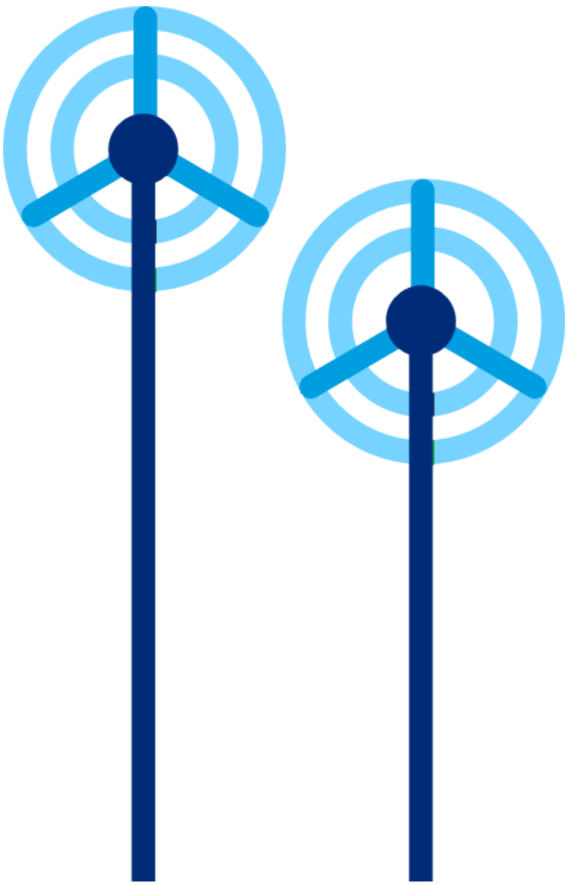
J.P. Morgan UK Pension Plan

Climate Change Report
July 2023

Contents



Executive Summary

Dear Members,

Welcome to our first climate change report. While this report is now a regulatory requirement, the Trustee believes that climate risk management is about more than "compliance". The Trustee views climate change as a risk to society, the economy and the financial system, and also recognises that the transition to a lower carbon world presents investment opportunities. With these risks and opportunities in mind, the Trustee is pleased to present the report. We summarise below some highlights.

Managing Climate Risks and Opportunities – Governance and Risk Management Highlights

The Trustee has a robust framework for managing climate risks and opportunities within the Plan, including setting clear expectations and responsibilities in relation to climate change. Some highlights of this activity are summarised below. You can find more on these topics in the Governance and Risk Management sections of this report.

Climate-related risks and opportunities are reviewed regularly at Trustee Board and Investment Committee meetings, and feature as a substantive part of the agenda in the annual meeting held with each investment manager to the Plan.

The Plan has implemented lower carbon funds within the Default Strategy and also makes these funds available on a Freestyle basis. This helps improve the resilience of the Plan to long term climate risks, as well as offering access to growth opportunities, such as in new technology and renewable energy.

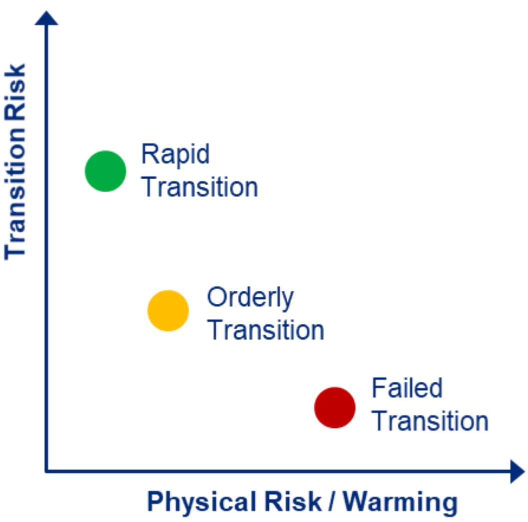
Whenever a new investment fund or manager is selected, a thorough assessment of how the manager integrates consideration of environmental, social, and governance (ESG) factors into the investment process and portfolio is made, including receipt of professional, independent advice on this matter.

The Trustee expects, and encourages, its investment managers to use stewardship (voting and engagement) to engage with investee companies on climate change and ESG topics. We report on this annually in the Implementation Statement, including details of significant votes on climate change.

Future Climate Scenarios – Potential Impact on the Plan

Climate change is uncertain and complex. Government policies, technological developments, and the actions of companies and consumers will all influence future climate scenarios. To make sure that the Plan is resilient to plausible future scenarios, the Trustee has assessed three possible outcomes:

- **Rapid Transition:** Average temperature increase of 1.5°C by 2100 (relative to pre-industrial average). This could be driven by an acceleration of government policy changes, or unexpected developments in technology.
- **Orderly Transition:** Average temperature increase of less than 2.0°C by 2100. This assumes governments and wider society act in a co-ordinated way to decarbonise.
- **Failed Transition:** Average temperature increase above 4°C by 2100. This assumes the world fails to co-ordinate a transition to a low carbon economy. Physical climate impacts significantly reduce economic productivity and have increasingly negative impacts.



You can find the results of the scenario analysis, in terms of the potential impact on future investment returns, in the Strategy Section.

