

# IBM Pension Plan (The “Plan”) **Climate Change-related Disclosures**

**Year-end 31 December 2023**

Report prepared to comply with the  
UK Occupational Pension Schemes Climate  
Change Governance and Reporting  
Regulations 2021 (as amended)

July 2024

IBM PENSIONS TRUST



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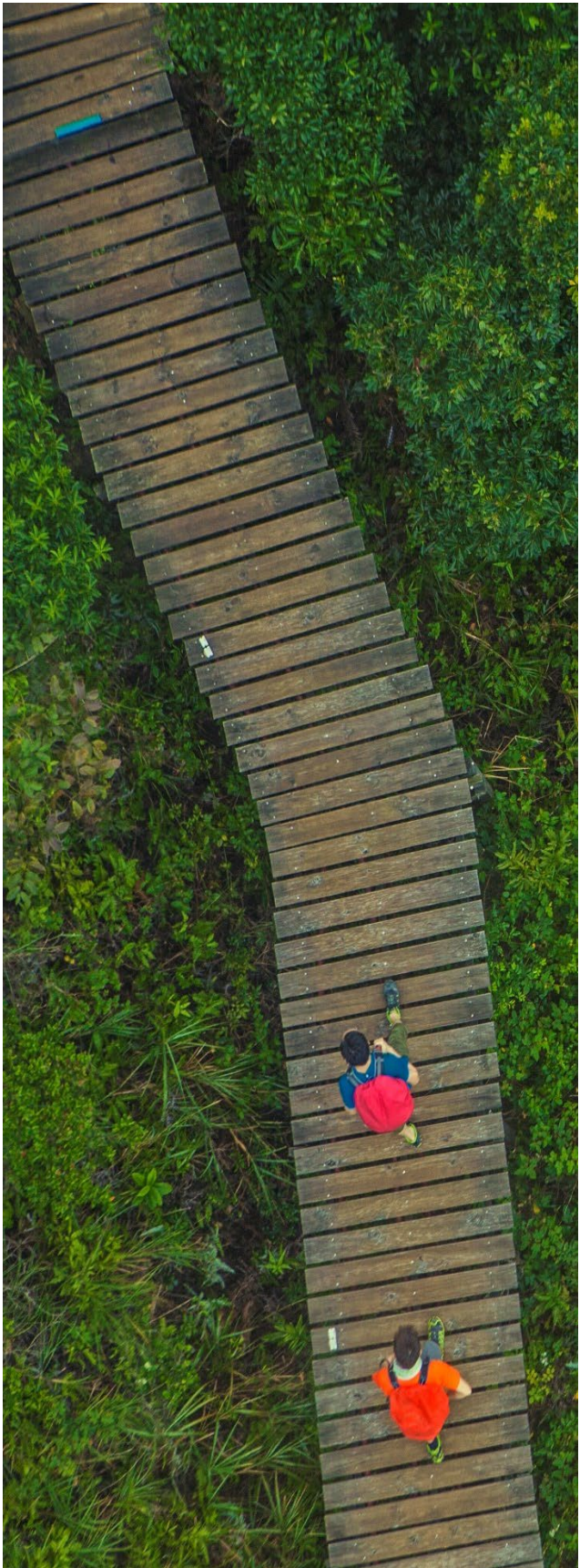
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# Chair's foreword

Welcome to the 2023 Climate Change-related Disclosures Report for the IBM Pension Plan ("the Plan"). This report covers the defined benefit (DB) and defined contribution (DC) sections of the Plan. Climate change continues to pose significant challenges to our planet and society. The increasing concentration of greenhouse gases in the atmosphere can lead to a variety of issues such as rising global temperatures, extreme weather events, rising sea levels and ecosystem disruptions, however climate change is not only an environmental issue but also a financial one.

The Trustee of the Plan recognises climate change as a risk that could impact the financial security of Plan members' benefits if it is not properly measured and managed where the Trustee is able to do so (although it is acknowledged that this is difficult to quantify with any precision). The Trustee recognises the importance of aligning the Plan's investments with climate goals and promoting sustainable practices and is committed to integrating environmental, social, and governance (ESG) factors, including climate change, into decision-making processes. This means considering the environmental impact of the Plan's investments, engaging with all stakeholders on sustainability issues, and supporting the transition to a low-carbon economy.

This report explains how the Trustee maintains oversight and processes to consider the Plan's relevant climate-related risks and opportunities by all stakeholders involved in the day-to-day management of the Plan over the year to 31 December 2023, including the progress made since the report published last year.<sup>1</sup>

The Trustee recognises that climate issues can be more relevant, and potential mitigations more readily implementable, for some parts of the portfolio than for others. The Trustee, working with its advisors, will seek to expand the remit of this report to cover the entirety of the Plan's investment portfolio as and when the ability to monitor these risks becomes more achievable via improved availability of data and methodologies.

## The Trustee has internal investment processes to ensure climate change is considered as part of any investment decision-making.

This report is available online, along with a member summary setting out the key highlights from this report at <https://www.smartpensionsuk.co.uk/#!/page/governance-documentation>.

The Trustee recognises the importance of engaging with you, the Plan's valued members, on this topic. The Trustee is committed to keeping members informed about its efforts to address climate-related risks and opportunities and members are encouraged to ask questions, provide feedback, and share perspectives on how the Trustee can further enhance its approach to climate change considerations. You can contact the Trustee via IBM Pensions Trust at [IBM Pensions Trust | Contact Us \(smartpensionsuk.co.uk\)](#).

We hope you enjoy reading this report, find it informative and support the Trustee on its climate journey.

**Robert Tickell**

Chair of the Trustee of the IBM Pension Plan



<sup>1</sup> This report has been prepared to comply with the UK Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 and the UK Occupational Pension Schemes (Climate Change Governance and Reporting) (Miscellaneous Provisions and Amendments) Regulations 2022 using the statutory guidance issued by the Department for Work and Pensions ("DWP").

# Executive summary

This report covers the following four areas of the Climate Change Governance framework:

- **Governance:** How the Trustee maintains oversight and incorporates climate change into its decision making;
- **Strategy:** How potential future climate warming scenarios could impact the Plan;
- **Risk Management:** How the Trustee incorporates climate-related risk in its risk management processes; and
- **Metrics and Targets:** How the Trustee measures and monitors progress against different climate related indicators known as metrics and targets.

## Trustee's Aims and Objectives:

The Trustee has set a target to **reduce the level of carbon intensity within the Plan's investment portfolio by 20% over the 3 years from 31 December 2021**. It should be noted that the target applies for the assets where Weighted Average Carbon Intensity (WACI) data is reportable<sup>2</sup>.

In addition, the Trustee:

- supports the goals of the Paris Agreement that seeks to limit warming to below 1.5°C relative to pre-industrial temperatures;
- believes that climate risk can have an impact on securing long-term financial returns and that considering climate risk is in the best long-term interest of Plan members;
- aspires to set a net-zero target and is working towards such a commitment as data quality improves.

The Trustee is working with its investment managers to improve the quality of data and is considering approaches to reduce carbon emissions exposure within the Plan's asset portfolio, with a view to gradually move towards setting a net-zero target in the future. The regulations note that *"whilst long term targets such as 'net-zero by 2050' are ambitious, a long term target with no interim targets would not on its own meet our expectation for trustees to consider and appropriately manage climate-related risk. Therefore, the target which trustees set should not be more than 10 years into the future."*

## The key messages from this report are:

- The Trustee has processes in place and has increased its level of governance to identify, assess and mitigate climate change risk.
- Climate change risk can have an impact on the long-term funding objectives of the DB portfolio and outcomes for DC members.
- Four metrics have been chosen to monitor the progress against climate change risk.
- Progress has been made to report on carbon metrics as far as possible, with an increase in the proportion of assets reported over the year.
- Scope 3 emissions data has been reported, but the Trustee notes that the data in this area is still very limited and expects this position to improve over time.
- The Trustee will continue to engage with the investment managers to help progress towards its WACI target and will review the appropriateness of the target in future strategic decision-making and on an annual basis for climate reporting purposes.
- Over 2023, the Trustee has considered ESG factors in further detail as part of the annual Stewardship Assessment, whereby there was greater focus on the extent that the Plan's investment managers are aligned with the Trustee's ESG beliefs relating to climate change, energy efficiency and diversity, equity and inclusion (DEI). The Trustee has formed a framework in order to monitor and better understand how its investment managers approach these areas in order to align with the Trustee's key priorities.
- The Trustee has made encouraging progress towards its target in the reduction of Weighted Average Carbon Intensity within the Plan's investment portfolio. The Trustee's progress is detailed overleaf.

<sup>2</sup> This includes scope 1 and 2 weighted average carbon intensity emissions data where available for the following mandates (excluding sovereigns): DB Section – Global Bonds, Global Credit and Long-term UK Core Credit, DC Section – popular arrangements.



## Trustee's progress against Target:

The table below summarises the progress against WACI (the chosen target metric) over the year to 31 December 2023:

	Mandate(s)	Asset allocation (%)	Coverage	Change in Weighted Average Carbon Intensity since 2021
<b>DB Section</b>	Global Bonds / Global Credit / Long-term UK Core Credit	42.0%	64%	-22.7%
<b>DC Section</b>		100.0%	83%*	-48.3%

\*Represents coverage of popular arrangements only.

For the **DB Section**, there has been some progress towards the WACI target with a 22.7% reduction in carbon intensity for the credit mandates.

Carbon intensity for the LDI portfolio is measured using a different methodology. The change in carbon intensity therefore cannot be compared on a like-for-like basis with the other mandates shown. Whilst the LDI portfolio does not form part of the Trustee's overall target (as sovereign assets are excluded), the sovereign carbon intensity reduced by c.12.8% over the reporting year.

In addition, carbon emission exposure via the Plan's pensioner buy-in policy with Rothesay is estimated to have reduced by 18.8%.

For the **DC Section**, the Trustee is pleased to demonstrate the significant progress made over the year in reducing carbon intensity within the Plan's investment portfolio, as the changes to the underlying funds of the Lifecycle arrangements that were implemented in early 2023 take effect.

The Trustee notes that the target has been met for both Sections but is aware that data continues to improve, and coverage may increase next year which could change the position. In addition, the Trustee notes that there are other economic factors, such as the increase in inflation, that could be driving the reduction in WACI rather than real world carbon emissions reduction. The Trustee is maintaining the current target but will annually review its appropriateness.

## Continuing the climate journey:

Over the next 12 months and beyond, the Trustee is planning to undertake the following actions:

- **Stewardship:** Engage with investment managers on carbon intensive holdings, voting and engagement activity to work towards the Trustee's climate goals and alignment with the Trustee's beliefs. An annual stewardship and Environmental, Social and Governance (ESG) integration assessment will also be completed.
- While the Trustee has observed a reduction in carbon intensity over the reporting period across the majority of the Plan's mandates, the Trustee will still be engaging with the managers to understand the investment decisions made and the consideration of ESG and climate change factors as part of their investment process.
- **Risks:** Conduct an annual review of the risk register and Plan governance documentation.
- **Climate Analysis:** Consider climate change risks and opportunities following completion of the DB Section's current investment strategy review and update the climate scenario analysis.
- **Training:** Ensure that the Trustee is well equipped with sufficient knowledge of developments around climate change risk and regulatory changes through training and a review of skills.

The Trustee, with support from the Plan's advisors, will review the above actions on an ongoing basis and consider longer-term actions in the Trustee's commitment to a sustainable future.

The Trustee works with its Investment Advisor, Mercer, to quantify the level of ESG integration within its investment decision-making by carrying out the [Responsible Investment Total Evaluation \(RITE\) assessment](#).

The RITE rating is **B+** for the DB Section and **A+** for the DC Section. A regular RITE assessment is carried out to ensure the Trustee is continually assessing how well ESG factors are integrated.

Further information on RITE is included in the Appendix.



# Governance

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

The Trustee has the ultimate responsibility for ensuring effective governance of climate-related risks and opportunities. The Trustee directors are becoming increasingly educated on climate change-related risks and opportunities and about how these may influence decisions in relation to risk management, strategy setting and in monitoring implementation.

The Trustee maintains a [Statement of Investment Principles](#) (SIP), which details the key beliefs, risks and approach to responsible investment and climate change. This is reviewed on an annual basis or more frequently as required. The Trustee maintains a standalone Investment Beliefs document, which provides more details on the Trustee's beliefs in matters such as integration of ESG factors, stewardship and climate change.

### The Trustee's overall investment beliefs on sustainability are:



ESG factors, including climate change, can impact the performance of the Plan's investments over the medium to long-term, and these should be integrated into the investment process.



Taking a broader and longer-term perspective on risk, including identifying sustainability themes and trends, presents risks and opportunities which require explicit consideration. Climate change risks and opportunities are embedded in the investment strategy.



Stewardship (or responsible active ownership) can add value to the Plan's assets in the long term and the Trustee will therefore seek to appoint managers who demonstrate strong engagement credentials, where relevant to the portfolio.

An ESG beliefs session is carried out triennially to refine the Trustee's beliefs and key priorities in relation to ESG factors. A review was carried out in Q1 2023, in which the Trustee agreed to the following key stewardship priorities:

- Climate change;
- Diversity, equity and inclusion;
- Energy efficiency.

These stewardship priorities are used to determine the significant votes to include within the [Implementation Statement](#). The next review will be carried out in 2026.

The Trustee takes independent investment advice to help assess climate risks and opportunities and looks to ensure that any decisions continue to be integrated into a coherent investment strategy that supports the Plan's ability to provide pensions.

The Trustee meets at least four times a year (and more frequently, as deemed necessary) where investment performance and risk management are reviewed, and climate-related risks form part of the wider assessment.

Research into how climate-related risks and opportunities impact financial markets is constantly evolving and expanding. The Trustee carries out training on a regular basis and at least annually to keep up to date with developments in this space.

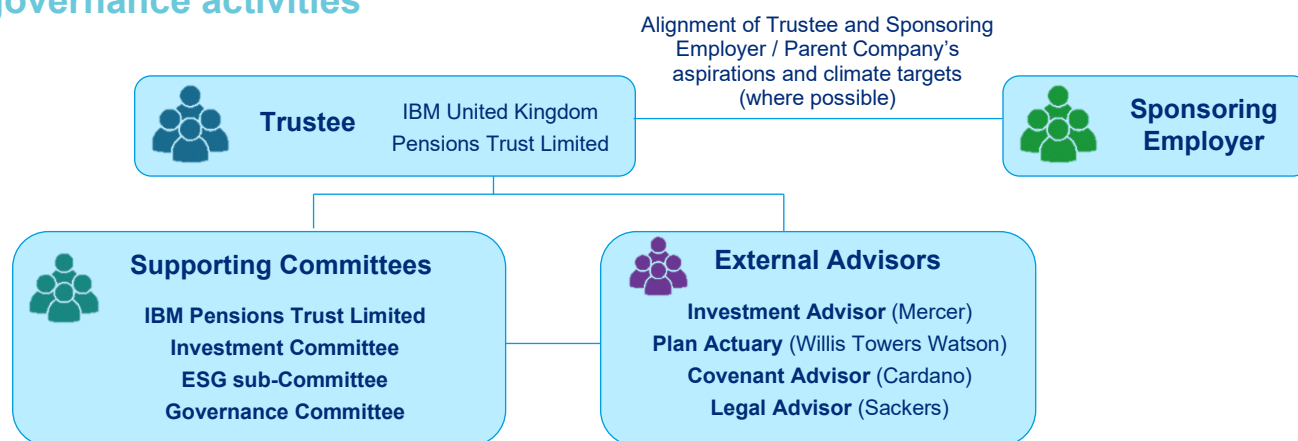
The Trustee has delegated the responsibility for the selection, retention, and realisation of investments to its underlying investment managers. The Trustee seeks to manage the risks and opportunities associated with these ESG factors by selecting industry leaders in investment management who are committed to the UN Principles for Responsible Investment (PRI) and who are signatories to the UK Stewardship Code. Managers have to demonstrate strong ESG, stewardship and engagement credentials, and align with the Trustee's ESG priorities.

The Trustee considers its current investment managers to be well-aligned overall with its own beliefs and policies.

The consideration of climate-related risks and opportunities is integrated into the wider monitoring and decision-making responsibilities of the Trustee and the ESG sub-committee. On at least an annual basis, the Trustee reviews the Plan's risk register which includes climate change risks. The Trustee will be monitoring the carbon emissions metrics, portfolio alignment metric and non-emissions metric produced in this report against the chosen target annually and will consider climate-related risks and opportunities in conjunction with triennial investment strategy reviews.

During 2023, the Trustee continued to make improvements to the level of integration of ESG factors within the Plan investments. The Trustee has fully implemented changes to the Plan's DC Section investment arrangements to increase their exposure to ESG-focussed funds. The Trustee has undertaken a more detailed ESG assessment over the Plan Year, which aligns with the Trustee's key priority areas.

## Roles and responsibilities of those advising or assisting the Trustee on Plan governance activities



**Figure 1: Plan governance structure**

Further details of the roles and responsibilities of the supporting committees and the Trustee-appointed advisors are set out in the appendix.

The Trustee takes an active role in assessing and reviewing its advisors. The Trustee works with its advisors to ensure that climate-related risks and opportunities are considered as part of its integrated risk management framework and expects its advisors to ensure the Trustee is compliant with the regulatory requirements when considering climate change. Specific objectives are included within Mercer's investment advisor objectives to ensure ESG and climate related risks and opportunities are considered as part of the investment strategy setting and monitoring/selection of investment managers. An assessment against these objectives is completed by the Trustee on an annual basis. Where no specific climate objectives are currently in place, the Trustee will consider these as part of any contract updates with its advisors. In addition, the Governance Committee has a rolling programme of inviting advisors to its meetings to review and assess their performance.

The Trustee expects all advisors to act with integrity and diligence in fulfilling the set objectives and uses meetings with the advisors to assess and challenge them.

IBM Pensions Trust (the Plan's in-house Pensions team) or Mercer, acting on behalf of the Trustee, will engage with underlying investment managers where they are perceived to be lagging their peers in terms of ESG integration and climate risk management, and to ensure the investment managers are voting and engaging with the investee companies in line with the Trustee's engagement priorities. Over the reporting year, the investment managers have been challenged on how ESG is integrated into their investment processes as part of the Trustee's ongoing stewardship monitoring.

The Plan's ESG sub-committee has oversight of climate change, stewardship and ESG related issues, as well as ensuring compliance with regulatory requirements. The ESG sub-committee is required to regularly report back to the Trustee to keep it informed of discussions and progress at the ESG sub-committee meetings. Over the course of 2023, the ESG sub-committee had several meetings covering the following areas:

- Establishing a set of ESG investment beliefs;
- Detailed stewardship and ESG assessment;
- Annual RITE assessment;
- Education in relation to Energy Efficiency and Diversity, Equity and Inclusion (DEI);
- Education on the developments relevant to pension schemes from a sustainability investment perspective, such as considerations in relation to nature and biodiversity.

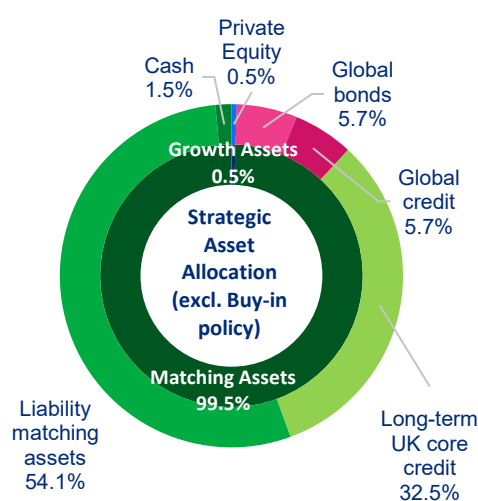
The Trustee has a specified engagement priority which includes focusing on climate change with the aim of improving the alignment to the transition to a lower carbon environment for the companies in which the Plan is invested.

# Strategy

## Summary of Plan's Assets

This section sets out the Plan's invested assets and highlights parts of the asset portfolio which are within the scope of climate-change related reporting requirements and therefore considered as part of the scenario analysis and metrics (where available) in the remainder of this report, which also includes the pensioner buy-in policy.

### DB Section



**Figure 2: Strategic Asset Allocation of the Plan's DB Section assets (excluding pensioner buy-in).**

The long term strategic asset allocation of the DB Section is set out in Figure 2. Additionally, there is a Currency overlay mandate held with Russell Investments which hedges 35% of overseas exposure that isn't hedged at the individual mandate level and two Reinsurance mandates held with Nephila and Securis. The CBRE Property portfolio was fully disinvested over the reporting year, and therefore there are no reportable assets in this year's report.

The Trustee has appointed Northern Trust as global custodian of the Plan's DB Section assets.

The Plan also holds a pensioner buy-in policy with Rothesay Life Plc which covers 50% of the DB Section's pensioner liabilities (approximately 40% of the Plan's total DB Section assets). Where possible, the Trustee has included analysis of the buy-in policy but limited information has been provided by Rothesay. This is an area the Trustee continues to work on and will consider as part of any further buy-ins.

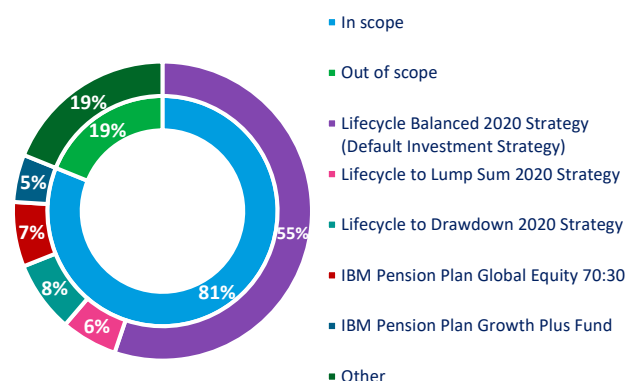
For the DB Section, the Trustee has considered scenario analysis based on the long-term strategic asset allocation. The Trustee, as far as it is able, has considered metrics for the Plan assets, excluding for the currency overlay, private equity and re-insurance mandates (due to the availability of data from the investment managers), which equates to 98% of total DB Section assets (based on the long-term strategic asset allocation).

