a significant portion of the data we employ has already undergone independent verification. However, we currently lack a method to confirm the audited status of this data. Our ongoing efforts are directed toward improving the data validation process to accurately reflect the true quality of the data we utilise. This workstream is conducted in collaboration with our data provider.

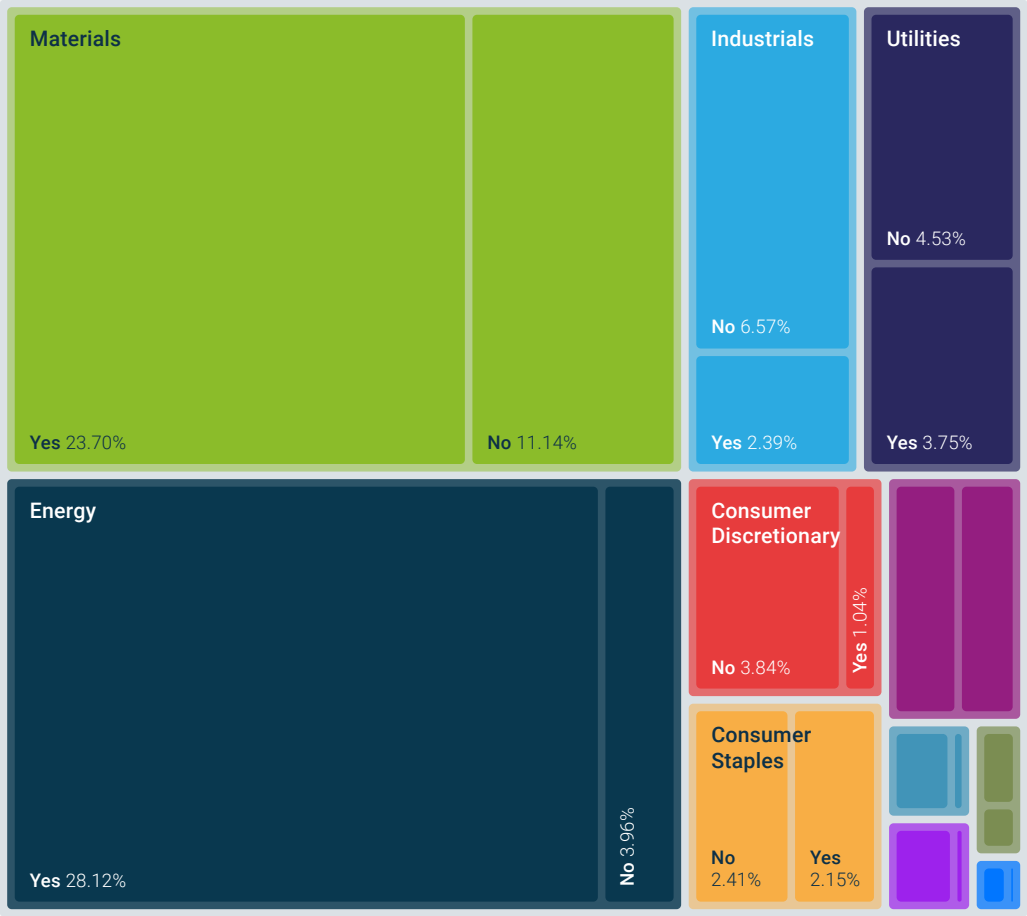

Jacob's Ladder, Peak District National Park, Derbyshire

Equities *(continued)*

Sources of Emissions

The graph below illustrates the distribution of emissions within the portfolio by sector and indicates whether these emissions are addressed through engagement activities (i.e. 'yes' or 'no' as shown on the chart overleaf).

Financed Emission (Scope 1+2) by GICS Sector and Climate Engagement



As mentioned above, allocation (as a percentage to NAV) to hard-to-abate sectors was relatively stable during the period between July 2019 to March 2023. During the same period, the share of emissions from the four main sectors (Energy, Materials, Utilities and Industrial) marginally declined. This was driven by a sharp decline in financed emissions from Utilities and to a smaller extent Materials sectors. Although emissions from the Energy sector increased, it was not enough to offset reductions from the former two sectors. As a result, not only did the share of emissions from hard-to-abate sectors decline (apart from Energy), but the reduction also contributed to the decline in overall financed emissions.

- **Information Technology**
  No 1.97% **Yes** 1.68%
- **Health Care**
  No 0.78% **Yes** 0.15%
- **Financials**
  Yes 0.43% **No** 0.26%
- **Communication Services**
  No 0.75% **Yes** 0.10%
- **Real Estate**
  No 0.25% **Yes** 0.02%

One key explanation for the decline in financed emissions from Utilities was the sharp decline in emissions from the underlying companies, such as RWE, NRG and Tata Power.