Climate Metrics

Climate metrics (such as carbon emissions, carbon footprint, the implied temperature increase from a portfolio, or the proportion of companies in a fund that have set science based climate targets) have two important roles.

- Firstly, by considering metrics for individual investment funds, they can help to identify climate risks and opportunities. For example, by highlighting funds that have a relatively high carbon footprint.
- Secondly, metrics are useful in charting the progress of the Plan's investments in aggregate.

The metrics used all have their pros and cons, and data standards (and availability) are still developing. However, the Trustee has set out in the Metrics and Targets Section details of these metrics.

Under the regulations, the Trustee is required to set a target based on one of the metrics disclosed in this report.

The Plan's Climate Target

Setting a target for a Plan like ours is challenging, as the assets are invested in pooled funds where the Trustee does not have direct control of the investments.

We have chosen to set a target linked to the "Science Based Targets" initiative (SBTi). The rationale for this is:

Independence

The SBTi s an independent body that is a collaboration between the World Resources Institute, the Carbon Disclosure Project, the World Wide Fund for Nature and the UN Global Compact. Its independence means data is not subject to individual investment manager assumptions or judgments.

Grounded in science

Targets are classed as 'science-based' if they are in line with what the latest climate science considers to be necessary to meet the goals of the Paris Agreement – limiting global warming to well-below 2℃ above pre-industrial levels and pursuing efforts to limit this to 1.5℃.

Forward-looking

The forward looking, long term nature of SBTs provide a clear direction of travel (rather than focusing on historical emissions) and assist the Trustee in assessing the risks and opportunities associated with the transition to a lower carbon world.

The Trustee has set a target for all relevant funds to achieve SBTi metric of 65% or higher by 2030, and is pleased to report that good progress has been made over the year to 31 December 2022. You can read more about the target, and our progress against the target, in the Targets Section.

What's Next?

This report will be prepared annually, and published in the public domain. The Trustee welcomes feedback from members and looks forward to sharing ongoing reporting on climate risks and opportunities, alongside the range of other communications material available to members.

Section 1
Introduction

Dear Members,

Welcome to the Plan's first climate change report, which has been prepared in line with the recommendations of the Task Force on Climate-related Financial Disclosures ("TCFD") and the statutory requirements prescribed by the Department of Work and Pensions[1].

The Trustee of the Plan has a legal fiduciary responsibility to invest the Plan's assets appropriately. As part of this responsibility, the Trustee recognises climate change as a risk that could impact the financial security of members' benefits if it is not properly measured and managed. The Trustee also recognises that climate change presents an opportunity, by investing in companies or assets that are expected to perform well in an economy that is positioned to address the challenges associated with climate change.

The Trustee's assessment of climate-related risks and opportunities has been carried out based on information that is currently available, both in terms of data from the companies and assets in which the Plan invests and in consideration of the different potential global warming scenarios we have analysed. This information is subject to change as climate change reporting improves.

Climate change is one risk amongst many that the Trustee measures, monitors and manages. To this extent, climate change needs to be considered alongside these other risks in a balanced and proportionate way. The Plan will therefore continue to invest in companies where there is a sufficiently attractive investment case and the investment manager believes there is an opportunity to engage and influence change in the behaviour and actions of a company.

[1] The Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 and the Occupational Pension Schemes (Climate Change Governance and Reporting) (Miscellaneous Provisions and Amendments) Regulations 2022

This report has been split into several sections:

Governance: How the Trustee incorporates climate change into its decision making.

Strategy: How potential climate warming scenarios could impact the Plan, and how assessment of climate change has influenced the investment strategy.

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.

The final section sets out the methodology and assumptions used to produce the information contained in this report.

Members are encouraged to contact us if there are comments you wish to raise. You can contact the Plan administrator through a range of channels:

Online (current employees): me@jpmc > Retirement Savings > My Pension

Online (former employees): you can access MyPension by using your User ID and password (which was sent to your home address when you left J.P. Morgan) at: https://epa.towerswatson.com/accounts/jpmc.

Email: jpmukpension@willistowerswatson.com

Phone: Dedicated helpline: 01737 227589 (Monday to Friday, 9am to 5pm)

Chair, J.P. Morgan UK Pension Plan

Section 2
Governance

Introduction

The Trustee has ultimate responsibility for ensuring effective governance of climate-related risks and opportunities. The Trustee maintains a Statement of Investment Principles (“SIP”), which details the Plan’s investment objectives, policies, and our approach to risk management. The SIP also sets out how the Trustee considers ESG factors, including climate change, as part of its investment decision making. The SIP is reviewed annually, or following a significant change in investment policy. The Trustee also maintains a Responsible Investment “Three Pillar” Policy with further details of the Trustee’s approach to responsible investment.

The Trustee’s key beliefs on ESG and climate change, as stated in the SIP, are:

- ESG factors can have a material impact on investment risk and return outcomes.
- Good stewardship (use of voting and engagement) can create and preserve value for companies and markets as a whole.
- Long-term sustainability issues, including climate change, present risks and opportunities that increasingly may require explicit consideration.

These beliefs cover the entire fund range including the investments used within the Plan’s Default Investment Option.

Roles of those undertaking Plan governance activities

The Trustee

The Trustee maintains oversight of climate related risks and opportunities by:

- Ensuring Trustee Directors have sufficient knowledge and understanding of climate change.

