

FOR PROFESSIONAL CLIENTS ONLY

LEICESTERSHIRE COUNTY COUNCIL PENSION FUND

Climate Risk Management Report

FOURTH EDITION • DECEMBER 2023 • PUBLIC

PREPARED BY LGPS CENTRAL LIMITED





About the Report

This report represents the fourth edition of the Leicestershire County Council Pension Fund's ("The Fund" or "LPF") review of its approach towards climate-related risks and opportunities. Previous iterations were titled Climate Risk Report. However, the name of the report is changed in this iteration to avoid confusion with the Department for Levelling Up, Housing and Communities' (DLUHC) climate-related disclosure requirement, which it dubbed *Climate Risk Report*. This report follows previous iterations delivered in October 2020, September 2021 and November 2022.

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 LPF's 2022 Climate-Related Disclosure report and public policy documents such as the 2022/2023 Annual Report, and the Fund's Investment and Funding Strategy Statements. Emphasising compliance; the Fund's Climate-Related Disclosure report meets Task Force on Climate-Related Financial Disclosures (TCFD) guidelines, satisfying DLUHC's proposed annual Climate Risk Report requirement. Recommendations from prior Climate Risk Management Report are included for continuity where relevant.

Section 2 of the 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.



Rural Leicestershire from the sky



Executive Summary

Climate Analysis

Summary of Recommendations and Considerations:

Governance

- Disclosure of participation in responsible investment/climate working group(s).
- Additional detail on the training program delivered to the Pensions and Investment committees should be included in TCFD report.

Strategy

- Integrate funding and investment climate scenario analysis.
- Provide an explanation of the choice of scenarios within the scenario analysis report.
- Consider the further integration of climate considerations into the Fund's Funding Strategy Statement.
- Work with appointed managers to understand how key transition and physical risks are assessed within high impact sectors.

Risk Management

- Continue to review current risk management processes including the list of companies within the Climate Stewardship Plan.

Metrics & Targets

- Include additional information regarding the choice of metrics, such as use cases and drawbacks.
- Include engagement statistics in TCFD report.
- Additional metrics to meet DLUHC requirements should be included in the next iteration of the Fund's TCFD report.



Executive Summary *(continued)*

Climate Metrics

Total Equities
Financed Emissions:

158,353
tCO₂e

↓ 19.4% vs
2019

↓ 24.0% vs
reference
index

Total Equities Weighted
Average Carbon
Intensity (WACI):

102.0
tCO₂e/\$M
Revenue

↓ 38.0% vs
2019

↓ 62.1% vs
reference
index

Total Equities exposure
to fossil fuel reserves:

5.2%

↓ 16 bps
vs 2019

Total Equities exposure
to climate solutions:

39.4%

↑ 16 bps
vs 2019

68.3%

of AUM in material
sectors are considered
to be aligning/aligned
to the Paris Agreement.



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Front Cover: A folly in the heart of Rutland, Leicestershire
Images (Clockwise): Farmland in Leicestershire
Woodland in the grounds of Bradgate Park, Leicestershire
Old John Tower in Bradgate Park, Leicestershire



Introduction

The Fund has published annual TCFD reports voluntarily since October 2020, well ahead of the upcoming mandate by DLUHC that requires Local Government Pension Scheme administering authorities to identify, assess and manage climate-related risks in line with the TCFD recommendations.

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, 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

Employing the TCFD Maturity Map as a foundational framework, we evaluated the Fund's existing climate reporting. This assessment aims to identify opportunities for the Fund to enhance its reporting, progressing towards a leading position. The TCFD Maturity Map categorises disclosure items into three levels: Limited, Moderate, and Full disclosure, guiding organisations in providing comprehensive responses.

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, scrutinizing its approach to identifying, assessing, and managing climate-related risks and opportunities. We also reviewed the Fund's TCFD to analyse its 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.

Step 6

Finally, we also reviewed TCFD reports published by various organisations across the Financial Services industry,¹ encompassing asset owners and asset managers to gauge how our peers manage climate-related risks. We seek to find examples of actions undertaken to meet the 'Full disclosure' category in the TCFD Maturity Map. We consider these actions as industry best practices and measure the Fund's progress against these.

¹ We reviewed TCFD reports from 12 organisations which include abrdn, Baillie Gifford, Schroders, Robeco, RLAM, LGIM, Liontrust, Scottish Widows, Railpen, Nest, USS and the Church of England Pension Board. These reports can be found in the organisations' websites.



Introduction *(continued)*

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 the 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 aim of this report is to drive further progress and improvement.

LPF is a Local Government Pension Scheme (LGPS), which unlike other pension schemes is a public service Pension Scheme. Investment Decisions are made locally by administrating authorities in accordance with legal principles (fiduciary duties and public law principles) and LGPS legislation. LGPS regulations are set nationally under the Public Service Pensions Act 2013 by the Secretary of State for Levelling-Up and, Housing and Communities.

This analysis provides outputs that the Fund should consider implementing in its climate related risk procedures and/or disclosures.



Rutland Water Reservoir



Section 1

Climate Analysis Report

A canal boat moored on a quiet stretch of the Grand Union Canal near Foxton in Leicestershire



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

LIMITED 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.

MODERATE DISCLOSURE

- 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.

FULL DISCLOSURE

- 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 DISCLOSURE



Governance *(continued)*

Industry Best Practices

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.

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.

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 for the audience.

Financial institutions that are listed on the stock exchange are required to disclose their 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.

LPF Current Disclosures and Practices

LPF's latest TCFD report details the Fund's organisational structure as well as the roles and responsibilities of the Local Pension Board and Local Pension Committee, including overall responsibility for the oversight and management of risks and opportunities related to climate change and the Local Pension Board.

This disclosure demonstrates accountability and transparency within the organisational structure. The Annual Pension Fund Report 2022/23 provides additional information on the responsibility and roles of the committee and board as well as detailing the individual members of the Local Pension Committee. Committee members' profiles are also provided on the Fund's website. LPF's TCFD report discusses the ongoing training received by the Committee.

The Fund's TCFD report discloses the utilisation of external advisors, including the advisors' responsibilities and how their role contributes to the overall governance of the Fund. The responsibilities of advisors include supporting the development of the Committees' policies, such as those in relation to responsible investment and climate risk. This disclosure demonstrates how governance is supported by external advisers.

The Fund has included climate considerations in the Fund's Investment Strategy Statement and Funding Strategy Statement, demonstrating a commitment to the integration of climate considerations in the Fund's policies. The Fund has also published a Responsible Investment Plan for 2023 and Net Zero Climate Strategy.

Summarised discussions on key climate matters are incorporated throughout the Fund's TCFD report. These discussions recognise how climate matters will impact the Fund and demonstrate LPF's commitment to address key climate considerations.

Considerations and Recommendations

While LPF supports the continuous improvement of Committee member knowledge, including ongoing training sessions on responsible investment, the Fund could consider providing a greater level of detail, such as the topics covered, the frequency of training and the provider of the training.

While LPF provide details on Committee members, the Fund could consider detailing the relevant climate credentials of the members, including the training sessions attended.

The Fund may benefit from disclosing participation and discussions held at climate/responsible investment working groups in collaboration with other funds within the pool. These disclosures would demonstrate the Fund's collaborative approach to managing climate risk.