Despite the declining share, the hard-to-abate sectors still contribute the lion share of emission (84.2%). This high level of concentration theoretically helps with engagement efforts. Overall, 63.5% of financed emissions from equity holdings are covered by one or more climate engagement programme managed either directly or indirectly by LGPSC. This figure therefore serves as a minimum percentage of financed emissions which are covered by some form of engagement program. It is worth noting that only 3 out of the 9 companies in the Fund's Climate Stewardship Plan (CSP) list are in the top 10 of contributors of emission. We will monitor this trend and suggest reviews, if required.

Relative to reference indices, the Fund's equity portfolios have lower exposure to fossil fuels, thermal coal and coal power generation. This can be attributed to the underweight position in the Energy sector.

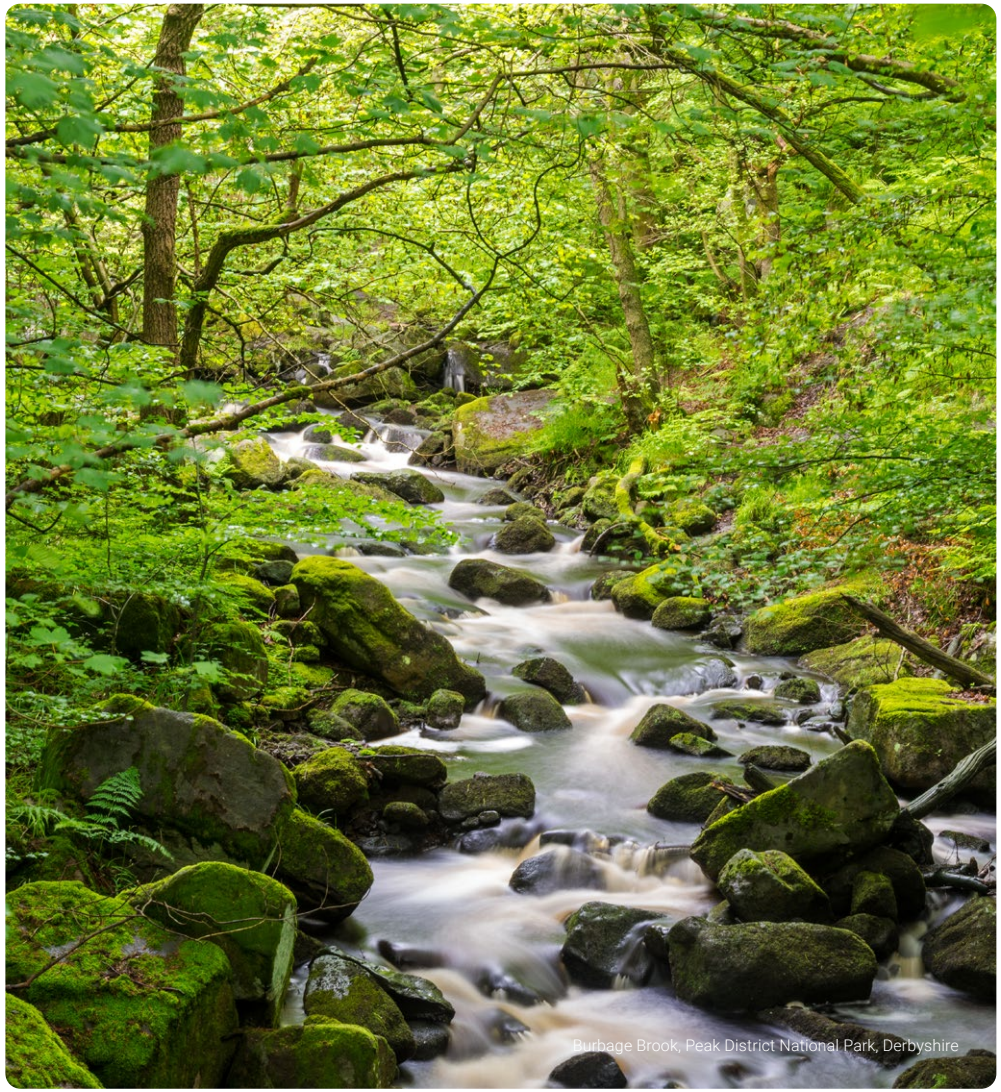
Equities *(continued)*

Highest Emitting Issuers

The leading contributor to financed emissions in DPF's equity portfolios is **Shell**, accounting for 18.4% of all such emissions. Shell has committed to a climate target of reducing scope 1 and 2 emissions by 50% by 2030, compared to a 2016 baseline, and achieving net zero emissions by 2050. In relation to this target, Shell has already reduced its scope 1 and 2 emissions by 20.4% since the baseline year, and they have also reported successful attainment of their short-term targets for 2021 and 2022. Nonetheless, Shell continues to be a key focus of our stewardship efforts.

Cement producers **CRH**, **Ultratech**, and **Cemex** had a negative impact on relative financed emissions at the individual stock level due to their overweight positions. However, the overall exposure to the Materials sector was lower than that of the reference indices. This resulted in significant outperformance in terms of relative financed emissions. On the flip side, underweights in **Holcim**, **CNBM**, and **Anhui Conch** made positive contributions in this context.