- Implementing effective climate governance, and ensuring that these arrangements remain appropriate and effective.
- Identifying and assessing climate-related risks and incorporating these in the Plan's Risk Register, along with appropriate controls.
- Ensuring that the Plan's professional advisers have clearly defined responsibilities in respect of climate change, and are competent to advise on such matters.
- Setting strategic objectives for the investment adviser, and reviewing annually performance against these objectives. This activity takes place primarily through the Investment Committee (see below) but is also considered by the Trustee Board annually.
- Communicating with Plan members and other stakeholders on climate change where appropriate, including public reporting (for example, the publication of the Chair's Statement, Implementation Statement, and SIP).

The Trustee has also reviewed the roles of others undertaking Plan governance activities, in particular the Investment Committee that has been established, and its delegated authorities.

The Investment Committee

The Investment Committee's role includes the following in relation to climate change:

- Incorporating climate-related considerations into strategic decisions relating to the investments, including both within the Default Option and the Freestyle fund range.
- Ensuring that the Plan's investment managers are managing climate-related risks and opportunities in relation to the Plan's investments, and have appropriate processes, expertise and resources to do this effectively.
- Meeting at least annually with each investment manager to discuss the Plan's investments. These meetings include discussions regarding the integration of ESG considerations, and climate change specifically in the investment manager's process and portfolio.
- Selecting and regularly reviewing metrics to inform the identification, assessment and management of climate-related risks and opportunities, and setting and monitoring targets to improve these metrics over time where appropriate.
- Working with advisers to identify new and emerging risks in relation to climate change.

Roles of advisers and investment managers

The Trustee has appointed advisers to support the effective running of the Plan. The advisers include investment, governance, legal, and communications advisers. Most relevant in the context of climate change is the role of the investment adviser, details of which are summarised below.

Investment Adviser

- Advises on investment arrangements, including the Default Option, taking into account climate risk, supported through the provision of climate scenario analysis.
- Advises on the choice of climate-related metrics and targets.
- Advises on investment manager selection, taking into account the Trustee's objectives, responsible investment beliefs, and climate-related considerations.

- Supports the Trustee with stewardship activities, which may be related to climate change, such as monitoring and reporting on voting and engagement activities of the invested assets, and assisting with the preparation of the annual Implementation Statement.
- Advises on the preparation of the SIP.
- Monitors investment managers through the use of ESG ratings and relevant climate-related targets.
- Liaises with investment managers and other professional advisers to provide training to the Trustee and Investment Committee on climate change, as appropriate.
- Assists the Trustee in producing the annual TCFD report.

Investment Managers

The Trustee invests in pooled funds and has delegated day to day management of the assets to its underlying investment managers. The selected managers have discretion – within the mandate terms – to evaluate ESG factors, including climate change considerations and exercising voting rights and stewardship obligations attached to the investments. The Trustee expects the investment managers to undertake the following activities relating to climate change:

- Identify, assess, and manage climate-related risks and opportunities in relation to Plan investments.
- Exercise rights (including voting rights) attached to Plan investments, and undertake engagement activities in respect of those investments, in relation to climate-related risks and opportunities that seeks to improve long-term financial outcomes for members.
- Report on stewardship activities and outcomes in relation to Plan investments.
- Provide information to the Trustee and its advisers on climate-related metrics, as agreed from time to time, and use its influence with investee companies and other parties to improve the quality and availability of these metrics over time

Assessment of Advisers and Investment Managers: The Trustee expects advisers and investment managers to act with integrity and diligence in fulfilling the set objectives, and uses meetings with these parties to assess and challenge them. Where relevant, this includes discussion of the steps taken to identify and assess any climate-related risks and opportunities.

The approach of the investment consultant to climate change and how it is integrated into its advice and services is assessed as part of the annual adviser monitoring process. The Trustee sets its investment adviser strategic objectives, including objectives related to ESG and climate change competency. The investment adviser is formally assessed against these objectives annually.

Time and resources spent on climate change-related matters

The Chair of the Trustee Board, with support from the Chair of the Investment Committee, is responsible for ensuring that sufficient time is allocated for consideration and discussion of climate matters by the Trustee and its advisers. The Trustee Board and Investment Committee, as part of the regular meeting schedule, will allocate agenda time to climate change topics, amongst other ESG matters.

Climate change will form an explicit agenda item at least annually for the Trustee and the Investment Committee when the Trustee's annual TCFD report is prepared. It will also be covered as part of other agenda items as part of a wider discussion of investment strategy, or as part of the investment manager selection and review discussions. The Trustee is satisfied that the amount of governance time spent is reasonable and will allocate more time at future meetings if any analysis or wider industry research requires additional Trustee review and consideration.