### DC Section

The Plan's DC investment arrangements are provided by Legal & General Assurance Society Limited ("LGAS") under a bundled arrangement. The majority of the funds available to members are managed by Legal & General Investment Management Limited ("LGIM") with one fund managed by HSBC Asset Management.

As a minimum, the scope of reporting for DC arrangements is expected to cover popular arrangement(s), which is considered to meet one of the following criteria:

- £100m or more of invested DC assets; or
- accounts for 10% or more of the assets used to provide money purchase benefits.



**Figure 3: Summary of assets within the Plan's DC Section as at 31 December 2023.**

The popular arrangements are approximately 81% of the total DC Section assets as at 31 December 2023.

The Lifecycle to Annuity is no longer a popular arrangement following the closure of the strategy in the first half of 2023 with members mapped to Lifecycle Balanced 2020 Strategy.



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

**Figure 4: Timeframes of short, medium and long-term horizons to identify relevant climate-related risks and opportunities.**

Short Term	Medium Term	Long Term
<b>DB Section</b>		
The Trustee expects that potential short-term risks identified could cause an impact in 0-3 years. This time horizon takes into account the <b>DB Section's triennial statutory funding valuation and investment strategy review</b> . The last triennial actuarial valuation, effective 31 December 2021, was completed over 2022. The investment strategy review is in progress at time of writing.	The Trustee expects that potential medium-term risks identified could cause an impact in 3-9 years. This time horizon considers the DB Section's <b>funding and investment strategy to gradually reduce risk over time</b> towards a long-term funding objective. At the time of writing, the investment strategy for the DB Section is largely de-risked, with activity undertaken in 2023 following positive funding level experience.  The medium term is defined in conjunction with IBM's net zero target and the time to move to a low-risk funding target.	The Trustee expects that potential long-term risks identified could cause an impact in 9 years and beyond. This time horizon reflects the <b>long-term objective of the DB Section's funding and investment strategy to secure members benefits</b> (e.g. with an insurance company). It should be noted that the DB Section's investment time horizon may shorten materially if the Trustee enters into further insurance contracts to secure member benefits.  The long term is defined in line with the Paris Agreement.
<b>DC Section</b>		
The Trustee expects that potential short-term risks identified could cause an impact in 0-3 years. This time horizon takes into account <b>the investment strategy review</b> which takes place every 3 years.	The Trustee expects that potential medium-term risks identified could cause an impact in 3-9 years. This time horizon considers the investment arrangements of the DC Section, such as the <b>investment risk/return profile over the period</b> .  The medium term is defined in conjunction with IBM's net zero target.	The Trustee expects that potential long-term risks identified could cause an impact in 9 years and beyond. This time horizon reflects the long-term future of the DC Section and the <b>Trustee's overarching objective to help members maximise their retirement outcomes</b> .  The long term is defined in line with the Paris Agreement.

As a long-term investor, the Trustee recognises the risks and opportunities arising from climate change are diverse and continuously evolving. Climate change presents risks over the short, medium and long-term, which the Trustee aims to better understand and mitigate where possible. The Trustee has considered short, medium and long term drivers of risk which are set out in the Appendix.

## Describe the climate-related risks and opportunities relevant to the Plan over the time periods that the Trustee has identified and the impact of these on the Plan's investment strategy

### Climate-related Risks

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

The Trustee ensures that the Plan's investment strategy is well-diversified, and that the investment managers (including the insurer with respect to the buy-in policy) have an appropriate understanding of both the companies and assets in which they invest and the risks to which they are exposed. As part of regular performance monitoring, the investment managers are expected to provide information on how climate-related risks and opportunities are integrated into their investment decisions.

The Trustee monitors on an annual basis the carbon intensity of the Plan's assets and how this changes over time, where the information is available. The carbon intensity for each of the Plan's assets and impact on the Plan's investment strategy has been reported (where available) within the Metrics section of this report.

Climate change risk can also have an impact on the long-term funding objective of the Plan. The Plan Actuary calculates the DB Section's funding level by comparing the current value of assets to the present value of the Plan's current and future liabilities (pension payments to members). The Actuary adopts a range of assumptions to calculate the present value of liabilities, such as expected mortality and the long-term investment return. Mortality in the long term may be impacted by the ability to limit warming and transition to a lower carbon economy. Equally, the assumed investment return from the Plan's investment strategy could be impacted under different climate change transition scenarios.

## Climate-related Opportunities

There are significant opportunities for investing in companies and assets that may benefit as the Plan transitions to a lower carbon environment.

From a DB Section perspective, as part of the ongoing monitoring of its investment managers, the Trustee will engage with the investment managers to understand the underlying investments that are being made and the extent that climate change risk is considered along with potential opportunities. The investment strategy for the DB Section is set to reduce risk, to the extent possible, by investing in assets which match changes in the value of the Plan's liabilities in response to changes in interest rates and inflation expectations. The Trustee retains some Growth asset exposure, however the scope to explore climate-related opportunities within the DB Section investment strategy is limited.

The Freestyle range includes seven sustainable equity funds with different regional exposures and sustainable investment approaches, as well as one sustainable corporate bond fund available for members to select.

In Q1 2023, the Trustee made the underlying allocations of the Growth Plus and Growth funds – which feature prominently in the Lifecycle arrangements – more sustainable by replacing the All World Equity and Investment Grade Corporate Bond exposures with funds from LGIM's Future World range.

## Addressing Future Risks and Opportunities

The Trustee acknowledges the potential for further progress in reducing climate-related risks in the short to medium term. Engaging with investment managers is considered a top priority for successfully achieving climate and sustainability goals. This can involve actions such as:

1. Adjusting benchmarks the funds track to a lower carbon intensive benchmark.
2. Considering alternatives or similar funds with a tilt towards ESG and sustainability (e.g. the Trustee has implemented changes to the Plan's investments in the DC Section to replace some funds within the default arrangements with an ESG-tilted equivalent fund available under the Future World fund range managed by LGIM and these are also made available in the Plan's Freestyle fund range).
3. Reallocating to more sustainable assets within the lifecycles (applicable to the DC Section only).
4. Changing the fund guidelines that limit the investment in carbon intensive funds within their portfolios (applicable to the DB Section only).

If there is limited engagement from the investment manager, the Trustee may make the decision to switch out of a fund. The Trustee's primary focus in its climate journey is to maximise engagement with investment managers, with exclusions and disinvestments only considered as a last resort.

The Trustee expects Mercer, as the Plan's Investment Advisor, to provide support and consider potential investment and implementation opportunities to reduce the Plan's exposure to climate-related risks over time. However, the Trustee recognises a balance is needed to be maintained between meeting the funding (i.e. ensuring that members' benefits are met) and investment objectives for each Section of the Plan and considering these risks.

Climate-related risks are factored into assumption setting for the Plan's triennial actuarial valuation and are actively considered as part of the Trustee's risk management process. For the 31 December 2021 actuarial valuation of the Plan (DB Section), the Trustee considered how climate-related risks might manifest themselves within the Plan, and the assumptions adopted for the valuation contained an appropriate degree of prudence taking into account these risks.

The Trustee recognises that climate-related issues represent a material risk to future economic stability in the long term, with potentially wide-ranging impacts on ESG matters. From the perspective of the funding of the Plan, the

key ways these risks could manifest themselves are through unmatched falls in asset values, Plan members living longer than assumed or a reduction in the strength of the Company covenant. However, the Trustee also acknowledges that the DB Section's investment time horizon may shorten materially if the Trustee enters into further insurance contracts to secure member benefits, which reduces the likely impact of climate risk over the long term.

For the 31 December 2021 actuarial valuation, the Trustee considered how longevity might be affected in different climate scenarios when deciding what assumptions to adopt. Climate is assumed to impact life expectancy both directly and indirectly. The climate-related issues which could impact life expectancy include more natural disasters, the possibility of warmer winters and impacts on air quality.

## Describe the impact of climate-related risks and opportunities on the sponsoring employer's covenant over the relevant short, medium and long-term time horizons

The Trustee recognises it is crucial to better understand the potential impact on the covenant of the effects of climate change, which can impact on the long-term funding requirements of the Plan. The analysis carried out by Cardano (the Trustee's Covenant Advisor) has been based on the IBM Group (IBM) rather than the Plan's employer (IBM United Kingdom Holdings Limited) given the integrated nature of the Group.

Climate change can impact a business or organisation throughout the whole value-chain and the key issues arising from climate change are complex and multi-dimensional.

IBM's exposure to climate risks can most easily be considered against the possible transmission channels throughout its value chain.

- **Supply Chain:** IBM's supply chain is global and diverse, with spend spread broadly around the world in key areas such as software, hardware, services and labour.
- **Operations:** IBM offers a wide range of Information Technology services, solutions, infrastructure and software such as cloud and data services, artificial intelligence, consulting, hybrid infrastructure and infrastructure support, and financing, to a wide range of customers, including commercial businesses and the public sector, in over 175 countries, primarily in North America, Europe and Asia.
- **Competitors:** Primary competitors include large multi-national listed companies.
- **End Market:** A diverse list of primarily technology services, hybrid, cloud and software for a diverse array of industries, including manufacturing, financial services, communications, energy, transportation, consumer and retail.
- **Macro-economic:** IBM's global reach and the nature of its product offering could expose it to wider macro-economic risks, such as inflationary pressures or global recessions.






## What could the sponsoring employer do to address such a risk?

IBM has committed to the climate transition goals below:

	Direct Operations Scope 1 and 2	Value Chain Scope 3
<b>Net Zero Goal</b>	2030	Some by 2030
<b>Interim Target</b>	65% by 2025	Some by 2025
<b>Ambition</b>	Aligned with 1.5 degrees	
<b>Baseline</b>	2010, adjusted for acquisitions and divestitures	



The Plan's Covenant Advisor has provided updated recommendations as part of the 2023 covenant assessment:

	<b>Contingency planning:</b> Consider undertaking contingency planning whereby Cardano work with the investment and actuarial advisors to map the possible impact of narrative downside scenarios over the nearer term (e.g. 5 years).
	<b>Monitor:</b> Closely monitor the Group's scope 3 carbon reduction progress against targets, including increasing visibility over remaining scope 3 emissions not yet calculated.
	<b>Regulatory readiness:</b> Regularly horizon scan for potential regulations, particularly in respect of data centre energy usage, and assess the Group's readiness to meet any such changes.
	<b>Supply chain exposure:</b> Consider the Group's supply chain exposure to regional, material climate events and any contingency/mitigation plans in place.
	<b>Sustainability oversight:</b> Consider whether the Trustee might benefit from adopting a 'sustainability dashboard' to monitor sustainability risks and policy implementation.

The Trustee are considering these recommendations and will look to incorporate these into their future monitoring and assessment of climate risks in respect of the sponsoring employer in an appropriate and pragmatic way.

## Scenario analysis

### Describe the resilience of the Plan's strategy, taking into consideration different climate-related scenarios, including a 1.5°C scenario

Climate change scenario analysis has been undertaken on the Plan's strategic asset allocation for the DB Section and the popular arrangements in the DC Section to assess the potential implications of climate change. Mercer's three climate scenarios are constructed to explore a range of plausible futures, rather than exploring tail risks. In shorter time frames, transition risk tends to dominate while over longer time frames physical risk is expected to be the key driver of climate impacts.

**Key assumptions for the scenarios used and the key limitations of the modelling are detailed within the appendix.**

### Scenario Analysis Results - DB Section

The scenario analysis for the DB Section was completed for the 2021 report and was not updated during the Plan year as the 2023 strategy review is ongoing with changes expected to be implemented during 2024. This is consistent with the regulatory guidance to update scenario analysis at least every three years.

**Figure 5: Climate change scenario analysis – funding level impact.**

As at 31 March 2021 the DB Section's funding level was estimated to be around **101%**. The approximate funding level impacts are shown below:



This is "top down" analysis – i.e. it is based on the Plan's investments at an asset class level and does not consider the individual stocks held within each asset class.

Source: Mercer, PFaroe. Analysis shown as at 31 March 2021 for the Plan (ex buy-in).

#### Key Findings

- Under an Orderly Transition and Disorderly Transition scenario, the funding level of the Plan is expected to be lower than the base case scenario in 3 and 10 years' time.
- Over 3 years the transition risks dominate and the scenarios show a plausible funding deterioration of **0.30%-0.75%**, relative to the base scenario with the majority of the risks occurring beyond this timeframe.
- Over 10 years the impact is greater and could be driven by either transition risk and/or the pricing in of future physical damage.

For the climate scenario analysis of the DB Section, Mercer considered both assets and liabilities across the matching and growth portfolios of the Plan's investment strategy. The analysis equally considered the currency overlay mandate held with Russell Investments and the two reinsurance mandates held with Nephila and Securis, but excluded the buy-in policy with Rothesay Life.

The objective of the investment strategy is to provide sufficient return relative to the liabilities (rather than in absolute terms) therefore the analysis carried out to consider the impact on the Plan's funding level is a better test of the resilience of the investment strategy. Similarly, the aim of the funding strategy is to achieve a given development in funding level (e.g. reach a certain level of funding on a given basis over a given timescale) rather than achieve a particular liability value. Hence, the resilience of the funding strategy is also better tested through the assessment of funding level projections. The Trustee understands that funding and investment strategies are interrelated and should be considered alongside each other, however the climate impacts that have been modelled in this report are mainly in relation to the Plan assets.

**These scenarios are not designed to be extreme or tail risk events.** The Trustee notes that the modelling may understate the true level of risk, and uncertainty is likely to be greater for higher warming scenarios, in particular due to the difficulty in being able to accurately predict the future. It should be noted that the climate scenario analysis only forecasts the climate related impact on relative returns, and does not take account of any other factors which may have an impact including economic and market conditions; political and geopolitical events; monetary policy conditions; etc.

All scenarios are expected to have a negative impact on the funding level over the 10-year period relative to the base scenario. The Trustee is aware that these scenarios are illustrative and the results of the modelling may differ from actual experience in 10 years' time. The Trustee will consider these climate scenarios further as part of the future funding and investment strategy of the Plan. This analysis was completed for the 2021 report and will be updated following completion of the investment strategy review. This is consistent with the regulatory guidance to update scenario analysis at least every three years. The Trustee recognises that assumptions and methodologies have evolved since completion of the last analysis, therefore updating this analysis could have a materially impact on the results and conclusions drawn.

The Trustee recognises that under different scenarios climate change might lead to longer life expectancies (i.e. higher liabilities) or lower life expectancies (i.e. lower liabilities). Of the scenarios considered, life expectancies are expected to improve only in WTW's 'Global coordinated action' scenario (where all necessary action is taken to achieve the Paris Agreement aim of limiting global temperature increases to 1.5°C above preindustrial levels) and deteriorate in WTW's other scenarios. Any impact of changes in life expectancy on the Plan's funding would be significantly reduced by the Plan's pensioner buy-in completed in December 2020. Other than the potential impact on longevity, the Plan's liabilities are assumed not to change in these scenarios; the valuation uses market implied inflation and assumes that transition and physical risks are appropriately priced into markets.

## Scenario Analysis Results - DC Section (Popular arrangements)

The scenario analysis for the DC Section has been updated in 2023 to reflect the Trustee's agreed short, medium and long term timeframes (3, 7 and 27 years respectively) relative to a base scenario<sup>3</sup> alongside the strategic changes implemented over the Plan year.

<sup>3</sup> The baseline represents what has been assumed the market is currently pricing in. In terms of what is priced in today the baseline scenario assume a 10% weight to a Failed Transition, 40% weight to an Orderly Transition, 10% to a Rapid Transition and 40% weight to a range of low impact scenarios .

**Figure 6: Portfolio value impact of climate change scenarios for in-scope popular arrangements within the Plan’s DC Section, on projected asset value of the three climate scenarios, based on a £100 starting value (for illustrative purposes), relative to the base**



Source: LGIM for determining popular arrangements as at 31 March 2023, Mercer for impact analysis calculations.

Figure 6 shows the impact of climate change scenarios for the Lifecycle Balanced 2020 Strategy, the Plan’s default option and one of the in-scope popular arrangements, based on a starting investment of £100. The impact is shown across 3 different member cohorts:

- **Younger member:** A member aged 38 years, retiring in 27 years (assuming a target retirement age of 65). These members would be invested in risk-seeking assets for longer and therefore the projected asset value is more exposed to climate risks.
- **Average member:** A member aged 53 years, retiring in 12 years (assuming a target retirement age of 65). These members are invested in a more diversified approach, with a lower allocation to equities compared to the ‘younger’ member.
- **Member 3 years from retirement:** A member aged 62 years, retiring in 3 years (assuming a target retirement age of 65). These members are invested in mainly cash and bonds with a lower allocation to equities and other growth assets.

There is a wide range of impacts on member outcomes due to two main factors:

- the longer the term to retirement – younger members will be exposed to physical and transition risks for a longer period of time, therefore these risks are priced in to a greater extent; and
- the speed of transition.

The analysis in Figure 6 can be summarised as follows (note this also includes how the analysis for the Lifecycle to Drawdown 2020 and Lifecycle to Lump Sum strategies compares to the Lifecycle Balanced 2020 strategy):

Time horizon	Short-term: 3 Years	Medium-term: 7 Years	Long-term: 27 Years
Impact of transition and physical risks at each time horizon and each climate scenario	Transition risk is most important which has the largest impact on the rapid transition scenario.	Transition risks are still the most significant and therefore the Rapid Transition is most impactful. However, the Failed Transition is becoming more impactful and future Physical damages start to be priced in.	As longer-term physical damages begin to be priced in, the Failed Transition becomes the most impactful scenario.



Time horizon	Short-term: 3 Years	Medium-term: 7 Years	Long-term: 27 Years
Analysis at overall level of the Lifecycle Balanced 2020 Strategy	Average members are more protected over the short and medium term compared to younger members due to the lower allocation to equities. The short and medium term impacts for the other Lifecycle strategies that fall under the popular arrangements (Lifecycle to Lump Sum 2020 and Lifecycle to Drawdown 2020) are the same as the Lifecycle to Balanced 2020 strategy for younger and average members as all Lifecycles have the same asset allocations at these points on the glidepath.		
	In the last 3 years to retirement, members hold an increasing allocation to cash and are therefore less impacted by transition and physical risks. However, pot sizes are likely to be much larger at this point resulting in a greater £ impact – this is demonstrated in the first chart where the Failed Transition could potentially have a significant impact on younger member pot sizes over the next 27 years. Impacts for members invested in the Lifecycle to Drawdown 2020 strategy are slightly larger due to the higher allocation to equities as a member approaches retirement. The Lifecycle to Lump Sum strategy has a significant amount allocated to cash in the lead up to retirement and hence the impact in the lead up to retirement is expected to be marginal compared to the other Lifecycle strategies.		
Impact on asset projection at each at time horizon towards retirement with reference to baseline scenario*			
Younger member (27 years from retirement)	Overall projected asset values at this time point are reduced by 12% in the Rapid Transition.	Under the Rapid Transition asset values are reduced by 9%.	The Failed Transition becomes the most impactful scenario. The Failed Transition reduces the asset value by 25%.
	The Failed Transition is marginally positive due to transition costs not materialising.	Under the Failed Transition the asset values are reduced by 1%.	
Average member (12 years from retirement)	The Rapid Transition shows an 8% reduction in asset values at the 3 year point.	Under the Rapid Transition asset values are reduced by 5% (compared to 9% for younger members).	-
	Average members are therefore more protected over this period compared to younger members due to the lower allocation to equities.	Under the Failed Transition the asset values are reduced by 2% (compared to 1% for younger members).	
Member 3 years from retirement	The Rapid Transition projects a 3% reduction in asset values at the 3 year point.	-	-

\* The baseline represents what has been assumed the market is currently pricing in. In terms of what is priced in today the baseline scenario assume a 10% weight to a Failed Transition, 40% weight to an Orderly Transition, 10% to a Rapid Transition and 40% weight to a range of low impact scenarios.

The IBM Pension Plan Global Equity 70:30 Fund and IBM Pension Plan Growth Plus Fund are also determined to be popular arrangements as at 31 December 2023. The table below provides some commentary comparing the impact analysis of these funds relative to the Lifecycle Balanced 2020 Strategy, as defined above.

Fund	Impact comparison
<b>IBM Pension Plan Global Equity 70:30 Fund</b>	<ul style="list-style-type: none"> <li>Over the short and medium term, the impact on projected asset values (relative to baseline) is broadly the same across all three climate scenarios, when compared to the impacts under the Lifecycle Balanced 2020 Strategy. This is because under the Lifecycle Balanced 2020 Strategy, for a “younger” member, assets are invested mainly in equities over these periods.</li> <li>Over the long term, impact on projected asset values (relative to baseline) is higher for the IBM Pension Plan Global Equity 70:30 Fund across all three climate scenarios (particularly for the Orderly and Failed Transition, as there is a greater impact of transition and physical risks). Under the Lifecycle Balanced 2020 Strategy, for a “younger” member, assets are gradually de-risked as the member moves closer to retirement and invests in a lower proportion of equities over time.</li> </ul>

Fund	Impact comparison
<b>IBM Pension Plan Growth Plus Fund</b>	<ul style="list-style-type: none"> <li>Over the short and medium term, the impact on projected asset values (relative to baseline) is lower across all three climate scenarios, when compared to the impacts under the Lifecycle Balanced 2020 Strategy. This is because under the Lifecycle Balanced 2020 Strategy, for a “younger” member, there is a higher allocation to equities.</li> <li>Over the long term, the impact of the Failed Transition on the IBM Pension Plan Growth Plus Fund is greater than under the Lifecycle Balanced 2020 Strategy, for a “younger” member, due to the higher allocation to equities.</li> </ul>

The return impacts for each of the in-scope popular arrangements relative to the baseline scenario can be found in the Appendix.

## Covenant Scenario Analysis

The three climate scenarios which have been considered as part of the covenant assessment carried out by Cardano for the Trustee’s 2023 climate report are unchanged from the prior analysis conducted and are set out in the Appendix.

Under each climate scenario, Cardano identified the key potential risks and determined the extent that these risks would have on the covenant of the sponsoring employer in the short, medium and long term.