CRH, a supplier of construction materials has been one of the top contributors (year-on-year) to the portfolio's financed emissions as exposure to the company increased. The company has established 2030 target which has been validated by the SBTi. The target refers to a 30% reduction in absolute emissions by 2030 from a base year of 2021. The company has so far reduced scope 1 and 2 emissions by 6.1% (from 2021 to 2022). Prior to this the company's scope 1 and 2 emissions increased by over 2x over a 10-year period (2012 to 2022) driven by M&A activities.



Burbage Brook, Peak District National Park, Derbyshire

Fixed Income

FIGURE 3: FIXED INCOME CLIMATE DASHBOARD

Fixed Income	Fixed Income Global	Multiple	£332,351,801	50% Sterling Non-Gilt & 50...	Q1 2023
Asset Class	Fund Classification	Fund Manager	NAV	Reference Index	Period

		Carbon Footprint Metrics			Data Availability	
		Portfolio	Reference	Previous Year	Portfolio	Reference
Total Financed Emissions	Scope 1+2	17,036	17,260	24,825	71.8%	77.4%
tCO2e	Scope 3	83,014	137,213	106,421	71.6%	76.9%
Normalised Financed Emissions	Scope 1+2	71.3	51.9	91.4		
tCO2e/£M Invested	Scope 3	349.0	412.9	391.8		
Weighted Average Carbon Intensity	Exclude Sovereign	174.6	159.0	200.5	83.0%	96.1%
tCO2e/$M Revenue	Include Sovereign	175.5	159.0	198.8	87.3%	96.1%

Top 10 Emissions Contributors

Issuer	PF Weight	Ref Weight	% Financed Emission		% WACI		Scope 1+2	Scope 3	Engagement	Focus	Data	LCT	ITR	SBT
THE SOUTHERN COMPANY	0.9%	0.1%	12.2%	2	17.7%	1	82.6M	34.8M	Yes	Yes	2	3.1	3.7	No
INTERCONTINENTAL HOTELS GROUP PLC	0.5%	0.1%	2.1%	13	2.1%	7	2.5M	3.5M	No	No	2	5.3	4.9	Yes
ENEL Finance International N.V.	0.4%	0.6%	2.8%	9	1.2%	14	55.9M	69.2M	No	No	2	6.1	1.4	Yes
CLECO CORPORATE HOLDINGS LLC	0.4%	0.0%	18.6%	1	11.2%	2	9.2M	3.7M	No	No	4			No
WEC ENERGY GROUP, INC.	0.4%	0.0%	4.1%	5	5.5%	3	21.8M	29.0M	Yes	No	2	2.7	3.5	No
DUKE ENERGY CORPORATION	0.3%	0.1%	3.5%	8	5.3%	4	78.0M	26.5M	Yes	No	2	4.0	2.6	No
Dominion Energy, Inc.	0.2%	0.1%	1.5%	17	2.7%	6	35.0M	25.4M	Yes	No	2	3.7	2.9	No
RWE Aktiengesellschaft	0.2%	0.0%	8.3%	3	3.0%	5	89.6M	23.0M	Yes	No	2	4.5	6.6	Yes
Holcim Sterling Finance (Netherlands) B.V.	0.1%	0.1%	5.3%	4	1.9%	10	83.0M	30.9M	No	No	2	4.2	2.3	Yes
THE AES CORPORATION	0.1%	0.0%	2.0%	14	2.0%	9	41.0M	8.6M	Yes	No	2	4.2	3.6	No

Recommendations / Observations

- Corporate Bond climate metrics have improved from the previous year, which was partially driven by decreased exposures to the **Southern Company** and the **Dow Chemical Company**.
- Despite the decrease in climate metrics, the portfolio still exceeds the blended benchmark, which is partially attributable to an overweight exposure to Utilities.

Worst YoY Contributors	Stewardship Focus
DUKE ENERGY CORPORATION	No
ELECTRICITE DE FRANCE SA	No
RWE Aktiengesellschaft	No

High Impact Sectors / Climate Solutions Exposures (Portfolio vs Benchmark)

Fossil Fuel Exposure	Fossil Fuel Revenue	Thermal Coal Exposure	Coal Power Exposure	Cleantech Exposure	Cleantech Revenue
4.4% | 6.3%	1.2% | 2.1%	1.5% | 1.4%	0.0% | 0.2%	22.3% | 28.9%	3.7% | 4.6%

Portfolio Alignment & Engagement

Engagement	Data Quality	LCT	ITR	SBT	Alignment
51.6%	2.2	26.1%	38.9%	39.7%	24.4%

Fixed Income *(continued)*

Our initial analysis encompasses three funds with a combined Net Asset Value (NAV) of approximately £0.9bn.

It's important to note that two of these funds are exclusively invested in UK Gilts (conventional and index linked sovereign bonds) (£0.6bn on 31 March 2023). Currently, we do not aggregate financed emissions from sovereign debt due to issues with the calculation process that present inconsistencies. We are actively working to validate the calculation for emissions from sovereign issuers to ensure accuracy and reliability in our assessments.