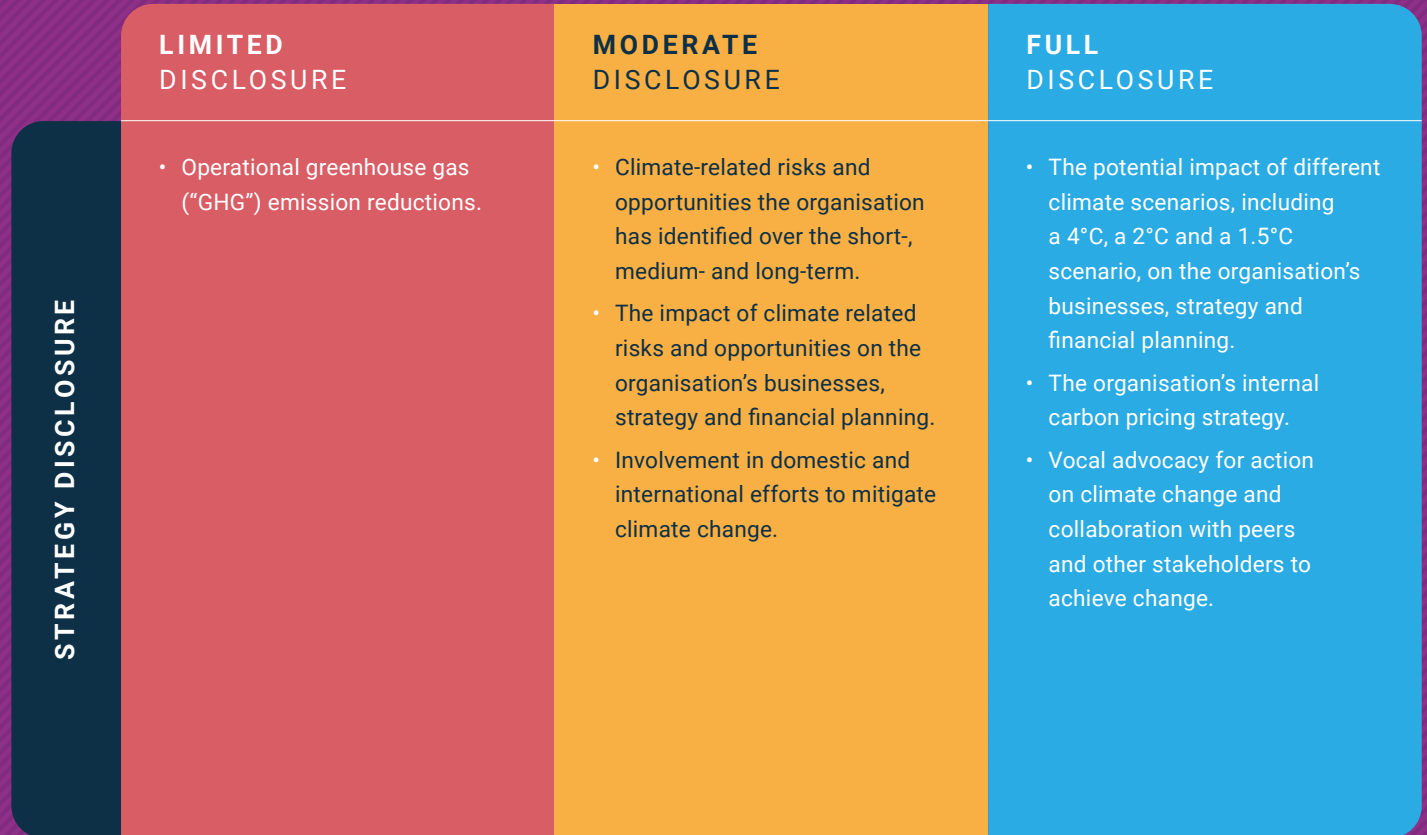
Strategy

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 *(continued)*

Industry Best Practices

USS's climate scenario analysis discussed the impact of climate change on 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. 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.

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.

LPF Current Disclosures and Practices

The Fund highlights their approach to climate change in their TCFD report, Investment Strategy Statement and Pension Fund Annual Report. The Fund has also published a responsible investment plan and Net Zero Climate Strategy.

The Fund's TCFD report and Net Zero Climate Strategy outline the Fund's approach to stewardship and engagement, detailing the various levels of escalation available. Both the TCFD report and Annual Pension Fund Report detail the Fund's stewardship partners. Overall, the Fund has effectively communicated how engagement is integrated into its investment approach.

Within the Fund's Net Zero Strategy and TCFD Report, there's an inclusion of climate scenario analysis, disclosing the estimated climate impact expected under different scenarios over time. This analysis defines the scenarios and offers examples of short, medium, and

long-term risks and opportunities, identifying the likely impacted asset classes. Additionally, the Fund acknowledges the challenges of climate scenario analysis while emphasizing its valuable insights. These disclosures showcase the Fund's understanding of scenario analysis and the potential impacts of climate risks on the portfolio.

Considerations and Recommendations

Although the Fund has demonstrated a robust comprehension of scenario analysis and outlined the chosen scenarios, it could further enhance its disclosure by incorporating additional detail. Specifically, there's an opportunity to include explicit explanations of the rationale behind the selection of these scenarios and clearer definitions of the timeframes involved.

The Fund has disclosed their approach to engagement. The Fund should also consider providing engagement case studies to provide credibility to the Fund's engagement approach.

The Fund should continue to commission Climate Scenario Analysis as recommended by DLUHC, with an awareness that the content of this analysis will develop in line with industry best practice. These should include an analysis of the impact of climate change on funding strategies as well as investments.

LPF should work with its appointed fund managers to understand how they are assessing, monitoring, and mitigating key transition and physical risks within the high-impact sectors, particularly in Oil & Gas where the Fund has an overweight position relative to Global indices. Regional exposures should be kept under review.



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

LIMITED DISCLOSURE

- Acknowledgement of the need to assess and respond to climate-related risks.

MODERATE DISCLOSURE

- The organisation's processes for identifying and assessing climate-related risks.
- The organisation's processes for managing climate-related risks.

FULL DISCLOSURE

- How processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management.

RISK MANAGEMENT DISCLOSURE



Risk Management *(continued)*

Industry Best Practices

Schroders' risk management section clearly outlines how climate risk fits in its three lines of defence model, 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.

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. Again, demonstrating the Fund's industry best practices to identify and mitigate climate risks.

LPF Current Disclosures and Practices

The Fund's TCFD report discloses the various sources utilised to identify climate risks, including annual Climate Risk reporting, which contains a suite of climate metrics, as well as the biennial climate scenario analysis. These risks can be identified by the Committee, Board, Officers, Investment Managers and the Fund's advisors. These disclosures demonstrate LPF's appropriate practices for identifying climate related risks.

In terms of mitigation, risks are prioritised by the level of perceived threat. These risks are managed internally through the asset allocation and stewardship activities. As the Fund is primarily externally managed, the identification and mitigation of climate related risks is also the responsibility of the individual fund

managers. The extent to which fund managers integrate climate-related risks into the investment process is a key factor in the Fund's overall exposure to climate risk.

Fund managers are monitored on a regular basis while new potential managers are required to demonstrate their ability to integrate climate considerations into investment decisions. This information is disclosed in the Fund's TCFD report and demonstrates the Fund's approach to managing climate related risks.

The Net Zero Climate Strategy provides additional details regarding the Fund's climate-related risk identification and mitigation practices. The Report also provides case studies to demonstrate how the Fund has identified and mitigated exposure to climate related risks. This exhibits credible evidence of climate risks being identified and mitigated.

Alongside the Fund's portfolio related climate targets, Leicestershire County Council, as the Administering Authority of LPF has committed to Net Zero Operations by 2030.

Considerations and Recommendations

Continue to review current risk management processes including the list of companies within the Climate Stewardship Plan and Net Zero strategy to ensure emerging and existing climate risks are identified and managed accordingly.



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

	LIMITED DISCLOSURE	MODERATE DISCLOSURE	FULL DISCLOSURE
METRICS AND TARGETS DISCLOSURE	<ul style="list-style-type: none"> • Scope 1 and Scope 2 GHG emissions. 	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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

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

Schroders outlined its annual emissions recalculation process, emphasising data that is restated. Acknowledging the evolving nature of emissions data, Schroders recognises the necessity of data restatements to maintain accuracy of their reported metrics. Disclosing these restatements enhances transparency and clarifies differences between reports.

Abrdn included an independent assurance statement that provides limited assurance of its selected sustainability performance indicators for inclusion in the sustainability disclosures. This additional step gives reported metrics additional credibility and reliability.

LPF Current Disclosures and Practices

The Fund's TCFD report recognises the flaws in climate data, in terms of data quality and availability. The TCFD report also discusses the additional metrics measuring exposure to clean tech and fossil fuels via attributable revenue. The Fund highlights the flaws in the exposure metric which were previously relied on. In the Appendix to the report, the Fund provides definitions of the climate metrics utilised. Identifying these flaws and providing the definition of these metrics demonstrates a strong understanding of the climate metrics.

The TCFD report provides a comparison of the climate metrics with the baseline and benchmark figures. A brief analysis of the changes identified is also provided.

LPF's Net Zero Climate Strategy outlines the Fund's climate targets and ambitions which complements the TCFD report.

The Fund's Climate Risk Report details the definitions, use case and limitations of the climate risk metrics, demonstrating a strong understanding of the metrics and provided ease of interpretation for the reader, improving the overall credibility of the report.

Considerations and Recommendations

Future iterations of the TCFD report should include the four metrics required by DLUHC. The Fund will continue to report on the metrics that it has historically tracked.

While the TCFD report includes definitions of the metrics used and identifies flaws in some of the climate metrics, the Fund should consider providing additional information on the metrics used, including use cases and limitations. This information will assist the reader in interpreting the metrics, adding value to the report. However, we note that these details are included in the Fund's latest Climate Risk Report, signposting to this report could also be considered.

While the Fund provides voting statistics within the Net Zero Climate Strategy, the Fund could consider including engagement statistics within the TCFD report.



Other Requirements / Recommendations

Proposed DLUHC Requirements

Section	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 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 deemed that it was worth flagging to ensure 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 the 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 would push the Fund towards full compliance and/or industry best practice.

We consider that, on average the Fund is providing a Moderate level of disclosure. Based on our analysis, no single peer is able to achieve leader status across all areas. The Fund has the potential to move towards leader status in several areas. Strategy and Risk Management are the areas where the Fund comes closest.

Please note, some considerations / recommendations may be carried forward from the previous climate risk report.