### The key findings from the risk analysis are:

- The risk associated with a **Rapid Transition** are greater in the near term than in an **Orderly Transition** due to delayed but sudden implementation of policies falling within the ‘near-term’ time horizon (2025).
- In the near term, risks associated with a **Rapid Transition** scenario are higher due to the implied cost of decarbonisation across the supply chain and operations.
- Over the longer term, the physical risks to suppliers, workforce and key operating sites, as well as GDP declines, are expected to be more pronounced in a **Failed Transition**.

IBM is also likely to benefit from opportunities to provide customers with services that better enable them to meet sustainability targets and limit environmental impact. This could partly offset risks identified in this assessment.

# Risk management

## Describe the Plan's process for identifying, assessing and managing climate change-related risks

The Trustee recognises that climate-related risks can be financially material and that the due consideration of climate risk falls within the scope of the Trustee's fiduciary duty. Given the long-dated nature of the Plan's investments and the timeframe in which climate risks could materialise, a total portfolio approach to risk management covering all relevant asset classes has been taken. The ongoing risk management that is carried out by the Trustee is set out in the Appendix. The table below provides additional information in relation to the risk management activities in each of the key areas for the reporting year.

<b>Governance</b>	<ul style="list-style-type: none"> <li>The <b>Trustee and ESG sub-committee receive training</b> from Mercer as appropriate on climate-related issues, including market and regulatory updates: <ul style="list-style-type: none"> <li>Education in relation to Energy Efficiency and Diversity, Equity and Inclusion (DEI).</li> <li>Education on the developments relevant to pension schemes from a sustainability investment perspective, such as considerations in relation to nature and biodiversity.</li> </ul> </li> </ul>
<b>Strategy</b>	<ul style="list-style-type: none"> <li>The Trustee undertakes <b>Climate change scenario modelling</b> on at least a triennial basis. The last assessment was carried out in 2021 and the next assessment is expected to take place in late 2024/early 2025.</li> <li>The Trustee has commissioned <b>covenant analysis</b> carried out by Cardano as part of this report, to understand the impact of climate change risk on the covenant of the Plan's sponsor. The recommendations from the 2023 review are set out in this report.</li> </ul>
<b>Reporting</b>	<ul style="list-style-type: none"> <li>The Trustee carried out a RITE assessment in 2023, which concluded: <ul style="list-style-type: none"> <li>The overall rating was B+ for the level of ESG integration in investment decision-making.</li> <li>Whilst the overall rating was unchanged compared to the 2022 assessment, there was a marginal increase in the score. This was a reflection of the Trustee's action to strengthen its ESG beliefs and key priorities, and work to further engage with the Plan's investment managers through the annual stewardship assessment.</li> </ul> </li> </ul>
<b>Manager monitoring</b>	<ul style="list-style-type: none"> <li>Mercer carries out an annual <b>Stewardship and ESG Manager Ratings Assessment. The 2023 Stewardship Assessment concluded that:</b> <ul style="list-style-type: none"> <li>All of the Plan's investment managers were signatories to the PRI and all managers have a PRI score of at least 4 (on a scale of 1 to 5 – 5 is the highest possible score), where publicly disclosed.</li> <li>All managers were signatories to the 2020 UK Stewardship Code.</li> <li>All managers had a publicly available stewardship or engagement policy which aligns with the Trustee's belief that climate change is a priority area.</li> <li>Majority of managers had exclusions against UN Global Compact violators to some degree.</li> <li>All managers believe climate change risks and DEI to be important, and forms part of their investment process, which aligns with the Trustee's ESG beliefs.</li> <li>Where available, the Mercer ESG ratings for the funds the Plan invests in were above the average ratings of the respective Mercer asset class universes, and ESG ratings for two funds had been upgraded over the year.</li> <li><b>IBM Pensions Trust are engaging with investment managers</b> where the Stewardship Assessment identified gaps in the responses or where managers did not perform as well on the stewardship assessment as their peers. Specifically, IBM Pensions Trust have engaged on Net Zero Asset Managers initiative (NZAMi), DEI and the UN Global Compact principles and worked with the managers to understand the context for their specific area of the investment.</li> </ul> </li> </ul>
<b>Manager Selection and Retention</b>	<ul style="list-style-type: none"> <li>Mercer rates investment managers on the extent of integration of ESG factors (including climate change) into their processes. <b>A manager's stewardship process forms part of the rating assessment.</b> This is considered at the firm level and at the investment strategy/fund level.</li> </ul>



## Describe how processes for identifying, assessing and managing climate change-related risks are integrated into the Plan's overall risk management (including the Plan's liabilities and sponsor covenant)

Both climate change-related risks and wider investment risks are considered as very important by the Trustee. Where possible, climate change and wider investment risks such as demographic trends are treated in a holistic manner by recognising they are often interrelated. Climate change and ESG risks are included alongside other material risks in the SIP and the risk register.

The climate change scenario analysis is strategic in nature and has therefore been incorporated into wider investment strategy discussions and considerations and into the portfolio design. The Trustee has commissioned scenario analysis to be carried out as part of understanding the impact of climate change risk on the sponsor covenant and the Plan's assets and liabilities. Furthermore, as mentioned earlier in this report, the Trustee recognises climate change risk in its risk register which is reviewed at least annually.



# Metrics and Targets

## Metrics

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

This report presents carbon data analysis for the Plan's investment mandates as at 31 December 2023 (or the closest date the data is available at time of preparing this report).

The Trustee recognises that the availability of accurate data for some asset classes is an industry-wide issue and continues to engage with the investment managers to improve their climate (and carbon) reporting, but also to influence custodians, and the companies in which they hold these assets, to improve their climate (and carbon) reporting as quickly as possible. In this context, it should be noted that there can be a significant time lag in the provision of emissions data from individual companies to data providers, and from data providers to fund managers. The Trustee recognises that this leads to a certain amount of uncertainty regarding the drivers of changes in carbon emissions across the Plan.

In this report, the Trustee has reported on the following four key metrics, split across different elements of the DB Section and the DC Section:

Metric Category	Metric chosen by Trustee	Rationale for chosen metric	Relevant Figures
<b>Absolute emissions</b>	The total carbon dioxide equivalent emissions (CO <sub>2</sub> e) attributable to a portfolio.	This is the recommended metric in line with regulations.	Figure 7 (DB Credit Portfolio), Figure 10 (DB LDI Portfolio) Figure 15 (DC Popular Arrangements)
<b>Emissions intensity</b>	Weighted Average Carbon Intensity ("WACI") The carbon intensity of a portfolio, weighted by the proportion of each constituent in the portfolio. Carbon intensity is calculated for each company as (Scope 1 and 2 carbon emissions / \$m sales).	The Trustee has chosen this metric as the majority of the Plan's investment managers (where relevant, although some investment managers have followed a slightly different approach due to the nature of the underlying assets) are able to report on this and because it provides a measure relative to the respective portfolio allocation and therefore currently provides better insight in this context than <b>Carbon Footprint</b> <sup>4</sup> .  Carbon footprint is the recommended metric for measuring emissions intensity under the UK regulatory guidance "Taking Action on Climate Risk". The Trustee also reports on this and may move to this as a main metric in future, as it may be more intuitive for Plan members and is a more straightforward metric to apply in the context of portfolio composition and attribution analysis.	Figure 9 (WACI DB Credit Portfolio) Figure 11 (WACI DB Buy-in) Figure 17 (WACI DC Popular Arrangements)  Figure 8 (Carbon Footprint DB Credit Portfolio) Figure 16 (Carbon Footprint DC Popular Arrangements) Figure 18 (Sovereign Carbon Intensity DC Popular Arrangements)
<b>Additional metric</b>	Share of portfolio held at year end for which engagement or voting on climate-related risk and opportunities has been a substantive topic.	This non-emissions based metric allows the Trustee to assess the extent to which an asset manager is engaging and/or voting on the topic of climate change. The Trustee has chosen this metric as it believes that engagement on climate-related issues is important. This metric will enable the Trustee to monitor improvement in engagement levels over time and is an area of focus for the Trustee.	Figure 13 (DB engagements) Figure 20 (DC engagements)

<sup>4</sup> Carbon Footprint is an intensity measure of emissions that takes the Plan's Total greenhouse gas emissions figure and normalises it to take account of the size of the investment.

Metric Category	Metric chosen by Trustee	Rationale for chosen metric	Relevant Figures
<b>Portfolio alignment metric</b>	Science Based Targets initiative ("SBTi").	<p>The Trustee has chosen this metric as it allows for an assessment of the extent to which a portfolio is committed to net zero. In addition, SBTi is an industry approved, scientifically rigorous approach used to assess decarbonisation pathways. This will enable the Trustee to monitor the progress of its investments relative to its own proposed net zero commitments.</p> <p>The Trustee also reports on <b>Implied Temperature Rise<sup>5</sup></b>, where data is available from the Plan's investment managers, and this is included in the appendix.</p>	<p>Figure 12 (DB Section)</p> <p>Figure 19 (DC Popular Arrangements)</p>

## Carbon emissions analysis

The carbon emissions analysis includes scope 1, 2 and 3 emissions for the Plan's assets, where available. Where the data cannot be provided, comments have been supplied by the investment managers and included in this report. The Trustee notes that it does not rely on scope 3 data to form conclusions and actions given the poor data quality and availability. This means that for some companies the assessment of their carbon emissions could be considered an 'understatement' at present. Examples could include an online retailer whose logistics emissions are not captured in its scope 1 or 2 emissions.

The metrics information set out in this report includes **coverage**, which represents the share of the securities in the fund which report on a given climate metric, provided by the Plan's investment managers.

For the DC Section, LGIM have provided data on **eligibility**, which represents the share of the securities in the fund which are eligible for reporting and **coverage**, which represents the share of the eligible securities in the fund which report on a given climate metric.

As noted earlier in this section, the Trustee recognises that there are still limitations in the accuracy and availability of emissions information – in particular, for scope 3 emissions. Fluctuations are expected to be observed over time and hence the commentary on the metrics disclosed in this report have focused on the drivers for the changes in scope 1 and 2 emissions.

## DB Section emissions based metrics

The Trustee has commissioned Northern Trust, as custodian of the DB Section's assets, to produce the agreed emissions based metrics. This enables the Trustee to consider the carbon emissions data in a consistent manner across all the mandates where carbon emissions data is available, allowing high-level comparison analysis to be carried out and to aid the Trustee with discussions and planning to reduce the Plan's carbon exposure. Northern Trust are currently only able to report on the asset classes below due to the availability of data. Where possible, the carbon emissions data for the remaining Plan assets have been provided separately in this section.

The following analysis should be considered with some caution given the varying levels of data coverage for all the mandates reported. The comparison of each carbon metric and each mandate are highlighted in red (which represents an increase over the year) and green (which represents a reduction over the year). The scope 1 and 2 emissions are indicated by the solid-coloured bars and scope 3 emissions are indicated in the pattern-shaded bars in the charts shown in this section of the report. The bars are grouped by each fund analysed.

Figure 7 sets out the total carbon emissions for the Global Bonds, Global Credit and Long-term UK Core Credit mandates as at 31 December 2022 and 31 December 2023. This represented around 42% of the assets of the DB Section as at 31 December 2023.

The total carbon emissions of scope 1 and scope 2 has increased from 57,000 tCO<sub>2</sub>e as at 31 December 2022 to 58,500 tCO<sub>2</sub>e as at 31 December 2023 (an increase of c.2.6%). There are two key factors which is likely to have driven the increase in emissions: firstly, the increase in the overall asset allocation to the credit portfolio (which increased by around 6.2%) and secondly, changes in emissions exposure from the underlying holdings within

<sup>5</sup> This is a forward-looking metric that considers the pledges, commitments and business strategy changes that underlying investee companies/issuers have made. It provides a prediction of the potential temperature rise over the rest of the century based on the activities of those companies and issuers. The metric illustrates the degree of portfolio alignment with the goals of the Paris Agreement.



these portfolios. At the individual portfolio level, increases in the total carbon emissions of scope 1 and 2 were observed for GSAM Long Term UK Core Credit, PIMCO UK Core Credit and Western UK Core Credit mandates:

- GSAM Long Term UK Core Credit: Scope 1 and 2 emissions for this mandate increased by c.7.1%. This increase in the total carbon emissions can be largely attributed to Holcim Ltd. This holding is the top contributor to GSAM's total carbon emissions due to its increased position size and its increase in scope 1 and 2 emissions. ENGIE SA and E.ON SE are also contributors to this increase, despite their fairly stable climate emissions their increased position size is driving their higher contribution to the total carbon emissions.
- PIMCO UK Core Credit: Scope 1 and 2 emissions increased by c.4.9%. As per GSAM, the increase in total carbon emissions can be largely attributed to Holcim Ltd.
- Western UK Core Credit: Scope 1 and 2 emissions increased by c.17.8%. This is largely driven by increased position size of Holcim Ltd. and ENGIE SA.

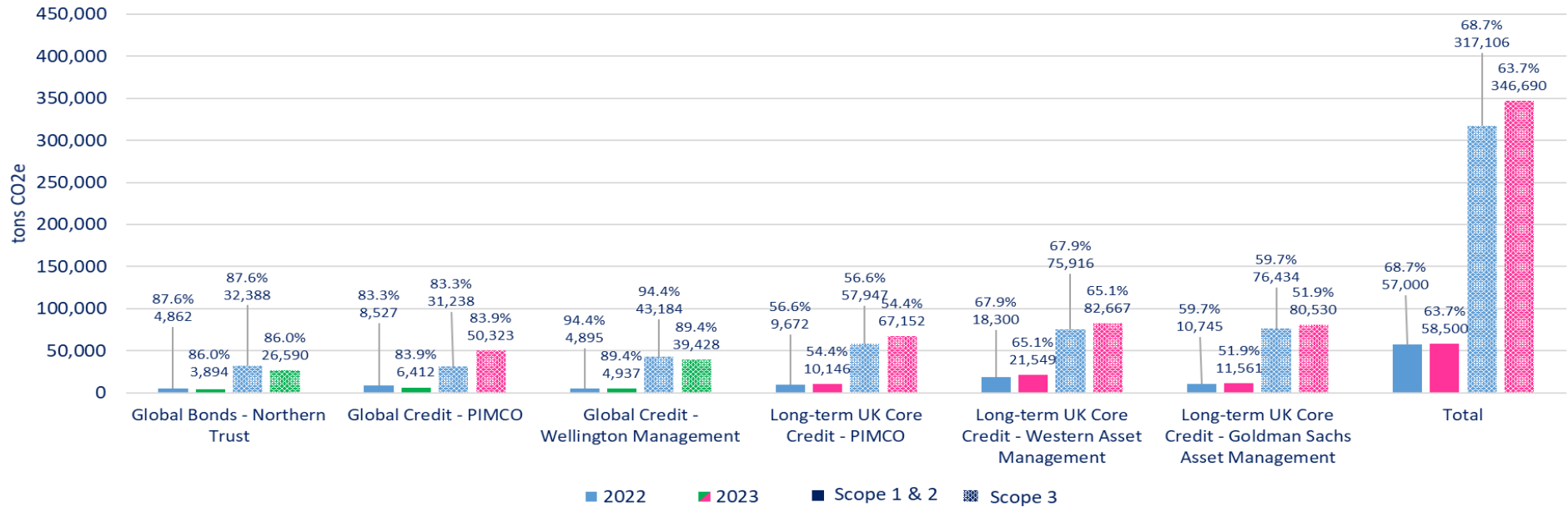
The Global Bond portfolio managed by Northern Trust invests in a number of underlying mandates and a breakdown of the carbon exposures of the underlying mandates is not available. The Trustee aims to work with Northern Trust to help with the engagement with the underlying investment managers.

In relation to scope 3 emissions, an increase was observed across all of the Plan's credit portfolios, with the exception of the Northern Trust Global Bonds and Wellington Global Credit mandate.

### Carbon Emissions – Matching portfolio

**Figure 7: Comparison of Climate-Related Absolute Emissions Metrics for the DB Section's credit portfolios**

Percentages shown in the chart are coverage of reportable assets



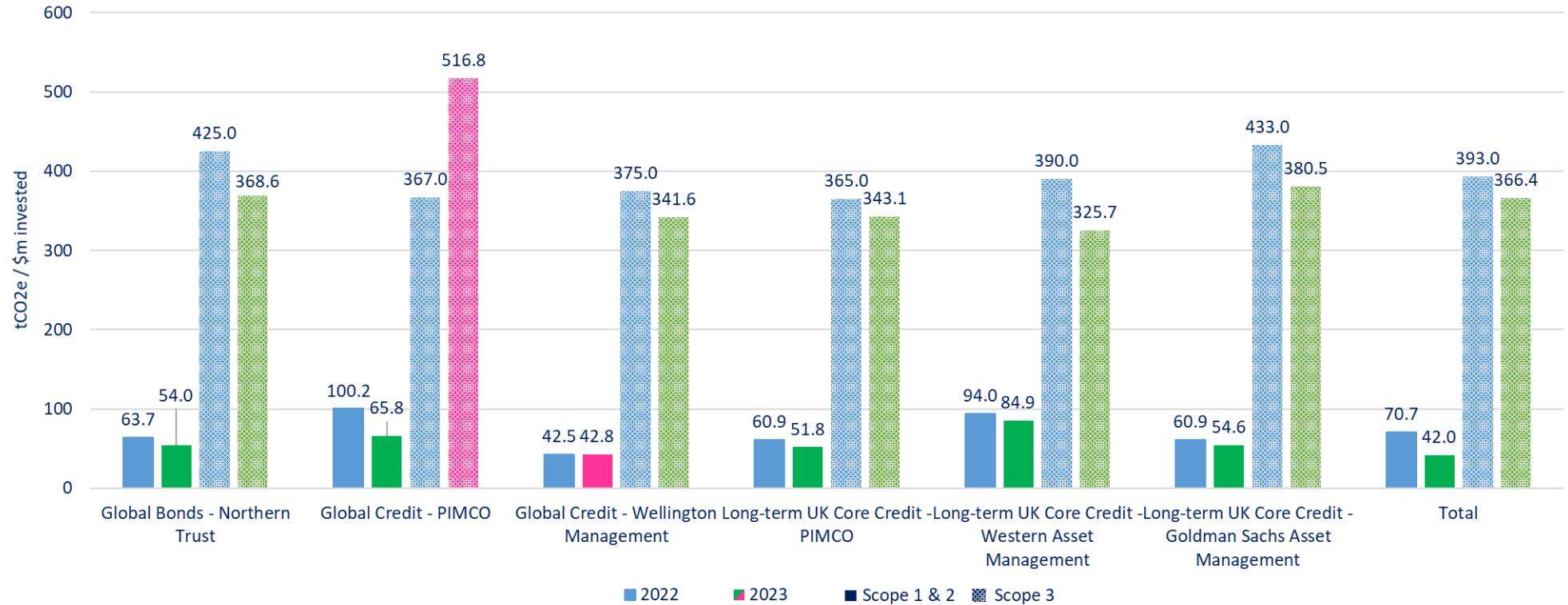
	Global Bonds - Northern Trust		Global Credit - PIMCO		Global Credit - Wellington Management		Long-term UK Core Credit - PIMCO		Long-term UK Core Credit - Western Asset Management		Long-term UK Core Credit - Goldman Sachs Asset Management		Total	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Value (£m)	214.6	201.6	115.8	110.5	113.6	106.8	302.8	334.3	293.1	385.7	285.4	376.6	1,325.3	1,515.5
% of total Plan assets	5.8	5.6	3.1	3.1	3.1	3.0	8.2	9.3	7.9	10.7	7.7	10.4	35.8	42.0

Source: Northern Trust, 31 December 2021, 31 December 2022 and 31 December 2023. Coverage shown as a proportion of reportable assets.

The coverage highlights the weight of companies by market value that report reliable emissions in the portfolio from those asset classes which are covered, i.e. corporate bonds. The coverage relates to scope 1, 2 and 3 emissions.

The proportion of fund that is reportable at total portfolio level is a weighted average of the mandates shown in the table.

**Figure 8: Carbon Footprint of the DB Section's credit portfolios**



Source: Northern Trust, 31 December 2021, 31 December 2022 and 31 December 2023. Coverage shown as a proportion of reportable assets.

Figure 8 sets out the Carbon Footprint for the Global Bonds, Global Credit and Long-term UK Core Credit mandates as at 31 December 2022 and 31 December 2023.

Northern Trust, in its role as Plan Custodian, has noted that carbon footprint takes into consideration not only absolute emissions but also the overall value of the portfolio, which therefore normalises the carbon emissions exposure of the portfolio by the investment for every \$1m invested. The value of the covered assets of the Plan has increased over the year to 31 December 2023. Suggesting that despite the increase in the total carbon emissions, the total carbon emissions per million \$ invested has decreased. The carbon footprint (scope 1 & 2 emissions) has decreased across all managers with the exception of Wellington Global Credit, whose carbon footprint has remained fairly static.

Scope 3 carbon footprint increased materially across the PIMCO Global Credit portfolio over the year. However, at a total credit portfolio level this increase was offset by the reductions from the other credit mandates. The Trustee expects to observe changes in the short term when reporting on Scope 3 emissions due to increased reporting and coverage of assets available.