The remaining fund that meets our criteria for inclusion is the LGPS Central Corporate Bond Fund (£0.3bn on 31 March 2023), which has been in DPF's books since 2020.

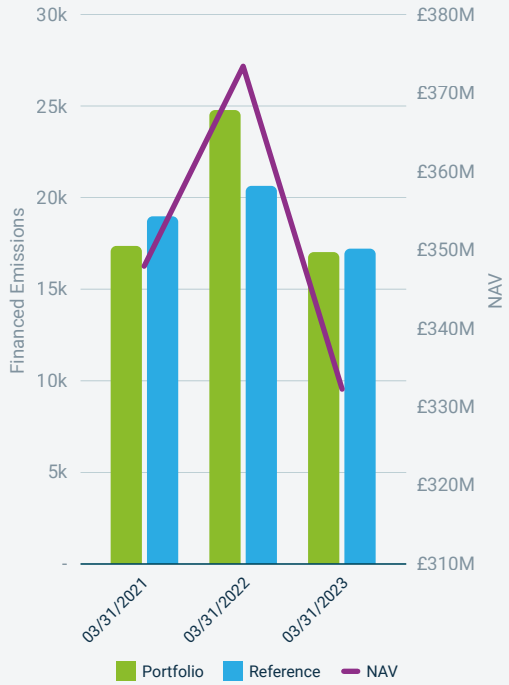
The reference indices we use to measure the funds' relative performances are as follows:

Fund	Reference Index
LGPS Central Corporate Bond Fund	50% Sterling Non-Gilt Index + 50% ICE BofA Global Corporate Index

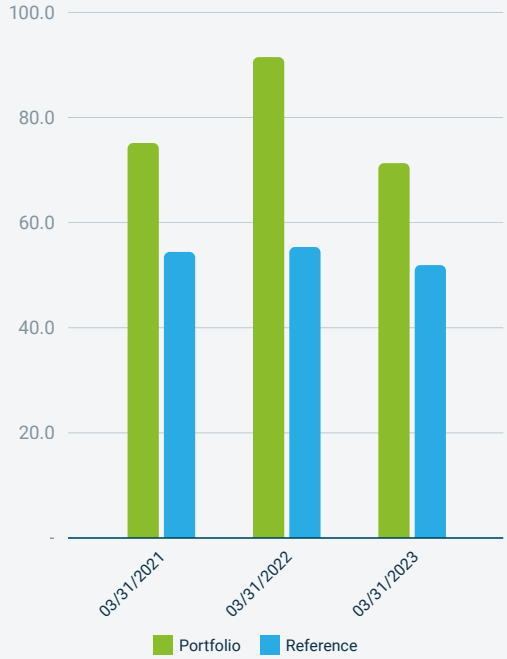
Comparison against reference index could be inaccurate due to the discrepancies in data availability between the funds and their reference indices. It is worth noting that lower data availability usually results in higher normalised financed emission and WACI (see above).

Carbon Footprint Metrics

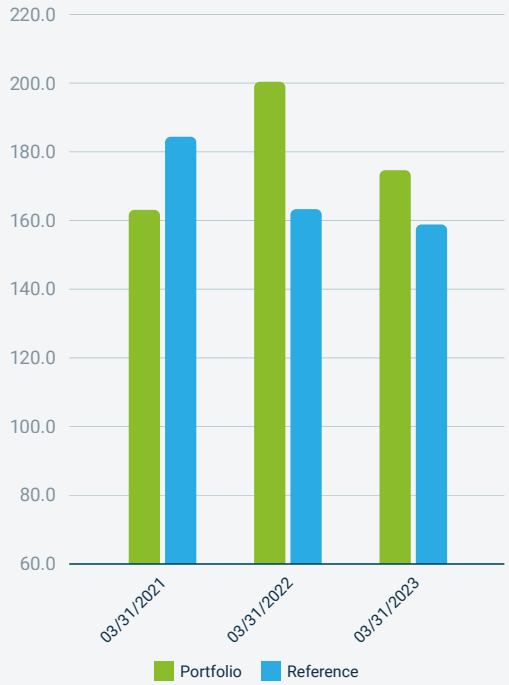
Fixed Income: Financed Emissions Over Time