Summary of Considerations / Recommendations

Section	Considerations / Recommendations
Governance	<ul style="list-style-type: none"> – Disclosure of participation in responsible investment/climate working group(s). – Additional detail on the training program delivered to the Pensions and Investment committees should be included in TCFD report.
Strategy	<ul style="list-style-type: none"> – Integrate funding and investment climate scenario analysis. – Provide an explanation of the choice of scenario's within the scenario analysis report. – Consider the further integration of climate considerations into the Fund's Funding Strategy Statement. – Work with appointed managers to understand how key transition and physical risks are assessed within high impact sectors.
Risk Management	<ul style="list-style-type: none"> – Continue to review current risk management processes including the list of companies within the Climate Stewardship Plan.
Metrics and Targets	<ul style="list-style-type: none"> – Include additional information regarding the choice of metrics, such as use cases and drawbacks. – Include engagement statistics in TCFD report. – Additional metrics to meet DLUHC requirements should be included in the next iteration of the Fund's TCFD report.



Section 2

Climate Metrics

FYE 31 March 2023



Deer spotted in the Leicestershire countryside



Climate Metrics

Scope of Analysis

The following Climate Risk Metrics provide a bottom-up analysis which aims to:



Observe climate transition risks and opportunities within the portfolio.



Identify company engagement opportunities.



Support manager monitoring of climate risk management.

The scope of analysis includes public market investments, as reported by the Fund as of 31 March 2023. This includes holdings in listed equity, fixed income and absolute return funds. The omission of unlisted asset classes at this time is due to insufficient data availability.

LGPS Central has calculated carbon footprint metrics for Leicestershire Pension Fund since 2019. The analysis scope 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 of 31 March 2023, the AUM in scope of this report totalled approximately £2.7bn. We included investments totalling £3.3b in our climate model. However, four portfolios were found to have limited data coverage. They are the two absolute return funds, an emerging markets debt fund and a multi asset credit fund.

Aggregating carbon footprint metrics offers a comprehensive view of emissions resulting from investments. However, insufficient data at the portfolio level can distort an organisation’s overall carbon footprint. Typically, investors engage with the highest emitters for emissions disclosure, leading to more available data from these companies compared to lower-emitting ones. Consequently, when data availability is limited, there’s a higher chance that the data will be skewed towards high emitters.

LGPS Central usually adopts a 60% data availability threshold for aggregating portfolios into the Fund’s emissions. Therefore, in this instance, we have excluded the four portfolios with low coverage. Ongoing efforts are in place to enhance data availability for future assessments.

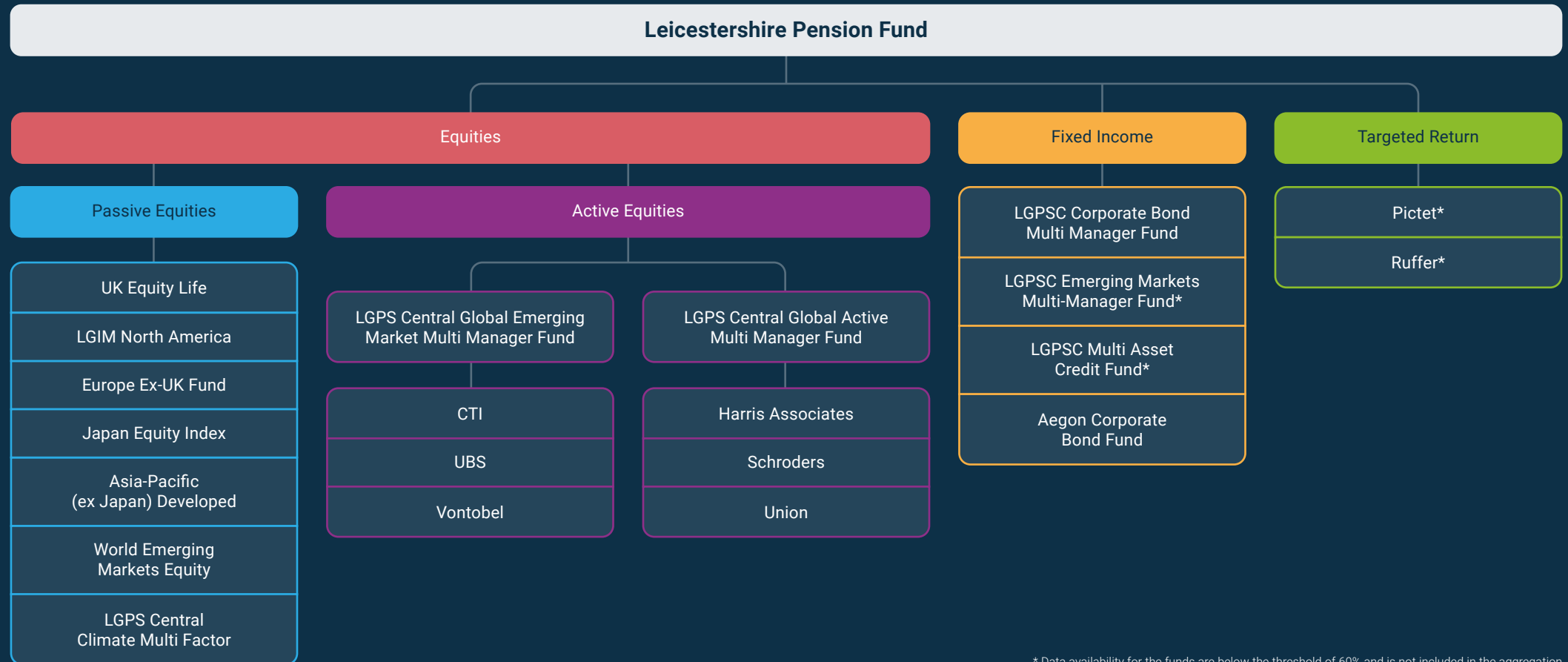




Climate Metrics *(continued)*

The funds are depicted in the chart below.

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



Climate Metrics *(continued)*

Selection of Carbon Footprint Metrics

The analysis is based on a dataset provided by MSCI ESG Research LLC (MSCI).² We utilised data that was downloaded from MSCI on 1st September 2023. The table on pages 43-47 provides a definition of the carbon metrics utilised.

Carbon footprint metrics were selected to comply with the results of Department for Levelling Up, Housing & Communities' consultation,³ which was 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.



Leicester Town Hall

² Certain information @ 2023 MSCI ESG Research LLC. Reproduced by permission. Attention is drawn to Section 8.0 Important Information.

³ <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 several other metrics as listed in the definition table. We consider that carbon footprint metrics provides a narrow lens through which to assess climate risk, the provision of additional metrics – including fossil fuel exposure, clean tech exposure, and carbon risk management – provides both a deeper and broader assessment of climate risk and opportunity. Further detail of these metrics can be found on pages 43-47.

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

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 for.	This metric measures the Financed Emissions for every \$1 million of market value.	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 USD invested?	What is my portfolio's exposure to carbon-intensive companies?
Unit	tCO2e	tCO2e / \$m invested	tCO2e / \$m sales
Comparability	No; does not take size into account	Yes; adjusts for portfolio size	Yes
Data needs	Medium <ul style="list-style-type: none"> Notional amount invested Carbon emissions of issuer EVIC⁴ or Total Equity + Total Debt (Sovereign: PPP-Adjusted GDP) 	Medium <ul style="list-style-type: none"> Notional amount invested Total portfolio AUM Carbon emissions of issuer EVIC or Total Equity + Total Debt (Sovereign: PPP-Adjusted GDP) 	Low <ul style="list-style-type: none"> Portfolio weights Carbon emissions of issuer Sales of issuer (Sovereign: Nominal GDP)

⁴ EVIC refers to enterprise value including cash.

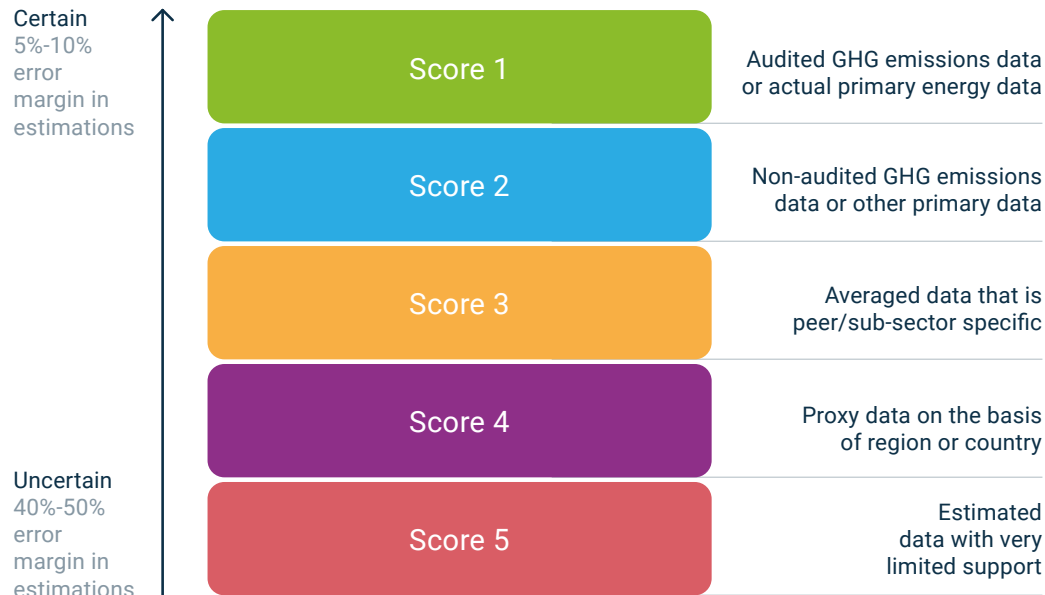


Climate Metrics *(continued)*

Data Quality Metric

This metrics provide a scale reflecting data quality, with values ranging from 1 to 5; with 1 being highest quality. See detailed explanation below.