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

- Climate change training session (minimum frequency = annual)
- Scenario analysis – modelling the relevant investment strategies (minimum frequency = first year of TCFD reporting, and every 3 years thereafter. While this is the minimum frequency, this work will also be carried out whenever the Trustee is considering strategy changes to the investment arrangements. In particular, the Trustee will review the appropriateness of undertaking scenario analysis in light of material data availability changes and / or material changes in investment strategy as appropriate)
- Metrics data collection (minimum frequency = annual)
- Target setting / target appropriateness review (minimum frequency = annual)
- Progress against target assessment (minimum frequency = annual)
- ESG beliefs (including climate change) update / review (minimum frequency = triennial)
- Review of manager ESG ratings (minimum frequency = quarterly)
- Stewardship, covered as part of the Trustee's annual Implementation Statement (minimum frequency = annual)
- Risk register review (minimum frequency = annual for full review, quarterly for monitoring existing risks and controls)
- Drafting annual TCFD report (minimum frequency = annual)

Training

During the year to 31 December 2022, the Trustee received training from the Investment Adviser, covering climate-related investment risks and reporting requirements in line with the TCFD recommendations. This training session took place on 30 November 2022, and built on climate change training sessions completed on 23 March 2021 and 23 June 2020.

The Investment Committee also received training on climate change and TCFD (with a specific, detailed focus on strategy and metrics) as part of discussions on climate change at both of its Strategic Investment Committee meetings in 2022 (26 April and 11 October 2022). This was in addition to investment manager-specific discussions at the four Manager Monitoring Investment Committee meetings during the year.

Strategy

As a long-term investor, the Trustee recognises the risks and opportunities arising from climate change are diverse and continuously evolving. In relation to climate-related risks, the Trustee believes it is important to understand how the Plan's exposure to these risks may change over time, when the risk exposure may be greatest and what actions can be taken now, or in the future, to avoid those risks becoming financially material.

To help with this assessment, the Trustee has defined short, medium, and long-term time horizons for the Plan as set out below.

Short Term	Medium Term	Long Term
3 years	20 years	40 years
Aligned with the frequency of the Plan's triennial Default Investment Option review.	The approximate term to retirement of an average age member. It also links to the move from the Initial Growth to Mid Growth Portfolio within the Default Option, which takes place at age 40 (normal retirement age is age 60).	Reflects the expected term to retirement for a young member / new graduate starter.

The Trustee acknowledges that climate change risks include both **transition risks** (such as those relating to changes in government policies, and technology developments. These factors bring risks of investment market re-pricing) and **physical risks** (for example risks arising from both gradual changes in climate conditions and extreme weather events).

The Trustee has considered the following short, medium and long-term drivers of risk in relation to climate change:

- **Over the short term (out to 3 years),** risks may present themselves through rapid investment market re-pricing relating to climate transition as:
  - Market awareness grows. For example, the cost and impacts of the transition to a lower carbon economy suddenly influence market pricing.

- Scenario pathways become clearer. For example a change in the likelihood of a well below 2°C warming scenario occurring (i.e. an increase in probability would be expected to drive additional transition risk).
- Policy changes unexpectedly surprise markets. For example, if a carbon price or significant regulatory requirement was introduced across key markets to which the portfolio is exposed, at a sufficiently high price to impact behaviour.
- Market sentiment is shocked. For example, falls in markets could create a downward spiral where economic sentiment worsens and asset values fall.
- Perceived or real increased pricing of greenhouse gas emissions/carbon.
- Substitution of existing products and services with lower emission alternatives, which may impact part of investment portfolios.
- Litigation risk relating to dangerous warming becoming more prevalent.
- Increases in the energy / heat efficiency of buildings and infrastructure.

As well as risks associated with these drivers, there could also be opportunities. For example, investing in climate solutions as policy support strengthens.

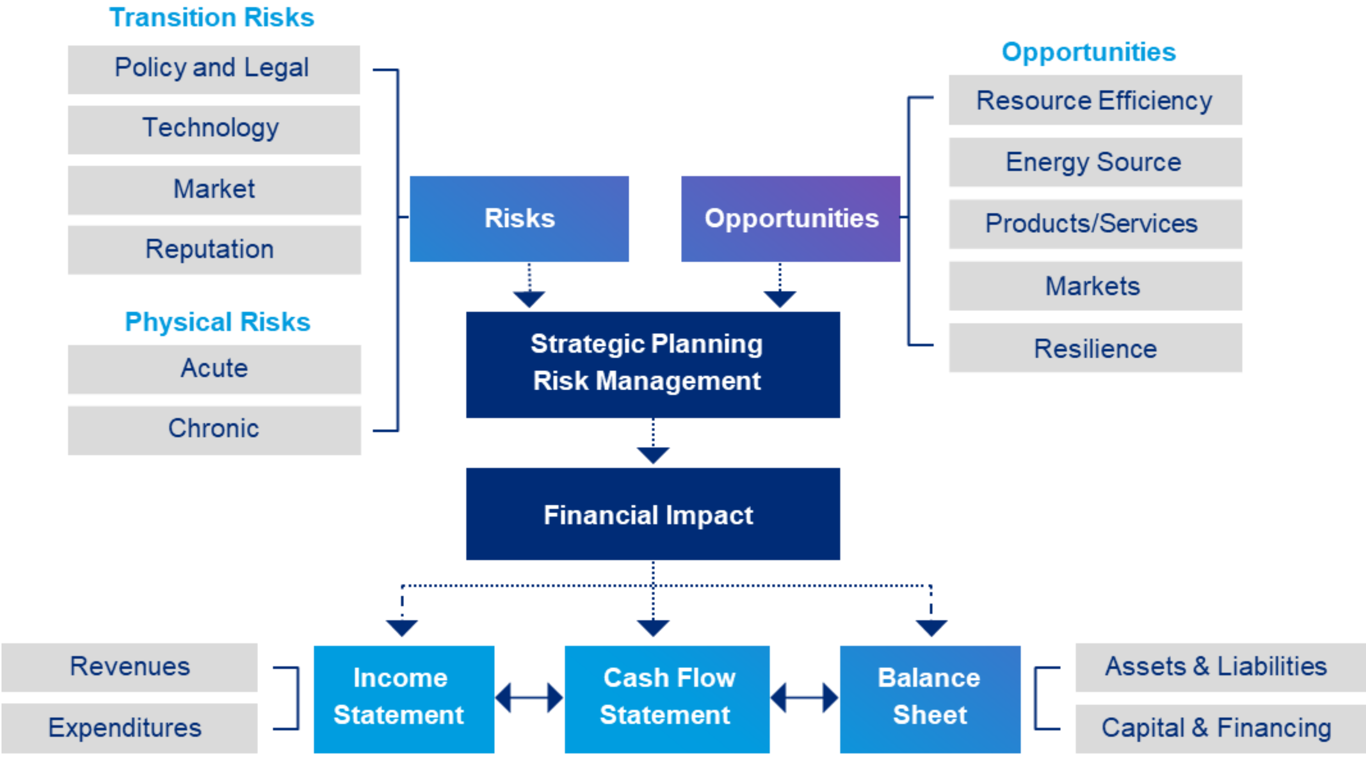
The Trustee's ability to understand these short-term changes can positon the Plan favourably, for example taking advantage of the climate transition by avoiding and reducing investment in high-emitting carbon sensitive businesses / assets that do not have a business plan that supports the transition to a low carbon economy.