**Figure 9: Weighted Average Carbon Intensity (WACI) of the DB Section's credit portfolios**

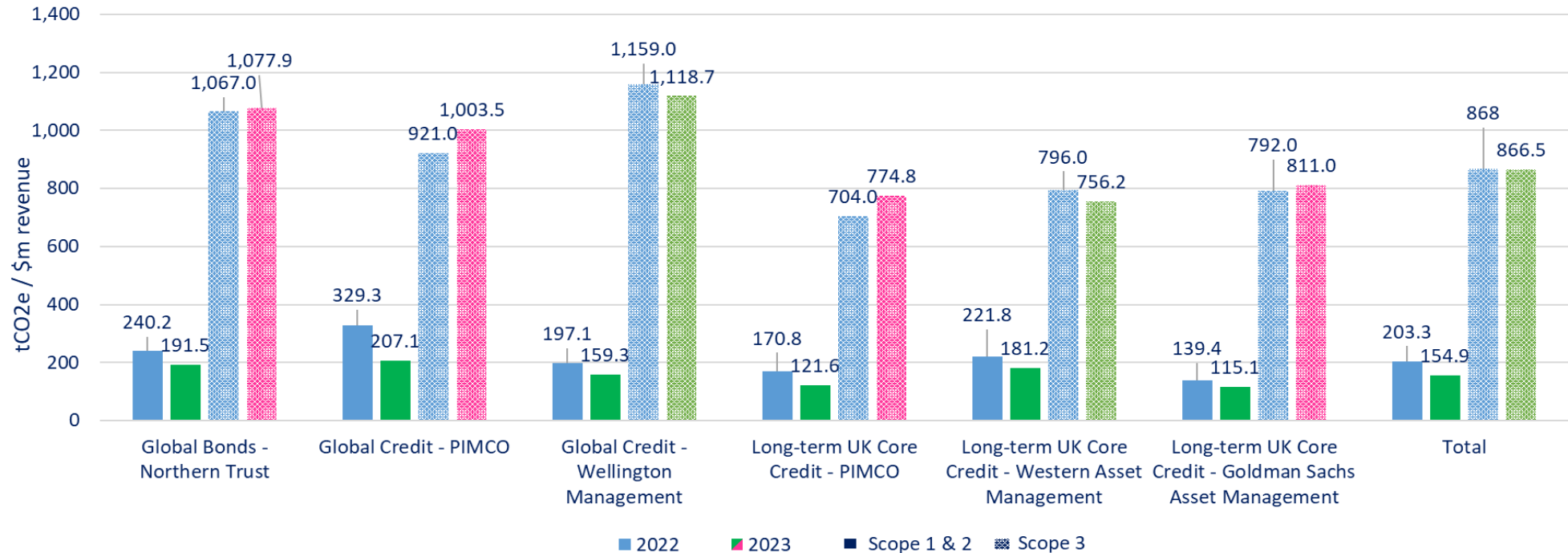


Figure 9 sets out the WACI for the Global Bonds, Global Credit and Long-term UK Core Credit mandates as at 31 December 2022 and 31 December 2023

The decrease in WACI for scope 1 & 2 on a weighted average basis was 23.8%. The reduction in WACI for the Global Bonds, Global Credit and Long-term UK Core Credit mandates at an aggregate level can be largely attributed to Electricite de France SA no longer being covered. Electricite de France SA, who were one of the top contributors to the weighted average carbon intensity for December 2022, is no longer listed and hence cannot be covered. However, there are also external underlying factors which could contribute to the decrease in WACI – in particular, over 2023 falls in WACI can be observed which is driven by the denominator effect for the calculation of WACI (i.e. higher inflation led to higher revenues, leading to lower intensity emissions, all else being equal).

At a total portfolio level, the WACI remained broadly unchanged for scope 3 emissions.



The remaining proportion of the matching assets held in the DB Section of the Plan mainly comprises of the Plan's Liability Driven investment (LDI) Portfolio managed by BlackRock, which is predominantly invested in UK Government bonds and liquidity assets. The Trustee will continue to engage with BlackRock on carbon emission information in respect of these assets, and the table below summarises the information available.

Figure 10 below provides carbon emissions metrics data in respect of the Plan's LDI portfolio, managed by BlackRock, for which data is reportable as at 31 December 2023. This represents around 54% of total Plan assets. There has been a change in methodology in the approach to disclosing carbon emissions for sovereigns in line with Partnership for Carbon Accounting Financials (PCAF) methodology which considers sovereign emissions in terms of production emissions<sup>6</sup> and consumption emissions<sup>7</sup>, which means that metrics for this reporting period are not directly comparable to prior year. The metrics for the prior year are included in the appendix for reference.

**Figure 10: Climate-Related Metrics in respect of the DB Section's LDI portfolio**

Manager	Value	Proportion of	Proportion of	Coverage of	Total Carbon Emissions		Sovereign Carbon Intensity	
	(£m)	Total Plan Assets	fund that is reportable	reportable assets	(tons CO2e)		(tons CO2e / \$M PPP adjusted GDP)	
		(%)	(%)	(%)	Production Emissions*	Consumption Emissions**	Production Emissions*	Consumption Emissions**
<b>BlackRock</b>	1,917.8	54.5	81.6	100.0	246,300	342,900	120.6	167.3

Source: BlackRock and MSCI, 31 December 2023.

\*Sovereign emissions data shown are considered with reference to the PCAF definition of Scope 1 sovereign emissions, aligning with the UNFCCC definition of domestic territorial emissions, including emissions from exported goods and services. Emissions data exclude land use, land use change and forestry. Data sourced from MSCI.

\*\*Sovereign emissions data shown with reference to the PCAF definition of Scope 1, 2, and 3 sovereign emissions, aligning with the UNFCCC definition of domestic territorial emissions, including emissions from exported goods and services. Emissions data exclude land use, land use change and forestry. Data sourced from MSCI.

The table above displays the emissions from the total exposure to UK gilts (£1,608M). Please note that the analysis does not include the exposure to cash, derivatives and Network Rail Bonds.

### Carbon Emissions – Growth portfolio

The DB Section invests in growth assets equating to approximately 2% of total invested assets (excluding the buy-in policy) as at 31 December 2023. The growth portfolio includes investments in private equity and alternatives (in respect of re-insurance arrangements). Due to the complexity of these assets, there is no carbon emissions data available.

The CBRE Property portfolio was fully disinvested over the year, meaning that there are no reportable assets held as party of the DB Section's growth portfolio.

### Carbon Emissions – Buy-In

As mentioned earlier in this report, the DB Section of the Plan also holds a buy-in policy managed by Rothesay Life which covers approximately 50% of the DB Section's pensioner liabilities. Whilst the funding and investment risks to the Trustee for this portion of the DB Section has been transferred to and managed by Rothesay Life (and therefore the emissions of the assets to back these liabilities should be managed by the insurer), the Trustee is required under the DWP's guidance to disclose a proportionate share of the emissions of the insurer's total assets backing their UK pension bulk annuity book, or if this not available, the emissions in relation to all the insurer's assets.

Figure 11 below sets out the absolute emissions and carbon intensity metrics in respect of the Plan's buy-in policy, based on Rothesay's total investment portfolio. Rothesay advised that the Trustee could use a comparison of its estimated liability value to their total insurance contract liabilities (which were £38,112m as at 31 December 2022, from their 2022 annual report and accounts) in order to estimate the fraction of Rothesay's financed emissions that the Trustee may wish to attribute to the Plan.

<sup>6</sup> Production emissions are emissions attributable to emissions produced domestically and include domestic consumption and exports, as defined by guidance produced by PCAF.

<sup>7</sup> Consumption emissions reflect the demand side of sovereign emissions and account for consumption patterns and trade effects.

**Figure 11: Climate-Related Metrics in respect of the buy-in policy under the DB Section**

Manager	Underlying portfolio	Data coverage (%)		Value (£bn)		WACI (Scope 1 & 2) (tons CO <sub>2</sub> e / \$M revenue)*		Change since 2021	Data coverage (%)		Financed Emissions (tons CO <sub>2</sub> e)		Change since 2021
		2021	2022	2021	2022	2021	2022		2021	2022	2021	2022	
Rothsay Life Plc	Supranationals / Sovereign / Public	84%	93%	21.0	14.6	196	196	0.0%	67%	80%	87,789	118,873	35.4%
	Corporate and Infrastructure	95%	96%	15.7	16.6	172	163	-5.2%	74%	88%	84,354	61,176	-27.5%
	Property	92%	90%	22.3	18.6	215	193	-10.2%	78%	78%	52,117	24,586	-52.8%
<b>Total Portfolio</b>		<b>86%</b>	<b>90%</b>	<b>59.0</b>	<b>49.8</b>	<b>196.8</b>	<b>183.9</b>	<b>-6.6%</b>	<b>73%</b>	<b>82%</b>	<b>73,392</b>	<b>64,456</b>	<b>-12.2%</b>

Source: Rothsay Life's, 31 December 2020 and Environmental, Social and Governance Report 2021, and Climate Report 31 December 2022 (2023 report was unavailable at time of producing this report)

\*For sovereigns, the WACI is defined as annual tons CO<sub>2</sub>e / \$M GDP. The emissions refer to those produced within the country and do not include those generated in producing imported items.

## DB Section portfolio alignment metric – SBTi

The Science Based Target initiative (SBTi) has established an industry standard methodology for companies setting long-term carbon emission reduction targets that are in line with climate science. Companies submit their net zero plans to SBTi, who then act as an independent assessor of the validity of the plans.

The Trustee has chosen this metric because it provides a measure of portfolio alignment with the goals of the Paris Agreement. Underlying funds with a low percentage of companies with SBTi-approved targets could indicate investment in companies or issuers that are not setting targets to align their businesses or activities with net zero, which is a forward-looking indication of climate transition risk.

The Trustee recognises that the SBTi does not currently cover every sector, however is cognisant that the initiative's coverage across additional companies and sectors is expanding rapidly.

Figure 12 provides the proportion of each portfolio where the underlying investee companies have a SBTi-approved target (where available). CBRE have noted that it is not currently possible to have net zero targets validated and verified by SBTi for buildings. CBRE are therefore unable to provide this metric as described at this time. SBTi's guidelines for buildings have yet to be released, although SBTi aligned pathways were published earlier in May 2023. It is CBRE's intention to use the SBTi aligned pathways in future analysis, although CBRE have noted that it will take some time to implement across all portfolios and assets. SBTi is based on company targets and is therefore not relevant for the Plan's LDI portfolio and the buy-in policy.

The Trustee notes that there has been an improvement in the proportion of companies that have an SBTi-approved target in all of the Plan's mandates and this is a positive observation.

**Figure 12: Plan SBTi figures**

Asset Class	Manager / Mandate	2022: SBTi(%)	2023: SBTi(%)
<b>Global Bonds</b>	Northern Trust	19.3	24.5
<b>Global Credit</b>	PIMCO	22.0	27.6
	Wellington Management	26.2	31.0
<b>Long-term UK Core Credit</b>	PIMCO	48.5	58.8
	Western Asset Management	53.1	59.4
	Goldman Sachs Asset Management	41.5	55.2
<b>LDI</b>	BlackRock	-	-
<b>Buy-in Policy</b>	Rothsay	-	-

Source: Northern Trust, BlackRock and Rothsay

The Trustee has also reported on Implied Temperature Rise (another portfolio alignment metric), where available. This data is provided in the appendix. There has been an improvement in the availability of reporting in relation to ITR which covers all of the Plan's mandates, with the exception of Northern Trust Global Bond mandate.

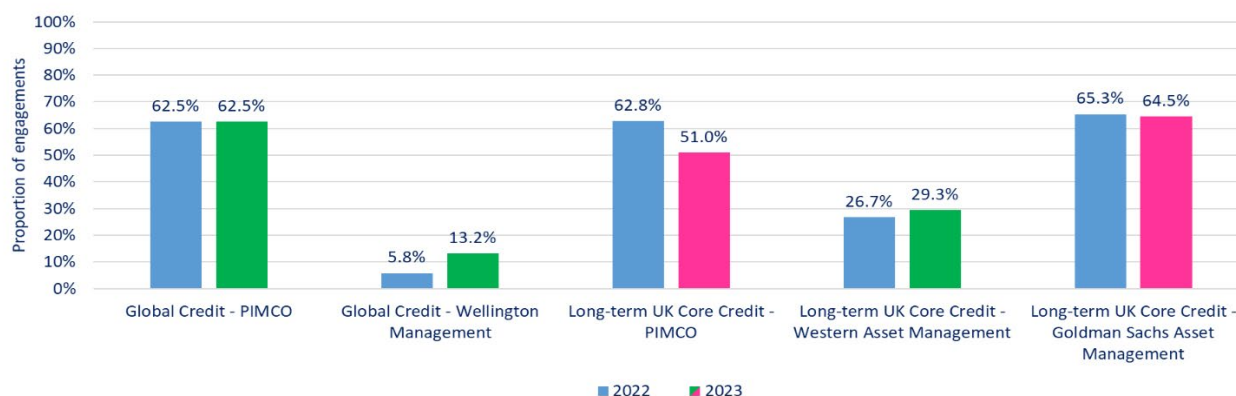
## DB Section non-emissions based metric

Figure 13 sets out the share of the portfolio held at year end for which engagement or voting on climate-related risk and opportunities has been a substantive topic. At the fund level, the proportion of engagements that are climate-related varies between funds where data is available. The results below enhance the Trustee's recognition of the importance of encouraging investment managers to engage with companies on climate change. Figure 14 includes the data for the investment managers that were able to provide this level of detail.

The Trustee expects levels of engagement to increase over time and the investment managers will be monitored by this metric. The Trustee will be engaging with managers regarding their climate-related engagements with companies and has also included this within the criteria of 'significant votes' which will be reported on within the [SIP Implementation Statement](#).

The blue bars in Figure 13 show climate-related engagements for the credit mandates as at 31 December 2022. The green and pink bars show climate-related engagements for the credit mandates as at 31 December 2023. The green bars show that there has been an improvement in the number of climate-related engagements over the year and pink bars show a deterioration in engagements. Climate-related engagements are defined as the % share of portfolio held at year end for which engagement or voting on climate related risk and opportunities has been a substantive topic.

**Figure 13: Climate-related engagements of mandates within DB Section**



Source: Investment managers, 31 December 2022 and 31 December 2023.

The Trustee notes that the share of climate-related engagements is relatively low for some investments managers, notably Western and Wellington in the DB Section, although there has been an increase in the proportion of climate-related engagements over the reporting year. It can be observed that relatively good levels of engagement for PIMCO and GSAM have been maintained. The proportion of climate-related engagements has also increased for Wellington and Western over the year.

The Trustee has therefore sought to obtain commentary from the investment managers to explain why the share of climate-related engagements was low and how they would seek to address this in the future. The managers' replies are summarised below.

Western have noted that they do not measure climate engagement relative to any formal targets and that the focus should be on the quality of the engagement rather than the quantity of engagements. Western have noted that they are continually monitoring and determining where and who best to engage with and it is very much part of the investment process.

Wellington advised that in Global Credit portfolios across the board, they were prioritising engagement with issuers whose WACI contributed the most to the overall portfolio WACI. As such, it was anticipated that they would have more climate-related engagements in 2023 than they had in 2022, which was borne out in practice, and that this number would continue to improve.

Engagement data is not available in respect of the Global Bonds fund due to the fund-of-funds nature. The Trustee has discussed with Northern Trust and set out its aims regarding managers' engagement on climate change.

## Engagement Examples

Over the year to 31 December 2023 the investment managers in which the Plan invests made a number of climate-related engagements, examples of which are detailed below:

### PIMCO

PIMCO provided a number of engagement examples over the year across different aspects of ESG. One of these engagements concerned a Germany Development bank (Kreditanstalt fuer Wiederaufbau “KfW”) where PIMCO engaged on EU taxonomy implementation and potential revisions to their green bond framework. KfW is seeing robust demand for green bonds and more financing, but the supply of bankable projects is too low. They are also contemplating releasing a new green bond framework with additional categories and project eligibility with categories on biodiversity and corporate climate transition financing. PIMCO suggested to KfW that they screen who is eligible based on climate commitments and an issuer’s transition plan.

### Wellington

Wellington provided the example of Suez SACA which provides access to essential environmental services such as offering water, sanitation, waste collection, and recovery activities and services to customers worldwide. In the fourth quarter, Wellington engaged with the issuer on environmental issues. Specifically, they sought to learn more about their carbon reduction strategy. From their engagement, Wellington learned that Suez has meagre carbon reduction targets and does not appear to properly addressing waste. While they sympathize with the challenges around waste, there are solutions such as carbon capture, which can be explored. However, Suez has not made progress in this area. Additionally, they were unconvinced with the issuer’s communication of its carbon reduction strategy. Consequently, Wellington eliminated the portfolio’s exposure to the issuer following the engagement as they did not find the ESG risk/reward characteristics to be compelling following this engagement. Wellington plan to continue to engage with the issuer to learn about their plans to address environmental risks.

### Western Asset Management

Western conducted a number of engagements over the year to 31 December 2023. Following a Wall Street Journal investigation into lead sheathed telecoms wires/cables in the US and potential environmental implications, US telco spreads began to widen meaningfully as investors began to assess the potential credit implications. Western engaged with 11 incumbent fixed line telecoms operators to gauge potential legacy environmental issues in Europe. Their preliminary assessment is based on the responses that they received from IR departments. At this time, they do not see material risk to spreads among European issuers and would highlight proliferation of cable coax without lead sheathing, copper decommissioning initiatives in countries with advanced fiber penetration, extensive ducting as well as select adoption of ISO 14001 certification.

### Goldman Sachs Asset Management

GSAM conducted 236 engagements over the year to 31 December 2023. In September 2023, GSAM engaged with Glencore Plc as they had identified the company for engagement under their Climate – Execute Strategy engagement initiative where they seek to engage with companies in high-impact industries on the implementation of a robust and quantifiable climate transition strategy. GSAM had previously engaged with the company in 2022 and 2023 to discuss its climate transition plan and to encourage greater disclosure around its climate strategy and capital allocation. At the 2023 annual meeting, GSAM voted against management’s proposal to approve the company’s climate transition plan, as they believed it did not provide sufficient disclosure on how its coal transition plan aligned with its stated emissions goals. During this engagement, the company shared updates around the future of its coal business. The company is currently exploring a merger with a diversified natural resources company, and if approved, the company intends to spin off its coal business post-merger. In the event the deal is not approved, the company will proceed with a managed decline of its coal business, and they discussed how the company intends to achieve its net zero goal while still producing unabated coal post 2040.

### CBRE

During 2023, CBRE engaged with 20 underlying funds and their managers, all relating to ESG. Given the nature of CBRE’s portfolios, all engagements related to the request for underlying managers to complete the CBRE IM Indirect annual ESG due diligence questionnaire.



## DC Section emissions-based metric

The majority of the Plan's DC investments are managed by LGIM and made available via a bundled arrangement with LGAS (there is one Freestyle fund managed by HSBC). The Trustee relies on LGIM to produce the required emissions based metrics and engagement data. This enables the Trustee to consider the data in a consistent manner across the DC mandates.

The Trustee has to disclose metrics data for all popular DC arrangements which are funds or Lifecycle arrangements constituting either more than 10% of the total DC assets or are valued at over £100m. The Trustee has obtained all relevant data and is therefore able to disclose the carbon metrics for all popular DC arrangements as at 31 December 2023 and also as at 31 December 2022 for comparative purposes. Please note that the Lifecycle to Annuity strategy was identified as a popular arrangement last year and that, since the 2022 report, this strategy had been mapped to the Lifecycle Balanced 2020 strategy as part of changes implemented from the 2021 investment strategy review.

The popular arrangements are shown in Figure 14. At 31 December 2023, approximately 81% of all DC assets were held in Lifecycle strategies or funds deemed as popular arrangements (compared with approximately 80%, as at 31 December 2022). Please note that most metrics shown in this report are based on the proportion of assets for which climate metrics are available (the "coverage"). Coverage figures may vary depending on the specific climate metric shown. Relevant coverage figures for all funds are shown in the appendix. For the avoidance of doubt, all aggregated metrics for the popular arrangements are adjusted for eligibility.

Over the course of 2023, LGIM's reporting capabilities were enhanced which will impact the changes seen in some of the numbers. The main reasons for this are set out in the Appendix.

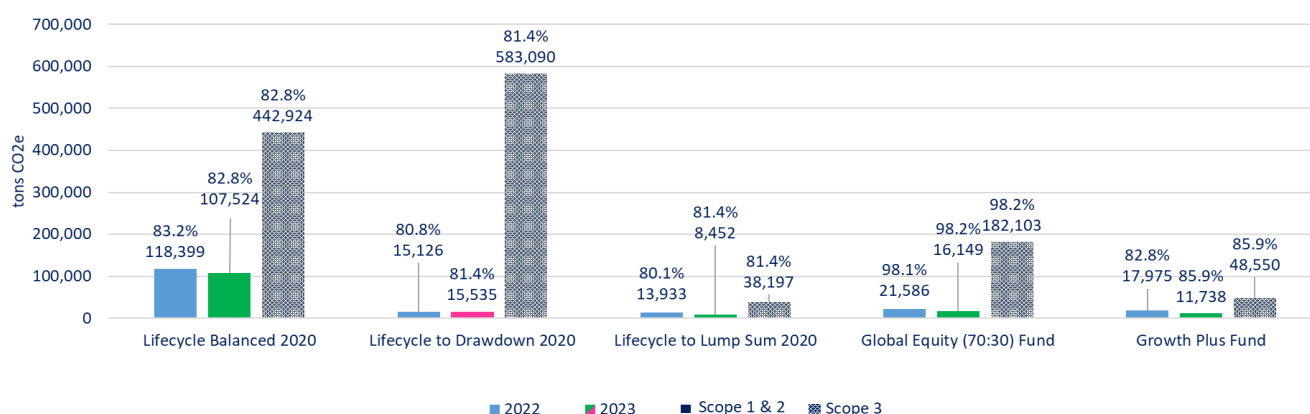
**Figure 14: Popular Arrangements in the DC Section as at 31 December 2023**

Popular Arrangement	Value (£m)	Proportion of Total DC Section Assets (%)
Lifecycle Balanced 2020 Strategy (Default Investment Strategy)	1,462.8	55.2
Lifecycle to Lump Sum 2020 Strategy	161.3	6.1
Lifecycle to Drawdown 2020 Strategy	204.1	7.7
IBM Pension Plan Global Equity 70:30	185.6	7.0
IBM Pension Plan Growth Plus Fund	136.2	5.1
<b>Total</b>	<b>2,150.1</b>	<b>81.1</b>

The blue bars in Figure 15 show the total carbon emissions for the popular arrangements as at 31 December 2022. The green and pink bars show the total carbon emissions for the popular arrangements as at 31 December 2023, with a green bar indicating a reduction and a pink bar indicating an increase over the year. Solid bars represent scope 1 & 2 emissions. LGIM were unable to provide scope 3 emissions data in 2022 and hence 2023 is the first year that data has been reported for scope 3 and hence is shown by the shaded grey bars.

**Figure 15: Comparison of absolute carbon emissions for the popular arrangements within the DC Section**

Percentages shown in the chart are coverage of reportable assets



Source of underlying data: LGIM, 31 December 2022 and 31 December 2023.

LGIM have confirmed for metrics to be reportable for each fund there are two criteria: (a) at least 50% of the underlying holdings are eligible for reporting and (b) coverage of those eligible assets is at least 60%.