This system provides transparency around 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).



Wilton Park in Melton Mowbray, Leicestershire



Climate Metrics *(continued)*

Paris Alignment Metric

A company will be considered to be Aligning to Paris Agreement pathways 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 is 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 as the issuer.

Below 2°C is required to be considered at least Aligning.





Climate Metrics *(continued)*

MSCI Low Carbon Transition Risk Assessment⁵

MSCI ESG Research's Low Carbon Transition Risk⁶ 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.

🌱 2) Low Carbon Transition Score:

This score is based on a multi-dimensional risks and opportunities assessment and considers both primary 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.

⁵ Source: MSCI Climate Change Indexes Methodology, pp17-18

⁶ 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 for a given product, or the emissions released by a customer through the consumption of 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, 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.



Leicester Cathedral



Climate Metrics *(continued)*

Headline Metrics	LPF FY2023
Absolute emissions metric: – Financed emissions	Equities: <ul style="list-style-type: none"> – Scope 1 and 2: 158,353 tCO₂e – Scope 3: 1,911,409 tCO₂e
	Fixed Income: <ul style="list-style-type: none"> – Scope 1 and 2: 26,418 tCO₂e – Scope 3: 205,522 tCO₂e
Emissions intensity metric: – Normalised financed emissions – Weighted Average Carbon Intensity (WACI)	Equities: <ul style="list-style-type: none"> Normalised Financed Emissions – Scope 1 and 2: 52.8 tCO₂e/\$M Invested – Scope 3: 638.0 tCO₂e/\$M Invested WACI <ul style="list-style-type: none"> – Scope 1 and 2: 102.0 tCO₂e/\$M Revenue
	Fixed Income: <ul style="list-style-type: none"> Normalised Financed Emissions – Scope 1 and 2: 53.1 tCO₂e/\$M Invested – Scope 3: 612.5 tCO₂e/\$M Invested WACI <ul style="list-style-type: none"> – Scope 1 and 2 (excluding sovereign): 145.2 tCO₂e/\$M Revenue
Data quality metric: – Data availability – MSCI data quality metric	Equities: <ul style="list-style-type: none"> – Data availability: 97.0% of AUM with data coverage for financed emissions calculation – Data quality: 2.1 (Weighted Average of available data quality)
	Fixed Income: <ul style="list-style-type: none"> – 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: <ul style="list-style-type: none"> – LCT Score: 39.5% of financed emissions has above median score – SBT: 39.8% of financed emissions are covered by a science-based target – ITR: 25.1% of financed emissions has an implied temperature of 2°C or below
	Fixed Income: <ul style="list-style-type: none"> – LCT Score: 30.0% of financed emissions has above median score – SBT: 51.9% of financed emissions are covered by a science-based target – ITR: 44.2% of financed emissions has an implied temperature of 2°C or below



Climate Metrics *(continued)*

The Fund's Progress Against its Climate Targets

Leicestershire Pension Fund's Net Zero Climate Strategy was approved by the Local Pension Committee on 3 March 2023 and was subsequently published. The table below summarises the Fund's climate targets and the progress that the Fund has made to-date against its baseline. The Fund has set 31 December 2019 as its baseline.

Primary Targets

Target	Progress as of 31 March 2023		
Net Zero by 2050.	See below.		
40% reduction in absolute carbon emissions for the Equity portfolio by 2030.	Financed emissions have decreased by 19.4%.		
		2019 (restated)	2023
	Financed Emissions	196,573 tCO2e	158,353 tCO2e
50% reduction in carbon intensity of the Equity portfolio by 2030.	Weighted Average Carbon Intensity has declined by 38.0%.		
		2019 (restated)	2023
	WACI	164.4 tCO2e/\$mn Sales	102.0 tCO2e/\$mn Sale



Climate Metrics *(continued)*

Secondary Targets

Target	Progress as of 31 March 2023					
Reduce exposure to fossil fuel reserves within the Equity portfolio.	Exposure to fossil fuel reserves reduced by 64bps . Share of revenue from fossil fuel reduced by 47bps .					
	2019 (restated)					
	2023					
	<table border="1"> <tr> <td>Fossil fuel reserves</td> <td style="text-align: right;">5.7%</td> <td style="text-align: right;">5.2%</td> </tr> <tr> <td>Fossil fuel revenue</td> <td style="text-align: right;">2.3%</td> <td style="text-align: right;">1.9%</td> </tr> </table>	Fossil fuel reserves	5.7%	5.2%	Fossil fuel revenue	2.3%
Fossil fuel reserves	5.7%	5.2%				
Fossil fuel revenue	2.3%	1.9%				
Increase exposure to climate solutions within the Equity portfolio.	Exposure to climate solutions increased by 16bps . Share of revenue from climate solutions increased by 83bps .					
	2019 (restated)					
	2023					
	<table border="1"> <tr> <td>Climate Solutions exposure</td> <td style="text-align: right;">36.6%</td> <td style="text-align: right;">39.4%</td> </tr> <tr> <td>Climate Solutions revenue</td> <td style="text-align: right;">4.3%</td> <td style="text-align: right;">5.4%</td> </tr> </table>	Climate Solutions exposure	36.6%	39.4%	Climate Solutions revenue	4.3%
Climate Solutions exposure	36.6%	39.4%				
Climate Solutions revenue	4.3%	5.4%				
90% of AUM in material sectors classified as Aligned or Aligning by 2030.	68.3% of AUM in material sectors are at least Aligning. – AUM in material sectors: £2.3bn – AUM at least Aligning: £1.6bn					
90% of financed emissions classified as Aligned or Aligning / subject to engagement by 2030.	80.7% of financed emissions at least Aligning or in an engagement programme. – 21.6% of financed emissions at least Aligning – 69.5% of financed emissions in engagement					
90% asset coverage by 2030.	Current asset coverage by this report is approximately 47% of Fund AUM.					
Leicestershire County Council and LGPS Central Net Zero operations by 2030.	Leicestershire County Council have reported it is on track to achieve Operational Net Zero by 2030. LGPS Central has set out its intention to set an Operational Net Zero Plan during 2024.					



Climate Metrics *(continued)*

Our Approach to Climate Data

Climate data remains a developing area, with governments, data providers, and companies constantly updating and refreshing methodologies. The data available to us through MSCI will often be subject to retrospective amendments as estimated data is replaced by reported data, estimations are recalculated for greater accuracy, and as data coverage increases. Our metrics are calculated using methodologies that are utilised by Partnership for Carbon Accounting Financials (PCAF) and MSCI.

We recalculate our emissions on an annual basis and will restate previously reported GHG data to utilise the most up-to-date values. Where possible, we will also match our holding period with the period in which emissions at the underlying issuer occurred. As such there are multiple data that are restated between values provided in previous reports and the values contained in this report.

A summary of restated values are as follows:

Equities	Previously Reported			Restated Reported		
	2020	2021	2022	2020	2021	2022
Weighted Average Carbon Intensity	160.20	120.20	117.80	164.40	111.80	103.30
Weight in Fossil Fuel Reserves	8.6%	6.3%	6.8%	5.7%	4.4%	6.1%
Weight in Thermal Coal Reserves	2.9%	2.7%	2.5%	2.4%	2.2%	2.6%
Weight in Coal Power*	1.4%	0.9%	1.2%	0.1%	0.0%	0.0%
Weight in Clean Technology	34.2%	38.8%	38.2%	36.6%	39.1%	38.9%

* New methodology screens companies with >30% of share from coal power generation.