Fixed Income: Normalised Financed Emissions Over Time



Fixed Income: WACI Over Time



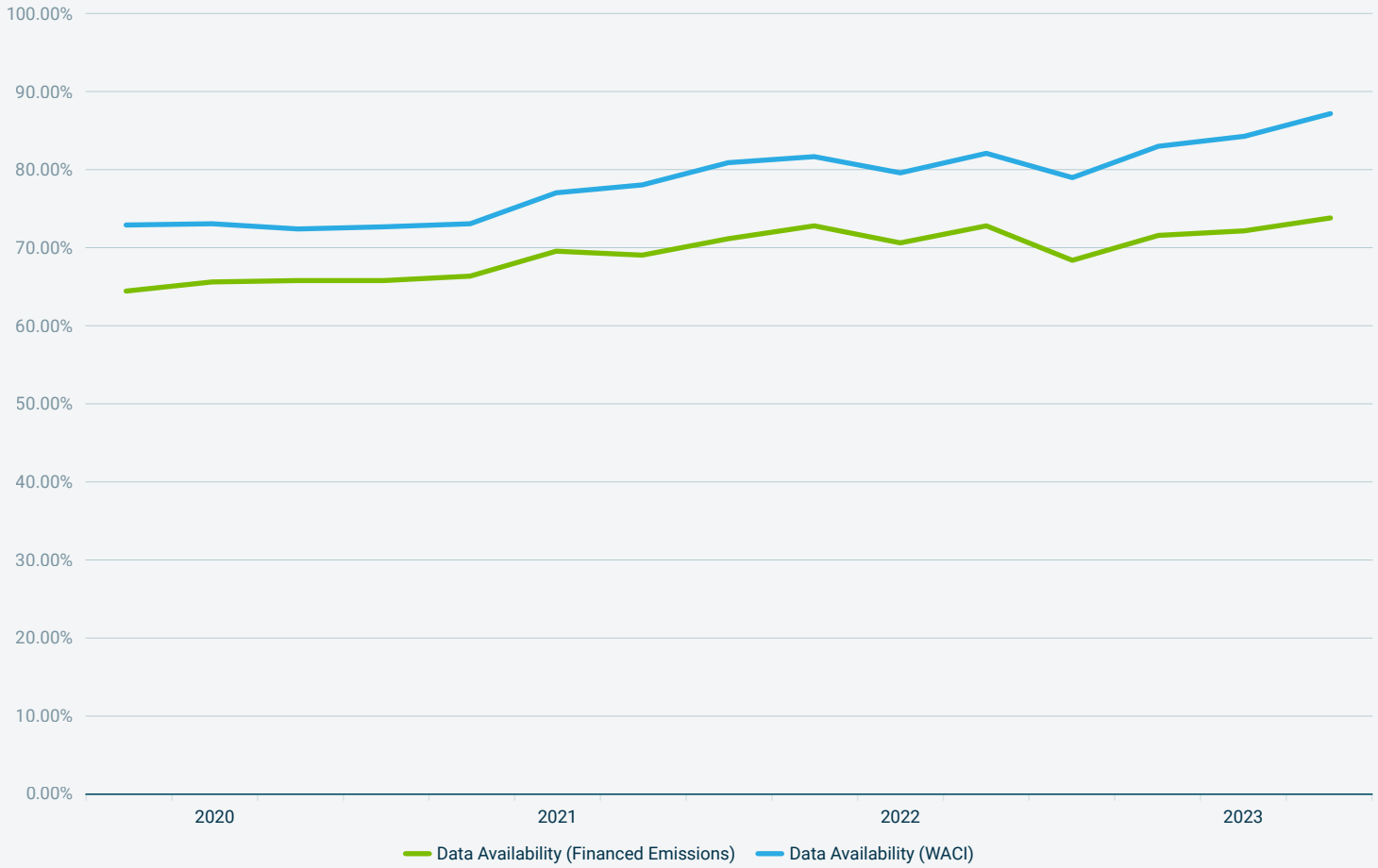
Fixed Income *(continued)*

The jump in financed emission in 2022 can be partially explained by additional DPF investment into the fund between periods. On top of that, increased allocation and security selection within Utilities sector further compounded the rise. The positioning within Utilities can also partially explain the shape of the normalised financed emissions and WACI curves. In 2023, while the weight in the sector was stable, stock selection contributed towards lower financed emissions.

Compared to its reference index, the fixed income portfolio exhibited a slight underperformance concerning carbon footprint metrics. Part of this underperformance can be attributed to the lower data coverage available for the fund in comparison to the reference index. Nevertheless, we are committed to closely monitoring and engaging with the underlying manager(s) to gain insights into their approach for managing the fund's carbon footprint.

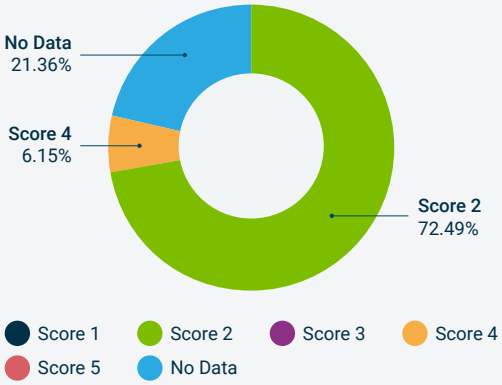
Data

Fixed Income: Data Availability Over Time



Fixed Income *(continued)*

Fixed Income: Breakdown of Data Quality Score (March 2023)