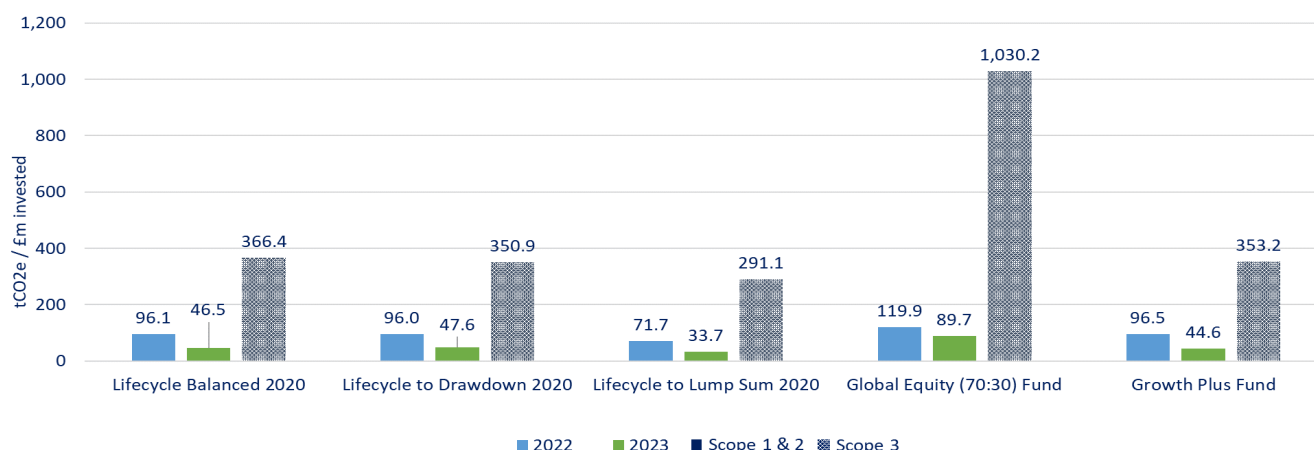
Mercer has calculated aggregate metrics based on the underlying fund data provided by LGIM. Total carbon emissions have been calculated using the carbon footprint of the underlying funds multiplied by their respective asset value within each popular arrangement. Total carbon emissions include both corporate and sovereign assets, with a green bar indicating a reduction and a pink bar indicating an increase over the year.

Over the year the scope 1 & 2 carbon emissions for the DC Section's popular arrangements reduced by 15% from 187,019 tons CO<sub>2</sub> emissions in 2022 to 159,398 tons CO<sub>2</sub> in 2023. There are a number of reasons for the reduction in total carbon emissions. Total carbon emissions depend on the size of the investment, the proportion of assets carbon metrics can be provided for, and the change in carbon emissions of the underlying assets. The size of the Plan's investments increased in the Lifecycle strategies which is likely to have offset some of the reduction as a result of changes made to move to more sustainable investments as part of the 2021 investment strategy review, and decreased for the Global Equity (70:30) Fund and Global Plus Fund which is likely to have contributed to the reduction in carbon emissions exposure. The reduction in the scope 1 & 2 carbon emissions for the Lifecycle strategies above were driven by the reduction in scope 1 & 2 carbon emissions for Growth and Growth Plus Fund.

The underlying holdings within the popular arrangements that were eligible for carbon emissions reporting were broadly unchanged (97% in 2022 to 96% in 2023). The eligibility for carbon emissions reporting are outside of the Trustee's control. As total carbon emissions are strongly impacted by these factors, the metric is not an indicator of the Trustee's efforts to decrease carbon intensity across the Plan. However, total carbon emissions illustrate the Plan's contribution to global carbon emissions on an absolute basis.

Figure 16 shows corporate carbon footprint for the popular arrangements as at 31 December 2022 and 31 December 2023. Solid bars represent scope 1 & 2 emissions, and shaded bars show scope 3 emissions. Carbon footprint is measured as tons CO<sub>2</sub> emissions per £m invested.

**Figure 16: Comparison of corporate carbon footprint metrics for the popular arrangements within the DC Section**



Source: LGIM, 31 December 2021, 31 December 2022 and 31 December 2023.

LGIM have confirmed for metrics to be reportable for each fund there are two criteria: (a) at least 50% of the underlying holdings are eligible for reporting and (b) coverage of those eligible assets is at least 60%.

Mercer has calculated aggregate metrics based on the underlying fund data provided by LGIM. Aggregated carbon footprint figures for the Lifecycle arrangements and the popular arrangements total are weighted averages of individual fund carbon footprint figures and account for relative investment size as well as coverage.

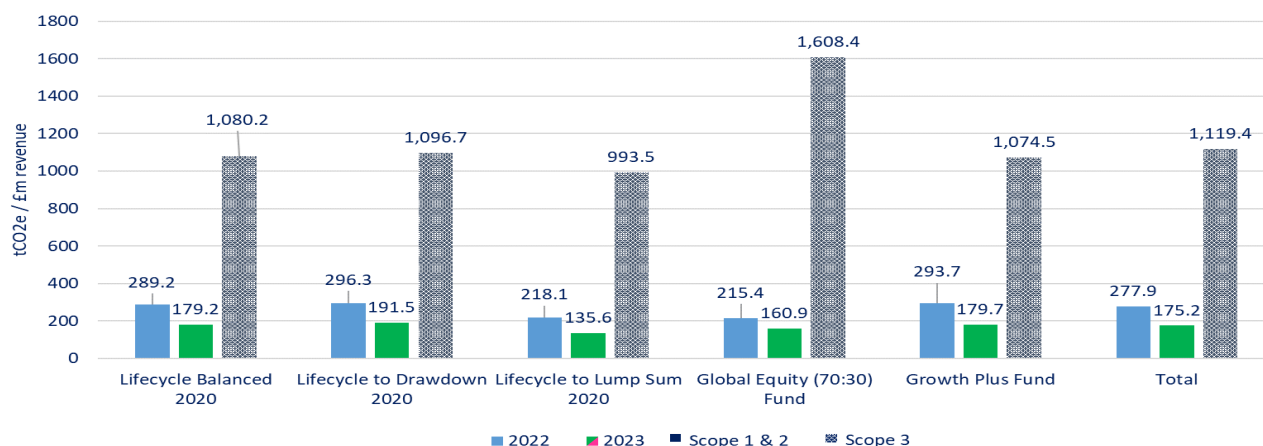
The total corporate carbon footprint for the popular arrangements has decreased by 45% between 31 December 2022 and 31 December 2023. The carbon footprint metric decreased for all popular arrangements but was least pronounced for the Global Equity (70:30) Fund which decreased by around 8%. LGIM explained that the component funds of the strategies have moved in different directions, but broadly speaking the reduction is due to drops across the board in all components of the metric, apart from emissions which have increased slightly. Components that have contributed to the fall include the take-up of new positions, divestment from previous positions and coverage changes.

WACI is measured as tons CO<sub>2</sub> emissions / £m company revenue.

WACI (scope 1 & 2) has reduced by 37% between 31 December 2022 and 31 December 2023 across the popular arrangements. The Lifecycle Balanced 2020 saw the greatest decrease in WACI over the year amounting to 38%. This was driven by a decrease in WACI for all underlying funds over the year and is highly exposed to the Growth and Growth Plus funds which experienced a reduction in WACI - the WACI of the Growth Fund decreased from 352.6 tons CO<sub>2</sub> emissions / £m revenue as at 31 December 2022 to 244.9 tons CO<sub>2</sub> emissions / £m revenue as at 31 December 2023 (around 31%) and the WACI of the Growth Plus Fund decreased by around 39%. The reductions in WACI for the Growth and Growth Plus funds were the main contributors to the reduction in WACI seen across all the Lifecycle arrangements.

**Figure 17** shows corporate WACI for the popular arrangements as at 31 December 2022 and 31 December 2023. Solid bars represent scope 1 & 2 emissions, and shaded bars show scope 3 emissions.

**Figure 17: Comparison of corporate carbon intensity metrics (Weighted Average Carbon Intensity) for the popular arrangements within the DC Section**



Source: LGIM, 31 December 2022 and 31 December 2023.

LGIM have confirmed for metrics to be reportable for each fund there are two criteria: (a) at least 50% of the underlying holdings are eligible for reporting and (b) coverage of those eligible assets is at least 60%.

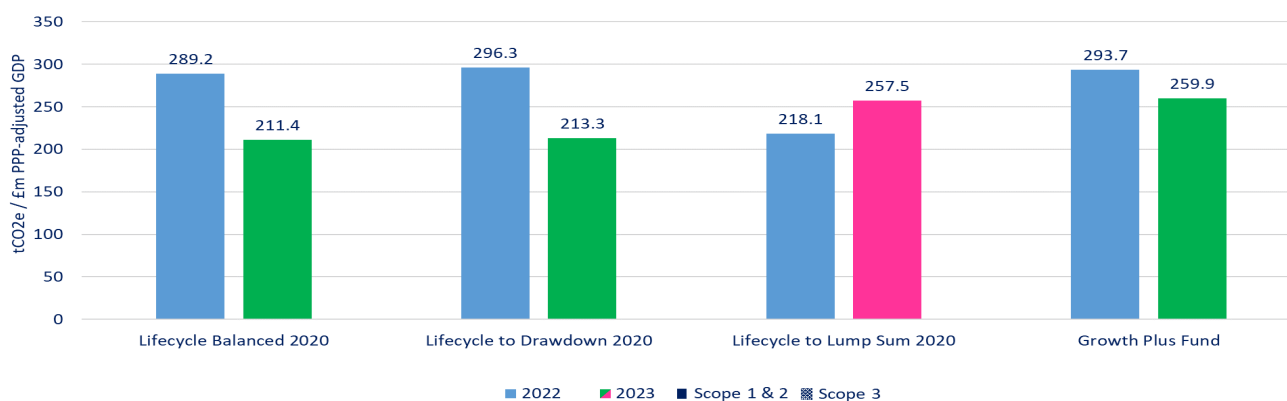
Mercer has calculated aggregate metrics based on the underlying fund data provided by LGIM. Aggregated WACI figures for the Lifecycle arrangements and the popular arrangements total are weighted averages of individual fund WACIs and account for relative investment size as well as eligibility.

WACI is a ratio that measures carbon intensity as carbon emissions divided by company revenue. It is therefore impacted by economic factors such as inflation. In particular, over 2023, falls in WACI can be observed which is driven by the denominator effect for the calculation of WACI (i.e. higher inflation led to higher revenues, leading to lower intensity emissions, all else being equal).

LGIM have explained that the drop in WACI can also be attributed to the fact that the weights across all portfolios have changed to invest less heavily in high carbon intensity companies, with new positions taken in firms with lower carbon intensity scores. LGIM have also confirmed that there have been changes in the carbon scores given to their invested securities – though this factor has resulted in a more modest impact on overall WACI as compared to the changes in portfolio weightings.

Due to the different calculation method for sovereign assets, the sovereign carbon intensity metrics are shown separately in Figure 18 below. Sovereign carbon intensity is measured in tons of CO2 emissions divided by £m purchasing power parity-adjusted Gross Domestic Product (GDP). The different denominator, compared to WACI, means that this metric cannot be aggregated with WACI and is not directly comparable. Sovereign carbon intensity is only measured for funds with underlying exposures to securities issued by sovereign entities. The Global Equity (70:30) Fund invests in only corporate holdings and is therefore not included.

**Figure 18: Sovereign carbon intensity metrics for the popular arrangements within the DC Section**



Source: LGIM, 31 December 2022 and 31 December 2023.

LGIM have confirmed for metrics to be reportable for each fund there are two criteria: (a) at least 50% of the underlying holdings are eligible for reporting and (b) coverage of those eligible assets is at least 60%.

Mercer has calculated aggregate metrics based on the underlying fund data provided by LGIM. Aggregated sovereign carbon intensity figures for the Lifecycle arrangements and the popular arrangements total are weighted averages of individual fund sovereign carbon intensity figures and account for relative investment size as well as eligibility.

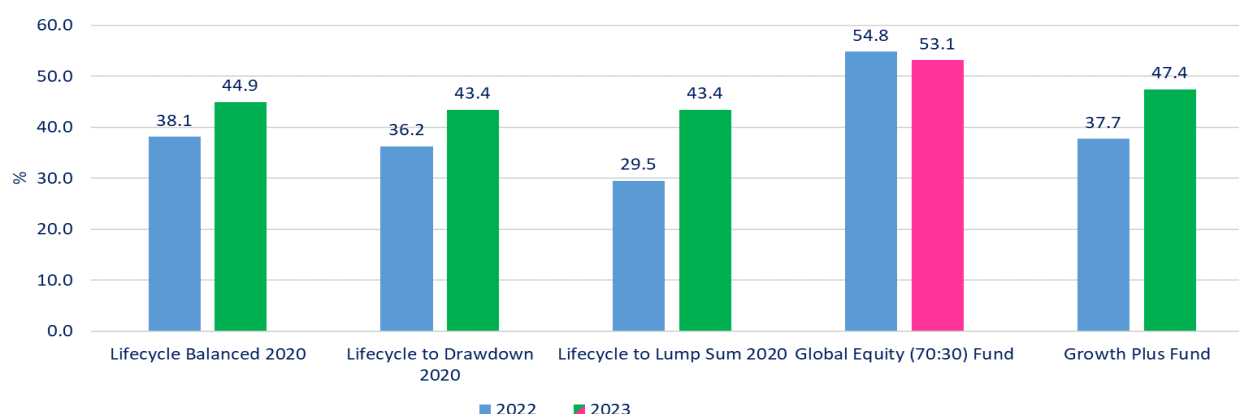
LGIM have explained that the changes in sovereign carbon intensity metrics is largely due to changes in positions in the constituent funds. In particular, the key drivers relate to new positions, asset allocation changes and reduction in existing sovereign bond emissions in some of the constituent funds. In addition, member movements may have also contributed to the changes in sovereign carbon emissions.

LGIM have confirmed that they are unable to provide Scope 3 sovereign carbon intensity metrics due to lack of available and good quality data.

## DC Section portfolio alignment - SBTi

The Trustee is able to report on two portfolio alignment metrics as LGIM have published alignment with the SBTi and Implied Temperature Rise for the current reporting period. The data in Figure 19 below relates to the SBTi metric as at 31 December 2022 and 31 December 2023 and the Implied Temperature Rise data is provided in the appendix.

**Figure 19: Comparison of SBTi alignment for the popular arrangements within the DC Section**



Source: LGIM, 31 December 2022 and 31 December 2023.

LGIM have confirmed for metrics to be reportable for each fund there are two criteria: (a) at least 50% of the underlying holdings are eligible for reporting and (b) coverage of those eligible assets is at least 60%.

Mercer has calculated aggregate metrics based on the underlying fund data provided by LGIM. Aggregated SBTi figures for the Lifecycle arrangements and the popular arrangements total are weighted averages of individual fund SBTi figures and account for relative investment size as well as eligibility.

As at 31 December 2023, alignment was highest for the Global Equity (70:30) Fund with 53% and lowest for the Lifecycle to Lump Sum 2020 and Drawdown strategies with 43%. Companies set SBTi targets, therefore the metric applies to equity and credit mandates only. The Trustee notes that there has been an improvement in the proportion of companies that have an SBTi-approved target in all of the Plan's popular arrangements, except for the Global Equity (70:30) Fund which is likely to be due to the changes in the underlying holdings over the reporting period. The increase in SBTi-approved targets for the majority of the Plan's popular arrangements is a positive observation.

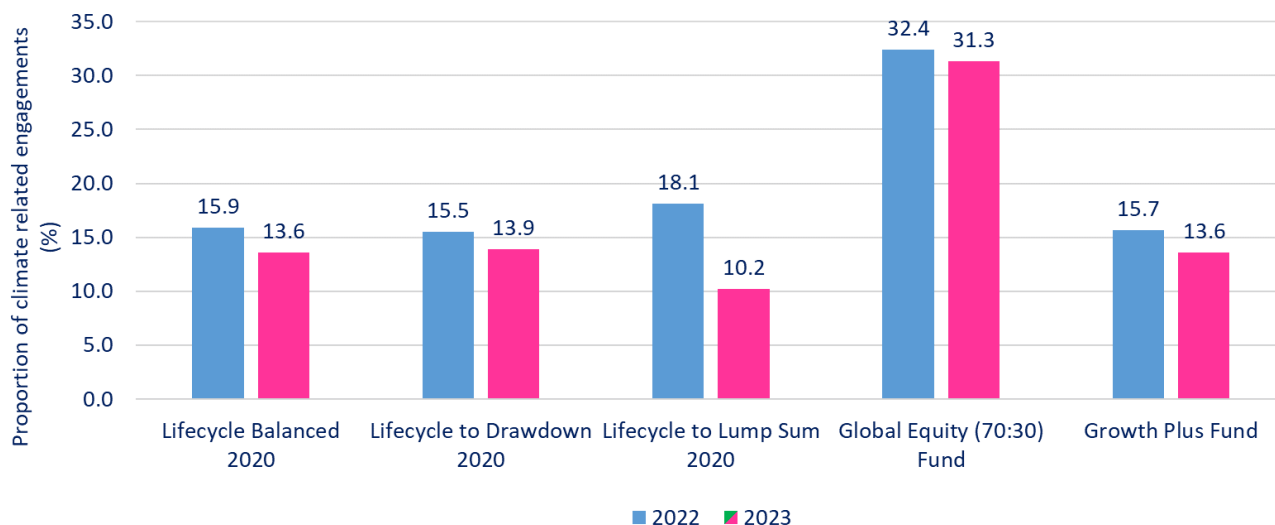
## DC Section non-emissions based metric

For the additional non-emissions based metric, the Trustee has chosen the share of the portfolio held at year end for which engagement or voting on climate related risk and opportunities has been a substantive topic.

The Trustee expects levels of engagement to increase over time and the investment managers will be monitored via this metric. The Trustee will be engaging with managers regarding their climate-related engagements with companies and have also included this within the criteria of 'significant votes' which will be reported on within the [SIP Implementation Statement](#).

Figure 20 shows climate-related engagements for the popular arrangements as at 31 December 2022 and 2023. Climate-related engagements are defined as the percentage share of portfolio held at year end for which engagement or voting on climate related risk and opportunities has been a substantive topic.



**Figure 20: Climate-related engagements of mandates within Plan**

Source: LGIM, 31 December 2022 and 31 December 2023.

LGIM have confirmed for metrics to be reportable for each fund there are two criteria: (a) at least 50% of the underlying holdings are eligible for reporting and (b) coverage of those eligible assets is at least 60%.

Mercer has calculated aggregate metrics based on the underlying fund data provided by LGIM. Aggregated climate engagement metrics for the Lifecycle arrangements and the popular arrangements total are weighted averages of individual fund climate engagement metrics and account for relative investment size as well as coverage.

There has been a modest reduction in climate related engagements over the year as LGIM engagement data no longer includes engagements on liquidity funds. Liquidity funds are held by most funds to provide adequate liquidity in the form of cash short, dated bonds certificates of deposits – LGIM have now deemed this as not appropriate to be included on the engagement breakdown. The Trustee continues to engage with LGIM to drive greater engagement over time.

## Targets

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

The Trustee has set the following target for both the **DB and DC Sections**. This target will be monitored and measured against 2021 metric data as the base year on an annual basis:

Reduce the Plan's Weighted Average Carbon Intensity (WACI) by 20% under Scope 1 & 2 over the short-term horizon of 3 years from 31 December 2021 (where data is available<sup>8</sup>).

The Trustee based its target on WACI due to the availability of data (which is expected to increase over time), as well as the metric being relative (and therefore is not skewed by the size of the fund).

The target metric<sup>8</sup> has been chosen as a method of monitoring and reducing the levels of carbon intensity in line with the Trustee's duties to invest in the best financial interests of the Plan and its beneficiaries.

It should be noted that the target applies for the assets where WACI data is reportable. Please note that the coverage differs for different metrics depending on the data available.

	Mandate(s)	Asset allocation (%)	Coverage	Carbon Intensity Change since 2021
<b>DB Section</b>	Global Bonds / Global Credit / Long-term UK Core Credit	42.0%	64%	-22.7%
<b>DC Section</b>		100.0%	83%*	-48.3%

\*Represents coverage of popular arrangements only.

The target excludes sovereigns. Carbon intensity is an available metric for investments in sovereign bonds, but it is measured and expressed in a different way compared to corporate WACI. WACI and sovereign carbon intensity cannot be aggregated.

The majority of carbon exposure relating to sovereign assets is mainly to UK government gilts (held within the DB Section's LDI Portfolio). The Trustee has little control over the carbon intensity of the UK and has concluded that a target set to include sovereign assets would be very difficult to influence and change.

For the DB Section, there has been progress towards the WACI target, which is positive progress for the Plan.

The Trustee notes that there has been a reduction in emissions intensity for the credit mandates within the DB Section. This reduction is largely driven by the changes in the underlying holdings, as set out in the Metrics section of this report. The Trustee is engaging with its investment managers on the investment process and how they are supporting the Trustee in moving towards its climate targets.

Whilst the LDI portfolio does not form part of the Trustee's overall target (as sovereign assets are excluded), the sovereign carbon intensity reduced by c.12.8% over the reporting year.

In addition, carbon emission exposure via the Plan's pensioner buy-in policy with Rothesay is estimated to have reduced by 18.8%.

The Trustee notes that the DC target has been exceeded but is aware that data continues to improve and coverage may increase in the future which could change the Plan's position. The Trustee recognises that the reduction in WACI over 2023 driven by a number of factors. The reduction is partially driven by the implementation of sustainable funds within the Lifecycle arrangements in early 2023. However, whilst this is a positive step in the Trustee's sustainable investment journey, it should be noted that there are external and economic factors outside of the Trustee's control which can result in fluctuations of the metrics.

The Trustee believes that the current targets remains relevant for this reporting year, however, the WACI target will be reviewed next year to ensure that this continues to be appropriate.

Both targets are expected to increase in line with the Trustee's support of the goals of the Paris Agreement, gradually moving towards achieving a portfolio of assets with net zero carbon emissions. The impact of the significant ongoing transition to a low carbon economy on performance and risk within the investment portfolio will be closely monitored and assessed.