Equities

FIGURE 2: EQUITIES CLIMATE DASHBOARD

Equities Asset Class	Multiple Fund Classification	Multiple Fund Manager	\$3,089,227,454 NAV		Blended Reference Index	Q1 2023 Period										
Carbon Footprint Metrics					Data Availability											
		Portfolio	Reference	Previous Year	Portfolio	Reference										
Total Financed Emissions	Scope 1+2	158,353	208,454	163,215	97.0%	98.7%										
tCO2e	Scope 3	1,911,409	1,697,091	1,700,104	97.0%	98.5%										
Normalised Financed Emissions	Scope 1+2	52.8	69.1	50.1												
tCO2e/\$M Invested	Scope 3	638.0	695.3	523.0												
Weighted Average Carbon Intensity	Exclude Sovereign	102.0	165.3	103.3	97.0%	98.7%										
tCO2e/\$M Revenue	Include Sovereign	102.0	165.3	103.3	97.0%	98.7%										
Top 10 Emissions Contributors										Recommendations / Observations						
Issuer	PF Weight	Ref Weight	% Financed Emission	% WACI	Scope 1+2	Scope 3	Engagement	Focus	Data	LCT	ITR	SBT				
SHELL PLC	0.8%	0.8%	7.5%	1 2.9%	3 137.7M	1,174.0M	Yes	Yes	2	2.9	2.5	No	<ul style="list-style-type: none"> Total Equities' carbon footprint metrics remained relatively stable YoY. Increased portfolio weights in Cemex and CRH Public, drove an increase in climate metrics, which was mitigated by a significant decrease in exposure to Berkshire Hathaway, as well as decreased portfolio weights associated with Glencore and Archer-Daniels. Total equities carbon footprint metrics continued to outperform the benchmark, predominantly attributable to underweight exposures to materials, energy and utilities. 			
EXXON MOBIL CORPORATION	0.3%	0.6%	1.5%	8 1.0%	14 116.0M	825.0M	Yes	Yes	2	2.5	2.9	No				
RIO TINTO PLC	0.3%	0.3%	1.4%	9 1.6%	9 30.3M	583.9M	Yes	Yes	2	5.5	5.9	No				
LINDE PUBLIC LIMITED COMPANY	0.3%	0.2%	1.1%	12 3.4%	1 37.7M	43.8M	Yes	No	2	5.0	7.1	Yes				
CRH PUBLIC LIMITED COMPANY	0.3%	0.2%	4.0%	3 2.5%	5 33.8M	22.4M	Yes	Yes	2	4.9	1.8	Yes				
STEEL DYNAMICS, INC.	0.2%	0.0%	1.9%	5 0.9%	17 9.5M	11.0M	Yes	No	2	5.6	2.6	No				
Holcim AG	0.1%	0.0%	4.4%	2 3.3%	2 83.0M	30.9M	Yes	No	2	4.2	2.3	Yes				
CEMEX, S.A.B. de C.V.	0.1%	0.0%	3.3%	4 2.0%	6 39.3M	14.8M	Yes	No	2	4.0	1.9	Yes				
CF INDUSTRIES HOLDINGS, INC.	0.1%	0.0%	1.2%	11 1.2%	11 17.8M	39.0M	Yes	No	2	4.7	10.0	No				
Huaxin Cement Co., Ltd.	0.0%	0.0%	1.6%	6 1.6%	8 36.0M	3.5M	No	No	2	1.4	8.3	No				
Worst YoY Contributors													Stewardship Focus			
CEMEX, S.A.B. de C.V.													No			
CRH PUBLIC LIMITED COMPANY													Yes			
VALERO ENERGY CORPORATION													No			
High Impact Sectors / Climate Solutions Exposures (Portfolio vs Benchmark)										Portfolio Alignment & Engagement						
Fossil Fuel Exposure	Fossil Fuel Revenue	Thermal Coal Exposure	Coal Power Exposure	Cleantech Exposure	Cleantech Revenue	Engagement	Data Quality	LCT	ITR	SBT	Alignment					
5.2% 7.7%	1.9% 3.6%	1.8% 2.7%	0.0% 0.1%	39.4% 39.0%	5.4% 5.4%	69.5%	2.1	39.5%	25.1%	39.8%	21.6%					



Equities *(continued)*

We analysed 9 funds totalling approximately £2.5 bn (\$3.1 bn) in NAV as of 31 March 2023.

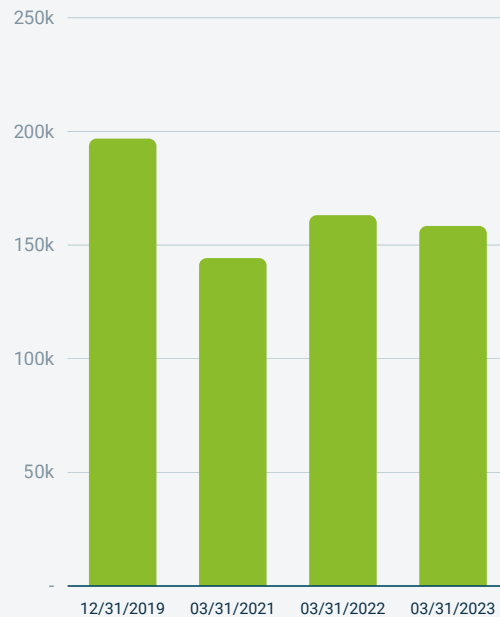
Since 2019, the major movement of AUM was in 2020 when LPF switched out of LGIM RAFI funds into the LGPS Central Climate Multi Factor Fund. AUM in scope has grown marginally from £2.1bn (\$2.8 bn) to £2.5bn (\$3.1 bn), partially driven by the switch (subscription value was higher than redemptions) as well as market movements.

Carbon footprint of each fund is measured up to a market index in which it is predominantly invested. The table below summarises the reference indices that we utilised.

Investment Universe (Most Predominant)	Reference Index
UK Equities	FTSE UK All Share Index
Developed Markets	FTSE All-World Index
Emerging Markets	FTSE Emerging Index

Carbon Footprint Metrics

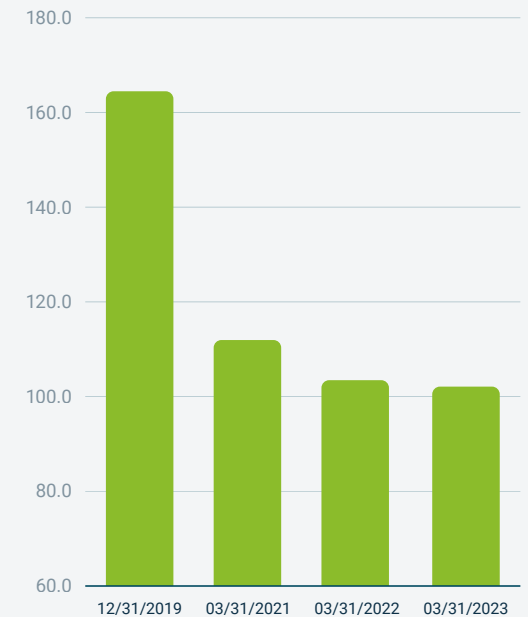
Equities: Financed Emissions Over Time



Equities: Normalised Financed Emissions Over Time



Equities: WACI Over Time





Equities *(continued)*

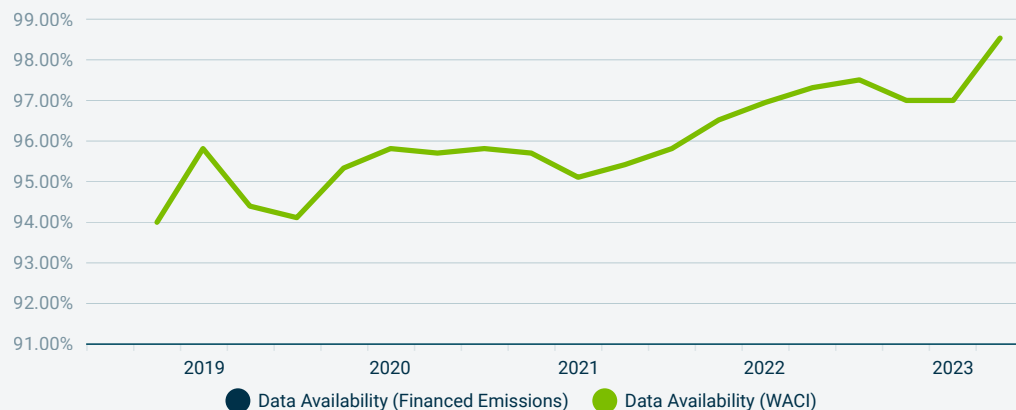
Since 2019, financed emissions has declined by 19.4% despite a 19.8% increase in AUM in scope. As a result, financed emissions normalised by AUM has declined by 32.5% in the same period. Financed emissions dipped in 2020 and 2021 – attributable to the slowdown in economic activity due to the COVID-19 pandemic – and has since rebounded. AUM increased by a similar proportion which led to the normalised financed emissions curve staying relatively flat since 2021.

Exposure to carbon intensive companies within the Equities asset class declined since 2019, This is evidenced by WACI, which declined by 38.0%. Allocation to hard-to-abate sectors gradually declined during the period. For example, weight in Energy and Materials sectors dropped by 120bps and 88bps since 2019, respectively. This is happening against a backdrop of declining carbon intensities of companies within high emitting sectors, partially driven by revenue growth that outstrips emissions growth.