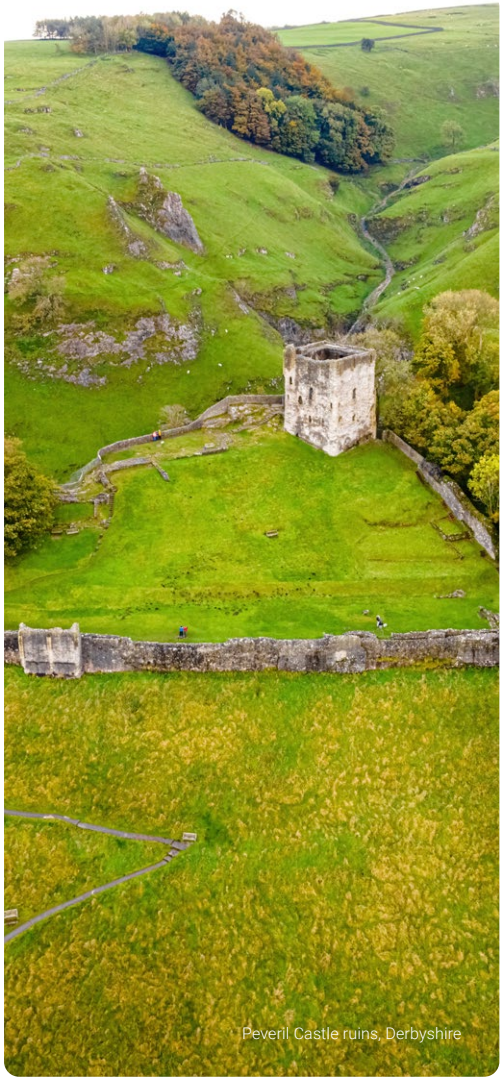
Data availability for fixed income products is relatively lower when compared to their equity counterparts. However, it's important to acknowledge that considerable progress has been made since the inception of our carbon footprinting efforts in 2019. In terms of data quality, the majority of the information used, where accessible, is sourced from reported data. Similar to our approach with equities, we are actively working on establishing a mechanism to validate verified data.

Moving forward, our immediate priorities for fixed income include:

i) Incorporating sovereign emissions data into our calculations, which will notably enhance data coverage for emerging market debt funds as well as funds investing predominantly into sovereigns such as the Gilt funds. (Note: We are currently in the testing phase for sovereign emissions data in our model).

ii) Expanding our coverage of Eneterprise Value Including Cash (EVIC) data, particularly for non-listed issuers. This expansion will improve our data coverage related to financed emissions.

iii) Continuously advancing our efforts to accurately map securities to their respective issuers for improved data quality and transparency.



Peveril Castle ruins, Derbyshire

Fixed Income *(continued)*

Sources of Emissions

The graph below illustrates the distribution of emissions within the portfolio by sector and indicates whether these emissions are addressed through engagement activities.

Financed Emission (Scope 1+2) by GICS Sector and Climate Engagement

- **Consumer Discretionary** — No 3.18% Yes 0.32%
- **Communication Services** — No 1.85% Yes 0.11%
- **Materials** — No 1.68% Yes 0.28%
- **Industrials** — No 1.27% Yes 0.61%
- **Consumer Staples** — No 0.91% Yes 0.29%
- **Health Care** — No 0.41% Yes 0.08%
- **Real Estate** — No 0.34% Yes 0.08%
- **Information Technology** — No 0.22% Yes 0.07%

The sector allocation has seen a notable shift towards Financials, while the share of emissions has shifted towards Utilities. There has been a slight increase in the weight of the Utilities sector since 2020. Furthermore, the average carbon intensity of companies within the Utilities sector experienced a significant increase in 2022, which corrected slightly in 2023. The disparity in the average carbon intensities between the Utilities sector constituents within the equities and fixed income portfolios suggests that the issuers to which the fixed income funds provide financing are generally less carbon efficient.

There is a pressing need for progress in expanding engagement coverage across the asset class. Currently, only 51.6% of financed emissions fall under one or more engagement programs. Considering the geographical focus of the funds in scope, there is room for improvement in this figure. This also highlights the challenges faced by engagers within this asset class. One of the key challenges is that companies may not be as willing to engage with their debtholders compared to their equity shareholders. Additionally, the high turnover rate in portfolios exacerbates the issue, as engagers may find it challenging to commit to long-term engagement plans with a single issuer. However, it's crucial to emphasise that delegated managers are expected to integrate ESG factors and engage in stewardship. As such, it is essential for this metric to show improvement over time, as engagement is believed to have the potential to drive real-world improvements.

Fixed Income *(continued)*

Highest Emitting Issuers

Cleco Corporate Holdings, a public utility holding company, stands as the top emitter in the fixed income portfolios, contributing to 18.6% of the financed emissions and accounting for 11.2% of the WACI. Unfortunately, emission data on the company is scarce. The issuer's private company status, as it is owned by private equity firms, poses challenges for analysis and engagement. LGPSC is in communication with the underlying manager to explore strategies for engagement with the company.