The Trustee is aware of IBM's net zero target and seeks to align the Plan as best as possible with the company's sustainability policy. When formulating an approach to climate change and the climate transition, different organisations have different opportunities and constraints. From the perspective of the Plan, the

<sup>8</sup> This includes scope 1 and 2 weighted average carbon intensity emissions data where available for the following mandates (excluding sovereigns): DB Section – Global Bonds, Global Credit and Long-term UK Core Credit, DC Section – popular arrangements.

Trustee invests in a large number of underlying companies. The investment managers of those funds have discretion over the underlying investments with investee companies to meet the fund's stated investment objectives.

The Trustee aspires to but has not yet committed to a net-zero target due to the quality of data. The Trustee will be exploring net zero target setting over the next 12 months and is working with its investment managers to improve the quality of data. The regulations note that *"whilst long term targets such as 'net-zero by 2050' are ambitious, a long term target with no interim targets would not on its own meet our expectation for trustees to consider and appropriately manage climate-related risk. Therefore, the target which trustees set should not be more than 10 years into the future."*

The Trustee recognises that there is still further progress to be made to consider climate-related risks and opportunities in a balanced and proportionate approach in respect of the Plan, and that the ultimate responsibility of the Trustee is to pay members their benefits which the Trustee is aiming to do in a sustainable way as possible. The next section of this report sets out the short term and long-term actions to move towards the above target and progress made against the metrics shown in the previous section.



# Conclusions and next steps

## The key messages from this report are:

- The Trustee and ESG sub-committee are equipped in the knowledge of ESG risks and beliefs through training sessions provided by their Investment Advisor.
- The Trustee has enhanced its stewardship reporting and assessment over the year to consider energy efficiency and DEI, as part of its broader ESG considerations which are directly or indirectly linked to climate change.
- The Trustee will continue to engage with the investment managers on moving towards its WACI target and review the appropriateness in future strategic reviews and as part of annual climate change reporting.
- The Trustee will continue to liaise with investment managers on voting and engagement activity in respect of climate change – in particular, where it has been identified that climate engagements are low.
- The Trustee believes that the current target remains relevant and will review its appropriateness on an annual basis. The Trustee will continue to engage with the investment managers on supporting the Trustee through their sustainable investment journey.
- Progress has been made for the DB and DC Sections in meeting and exceeding the respective WACI targets.

The Trustee has considered a number of actions in order to work towards the set target. **Over the next 12 months, the Trustee is planning to undertake the following actions:**

- Continue engagement with investment managers on voting and engagement activity in respect of climate change.
- Consider of climate change risks and opportunities as part of strategic decision-making for the Plan (including updating the Plan's scenario analysis).
- Continue to liaise with investment managers to understand the drivers and movements of changes in emissions metrics and how the changes are attributed.
- Set new climate transition goals to move in line with the Trustee's support of the Paris Alignment.

## In the longer term, the Trustee expects to:

- Regularly review the climate-related risks and opportunities in the Plan and maintain compliance with regulatory requirements, with support from the Plan's advisors.
- Ensure it is well equipped with sufficient knowledge of developments around climate change risk through training and a review of skills.
- Annually consider the suitability of the Plan's investment arrangements to move to the agreed target reduction in carbon exposure.

The Trustee will continue to monitor integration of ESG factors into its decision making and strive for continued improvement by carrying out regular stewardship assessments.





# Appendix

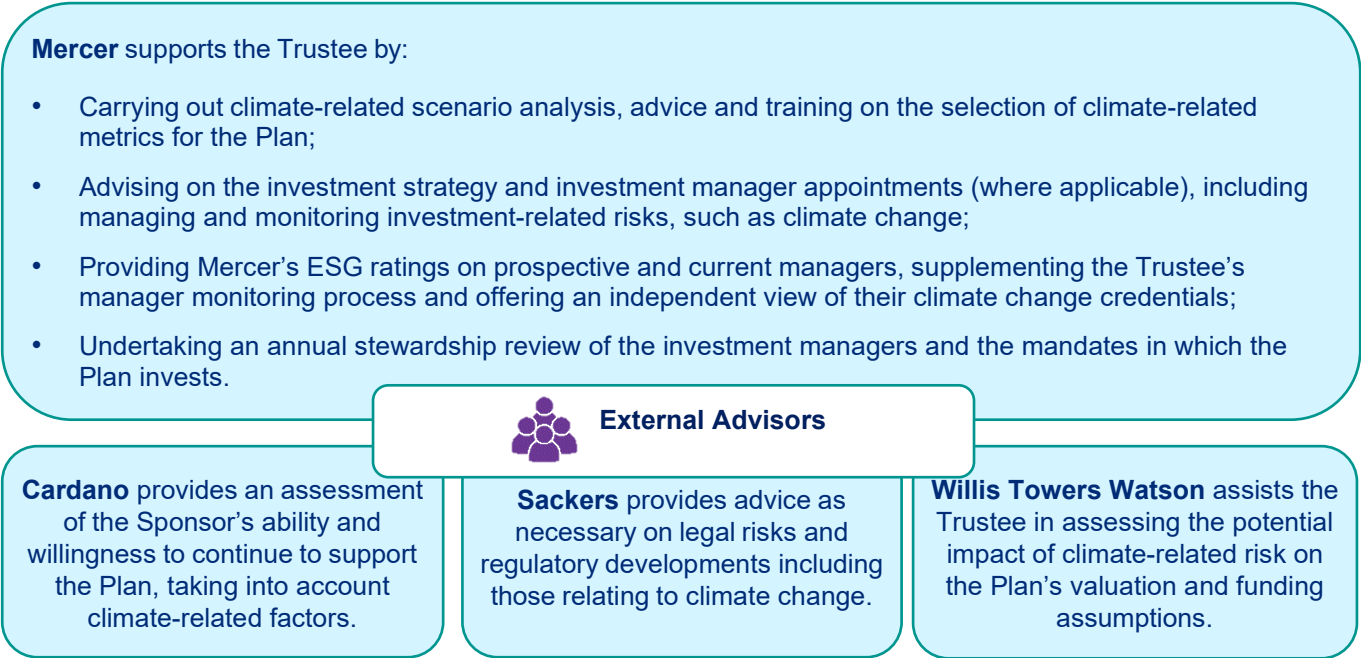
## Roles and responsibilities of those advising or assisting the Trustee on Plan governance activities

The Trustee monitors the investment managers on a regular and ongoing basis, including with respect to stewardship activities. The investment managers have been appointed based on their credentials, which includes the integration of sustainability at the strategic asset allocation level and the manager selection level.

The Trustee expects the overall approach to climate-related financial risks and opportunities for each of the Plan’s investment managers to be consistent with the governance and reporting of climate change risk statutory guidance. Disclosures consistent with this guidance are also expected of appointed investment managers. The Trustee works with its Investment Advisor, Mercer, to ensure that the investment managers adopt a consistent approach where possible and the Investment Advisor is assessed by the Trustee on an annual basis to the extent that ESG considerations are considered in investment advice provided to the Trustee (where appropriate).

IBM Pensions Trust, the Plan’s in-house pensions team, supports the Trustee with ensuring climate risks and opportunities are considered throughout the Plan’s governance framework and supports the Trustee’s engagement with the investment managers. IBM Pensions Trust also works closely with the Trustee’s advisors to consider climate-related risks and opportunities, and report back to the Trustee. The in-house team’s performance is regularly reviewed by the Governance Committee which focuses on in-house and advisors’ performance across a number of activities and deliverables.

IBM Pensions Trust or Mercer, acting on behalf of the Trustee, will engage with underlying investment managers where they are perceived to be lagging their peers in terms of ESG integration and climate risk management, and to ensure the investment managers are voting and engaging with the investee companies in line with the Trustee’s engagement priorities. Over the year, the investment managers have been challenged on how ESG is integrated into their investment processes as part of the Trustee’s ongoing stewardship monitoring.



## Short, medium and long-term drivers of climate risk

Short Term	Medium Term	Long Term
<p><b>Rapid market re-pricing relating to climate transition:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenario pathways become clearer.</b> For example, a change, in the likelihood of below 1.5°C scenario occurring becoming higher and driving the transition risk.</li> <li>• <b>Market awareness grows.</b> For example, the implications of the physical impacts of climate change become clearer to markets and impact asset valuations.</li> <li>• <b>If policy changes unexpectedly, it could surprise markets.</b> For example, if a carbon price or significant regulatory requirements are introduced across key markets to which the portfolio is exposed at a sufficiently high price to impact behaviour.</li> <li>• <b>Substitution of existing products and services with lower emission alternatives</b> may impact part of the portfolio.</li> <li>• <b>Litigation risk</b> relating to dangerous warming becoming more prevalent.</li> <li>• <b>Increases in the energy/heat efficiency</b> of buildings and infrastructure.</li> </ul>	<p>Transition to a low carbon economy are still likely to dominate:</p> <ul style="list-style-type: none"> <li>• <b>Development of technology</b> and low carbon solutions.</li> <li>• <b>Policy, legislation and regulation</b> are likely to also play a key role at the international, national and subnational level.</li> <li>• <b>Technology and policy changes</b> are likely to produce winners and losers both between and within sectors.</li> <li>• <b>Advancement of transition</b> is likely to have started to crystallise stranded asset risks over the medium term.</li> </ul> <p>The Trustee's ability to understand these changes may position it favourably, for example by increasing investments in new emerging technologies. The Trustee will consider this further as part of any future manager appointments and ongoing manager engagement.</p>	<p>Physical risks are expected to come to the fore:</p> <ul style="list-style-type: none"> <li>• <b>The impact of natural catastrophes</b> leading to physical damages through extreme weather events.</li> <li>• A lack of important natural resources such as water and food due to <b>changes in weather patterns</b>.</li> </ul> <p>The Trustee's ability to understand these changes may position it favourably in the future, for example by increasing investments in infrastructure projects that display a high level of climate resilience. A changing climate may directly impact the viability of some assets or business models (for example, flood risk for real estate, or drought / fire risk for timberland assets).</p>

## Modelling Assumptions – DB Section

Liability Cashflows based on information from the 31 December 2018 actuarial valuation rolled forward to 31 March 2021.

### Economic model

- Analysis is shown at 31<sup>st</sup> March 2021.
- The assumptions are based on Mercer's Stochastic scenarios.

### Mercer's UK Capital Market Assumptions

- The table below shows the 1<sup>st</sup>, 3<sup>rd</sup> and 10<sup>th</sup> year cumulative annualised returns:

Asset Class	31/03/2021		
	1 Year	3 Years	10 Years
Developed Equity	5.4%	5.2%	6.9%
Emerging Market Equity	6.8%	6.6%	7.6%
Private Equity	7.2%	7.1%	8.0%
Gilts	0.0%	0.2%	0.9%
UK Corporate All Stocks	0.9%	1.2%	1.8%
Infrastructure	4.2%	4.3%	5.3%
Emerging Market Debt	2.2%	2.9%	4.6%

- Mercer's scenarios do not assume any differences between geographies regarding Developed Equity returns.

## Funding Level – Scenario Analysis Assumptions

	Orderly Transition	Disorderly Transition
<b>UK long dated Interest rate</b>	+0.25% p.a. compared to the Mercer yield curve	-0.25% p.a. compared to the Mercer yield curve
<b>Inflation</b>	+0.25% p.a. compared to the Mercer yield curve	+0.5% p.a. compared to the Mercer yield curve
<b>UK life expectancy</b>	Any changes in life expectancy due to climate change, such as deaths due to extreme heat vs improved mortality due to milder winters, are expected to be largely offsetting in the UK over the next 10 years.	
<b>Equity market</b>	Global Equities: -4.5% Emerging markets: -7.5% reflecting greater volatility in EM and additional exposure to energy Small Cap: -6%	Global Equities: -15% Emerging markets: -25% reflecting greater volatility in EM and additional exposure to energy Small Cap: -20% reflecting greater volatility
<b>IG Credit spread widening</b>	0.1% p.a.	+0.25% p.a.
<b>IG Credit defaults &amp; downgrade impact</b>	No additional losses	Additional 0.5% losses in 2025 and 2026
<b>High yield Debt (HYD) and Multi-Asset Credit (MAC)</b>	-2.3% reflecting low risk compared to equity partially offset by high energy weightings	-7.5% reflecting low risk compared to equity partially offset by high energy weightings
<b>Emerging Market Debt (EMD)</b>	-3% significant variation by issuer, assumes worse than HYD reflecting the disorder and its impact on EMD issuers	-10% significant variation by issuer, assumes worse than HYD reflecting the disorder and its impact on EMD issuers
<b>Diversified Growth Fund</b>	-3% reflecting other asset classes	-10% reflecting other asset classes
<b>Hedge funds</b>	-1.5% significant variation by fund, reflects equity beta of a third	-5% significant variation by fund, reflects equity beta of a third
<b>Phasing</b>	Impacts happen evenly over the projection periods	75% of the change is expected over the first 5 years with the remainder spread over the later 5 years

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

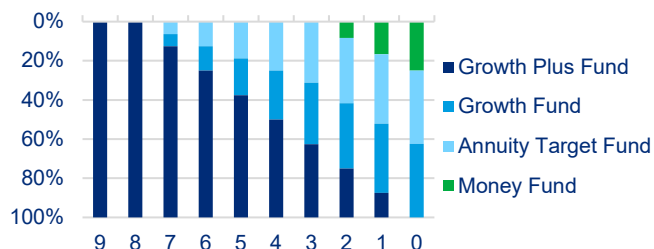
1. The further into the future that is modelled, the less reliable any quantitative predictions will be.
2. Looking at average asset class returns over multi-decade timeframes leads to small impacts. The results are potentially significantly underestimated.
3. There is a reasonable likelihood that physical impacts are grossly underestimated. Feedback loops or 'tipping points', like permafrost melting, are challenging to model particularly around the timing of such an event and the speed at which it could accelerate.
4. Financial stability and insurance 'breakdown' is not modelled. A systemic failure may be caused by either an 'uninsurable' 4°C physical environment, or due to the scale of mitigation and adaption required to avoid material warming of the planet.
5. Most adaptation costs and social factors are not priced into the models. These include population health and climate-related migration.

## DC Section – Lifecycle Glide Paths

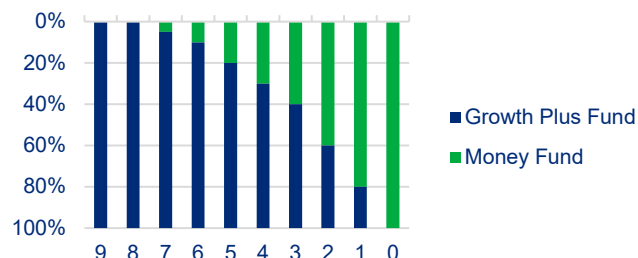
### Last 10 years of the lifecycle

Glide paths represented, focusing on the last 10 years of the Lifecycle strategies as previously outlined. The Lifecycles that have been modelled represent those with £100m+ of assets invested.

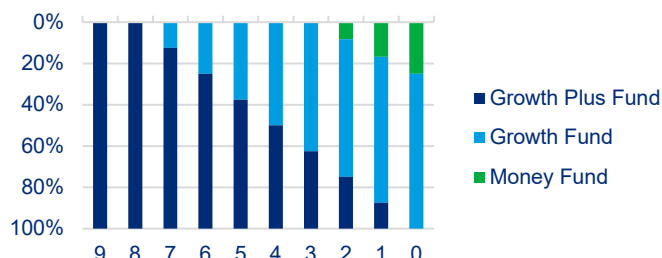
#### Lifecycle Balanced 2020



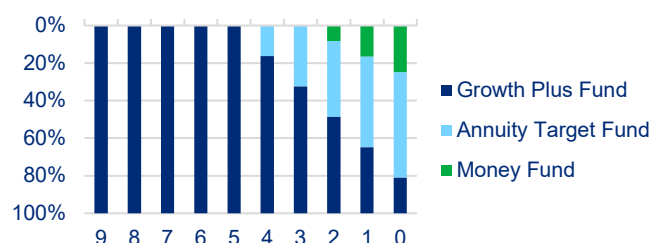
#### Lifecycle to Lump Sum 2020



#### Lifecycle to Drawdown 2020



#### Lifecycle to Annuity



## Modelling Assumptions – DC Section

	Failed Transition	Rapid Transition	Orderly Transition
<b>Summary</b>	The world fails to meet the Paris Agreement goals and global warming reaches 4.3°C above pre-industrial levels by 2100. Physical climate impacts cause large reductions in economic productivity and increasing impacts from extreme weather events.	Sudden divestments in 2025 to align portfolios to the Paris Agreement goals have disruptive effects on financial markets with sudden repricing followed by stranded assets and a sentiment shock.	Political and social organizations act quickly and predictably to implement the recommendations of the Paris Agreement to limit global warming to below 1.5°C.
<b>Temperature change</b>	Expected increase of 4.3°C, with a high-likelihood range of an increase between 3.4°C and 5.6°C by 2100.	Average temperature increase stabilises at 1.5°C around 2050.	This scenario includes additional economic damage consistent with 1.8°C of average temperature rise – peaking in 2070.
<b>Cumulative emissions</b>	c5,000 GtCO <sub>2</sub> (2020-2100)	c400 GtCO <sub>2</sub> (2020-2100)	The additional damage under this scenario could be associated with further human emissions or greater impacts from feedback loops and tipping points.
<b>Key policy &amp; tech assumptions</b>	Existing policy regimes are continued with the same level of ambition.	An ambitious policy regime is pursued to encourage greater decarbonization of the electricity sector and to reduce emissions across all sectors of the economy. Higher carbon prices, larger investment in energy efficiency and faster phase out of coal-fired power generation. This is earlier and more effective under a Rapid Transition than the Orderly Transition, which allows for less investment in energy efficiency and bioenergy with carbon capture and storage.	



	Failed Transition	Rapid Transition	Orderly Transition
<b>Financial climate modelling</b>	Physical risks are priced in two different periods: 2026-2030 (risks of first 40 years) and 2036-2040 (risks of 40-80 years).	Pricing in of transition and physical risks of the coming 40 years occurs within one year in 2025. As a result of this aggressive market correction, a confidence shock to the financial system takes place in the same year.	Pricing in of transition and physical risks associated with 1.5°C up to 2050 takes place over the first 4 years. The additional damage, beyond 1.5°C, impacts asset performance on a year-by-year basis with no advance pricing in.
<b>Physical risks considered</b>	Physical risks are regionally differentiated, considerable variation in expected temperature increase per region and increase dramatically with rising average global temperature. Physical risks are built up from: <ul style="list-style-type: none"> <li>Gradual physical impacts associated with rising temperature (agricultural, labour, and industrial productivity losses)</li> <li>Economic impacts from climate-related extreme weather events</li> </ul> Current modelling does not capture environmental tipping points or knock-on effects (e.g., migration and conflict).		

## Cumulative Climate Return Impacts

	Failed Transition			Rapid Transition			Orderly Transition		
Asset Class	31/12/2022								
	3 Years	7 Years	27 Years	3 Years	7 Years	27 Years	3 Years	7 Years	27 Years
MSCI ACWI Equity	5.7%	-2.2%	-34.4%	-14.1%	-10.6%	-7.8%	-3.9%	-3.0%	-5.2%
MSCI ACWI ESG Equity	4.7%	-3.2%	-35.6%	-10.3%	-7.0%	-3.5%	-3.6%	-2.4%	-3.8%
UK Sovereign Bonds	0.4%	0.6%	-0.9%	-0.8%	-0.6%	1.4%	-0.3%	-0.7%	1.8%
EMD Hard Currency	1.2%	-0.1%	-4.9%	-5.8%	-4.3%	-1.4%	-0.3%	-0.3%	-2.4%
EMD Local Currency	0.8%	0.9%	-5.3%	-5.7%	-3.7%	2.8%	0.4%	-0.6%	3.1%
Global Real Estate	1.8%	-2.0%	-25.9%	-5.2%	-3.0%	0.3%	-1.2%	-0.6%	-0.6%
Listed Infrastructure	5.9%	2.3%	-27.4%	-11.1%	-8.8%	-3.0%	-4.6%	-5.4%	-4.5%
UK Investment Grade Credit	1.3%	-0.6%	-0.1%	-4.7%	-2.8%	-2.0%	-0.4%	0.3%	0.8%
Cash	0.1%	-0.3%	-3.1%	-0.1%	0.2%	2.6%	-0.1%	0.4%	2.0%
US Equity	6.6%	-1.4%	-34.3%	-14.1%	-11.5%	-9.3%	-5.0%	-4.5%	-7.5%
UK Equity	4.8%	-2.0%	-30.5%	-11.8%	-8.7%	-6.2%	-3.3%	-2.3%	-3.3%
Europe Equity	4.4%	-2.0%	-28.3%	-14.9%	-11.5%	-8.9%	-2.1%	-1.1%	-2.2%
Japan Equity	2.8%	-4.1%	-35.8%	-13.5%	-10.4%	-7.5%	-0.6%	0.8%	-1.9%
Developed Asia ex Japan Equity	4.8%	-4.1%	-41.4%	-14.2%	-10.9%	-8.3%	-2.9%	-1.2%	-6.3%
Emerging Markets Equity	4.6%	-5.9%	-45.1%	-14.8%	-9.5%	-6.9%	-2.7%	0.6%	-4.9%
Cash - US	0.0%	-0.2%	-1.9%	0.0%	-0.1%	0.5%	0.0%	0.2%	-0.6%

**Impact on projected asset value of the three climate scenarios, based on a £100 starting value (for illustrative purposes), relative to the baseline for all scenarios modelled**