- **Over the medium term (out to 20 years),** risks are likely to be more balanced reflecting both transition and physical risk. Over this time period the transition pathway will unfold and the level of anticipated physical damage may become much clearer. While the full extent of the physical damage is unlikely to have occurred markets are likely to be allowing for it to a large degree in asset pricing.

  The Trustee's ability to understand these changes and evolve the portfolio as the pathway develops should help to control risk and potentially enhance returns. The Trustee seeks to select managers and choose investments that can identify potential emergence of low carbon opportunities and the decline of some traditional sectors.

- **Over the long term (by the 40 year point and beyond),** physical risks are expected to come to the fore. This includes the impact of natural catastrophes leading to physical damages through extreme weather events. Availability of resources is expected to become more important if changes in weather patterns (e.g. temperature or precipitation) affect the availability of natural resources such as water. The impact of global heating on productivity, particularly in areas closer to the equator, will also be a key driver.

Summary of Climate Risk Types and Opportunities



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

Climate-related risks and opportunities relevant to the Plan

Having taken into account the Plan's "popular arrangements", as set out in the Technical Appendix, the following risks and opportunities have been identified:

- Over the short term, the Trustee has identified the inter-related risk of climate transition risk and asset repricing risk as being most relevant. Over this time period opportunities are most likely to occur in transition related investment such as climate solutions. The Trustee has taken steps to integrate within the Plan funds offering access to such opportunities.
- Over the medium term, the Trustee has concluded that both transition risk and physical risk (particularly in the form of asset repricing to allow for future physical damage) could be material.
- Over the long term, the Trustee has identified physical risk as the key driver of climate-related risk.

The Trustee has investigated the potential impacts of these risks and opportunities in the scenario analysis that follows.

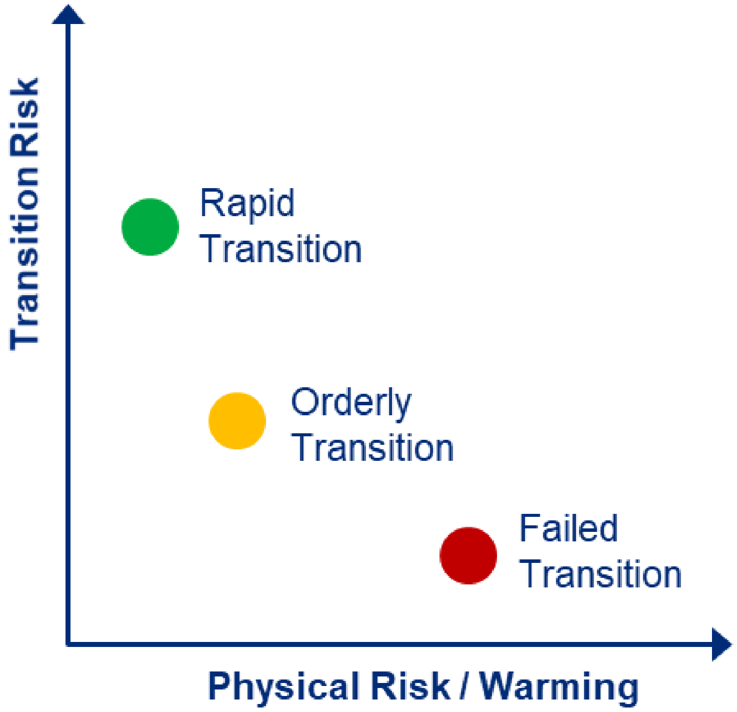
Testing the resilience of the Plan's investments

Scenario analysis

The Trustee has undertaken climate scenario analysis to test the resilience of the investment strategy adopted by the Trustee. Quantitative climate change scenario analysis has been undertaken on the Trustee's popular arrangements in order to assess the potential implications of climate change under three modelled scenarios; a Rapid Transition (1.5°C), an Orderly Transition (less than 2°C) and a Failed Transition (greater than 4°C). The analysis is based on scenarios developed by Mercer working with Ortec Finance.