Southern Company, a prominent energy provider serving 9 million customers in the United States, has earned a spot on DPF's CSP due to its consistent high emissions ranking. The company has articulated a commitment to achieve net zero emissions by 2050. Initially, it aimed to reduce emissions by 50% from a 2007 baseline, primarily by transitioning from coal to natural gas in its energy mix. Additionally, Southern Company has established plans to enhance its renewable energy capacity to align with the 2050 net-zero emissions goal. However, recent emissions reductions have been slower, reflecting the challenges of decarbonization once the initial transition from coal to natural gas has been completed. As a result, Southern Company will continue to be a central focus of climate stewardship efforts.

RWE Aktiengesellschaft is a German based utilities company and contributes 8.3% of the portfolio's financed emissions. The company continues to lag peers, with a high reliance on fossil fuel sources (66% of 2021 installed capacity). Despite this the company is well positioned in regard to opportunities in clean tech, with targets to increase net capacity and invest significant funds into projects including battery storage and hydrogen. The company has also committed to exit coal by 2030, a target brought forward from 2038. RWE have also committed to be Net Zero by 2040 and have implemented climate targets for 2030 which have been certified by the Science Based Target initiative as to be in line with the Paris Agreement.

One of the top contributors to financed emissions in the fixed income portfolios is **Enel**, accounting for 2.8% of the financed emissions. Enel is widely recognised as a leader in the low-carbon transition within the Utilities sector. The company has set forth an ambitious plan to achieve net-zero emissions by 2040, primarily by transitioning its generation capacity to renewable energy sources, with a target of reaching 85% by 2030 and 100% by 2040.


Monsal Dale, Derbyshire

Definition of Carbon Metrics

TABLE 1: DEFINITION OF CARBON METRICS USED[15]

Carbon Risk Metric	Unit	Definition	Use Case	Limitations
Scope 1 Emissions	tCO2e (Tons of CO2 equivalent)	These are the Greenhouse Gas (GHG) emissions that a company is directly responsible for through its generation of energy.	The emissions generate through the company's direct operations, such as fuel combustion, company vehicles, etc.	These metrics must be considered together to gain a full understanding of a company's carbon profile. They do not consider a company's size and they do not capture the impact of the company's business model on the climate. Scope 3 emissions can also be counted multiple times by companies at different stages of the same supply chain.
Scope 2 Emissions	tCO2e	GHG emissions that a company produces indirectly through its operations via the consumption of purchased energy.	The emissions generated through the energy purchased by the company during its operations, such as energy consumption used to heat buildings.	
Scope 3 Emissions	tCO2e	All indirect GHG emissions resulting from the company's wider business practice.	Capturing emissions up and down the company's supply chain, including the emissions produced by customers' consumption of its products.	
Financed Emissions	tCO2e	This figure represents the amount of emissions attributed to the investor based on the proportion of the company that the investor owns.	Measures the absolute tons of (scope 1 and 2) CO_2 emissions for which an investor is responsible.	Limited usefulness for benchmarking and comparison to other portfolios due to the link to portfolio size (benchmarks are assumed to have equal AUM to the respective portfolio to overcome this challenge). Attribution factor (EVIC)[16]

[15] Further information can be found at this link: Carbon Footprinting 101 - A Practical Guide to Understanding and Applying Carbon Metrics - MSCI

[16] EVIC is the Enterprise Value Including Cash. In other words, this refers to the company's total value.

Definition of Carbon Metrics *(continued)*

Carbon Risk Metric	Unit	Definition	Use Case	Limitations
Normalised Financed Emissions	tCO2e/£m Invested	Financed Emissions are normalised by the portfolio's AUM as to provide a measure of carbon intensity.	This measure converts the absolute measure of Financed Emissions into a relative measure of carbon intensity, creating greater ease when benchmarking and comparing to other portfolios.	This measure will complement Financed Emissions, as alone it cannot provide an absolute measure of portfolio emissions.
Weighted Average Carbon Intensity (WACI)	tCO2e/$m revenue	Is calculated by working out the carbon intensity (Scope 1+2 Emissions / $M revenue) for each portfolio company and calculating the weighted average by portfolio weight.	A proxy for carbon price risk. Were a global carbon price to be introduced in the form of a carbon tax, this would (ceteris paribus) be more financially detrimental to carbon intensive companies than to carbon efficient companies.	This metric includes scope 1 and 2 emissions but not scope 3 emissions. This means that for some companies the assessment of their carbon footprint could be considered an 'understatement'. As this metric is a product of revenue, the figure may fluctuate independently of the company's carbon emissions.
Exposure to Fossil Fuel Reserves	%	The weight of a portfolio invested in companies that (i) own fossil fuel reserves (ii) thermal coal reserves (iii) utilities deriving more than 30% of their energy mix from coal power.	A higher exposure to fossil fuel reserves is an indicator of higher exposure to companies challenged by the transition to a lower carbon economy and is a measure of the impact of the portfolio.	It does not consider the amount of revenue a company generates from fossil fuel activities. Consequently, diversified businesses (e.g. those that are involved in a range of economic activities) would be included when calculating this metric regardless of the proportion of their revenue derived from fossil fuels. As a result it is not a precise measure of transition risk.