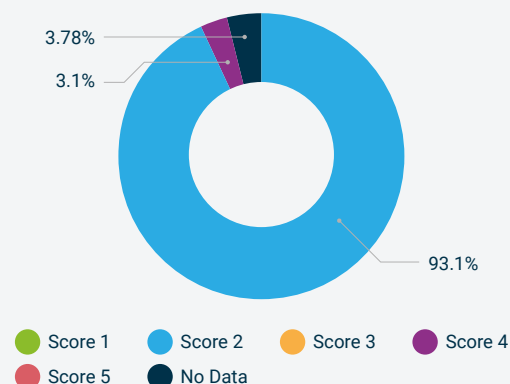
Nonetheless, carbon metrics for equities have consistently outperformed the reference indices. All actively managed portfolios have lower carbon metrics compared to their market index. This suggests that delegated managers are managing climate risk exposure in their respective portfolios.

Data

Equities: Data Availability Over Time



Equities: Breakdown of Data Quality Score (March 2023)



Data availability for equities has been consistently high since we started carbon footprinting. Going forward, our focus is to improve upon the quality of data that is used to calculate the carbon footprint metrics. As at the time of writing, majority (93.1%) of data used, apportioned by NAV, is from company reported data (score of 2). To get a higher score, the company reported data has to be independently verified. In reality, a large amount of the data that we use is already independently verified. However, right now we do not have a method to validate these audited status.

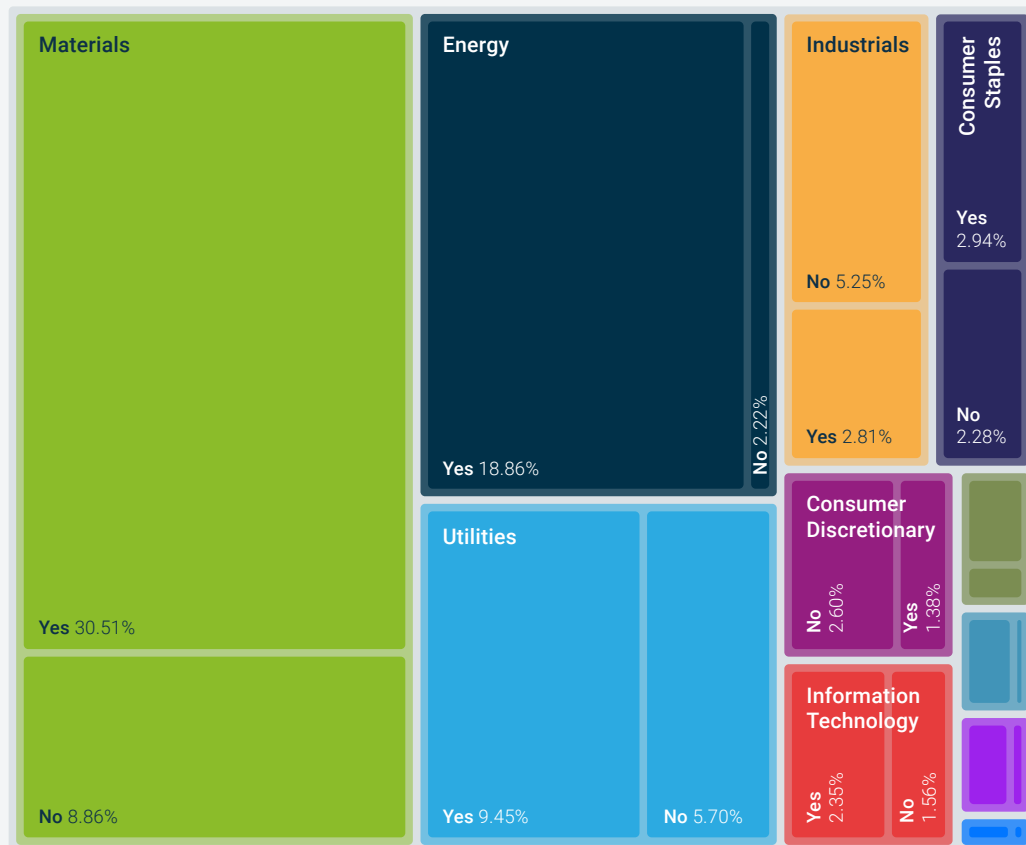


Equities *(continued)*

Sources of Emissions

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

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



As mentioned above, allocation (as a percentage of NAV) to hard-to-abate sectors, namely Energy and Materials has declined since 2019. However, the share of emissions from these two sectors combined increased during the period. This is due to other sectors reducing emissions at a faster rate – most notably Utilities. Nonetheless, absolute emissions from the hardest-to-abate sectors (Energy, Materials, Utilities and Industrials) all declined since 2019. As a result, overall financed emissions decreased, despite NAV rising during the period. This caused the Fund's carbon intensity, as measured by normalised financed emissions, to decline significantly.

Several sectors contribute the lion share of emissions. This high level of concentration theoretically helps with engagement efforts. Overall, 69.5% of financed emissions from equity holding is in one or more climate engagement plan by the Fund and its engagement partners/providers. It is worth noting that only 4 out of the 8 companies in the climate stewardship focus list are in the top 10 of contributors of emissions. We will monitor this trend and suggest reviews, if required.

Relative to reference indices, LPF's equities portfolios have lower exposure to fossil fuels, thermal coal and coal power generation. This can be attributed to a underweight exposure to the Energy sector.

- **Health Care**
Yes 0.39% No 0.79%
- **Communication Services**
No 0.78% Yes 0.12%
- **Financials**
Yes 0.64% No 0.25%
- **Real Estate**
No 0.22% Yes 0.04%



Equities *(continued)*

Highest Emitting Issuers

The equity portfolios' top contributor to financed emissions was **Shell**, which contributes 7.5% of total equities financed emissions. Shell does have a climate target of reducing scope 1 and 2 emissions by 50% by 2030, from a 2016 baseline, and net zero emissions by 2050. Relative to this target, Shell has decreased its scope 1 and 2 emissions by 20.4% since the baseline year, and has also reported that it has achieved its short-term 2021 and 2022 targets. Shell remains a focus of stewardship efforts.

Cement producers **CRH**, **Holcim**, **Cemex** and **Huaxin** were negative contributors to relative financed emissions due to overweight positions. However, these selections had a positive overall effect on financed emissions, as managers selected these names against worst relative emitters in the Materials sector such as Anhui Conch, Ultratech and CNBM.

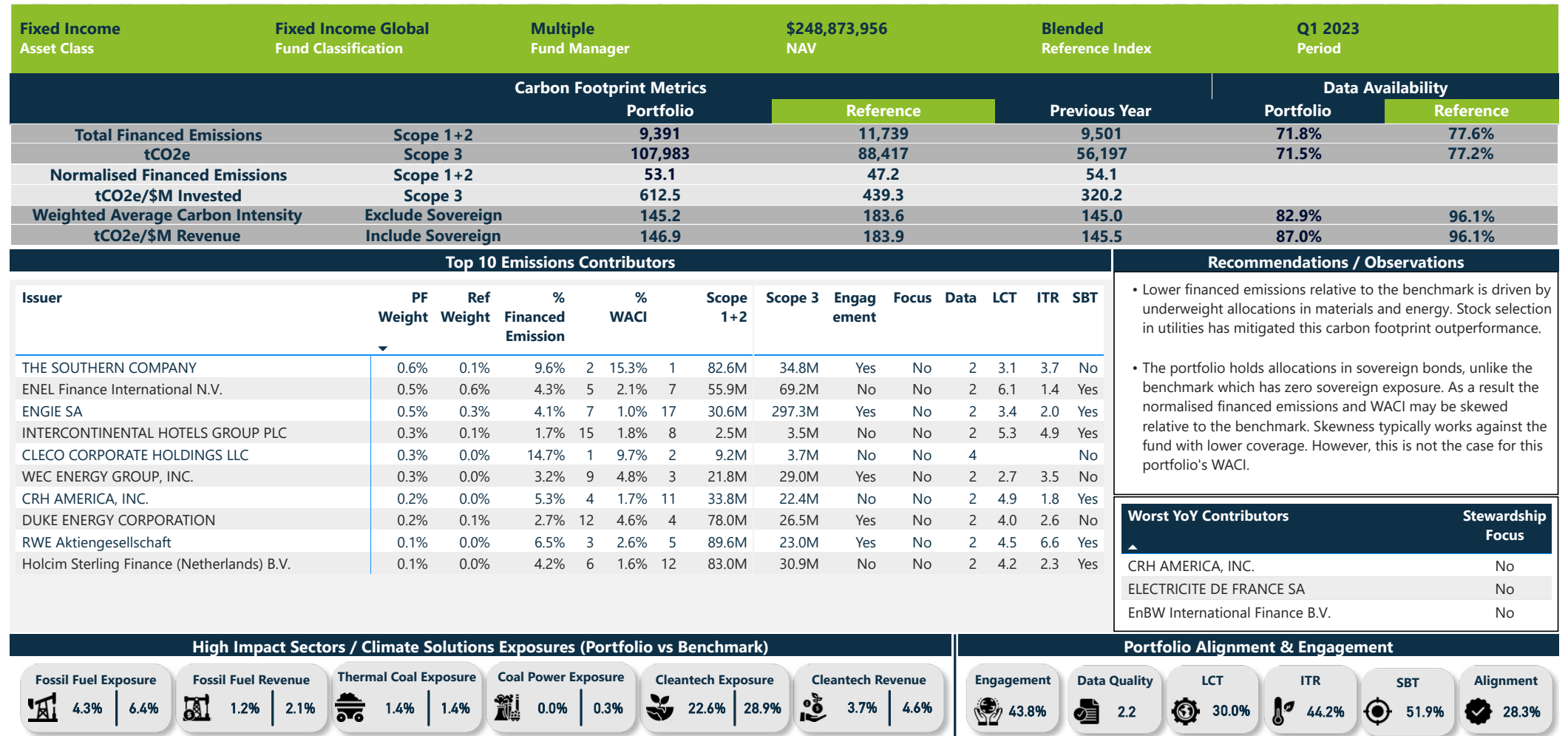
CRH, a supplier of construction materials has been one of the top contributors (year-on-year) to the portfolio's financed emissions as exposure to the company increased. The company has established a 2030 target which has been validated by the SBTi. The target refers to a 30% reduction in absolute emissions 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 more than doubled during a 10-year period (2012 to 2022) driven by M&A activities.