	Rapid Transition			Orderly Transition			Failed Transaction		
	Year 3	Year 7	Year 27	Year 3	Year 7	Year 27	Year 3	Year 7	Year 27
<b>Lifecycle Balanced 2020 Strategy</b>									
Younger member (27 years from retirement)	-11.8%	-8.8%	-6.0%	-3.6%	-2.8%	-2.7%	5.0%	-1.1%	-24.8%
Average member (12 years from retirement)	-7.9%	-5.3%	-	-2.5%	-1.8%	-	3.4%	-1.7%	-
3 years from retirement	-2.7%	-	-	-1.1%	-	-	1.4%	-	-
<b>Lifecycle to Drawdown 2020 Strategy</b>									
Younger member (27 years from retirement)	-11.8%	-8.8%	-5.9%	-3.6%	-2.8%	-2.9%	5.0%	-1.1%	-25.1%
Average member (12 years from retirement)	-7.9%	-5.3%	-	-2.5%	-1.8%	-	3.4%	-1.8%	-
3 years from retirement	-3.8%	-	-	-1.5%	-	-	1.8%	-	-
<b>Lifecycle to Lump Sum 2020 Strategy</b>									
Younger member (27 years from retirement)	-11.8%	-8.8%	-6.2%	-3.6%	-2.8%	-3.1%	5.0%	-1.1%	-24.8%
Average member (12 years from retirement)	-7.9%	-5.2%	-	-2.5%	-1.8%	-	3.4%	-2.0%	-
3 years from retirement	0.6%	-	-	-0.8%	-	-	0.5%	-	-
<b>In scope popular arrangements - Funds</b>									
IBM Pension Plan Global Equity (70:30) Fund	-11.6%	-8.7%	-6.5%	-3.3%	-2.3%	-3.8%	4.7%	-1.9%	-29.5%
IBM Pension Plan Growth Plus Fund	-7.9%	-5.3%	-2.1%	-2.5%	-1.8%	-2.4%	3.4%	-2.0%	-26.7%

**Summary of the climate scenarios considered in the covenant assessment by Cardano**

	Orderly Transition – 1.8°C scenario	Rapid Transition – 1.5°C scenario	Failed Transition - Between 3-4°C scenario
<b>Scenario outline</b>	Global decarbonisation <b>starts now</b> so policies intensify gradually but immediately. Large transition changes will happen quickly	Temperature increase is limited to 1.5°C to achieve carbon neutrality by 2050, but with <b>delayed implementation</b> beginning in 2025	<b>No new transition policies above existing commitments</b> leads to continued increase in greenhouse gas emissions and rise in global temperature
<b>Physical risks</b>	<b>Long-term physical risks are reduced</b> but deviations from present climate still expected	<b>Long term physical risks are reduced</b> but deviations from present climate still expected	More <b>pronounced physical risks</b> , particularly over the longer-term
<b>Transition risk</b>	<b>Highest in the near-term</b> as policies are implemented immediately	<b>Highest in the medium term as policy implementation is delayed</b>	<b>Limited transition risks</b> over and above existing commitments and policies
<b>Macro-economic impact</b>	Overall longer-term <b>impact on GDP growth muted</b> , with assumed long-term benefit from green tech investment	Compressed nature of emission reductions <b>drives material short term macroeconomic disruption in 2025</b> and a sharp fall in GDP	UK and global <b>GDP growth permanently lower</b> with that impact growing over time. Macroeconomic uncertainty increases

## Ongoing risk management activities of the Plan

<b>Governance</b>	<ul style="list-style-type: none"> <li>The Trustee <b>actively considers ways to further enhance the process of identifying and assessing climate-related risks and opportunities</b>. The <b>Plan's risk register</b> includes ESG and climate change risks, and is reviewed by the Trustee Board's Governance Committee to ensure that the Plan's risks are effectively managed.</li> <li>The <b>overall register is reviewed in detail annually</b> in the course of the Trustee's overall risk management approach, with the <b>most prominent risks being reviewed quarterly</b>. It is used to effectively identify, prioritise, manage and monitor risks associated with the Plan and the escalations of risk are managed by internal controls in place.</li> <li>The <b>Trustee and ESG sub-committee receive training</b> from Mercer as appropriate on climate-related issues, including market and regulatory updates.</li> </ul>
<b>Strategy</b>	<ul style="list-style-type: none"> <li>Climate change-related risks and opportunities are taken into account as part of the <b>investment strategy advice</b> provided by Mercer.</li> <li><b>Climate change scenario modelling</b> (described in the previous section) provides a top down strategic assessment of climate change risks at the asset class level across transition and physical risks, providing the estimated impact of climate change on the Plan's investment strategy and funding level. The last assessment was carried out in 2021 and the next assessment is expected to take place in late 2024/early 2025.</li> <li>The Trustee has commissioned <b>covenant analysis</b> carried out by Cardano as part of this report, to understand the impact of climate change risk on the covenant of the Plan's sponsor.</li> <li>The Trustee sees its <b>target to reduce the level of carbon intensity</b> within the Plan's investment portfolio as a means to manage climate transition risks.</li> </ul>
<b>Reporting</b>	<ul style="list-style-type: none"> <li>A <b>summary of the managers' voting and engagement actions over the year (including examples) are disclosed</b> in the <a href="#">Implementation Statement</a> which is reviewed on an annual basis by the Trustee.</li> <li>The Trustee monitors integration of ESG factors within its investment decision-making through <b>annual RITE assessments</b>.</li> </ul>
<b>Manager monitoring</b>	<ul style="list-style-type: none"> <li>The Plan's <b>custodian and underlying investment managers have been asked to provide information which covers carbon emissions analysis and non-carbon emissions climate-related metrics</b> (described in the next section). This analysis helps identify key sources of company and sector-level carbon risks, as well as monitoring the continued engagement on climate-related issues. The metrics are reported and monitored on an annual basis.</li> <li>The Trustee recognises that <b>active management by the investment managers will continue to be a very important</b> part of the Plan's approach to managing these risks. The Trustee expects companies in its portfolio to manage climate change risks. Where relevant, <b>managers are invited to present to the Trustee to explain their approach to climate change risk management</b>, amongst other topics. Stewardship activities can help hold companies to account and ensure they are taking a meaningful approach in this area.</li> <li>The Trustee receives <b>quarterly investment performance reporting</b> and has access to ESG investment manager ratings produced by Mercer for the Plan's investment managers. These ratings assess the degree to which managers integrate ESG considerations, including climate change, into their investment processes and active ownership activities. If a manager is considered to be "lagging the market", the Trustee will engage with the relevant investment manager(s) to strongly encourage that they improve in policies and practises in this area.</li> <li><b>Mercer carries out an annual Stewardship and ESG Manager Ratings Assessment.</b></li> </ul>
<b>Manager Selection and Retention</b>	<ul style="list-style-type: none"> <li>The Trustee, with advice from Mercer, will <b>consider an investment manager's firm-wide and strategy-specific approach to managing climate-related risks and opportunities</b> when either appointing a new manager, in the ongoing review of a manager's appointment, or as a factor when considering the termination of a manager's appointment.</li> <li>Mercer rates investment managers on the extent of integration of ESG factors (including climate change) into their processes. <b>A manager's stewardship process forms part of the rating assessment.</b> This is considered at the firm level and at the investment strategy/fund level.</li> </ul>

## DC Section – Fund Benchmarks

The funds highlighted in blue represent the funds which are part of or are underlying funds to the popular arrangement.

Fund	Benchmark
<b>Equities</b>	
Global Equity (60:40)	60% FTSE All Share Index 14% FTSE World North America Index 14% FTSE Developed Europe ex UK Index 7% FTSE Japan Index 5% FTSE World Asia Pacific ex Japan Index
Global Equity (70:30)	70% All-Share Index 30% FTSE All-World (ex UK) Index
UK Equity	FTSE All-Share Index
World (ex-UK) Developed Equity	50% FTSE Developed (ex UK) Index 50% FTSE Developed (ex UK) Index GBP Hedged
All World Equity	10% FTSE All-World Index 90% FTSE All-World Index GBP Hedged (Only Developed Markets Hedged)
World Emerging Markets Equity	FTSE Emerging Index
<b>Specialist Equity</b>	
Ethical Global Equity	FTSE4Good Global Equity Index (90% GBP Hdg)
Ethical UK Equity	FTSE4Good UK Equity Index
Future World	10% FTSE All-World ex CW Climate Balanced Factor Index 90% FTSE All-World ex CW Climate Balanced Factor Index - GBP Hedged
Infrastructure Equity	MFG Core Infrastructure Index - GBP Hedged
Global Real Estate Equity	FTSE EPRA/NAREIT Developed Real Estate Index
<b>Multi-Asset</b>	
Growth	25% Solactive L&G ESG Global Markets Index (90% Hedged) 7.5% MFG Core Infrastructure Index 3.75% JPMorgan Government Bond Index - Emerging Markets - Global Diversified 3.75% JPMorgan Emerging Markets Bond Index - Global Diversified GBP Hedged 7.5% LGIM Commodities 30% Solactive L&G ESG GBP Investment Grade Corporate TR Index 10% FTSE UK Gilts Over 15 Year Index 5% FTSE Index-Linked All Stocks Index 7.5% FTSE EPRA/NAREIT Developed Index (100% Hedged)
Growth Plus	65% Solactive L&G ESG Global Markets Index (90% Hedged) 10.0% FTSE EPRA/NAREIT Developed Index (100% Hedged) 5.0% MFG Core Infrastructure Index - GBP Hedged 5.0% Solactive L&G ESG GBP Investment Grade Corporate TR Index 3.75% JPMorgan Government Bond Index - Emerging Markets - Global Diversified 3.75% JPMorgan Emerging Markets Bond Index - Global Diversified GBP Hedged 7.5% LGIM Commodities
<b>Bonds</b>	
Over 15 years Gilts	FTSE A Government (Over 15 Year) Index
All Stocks Index Linked Gilts	FTSE A Index Linked (All Stocks) Index
Investment Grade Corporate Bond – All Stocks Index	Markit iBoxx £ Non-Gilts (All Stocks) Index
Pre-Retirement (Annuity Target)	FTSE Annuities Index
Pre-Retirement Inflation Linked (Annuity Target)	Inflation Linked Annuity Aware Composite Index
Annuity Protection Index	70% FTSE A Index-Linked (Over 5 Year) Index 30% FTSE A Government (Over 15 Year) Index
Emerging Markets Debt	50% JPMorgan Government Bond Index - Emerging Markets - Global Diversified 50% JPMorgan Emerging Markets Bond Index - Global Diversified GBP Hedged
<b>Cash</b>	
UK Money	Sterling Overnight Index Average (SONIA)



Fund	Benchmark
<b>ESG / Sustainable Funds*</b>	
Future World Global Equity	Solactive L&G ESG Global Markets Index
Future World Developed (ex-UK) Equity	Solactive L&G ESG Developed ex UK Index
Future World UK Equity	Solactive L&G ESG UK Index
Future World Emerging Markets Equity	Solactive L&G ESG Emerging Markets Index
Future World GBP Corporate Bonds	Solactive L&G ESG GBP Investment Grade Corporate TR Index
HSBC Islamic Global Equity	Dow Jones Islamic Titans 100

\*These funds were introduced into the self-select fund range in Q4 2022.

## DC Section – Notes on Data, Assumptions, Risk Identification & Model Limitations

### Data

The data used in the analysis presented in this report is set out in each scenario modelled, which includes the asset allocation modelled how it will develop over time for each scenario. The data used to determine the popular arrangements and the underlying asset allocations used in relation to the Growth and Growth Plus Funds is based on the information sourced from LGIM.

### Assumptions

The key assumptions used in carrying out the analysis shown in this report are assumptions for the returns on assets under the base case. The climate scenarios are defined by assumed impacts on asset returns, yield curves and inflation experience relative to the base case.

### Risk Identification

This analysis is focused specifically on climate risk. Other risks should be considered as part of a wider review which may include asset liability modelling. Our climate scenarios are not necessarily “extremes” and so should not be construed as illustrating the maximum risk exposure.

### Model Limitations

Climate scenario modelling is a complex process, with associated modelling limitations. In particular:

- The further into the future that is modelled, the less reliable any quantitative predictions will be.
- There is a reasonable likelihood that physical impacts are grossly underestimated. Feedback loops or ‘tipping points’, like permafrost melting, are challenging to model particularly around the timing of such an event and the speed at which it could accelerate.
- Financial stability and insurance ‘breakdown’ is not modelled. A systemic failure may be caused by either an ‘uninsurable’ 4°C physical environment, or due to the scale of mitigation and adaption required to avoid material warming of the planet.
- Most adaptation costs and social factors are not priced into the models. These include population health and climate-related migration.
- Not all physical risks are captured and so physical damage could be understated. This includes positive feedback loops that could accelerate warming and systemic impacts of warming for example relating to migration and war.
- There are only 3 scenarios illustrated, therefore there is a wide range of possible outcomes not covered.

## Climate-Related Metrics: BlackRock LDI portfolio (31 December 2022)

Manager	Value  (£m)	Proportion of Total DB Section Assets (excl. buy-in)	Proportion of fund that is reportable	Coverage of reportable assets	Total Carbon Emissions (Scope 1 & 2)	Carbon Footprint (Scope 1 & 2)	Carbon Intensity (Scope 1 & 2)
		(%)	(%)	(%)	(tons CO2e)	(tons CO2e / £M invested)	(tons CO2e / \$M GDP nominal)
	2022	2022	2022	2022	2022	2022	2022
<b>BlackRock</b>	1,814	49.1	100.0	100.0	256,000	160	148

Source: BlackRock, based on MSCI data

## DB Section – Portfolio Alignment: Implied Temperature Rise

Asset Class	Manager / Mandate	2022: Implied Temperature Rise (°C)	2023: Implied Temperature Rise (°C)
<b>Global Bonds</b>	Northern Trust	-	-
<b>Global Credit</b>	PIMCO*	-	1.5 – 2.0: 49% 2.0 – 2.5: 16% 2.5 – 3.0: 3% 3.0 – 4.0: 20% 4.0+: 2%
	Wellington Management	-	1.9
	PIMCO*	-	1.5 – 2.0: 46% 2.0 – 2.5: 11% 3.0 – 4.0: 42%
<b>Long-term UK Core Credit</b>	Western Asset Management	-	2.4
	Goldman Sachs Asset Management	-	1.9
<b>LDI</b>	BlackRock	2.8	2.8
<b>Property</b>	CBRE	-	-
<b>Buy-in Policy</b>	Rothesay	2.7	2.6

Source: Northern Trust, BlackRock, CBRE and Rothesay as at 31 December 2022 and 31 December 2023. “-” indicates where data not available.

Rothesay: Data provided by MSCI and is only available at this stage for certain corporate issuers so the sub-portfolio with coverage is small (£9bn or 15% of all holdings).

\* PIMCO are “unable to provide a portfolio number for implied temperature rise due to methodological challenges” and believe that “reporting this metric as per a breakdown across implied temperature rise scores remains best practice”.

## Carbon emissions analysis – DC Section (All Funds)

### 31 December 2023 – Absolute Emissions

Fund	Value (£m)	Proportion of Total DC Section Assets (%)	Underlying holdings eligible for carbon reporting (%)	Carbon coverage (Scope 3) (%)	Total Carbon Emissions (Scope 3) (tons CO2e)	Carbon coverage (Scope 1 & 2) (%)	Total Carbon Emissions (Scope 1 & 2) (tons CO2e)	Change since 2022 (Scope 1 & 2) (%)
<b>Equities</b>								
Global Equity (60:40)	84.6	3.2	98.2	94.2	84,988.8	94.2	7,642.8	-19.1
Global Equity (70:30)	185.6	7.0	98.2	93.8	191,239.9	93.8	16,651.4	-22.9
UK Equity	38.4	1.5	97.7	92.2	47,101.0	92.2	3,624.6	-26.3
World (ex-UK Developed Equity)	75.6	2.9	98.3	96.9	40,075.9	96.9	4,668.3	-5.2
All World Equity	103.0	3.9	97.7	95.7	62,609.0	95.7	8,154.3	-10.9
World Emerging Markets Equity	7.9	0.3	99.5	94.0	8,782.3	94.0	1,839.0	-9.2
<b>Equities Total</b>	<b>495.2</b>	<b>18.7</b>	<b>98.1</b>	<b>94.6</b>	<b>434,796.9</b>	<b>94.6</b>	<b>42,580.4</b>	<b>-18.2</b>
<b>Specialist Equity</b>								
Ethical Global Equity	31.5	1.2	100.1	99.1	15,846.5	99.1	1,760.7	3.8
Ethical UK Equity	13.1	0.5	100.0	98.9	14,720.0	98.9	1,126.5	-22.4
Future World	3.2	0.1	100.0	99.3	2,904.5	99.3	289.7	0.3
Infrastructure Equity	5.3	0.2	100.5	97.5	3,012.5	97.5	1,535.6	-20.9
Global Real Estate Equity	2.2	0.1	100.3	98.7	87.0	98.7	15.2	-42.2
<b>Specialist Equity Total</b>	<b>55.3</b>	<b>2.1</b>	<b>100.1</b>	<b>98.9</b>	<b>36,578.3</b>	<b>98.9</b>	<b>4,727.7</b>	<b>-12.5</b>
<b>Multi-Asset</b>								
Growth	183.9	6.9	99.0	63.9	64,224.6	92.1	16,606.9	-46.7
Growth Plus (including was Consensus)	1,600.1	60.5	98.8	82.9	565,166.7	95.6	117,341.1	-24.3
<b>Multi Asset Total</b>	<b>1,784.0</b>	<b>67.4</b>	<b>98.8</b>	<b>81.2</b>	<b>629,391.3</b>	<b>95.3</b>	<b>133,948.1</b>	<b>-28.1</b>
<b>Bonds</b>								
Over 15 Year Gilts	21.4	0.8	100.9	-	-	100.9	1,761.2	-35.7
All Stocks Index Linked Gilts	1.6	0.1	100.8	-	-	100.8	129.8	-23.2

Fund	Value (£m)	Proportion of Total DC Section Assets (%)	Underlying holdings eligible for carbon reporting (%)	Carbon coverage (Scope 3) (%)	Total Carbon Emissions (Scope 3) (tons CO2e)	Carbon coverage (Scope 1 & 2) (%)	Total Carbon Emissions (Scope 1 & 2) (tons CO2e)	Change since 2022 (Scope 1 & 2) (%)
Investment grade corporate bond - All Stocks Index	3.4	0.1	98.8	48.5	1,625.4	55.4	183.1	-19.5
Pre-Retirement (Annuity Target)	21.2	0.8	99.0	41.1	10,076.4	76.7	1,370.2	-76.2
Pre-Retirement Inflation Linked (Annuity Target)	100.1	3.8	99.2	31.8	47,523.7	83.8	6,797.7	9,513.4
Annuity Protection Index	5.6	0.2	101.2	-	-	101.2	456.1	-16.6
Emerging Markets Debt	0.8	0.0	97.5	0.0	294.9	86.3	278.2	106.3
<b>Bonds Total</b>	<b>154.1</b>	<b>5.8</b>	<b>99.5</b>	<b>34.6</b>	<b>59,520.2</b>	<b>85.4</b>	<b>10,976.7</b>	<b>13.6</b>
<b>Cash</b>								
UK Money	157.7	6.0	70.7	52.8	15,914.5	53.2	161.6	-90.7
<b>ESG / Sustainable Funds*</b>								
Future World Global Equity	0.3	0.0	98.7	97.3	109.5	97.3	9.3	-
Future World Developed (ex-UK) Equity	0.1	0.0	98.7	97.8	25.7	97.8	1.9	-
Future World UK Equity	0.1	0.0	99.0	96.7	78.8	96.7	4.8	-
Future World Emerging Markets Equity	0.1	0.0	98.6	93.5	24.7	93.5	4.3	36.3
Future World GBP Corporate Bonds	0.0	0.0	98.4	79.8	10.7	80.8	1.0	-
HSBC Islamic Global Equity**	1.6	0.1	99.9	-	-	99.9	42.6	-
<b>ESG / Sustainable Funds Total</b>	<b>2.2</b>	<b>0.1</b>	<b>99.6</b>	<b>23.8</b>	<b>249.3</b>	<b>98.9</b>	<b>63.9</b>	<b>36.3</b>
<b>Total</b>	<b>2,648.4</b>	<b>100.0</b>	<b>97.1</b>	<b>81.8</b>	<b>1,176,450.4</b>	<b>92.8</b>	<b>192,458.4</b>	<b>0.8</b>

Source: LGIM, 31 December 2023. "-" indicates where data not available due to eligibility or coverage criteria not being met. "n/a" indicates where LGIM were unable to provide benchmark data. Rows highlighted in turquoise indicate the funds that are either popular arrangements in their own right or are underlying funds to the Lifecycles identified as popular arrangements.

Total carbon emissions is calculated as carbon footprint (tons CO2e per £1M value invested) as provided by LGIM multiplied by fund value (in £).

Please note that for most funds less than 100% of the underlying holdings are eligible for carbon reporting. The total carbon emissions calculation therefore implicitly assumes that the holdings that have not been covered have the same carbon footprint as the average of the covered holdings.

LGIM have confirmed for metrics to be reportable for each fund there are two criteria: (a) at least 50% of the underlying holdings are eligible for reporting and (b) coverage of those eligible assets is at least 60%. The funds highlighted in blue represent the funds which are part of or are underlying funds to the popular arrangement.

\*These funds were introduced into the self-select fund range in Q4 2022.

\*\* Data sourced from HSBC.