Summary of Scenarios Considered

- **Rapid Transition:** Average temperature increase of 1.5°C by 2100 (relative to pre-industrial average). This assumes sudden downward re-pricing across assets by 2025. This could be driven by a change in policy, consideration of stranded assets or expected costs. The shock is partially sentiment-driven and so is followed by a partial recovery. Physical damages are most limited in this scenario.
- **Orderly Transition:** Average temperature increase of less than 2.0°C by 2100. Governments and wider society act in a co-ordinated way to decarbonise and to limit global warming to well below 2°C. Transition impacts do occur but are relatively muted.



Source: Mercer

- **Failed Transition:** Average temperature increase above 4°C by 2100. The world fails to co-ordinate a transition to a low carbon economy. Physical climate impacts significantly reduce economic productivity and have increasingly negative impacts including from extreme weather events. These are reflected in re-pricing events in the late 2020s and late 2030s.

In designing scenario analysis a fundamental decision is whether to assume that any climate impacts are priced in today. The analysis in this report is expressed relative to a 'climate-informed' baseline[2]; the implication is that all return impacts are presented in terms of how they are different to what we are assuming is priced in today.

Further detail on climate scenario narratives, including modelling limitations, is included in the Technical Appendix.

Scenario Analysis Results

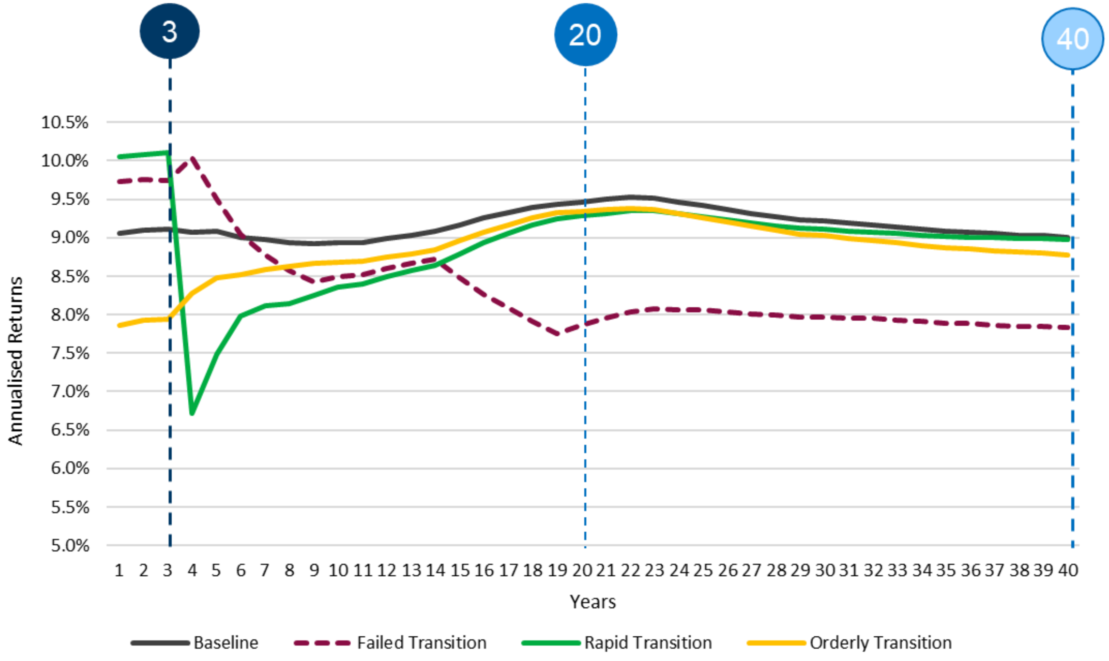
The charts and tables on the following pages represent the output of the quantitative analysis of the popular arrangements. The charts represent projections of annualised returns over a period of up to 40 years. Projections do not include the impact of future contributions, in order that the output can focus specifically on climate impacts. Further detail on the underlying asset allocations and limitations associated with climate scenario analysis are set out in the Technical Appendix.

[2] The baseline represents what we are assuming the market is currently pricing in. The baseline includes a 10% weight to a **Failed Transition**, 40% weight to an **Orderly Transition**, 10% to a **Rapid Transition** and 40% to a range of **low impact scenarios**.

Default Investment Strategy

In the charts below, the climate scenario analysis for the funds used with the Default Strategy is shown. These funds are also available on a Freestyle basis, and are used in the Plan's other lifestyle investment options. The lifestyle "glidepath" in its entirety is also shown.