Definition of Carbon Metrics *(continued)*

Carbon Risk Metric	Unit	Definition	Use Case	Limitations
Exposure to Fossil Fuel Reserves by Revenue	%	This figure identifies each portfolio company's maximum percentage of revenue (either reported or estimated) derived from conventional oil and gas, unconventional oil and gas, as well as thermal coal. Each company's maximum possible revenue values are summed and weighted by the portfolio weights to produce a weighted exposure figure.	This has been included to overcome the limitations of the metric of Exposure to Fossil Fuel Reserves, which includes all companies which have any exposure regardless of how small.	This measurement uses maximised estimates where reported values are not available. Therefore, there is a potential to overestimate exposure.
Exposure to Clean Technology	%	The weight of a portfolio invested in companies whose products and services include clean technology (Alternative Energy, Energy Efficiency, Green Buildings, Pollution Prevention, and Sustainable Water). The final figure comes from the percentage of each company's revenue derived from clean technology.	Provides an assessment of climate-related opportunities so that an organisation can review its preparedness for anticipated shifts in demand.	While MSCI has been used for this report due to its wide range of listed companies and data points, there is no universal standard or definitive list of green revenues. This is due to the inherent difficulty in compiling a complete and exhaustive list of technologies relevant for a lower-carbon economy. This is also a binary measure, whereby all exposures to clean technology are categorised equally. Therefore, companies with very limited exposure to clean technology may have a significant influence on the final figure. This limitation is met by the revenue metric below.

Definition of Carbon Metrics *(continued)*

Carbon Risk Metric	Unit	Definition	Use Case	Limitations
Exposure to Clean Technology by Revenue	%	This identifies the maximum percentage of revenue, either reported or estimated, derived from companies involved in clean technology (see above). Company values are summed and weighted by the portfolio weights to produce a weighted exposure figure.	Allows for a comparison of company's exposure to clean technology, adjusted according to a proportion of that company's revenue generated from those activities.	This measurement uses maximised estimates where reported values are not available. Therefore, there is potential to overestimate exposure.
Engagement	%	Is calculated by the proportion of financed emissions which are accounted for under an engagement program either directly, in partnership and/or through stewardship provider.	This allows us to understand how much of the portfolio's financed emissions are accounted for under engagement programs.	This figure does not demonstrate the degree of progress made with the portfolio company as a result of the engagement. This will also include engagement on issues outside of environmental topics.
Data Quality	Numerical (1-5)	This metric is presented as a score between 1 and 5, with 1 representing the highest quality of reported emissions. A score of 1 would represent independently verified emissions data, whereas a higher score may represent estimated emissions based on sector averages.	Understanding data quality provides an insight into the accuracy of other climate metrics.	Simple quantification of the quality of data, does not provide in-depth understanding of data availability/reliability.

Definition of Carbon Metrics *(continued)*

Carbon Risk Metric	Unit	Definition	Use Case	Limitations
Low Carbon Transition	Numerical (1-10)	Low Carbon Transition scores are assigned from 1 to 10, whereby a score of 10 indicates exceptional management of climate risks and opportunities, while a score of 1 indicates poor management. For this metric the proportion of financed emissions associated with a portfolio with a manager score above 5 is aggregated.	This views how well a company manages risk and opportunities related to the low carbon transition. The overall figure for this metric is apportioned by financed emissions, highlighting the proportion of emissions within the portfolio which arise from companies with effective carbon management policies.	While this considers the ability of a company's management to incorporate low carbon transition risks and opportunities, it is not an overall indicator of the company's low carbon transition performance.
Implied Temperature Rise (ITR)	%	ITR is typically expressed in degrees centigrade, and is based on the implied global temperature rise if the entire economy adopted the same decarbonisation policy as the company in question. The reported figure is expressed in a percentage, and relates to the share of financed emissions within the portfolio with an ITR of 2C or less.	Implied temperature rise is an intuitive, forward-looking metric, expressed in degrees Celsius, designed to show the temperature alignment of companies, portfolios and funds with global temperature goals.	Implied temperature rise is heavily reliant on the model's parameters and assumptions.
Science-Based Targets	%	This is calculated as the proportion of financed emissions which are accounted for by a portfolio company with science-based climate target.	Provides an insight into the proportion of companies which have implemented science-based targets. Apportioning by financed emissions places a greater weight on companies where emissions are more substantial.	This metric only measures the proportion of companies with official science-based targets which have been verified by an independent body. A company with robust and ambitious targets which have not been verified may be omitted.

Definition of Carbon Metrics *(continued)*

Carbon Risk Metric	Unit	Definition	Use Case	Limitations
Paris Alignment	%	This metric is constructed in-house. A company is considered to be aligned if they have a Low Carbon Transition score greater than 5, as well as either an ITR of 2 degrees Celsius or lower, or a science-based target.	This figure is designed to provide an insight into the overall Paris alignment of the portfolio. Apportioning by financed emissions places a greater weight on companies where emissions are more substantial.	The limitations of the figure will be carried over from the limitations of the underlying metrics. There is currently no consensus opinion on what it means for a company to be aligned.