## 31 December 2023 – Carbon Intensity

Fund	Value  (£m)	Proportion of Total DC Section Assets  (%)	Underlying holdings eligible for carbon reporting  (%)	WACI (Scope 1 & 2)		Actual WACI Change since 2022  (%)	WACI (Scope 3)  Coverage  (%)	Sovereign Intensity (Scope 1 & 2)	
				Coverage  (%)	Actual (tons CO2e / £M revenue)			Coverage  (%)	Actual (tons CO2e / £M revenue)
Equities									
Global Equity (60:40)	84.6	3.2	98.2	98.2	152.2	-24.4	94.8	0.0	-
Global Equity (70:30)	185.6	7.0	98.2	98.2	160.9	-25.3	94.5	0.0	-
UK Equity	38.4	1.5	97.7	97.7	141.3	-30.1	92.8	0.0	-
World (ex-UK Developed Equity)	75.6	2.9	98.3	98.3	156.7	-22.2	97.4	0.0	-
All World Equity	103.0	3.9	97.7	97.7	199.9	-16.5	96.6	0.0	-
World Emerging Markets Equity	7.9	0.3	99.5	99.5	615.0	4.1	97.8	-	-
Equities Total	495.2	18.7	98.1	98.1	172.7	-22.0	95.3	0.0	-
Specialist Equity									
Ethical Global Equity	31.5	1.2	100.1	100.1	124.4	-21.3	99.4	0.0	-
Ethical UK Equity	13.1	0.5	100.0	100.0	144.2	-33.5	99.8	-	-
Future World	3.2	0.1	100.0	100.0	143.9	-16.6	99.5	-	-
Infrastructure Equity	5.3	0.2	100.5	100.5	1,445.6	0.7	100.5	-	-
Global Real Estate Equity	2.2	0.1	100.3	100.3	82.0	-17.4	98.4	0.0	-
Specialist Equity Total	55.3	2.1	100.1	100.1	255.9	-26.9	99.6	0.0	-
Multi-Asset									
Growth	183.9	6.9	99.0	70.7	244.9	-30.6	66.3	28.3	299.7
Growth Plus (including was Consensus)	1,600.1	60.5	98.8	85.9	179.7	-38.8	84.0	12.9	441.0
Multi Asset Total	1,784.0	67.4	98.8	84.3	185.3	-38.6	82.5	16.0	412.6
Bonds									
Over 15 Year Gilts	21.4	0.1	100.9	-	-	-	-	100.9	183.6
All Stocks Index Linked Gilts	1.6	0.1	100.8	-	-	-	-	100.8	183.6
Investment grade corporate bond - All Stocks Index	3.4	0.1	98.8	91.9	95.3	-24.5	67.9	6.9	261.7

Fund	Value (£m)	Proportion of Total DC Section Assets (%)	Underlying holdings eligible for carbon reporting (%)	WACI (Scope 1 & 2)		Actual WACI Change since 2022 (%)	WACI (Scope 3) Coverage (%)	Sovereign Intensity (Scope 1 & 2)	
				Coverage (%)	Actual (tons CO2e / £M revenue)			Coverage (%)	Actual (tons CO2e / £M revenue)
Pre-Retirement (Annuity Target)	21.2	0.8	99.0	63.4	98.4	-6.7	47.4	35.6	183.6
Pre-Retirement Inflation Linked (Annuity Target)	100.1	3.8	99.2	47.3	84.2	-24.5	36.1	51.9	183.7
Annuity Protection Index	5.6	0.2	101.2	35.6	98.4	-6.6	0.0	101.2	183.6
Emerging Markets Debt	0.8		97.5	9.6	1,196.6	-58.4	5.3	87.9	488.0
<b>Bonds Total</b>	<b>154.1</b>	<b>5.8</b>	<b>99.5</b>	<b>41.5</b>	<b>89.0</b>	<b>-18.5</b>	<b>40.0</b>	<b>66.6</b>	<b>186.3</b>
<b>Cash</b>									
UK Money	157.7	6.0	70.7	70.3	2.9	-48.2	58.7	0.4	183.6
<b>ESG / Sustainable Funds*</b>									
Future World Global Equity	0.3	0.0	98.7	98.7	98.0	-15.2	97.8	0.0	-
Future World Developed (ex-UK) Equity	0.1	0.0	98.7	98.7	83.8	-14.8	98.0	0.0	-
Future World UK Equity	0.1	0.0	99.0	99.0	66.4	-22.1	97.4	0.0	-
Future World Emerging Markets Equity	0.1	0.0	98.6	98.6	217.9	-12.4	96.3	0.0	-
Future World GBP Corporate Bonds	0.0	0.0	98.4	97.4	70.3	-13.4	85.4	1.0	-
HSBC Islamic Global Equity**	1.6	0.1	99.9	99.9	71.0	-	-	-	-
<b>ESG / Sustainable Funds Total</b>	<b>2.2</b>	<b>0.1</b>	<b>99.6</b>	<b>98.6</b>	<b>67.0</b>	<b>-12.4</b>	<b>96.3</b>	<b>0.0</b>	<b>-</b>
<b>Total</b>	<b>2,648.4</b>	<b>100.0</b>	<b>97.1</b>	<b>83.9</b>	<b>252.0</b>	<b>-</b>	<b>83.3</b>	<b>28.9</b>	<b>354.1</b>

Source: LGIM, 31 December 2023. "-" indicates where data not available due to eligibility or coverage criteria not being met. "n/a" indicates where LGIM were unable to provide benchmark data. Rows highlighted in turquoise indicate the funds that are either popular arrangements in their own right or are underlying funds to the Lifecycles identified as popular arrangements.

WACI is measured as tons CO2 emissions / £m company revenue. Sovereign carbon intensity is measured as tons CO2 emissions / £m PPP-adjusted GDP.

Please note that for most funds less than 100% of the underlying holdings are eligible for carbon reporting.

LGIM have confirmed for metrics to be reportable for each fund there are two criteria: (a) at least 50% of the underlying holdings are eligible for reporting and (b) coverage of those eligible assets is at least 60%.

The funds highlighted in blue represent the funds which are part of or are underlying funds to the popular arrangement.

\*These funds were introduced into the self-select fund range in Q4 2022.

\*\* Data sourced from HSBC. HSBC provide figures on a \$M basis, therefore the figures provided have been converted in the £M using a USD/GBP conversion rate of \$1:£0.7844.

## 31 December 2023 – Carbon Footprint

Fund	Value  (£m)	Proportion of Total DC Section Assets  (%)	Underlying holdings eligible for carbon reporting  (%)	Carbon Footprint (scope 3)		Corporate Carbon Footprint (Scope 1 & 2)		Sovereign Carbon Footprint (Scope 1 & 2)	
				Coverage  %	Actual  (tons CO2e / \$M invested)	Coverage  %	Actual  (tons CO2e / \$M invested)	Coverage  (%)	Actual  (tons CO2e / \$M invested)
Equities									
Global Equity (60:40)	84.6	3.2	98.2	94.2	1,004.8	94.2	90.4	-	-
Global Equity (70:30)	185.6	7.0	98.2	93.8	1,030.2	93.8	89.7	-	-
UK Equity	38.4	1.5	97.7	92.2	1,225.1	92.2	94.3	-	-
World (ex-UK Developed Equity)	75.5	2.9	98.3	96.9	529.8	96.9	61.7	-	-
All World Equity	103.0	3.9	97.7	95.7	607.8	95.7	79.2	-	-
World Emerging Markets Equity	7.9	0.3	99.5	94.0	1,118.3	94.0	234.2	-	-
Equities Total	495.2	18.7	98.1	94.6	878.2	94.6	86.0	-	-
Specialist Equity									
Ethical Global Equity	31.5	1.2	100.1	99.1	503.5	99.1	55.9	-	-
Ethical UK Equity	13.1	0.5	100.0	98.9	1,125.3	98.9	86.1	-	-
Future World	3.2	0.1	100.0	99.3	897.9	99.3	89.5	-	-
Infrastructure Equity	5.3	0.2	100.5	97.5	567.8	97.5	289.4	-	-
Global Real Estate Equity	2.2	0.1	100.3	98.7	39.7	98.7	6.9	-	-
Specialist Equity Total	55.3	2.1	100.1	98.9	661.0	98.9	85.6	-	-
Multi-Asset									
Growth	183.9	6.9	99.0	63.9	349.3	63.9	58.9	28.2	161.7
Growth Plus (including was Consensus)	1,600.1	60.4	98.8	82.9	353.2	82.9	44.6	12.8	259.9
Multi Asset Total	1,784.0	67.4	98.8	81.2	352.9	81.2	45.9	15.9	240.1
Bonds									
Over 15 Year Gilts	21.4	0.8	100.9	-	-	-	-	100.9	82.2
All Stocks Index Linked Gilts	1.6	0.1	100.8	-	-	-	-	100.8	82.2
Investment grade corporate bond - All Stocks Index	3.4	0.1	98.8	48.5	473.2	48.5	46.4	6.9	101.5

Fund	Value  (£m)	Proportion of Total DC Section Assets  (%)	Underlying holdings eligible for carbon reporting  (%)	Carbon Footprint (scope 3)		Corporate Carbon Footprint (Scope 1 & 2)		Sovereign Carbon Footprint (Scope 1 & 2)	
				Coverage  %	Actual  (tons CO2e / \$M invested)	Coverage  %	Actual  (tons CO2e / \$M invested)	Coverage  (%)	Actual  (tons CO2e / \$M invested)
Pre-Retirement (Annuity Target)	21.2	0.8	99.0	41.1	475.5	41.1	49.5	35.6	82.2
Pre-Retirement Inflation Linked (Annuity Target)	100.1	3.8	99.2	31.8	474.9	31.8	44.6	51.9	82.2
Annuity Protection Index	5.6	0.2	101.2	-	-	-	-	101.2	82.2
Emerging Markets Debt	0.8	0.0	97.5	0.0	361.9	0.0	31.7	86.2	341.5
<b>Bonds Total</b>	<b>154.1</b>	<b>5.8</b>	<b>99.5</b>	<b>34.6</b>	<b>474.8</b>	<b>34.6</b>	<b>45.7</b>	<b>66.6</b>	<b>84.3</b>
<b>Cash</b>									
UK Money	157.7	6.0	70.7	52.8	100.9	52.8	0.4	0.4	82.2
<b>ESG / Sustainable Funds*</b>									
Future World Global Equity	0.3	0.0	98.7	97.3	387.6	97.3	32.8	-	-
Future World Developed (ex-UK) Equity	0.1	0.0	98.7	97.8	368.7	97.8	27.1	-	-
Future World UK Equity	0.1	0.0	99.0	96.7	730.6	96.7	44.6	-	-
Future World Emerging Markets Equity	0.1	0.0	98.6	93.5	422.9	93.5	74.2	-	-
Future World GBP Corporate Bonds	0.0	0.0	98.4	79.8	344.0	79.8	32.2	-	-
HSBC Islamic Global Equity**	1.6	0.1	99.9	-	-	99.9	25.9	-	-
<b>ESG / Sustainable Funds Total</b>	<b>2.2</b>	<b>0.1</b>	<b>98.6</b>	<b>93.5</b>	<b>422.9</b>	<b>98.9</b>	<b>24.9</b>	<b>0.0</b>	<b>-</b>
<b>Total</b>	<b>2,648.4</b>	<b>100.0</b>	<b>97.1</b>	<b>81.8</b>	<b>466.4</b>	<b>81.8</b>	<b>73.9</b>	<b>28.8</b>	<b>199.9</b>

Source: LGIM, 31 December 2023. "-" indicates where data not available due to eligibility or coverage criteria not being met. Rows highlighted in turquoise indicate the funds that are either popular arrangements in their own right or are underlying funds to the Lifecycles identified as popular arrangements.

Carbon footprint is measured as tons CO2 emissions / £m invested.

Please note that for most funds less than 100% of the underlying holdings are eligible for carbon reporting.

LGIM have confirmed for metrics to be reportable for each fund there are two criteria: (a) at least 50% of the underlying holdings are eligible for reporting and (b) coverage of those eligible assets is at least 60%. The funds highlighted in blue represent the funds which are part of or are underlying funds to the popular arrangement.

\*These funds were introduced into the self-select fund range in Q4 2022.

\*\* Data sourced from HSBC. HSBC provide figures on a \$M basis, therefore the figures provided have been converted in the £M using a USD/GBP conversion rate of \$1:£0.7844.



## Key

	Actual ITR above 2.0 degrees Celsius
	Actual ITR above 1.5 degrees Celsius

## DC Section – Portfolio Alignment: SBTi and Implied Temperature Rise

Fund	Value	Proportion of Total DC Section Assets	Underlying holdings eligible for carbon reporting	SBTi	Implied Temperature Rise	
	(£m)	(%)	(%)	(%)	Coverage (%)	Actual (°C)
Equities						
Global Equity (60:40)	84.6	3.2	98.2	0.5	94.6	2.6
Global Equity (70:30)	185.6	7.0	98.2	0.5	93.7	2.7
UK Equity	38.4	1.5	97.7	0.5	91.6	2.5
World (ex-UK Developed Equity)	75.5	2.9	98.3	0.5	96.3	2.8
All World Equity	103.0	3.9	97.7	0.5	94.6	2.9
World Emerging Markets Equity	7.9	0.3	99.5	0.3	96.4	3.2
Equities Total	495.2	18.7	98.1	0.5	94.3	2.8
Specialist Equity						
Ethical Global Equity	31.5	1.2	100.1	0.7	99.9	2.9
Ethical UK Equity	13.1	0.5	100.0	0.6	98.7	2.5
Future World	3.2	0.1	100.0	0.7	99.1	2.6
Infrastructure Equity	5.3	0.2	100.5	0.4	94.7	2.8
Global Real Estate Equity	2.2	0.1	100.3	0.5	99.3	3.1
Specialist Equity Total	55.3	2.1	100.1	0.6	99.0	2.8
Multi-Asset						
Growth	183.9	6.9	99.0	0.4	87.7	2.7
Growth Plus (including was Consensus)	1,600.1	60.5	98.8	0.5	90.5	2.8
Multi Asset Total	1,784.0	67.4	98.8	0.5	90.2	2.7
Bonds						
Over 15 Year Gilts	21.4	0.8	100.9	-	99.4	1.9
All Stocks Index Linked Gilts	1.6	0.1	100.8	-	100.8	1.9
Investment grade corporate bond - All Stocks Index	3.4	0.1	98.8	0.3	55.4	2.4
Pre-Retirement (Annuity Target)	21.2	0.8	99.0	0.3	79.7	2.1

## Key

	Actual ITR above 2.0 degrees Celsius
	Actual ITR above 1.5 degrees Celsius

Fund	Value (£m)	Proportion of Total DC Section Assets (%)	Underlying holdings eligible for carbon reporting (%)	SBTi (%)	Implied Temperature Rise	
					Coverage (%)	Actual (°C)
Pre-Retirement Inflation Linked (Annuity Target)	100.1	3.8	99.2	0.2	85.9	2.0
Annuity Protection Index	5.6	0.2	101.2	-	100.8	1.9
Emerging Markets Debt	0.8	0.0	97.5	0.0	47.4	3.0
<b>Bonds Total</b>	<b>154.1</b>	<b>5.8</b>	<b>99.5</b>	<b>0.3</b>	<b>86.8</b>	<b>2.2</b>
<b>Cash</b>						
UK Money	157.7	6.0	70.7	0.1	8.1	2.5
<b>ESG / Sustainable Funds*</b>						
Future World Global Equity	0.3	0.0	98.7	0.6	97.4	2.8
Future World Developed (ex-UK) Equity	0.1	0.0	98.7	0.6	97.8	2.7
Future World UK Equity	0.1	0.0	99.0	0.6	94.0	2.4
Future World Emerging Markets Equity	0.1	0.0	98.6	0.3	94.2	3.0
Future World GBP Corporate Bonds	0.0	0.0	98.4	0.5	83.5	2.3
HSBC Islamic Global Equity**	1.6	0.1	99.9	-	97.0	2.0 - 3.0
<b>ESG / Sustainable Funds Total</b>	<b>2.2</b>	<b>0.1</b>	<b>98.6</b>	<b>0.3</b>	<b>94.2</b>	<b>2.2</b>
<b>Total</b>	<b>2,648.4</b>	<b>100.0</b>	<b>97.1</b>	<b>0.5</b>	<b>87.4</b>	<b>2.5</b>

Source: LGIM, 31 December 2023. "-" indicates where data not available due to eligibility or coverage criteria not being met. Rows highlighted in turquoise indicate the funds that are either popular arrangements in their own right or are underlying funds to the Lifecycles identified as popular arrangements.

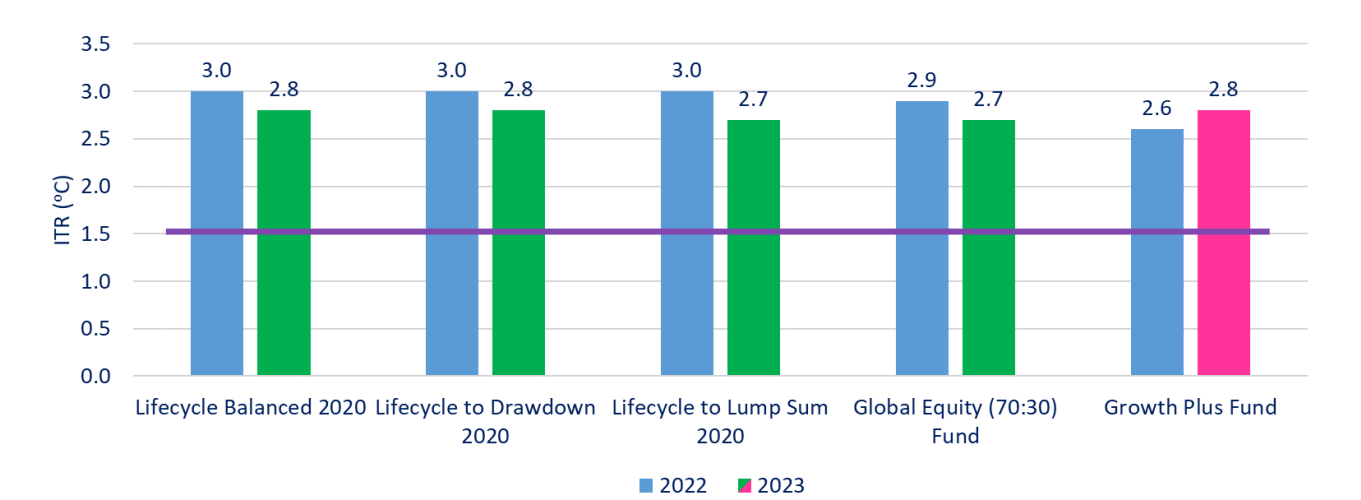
Please note that for most funds less than 100% of the underlying holdings are eligible for carbon reporting.

LGIM have confirmed for metrics to be reportable for each fund there are two criteria: (a) at least 50% of the underlying holdings are eligible for reporting and (b) coverage of those eligible assets is at least 60%. The funds highlighted in blue represent the funds which are part of or are underlying funds to the popular arrangement.

\*These funds were introduced into the self-select fund range in Q4 2022.

\*\* HSBC have disclosed an Implied Temperature rise range of 2 to 3 degrees Celsius rather than a precise estimate as provided by LGIM for their own funds. It should be noted that this range does not factor into the total metrics for ESG and Sustainable funds or the Plan funds as there was no allocation to the Islamic Global Equity Fund at 31 December 2023.

Comparison of Implied Temperature Rise for the popular arrangements within the DC Section



Please note: The blue bars show Implied Temperature Rise in degrees Celsius for the popular arrangements as at 31 December 2022. The purple line shows the temperature rise limit in line with the Paris Agreement which is 1.5 degrees Celsius.

Source: LGIM, 31 December 2023.  
LGIM have confirmed for metrics to be reportable for each fund there are two criteria: (a) at least 50% of the underlying holdings are eligible for reporting and (b) coverage of those eligible assets is at least 60%.  
Mercer has calculated aggregate metrics based on the underlying fund data provided by LGIM. Aggregated Implied Temperature Rise figures for the Lifecycle arrangements and the popular arrangements total are weighted averages of individual fund Implied Temperature Rise figures and account for relative investment size as well as coverage.

The figure above provides a prediction of the potential temperature rise over the rest of the century based on the activities of the companies and issuers within the popular arrangements. As at 31 December 2022, all popular arrangements exceeded the goal of the Paris Agreement to limit temperature rises to below 1.5°C.

## Disclaimer(s)

### Northern Trust

The DB Section carbon metrics data has been sourced from the IBM UK Investment Risk & Analytical Services ESG Insights: Climate Focus report provided by Northern Trust, the custodian of the DB Section assets. The information in the Northern Trust report has been prepared using the best available data. It may also contain information provided by third parties or derived from third party data and/or data that may have been categorised or otherwise reported based upon client direction – Northern Trust assume no responsibility for the accuracy, timeliness or completeness of any such information.

Data Source: Institutional Shareholder Services (ISS)

### LGIM

Data Source: Institutional Shareholder Services (ISS). Information is for recipients' internal use only.

Carbon Emissions Notes:

1. Carbon dioxide equivalent (CO<sub>2</sub>e) is a standard unit to compare the emissions of different greenhouse gases.
2. LGIM define 'Sovereigns' as, Agency, Government, Municipals, Strips and Treasury Bills and is calculated by using: the CO<sub>2</sub>e/GDP, Carbon Emissions Footprint uses: CO<sub>2</sub>e/Total Capital Stock.
3. Eligibility % represents the % of the securities in the benchmark which are eligible for reporting including equity, bonds, Exchange Traded Funds and sovereigns (real assets, private debt and derivatives are currently not included for carbon reporting). The Coverage % represents the coverage of those assets with carbon scores.
4. Derivatives including repurchase agreements are not presently included and the methodology is subject to change. Leveraged positions are not currently supported. In the instance a leveraged position distorts the coverage ratio over 100% then the coverage ratio will not be shown.
5. LGIM set the following threshold for reportable funds 1) the assets eligible for coverage e.g. eligible ratio needs to be greater than or equal to 50% and 2) the carbon coverage of the eligible assets e.g. eligible coverage needs to be greater than or equal to 60%.
6. Engagement figures do not include data on engagement activities with national or local governments, government related issuers, or similar international bodies with the power to issue debt securities.

There have been metrics changes over the year which are driven by the following reason:

- Bloomberg issuer tree update – Updated companies are mapped to subsidiaries.
- Cash coverage/ short dated bond coverage – LGIM started covering cash and short dated bonds.
- Impact of data year change – carbon data lags behind so it was based on 2020 in 2022 and 2021 in 2023 – because this is coming out of COVID years LGIM expects jumps for specific industries' carbon, such as airlines.
- Data changes from data vendors - for example emissions to water has been updated by sustainability to no longer include inorganic salts as an emission source to water (which reduced a lot of company emissions to water values).



## Cardano

The Trustee is required to consider an integrated assessment of the exposure of the Plans' assets, liabilities and employer covenant to at least two climate related scenarios (one of which must be low warming).

The covenant assessment completed by Cardano sets out a high-level assessment of the potential exposure of the Plan's employer covenant over three climate scenarios. Cardano's assessment is based on the IBM Group rather than the Plan's employer (IBM UK) given the integrated nature of the Group.

In preparing this covenant assessment, Cardano have relied on information from numerous sources, including governments, scientific journals and IBM (including the 2023 ESG Report). Cardano have not verified the accuracy of this information or attempted to include it in full in their covenant assessment document.

## Mercer

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## MSCI

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