Initial Growth Portfolio



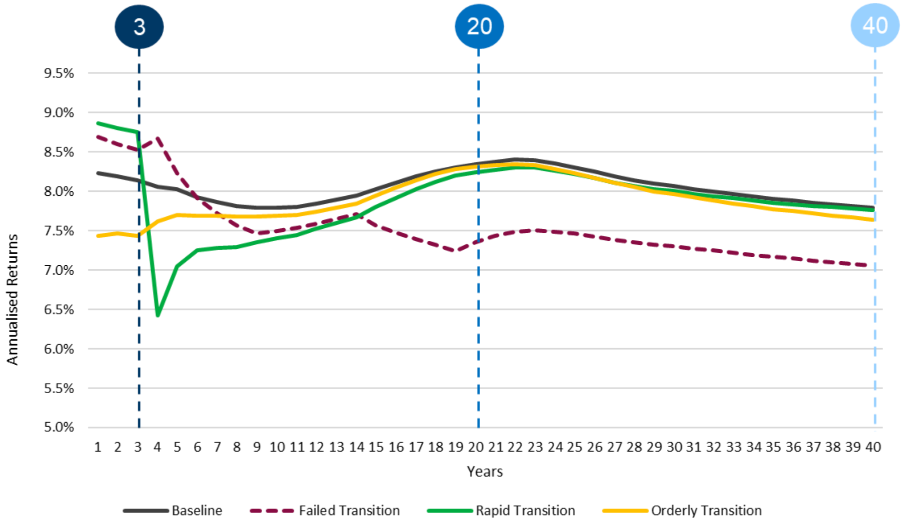
Key points at different time frames

3 **Short term:** Transition risk dominates. Relative to the baseline (black line) an orderly transition is the most impactful – under this scenario returns are reduced by c1% p.a. A failed transition is perhaps surprisingly marginally positive due to transition costs not materialising. A rapid transition is expected to become sharply negative in year 4 – driven by a sudden change in policies and hence greater economic costs.

20 **Medium term:** As longer term physical damages begin to be priced in, a failed transition becomes the most impactful scenario. This is estimated to cause a reduction in annualised return of around 1.6%.

40 **Long term:** Physical damage is the dominant driver and a failed transition is the worst scenario. Such an outcome causes a reduction in annualised return of around 1.2%. In addition, we see some additional warming and hence damage in the orderly transition (compared to the rapid transition) meaning it becomes a marginally more negative scenario – albeit the orderly and rapid scenarios are not materially different from the baseline.

Mid Growth Portfolio



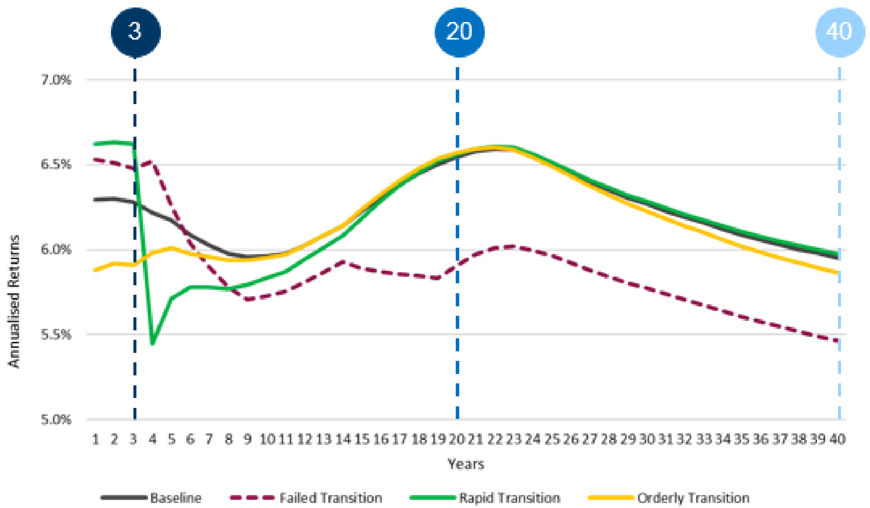
Key points at different time frames

3 **Short term:** Very similar patterns emerge as for the Initial Growth Portfolio. Again, transition risk dominates. An orderly transition is the most impactful scenario, reducing returns by c0.7% p.a. A failed transition is marginally positive due to transition costs not materialising. Again, the rapid transition prompts a market shock in year 4 – this could of course occur earlier or later around this window.

20 **Medium term:** As longer term physical damages begin to be priced in, a failed transition becomes the most impactful scenario, causing a reduction in annualised return of around 1% p.a.

40 **Long term:** physical damages are the dominant driver and the failed transition again the worst scenario, causing a reduction in return of c0.7% p.a. In addition, we see the additional warming and hence damage in the orderly transition (compared to a rapid transition) meaning it becomes a slightly more negative scenario. Typically however, we would not expect members to be invested in this portfolio for 40 years.