Linde has been a driving factor in the Fund's equities' financed emissions for several years. Linde is a German chemical company, which is significantly more carbon intensive compared to the industry average (with a WACI 45.8% greater than the industry average). The company's scope 1 and 2 emissions have also more than doubled over a 10-year period. However, the Company's carbon intensity has decreased by 58.5% from a peak in 2016. The company's production processes are energy intensive and use natural gas in most instances accounting for 70% of the company's scope 1 emissions in 2021 according to the company. The company has announced its 2035 absolute emissions target which has been approved by the SBTi (not all targets have been approved, only 2035 target). This target relates to a 35% reduction in scope 1 and 2 emissions against a 2021 baseline. The company has also announced a target to be net zero by 2050. We are closely monitoring industrial gas producers' net zero target setting due to the over-reliance on carbon sequestration and alternative feedstocks. Nevertheless, we are mindful of the sector's role in the transition.



Fixed Income

FIGURE 3: FIXED INCOME CLIMATE DASHBOARD





Fixed Income *(continued)*

Our initial analysis covers four funds with approximately £521.4mn (\$644.6mn) in NAV.

However, two of the funds have limited data coverage. These are the emerging market debt fund and a multi asset credit fund. As mentioned above, the threshold of 60% data coverage applies in these cases. For the purpose of data reliability, these portfolios have been removed from this analysis, including data presented on page 38, Fixed Income (Data Availability > 60%).

The remaining two funds that meet our criteria for inclusion total £201.3mn (\$248.9mn) in NAV. We have calculated carbon footprint metrics for LGPS Central Corporate Bond Fund since 2021, and Aegon Corporate Bond Fund since 2022. There were additional subscriptions into the LGSPSC fund in subsequent years.

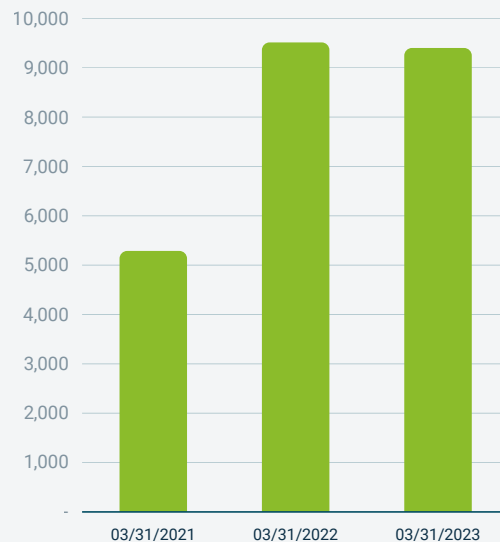
The reference indices we use to measure the funds' relative performances are as follows:

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

The Fund's Fixed Income portfolio's (despite having lower data availability) outperform their reference indices. The accuracy of any comparison with reference indices is likely to be affected by discrepancies in data availability between the funds and the indices. However, it is worth noting that lower data availability usually results in higher normalised financed emissions and WACI (see above).

Carbon Footprint Metrics

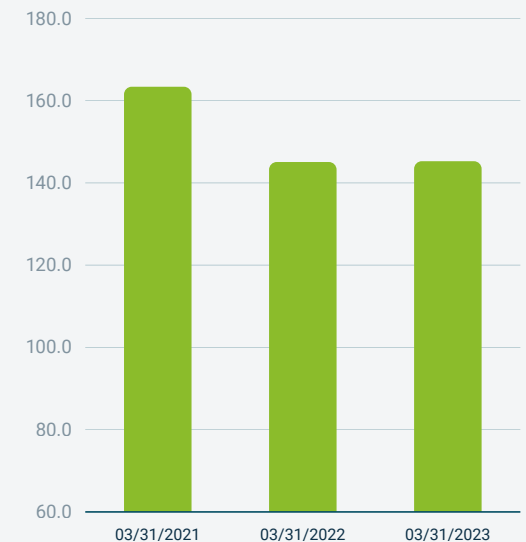
Fixed Income: Financed Emissions Over Time



Fixed Income: Normalised Financed Emissions Over Time



Fixed Income: WACI Over Time





Fixed Income *(continued)*

Financed emissions increased dramatically in 2022 due to the addition of the Aegon fund into the model. AUM growth slightly outpaced financed emissions, leading to normalised financed emissions declining by 12.6%. Portfolio weight shifted significantly towards Financials, and to a smaller quantum towards the Utilities sector. From a normalised and weighted average basis, the small increase in the weight into Utilities substantially offset the shift away from other sectors into Financials.

Fixed Income's exposure to carbon intensive companies also declined slightly since 2021, This is evidenced by WACI, which declined by 11.1%. The sector allocation shift described above is one of the main causes of this overall reduction, tempered slightly by the increase in Utilities. Interestingly, the high emitting sectors' overall decline seen in the equities analysis did not filter through to fixed income. Average carbon intensities in Utilities, Energy and Materials sectors within the fixed income

universe actually increased during the period. This suggests that the two asset classes are exposed to different issuers and highlights the importance of the shift in weight into Financials.

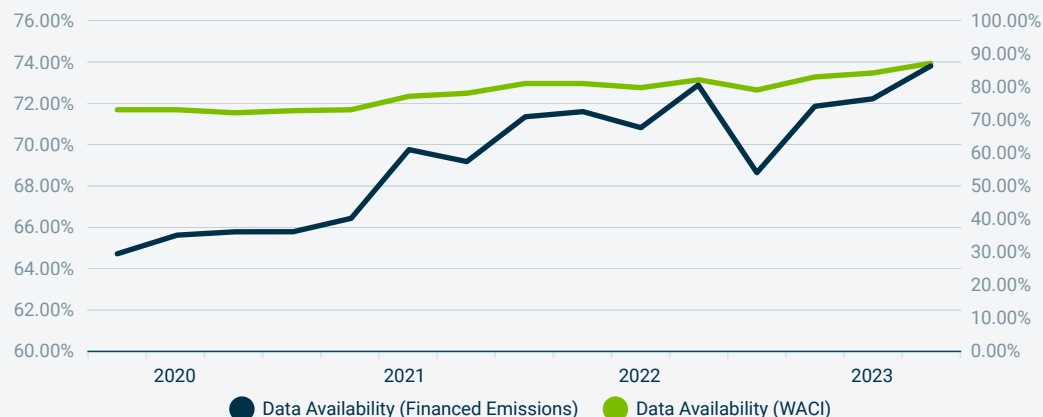
Nonetheless, carbon metrics for equities significantly outperform the reference indices. All actively managed portfolios have lower carbon metrics compared to their market index. This suggests that delegated managers are managing climate risk exposure in their

respective portfolios.

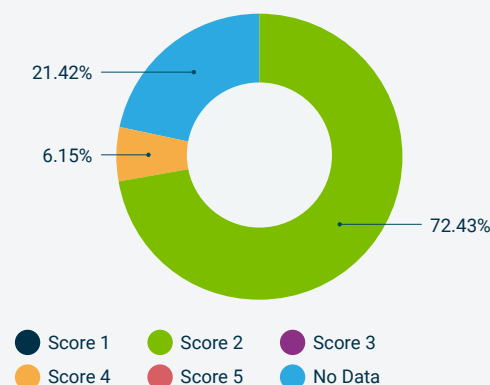
Data availability for fixed income is relatively low compared to those of its equities counterpart. It is worth noting that significant strides have been made since we started carbon footprinting in 2021. In terms of quality of data, where available, the majority of the data used are reported data.

Data

Fixed Income: Data Availability Over Time



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



Going forward, our immediate focus on fixed income is:

- i) Adding sovereign emissions data into the calculation. This will significantly improve data coverage for emerging market debt funds. (NB: We are currently developing a methodology to calculate emissions from sovereign issuers in our model).
- ii) Increasing coverage of EVIC data, especially for non-listed issuers. This will improve our financed emissions data coverage.
- iii) Mapping securities to their parent issuer.

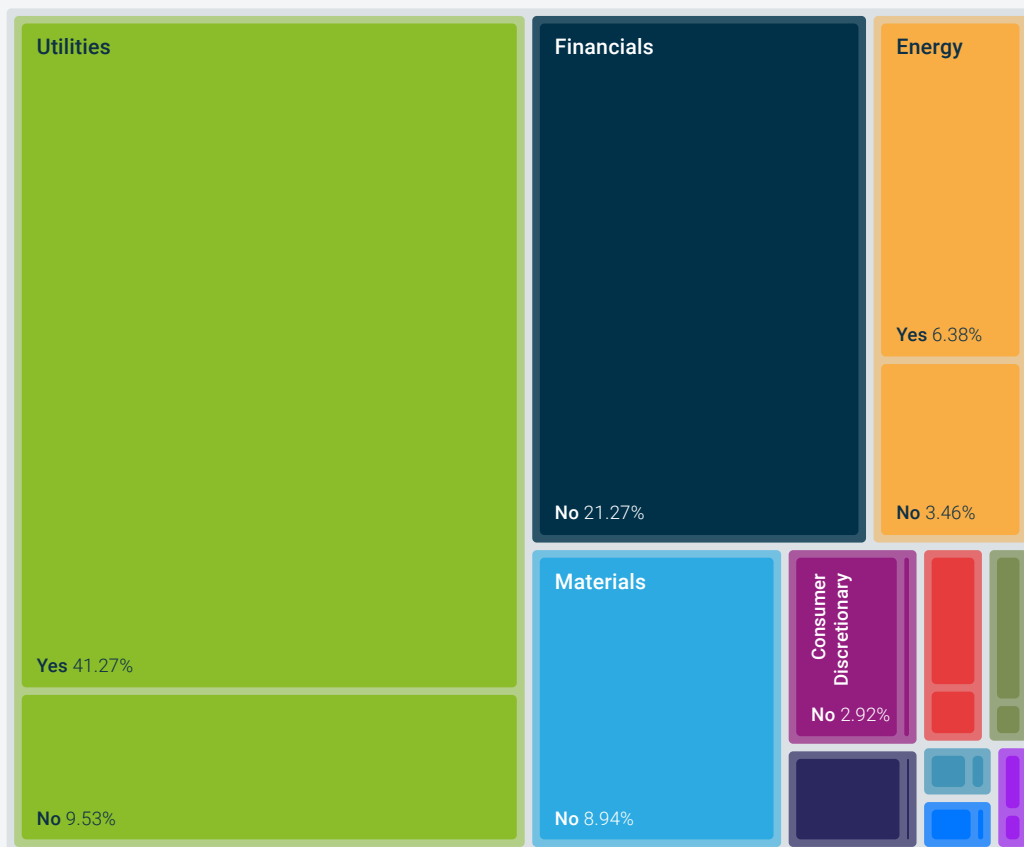


Fixed Income *(continued)*

Sources of Emissions

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

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



As mentioned above, sector allocation has shifted significantly towards Financials, but share of emissions has moved towards Utilities. The average carbon intensity of the companies in the high emitting sectors has also increased, suggesting the issuers that the funds lend to are less carbon efficient. Nonetheless, relative to reference indices, all funds are still outperforming.

However, progress is required to increase the engagement coverage across the asset class. Only 43.8% of financed emissions are currently under one or more engagement program. Considering the geographical focus of the funds in scope, this figure needs improvement. This also reflects the challenges facing engagers relating to the asset class. There is a lack of desire for companies to engage with their debtholders. High portfolio turnover exacerbates the problem as engagers cannot commit to a long-term engagement plan with a single issuer. Nevertheless, the expectation placed upon delegated managers is to perform ESG integration and stewardship. It is imperative that this metric improve over time as we believe that engagement can lead to improvements in carbon performance.

- **Communication Services**
No 1.52%
- **Industrials**
No 1.10% Yes 0.46%
- **Consumer Staples**
No 0.72% Yes 0.21%
- **Information Technology**
No 0.24% Yes 0.13%
- **Health Care**
No 0.34% Yes 0.13%
- **Real Estate**
No 0.37% Yes 0.06%



Fixed Income *(continued)*

Highest Emitting Issuers

Cleco Corporate Holdings, a public utility holding company is fixed income's top emitter with 14.7% of financed emissions and 9.7% of WACI. Unfortunately, the issuer is not covered by MSCI (for LCT and ITR scores). The issuer's private company status (it is owned by private equity firms) makes it difficult to analyse and engage with. LGPSC is communicating with the underlying manager on how they plan to engage with the company.

One of the fixed Income portfolios' top contributors to financed emissions is **Enel**, which contributes 4.3% of financed emissions. Enel is generally seen as a leader in low carbon transition amongst its Utilities peers, demonstrated by the companies ITR of 1.4, LCT of 6.1 and SBT, we therefore consider Enel to be at least aligning to the Paris Agreement. It has an ambitious plan to be net zero by 2040 by switching its generation capacity to renewables (85% by 2030, 100% by 2040).

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. While the company has established a 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.



Definition of Carbon Metrics

TABLE 1: DEFINITION OF CARBON METRICS USED⁷

Carbon Risk Metric	Unit	Definition	Use Case	Limitations
Scope 1 Emissions	tCO ₂ e (Tons of CO ₂ equivalent)	These are the Greenhouse Gas (GHG) emissions that a company is directly responsible for.	The emissions generated 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 2 Emissions	tCO ₂ e	GHG emissions that a company causes indirectly through its operations.	The emissions generated through the energy purchased by the company during its operations, such as energy consumption used to heat buildings.	Scope 3 emissions can also be counted multiple times by companies at different stages of the same supply chain.
Scope 3 Emissions	tCO ₂ e	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	tCO ₂ e	Is calculated by multiplying an attribution factor by a company's scope 1 and 2 emissions. The attribution factor is the ratio between an investor's outstanding amount in a company and the value of the financed company.	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).

⁷ Further information can be found at this link: [Carbon Footprinting 101 - A Practical Guide to Understanding and Applying Carbon Metrics - MSCI](#)



Definition of Carbon Metrics *(continued)*

Carbon Risk Metric	Unit	Definition	Use Case	Limitations
Normalised Financed Emissions	tCO2e/\$m Invested	Financed Emissions are apportioned 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 sales) 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'.
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 stranded asset risk.	It does not consider the amount of revenue a company generates from fossil fuel activities. Consequently, diversified businesses (e.g. those that own a range of underlying companies, one of which owns reserves) would be included when calculating this metric. In reality, these companies may not bear as much stranded asset risk as companies that do generate a high proportion of revenue from fossil fuels.



Definition of Carbon Metrics *(continued)*

Carbon Risk Metric	Unit	Definition	Use Case	Limitations
Exposure to Fossil Fuel Reserves by Revenue	%	This identifies the maximum percentage of revenue either reported or estimated derived from conventional oil and gas, unconventional oil and gas, as well as thermal coal. These values by companies are summed and weighted by the portfolio weights to produce a weighted exposure.	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.
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).	Allows for a comparison of company's exposure to clean technology, adjusted according to a proportion of that company's size.	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.



Definition of Carbon Metrics *(continued)*

Carbon Risk Metric	Unit	Definition	Use Case	Limitations
Data Quality	Numerical (1-5)	This metric is represented 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.
Low Carbon Transition	Numerical (1-10)	Low Carbon Transition scores are assigned from 1 to 10. For this metric the proportion of financed emissions associated with a portfolio with a manager score above 5 is aggregated.	This assesses how well a company manages risk and opportunities related to the low carbon transition. Apportioning by financed emissions places a greater weight on companies where emissions are more substantial.	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)	%	This introduces the concept of a carbon budget, how much the world can emit such that global temperatures do not exceed 2 degrees Celsius. Implied temperature rise considers if the entire economy had the same over/undershoot of (scope 1, 2 and 3) their respective carbon budgets as the respective portfolio company, what would be the temperature rise during 2100 from preindustrial levels. The portfolio's Implied Temperature Rise aggregates the portion of financed emissions associated with portfolio companies with an Implied Temperature Rise of 2 degrees Celsius 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.



Definition of Carbon Metrics *(continued)*

Carbon Risk Metric	Unit	Definition	Use Case	Limitations
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.
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.