Flexible Portfolio



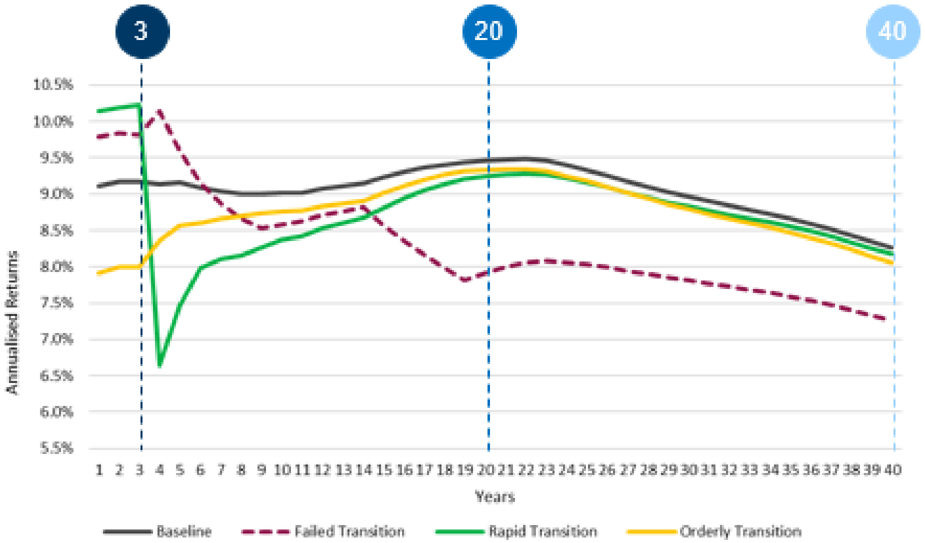
Key points at different time frames

3 **Short term:** transition risk dominates though relative to the Initial and Mid Growth portfolios, the return impact is less significant due to the higher allocation to fixed income and cash in the Flexible Portfolio (these asset classes have less exposure to higher climate risk sectors than equities / diversified growth funds). An orderly transition is the most impactful, with returns reduced by 0.4% p.a. The rapid transition risk again emerges in year 4.

20 **Medium term:** As physical damages begin to be priced in, the failed transition becomes the most impactful scenario, causing a reduction in return of c 0.6% p.a.

40 **Long term:** physical damages are the dominant driver and a failed transition is the worst scenario, causing a reduction in annualised return of c. 0.5% p.a. It would generally be unusual for a member to be invested in this strategy for 40 years, though it is possible if they maintained the holding into retirement and drawdown.

Flexible Pathway (Default Strategy – a lifestyle arrangement)



Key points at different time frames

3 **Short term:** Very similar patterns emerge as for the individual funds within the Default Strategy. Again, transition risk dominates and the orderly and rapid transition scenarios are the more negative scenarios, whereas a failed transition is marginally positive due to transition costs not materialising.

20 **Medium term:** As longer term physical damages begin to be priced in, a failed transition becomes the most impactful scenario, causing a reduction in annualised return. Given that elements of the rapid and orderly transition scenarios are already considered to be "priced in" to markets, these outcomes have a less significant impact relative to the baseline.

40 **Long term:** Physical damages are the dominant driver and the failed transition is the worst scenario. Such a scenario is estimated to cause a reduction in return of around 1.0% p.a. relative to the baseline.

Other Popular Arrangements

For the Plan's other popular arrangements, and to illustrate potential return impacts "in numbers", the analysis is presented in tables that show the cumulative impact on returns of the three climate scenarios compared to their respective baseline, on the asset allocation modelled.

For completeness, we also show the funds referenced on the previous pages in the tables in order to present the results in a consistent format.

Popular Arrangements invested in a single asset class

	Rapid Transition – impact on cumulative investment return			Orderly Transition – impact on cumulative investment return			Failed Transition – impact on cumulative investment return		
	Year 3	Year 20	Year 40	Year 3	Year 20	Year 40	Year 3	Year 20	Year 40
LGIM UK Equity (5% Capped) Index	3.3%	-5.2%	-3.3%	-3.1%	-2.4%	-7.0%	1.7%	-21.0%	-30.6%
JPMAM UK Dynamic	3.3%	-5.2%	-3.3%	-3.1%	-2.4%	-7.0%	1.7%	-21.0%	-30.6%
LGIM Global Equity Fixed Weight (30:70) Index	3.1%	-7.1%	-5.5%	-3.5%	-3.1%	-8.8%	2.0%	-24.2%	-34.0%
Baillie Gifford Paris Aligned Global Alpha Fund	2.4%	-1.0%	1.3%	-2.9%	-1.8%	-7.5%	1.6%	-26.8%	-37.0%
Sustainable Global Equity Portfolio	2.2%	2.5%	5.3%	-2.6%	-0.8%	-6.4%	1.4%	-28.2%	-38.2%
LGIM North America Equity Index	3.2%	-8.3%	-6.2%	-4.0%	-4.9%	-11.9%	2.4%	-25.4%	-36.0%
LGIM Europe (ex UK) Equity Index	3.2%	-8.0%	-6.6%	-2.9%	-1.4%	-6.2%	1.5%	-25.2%	-33.8%
LGIM Asia Pacific (ex Japan) Developed Equity Index	3.9%	-8.4%	-7.2%	-3.3%	-2.3%	-8.7%	1.6%	-30.9%	-40.7%
LGIM World Emerging Market Equity Index	4.9%	-7.2%	-5.5%	-2.7%	-1.3%	-7.5%	0.9%	-31.6%	-42.0%
LGIM Pre-Retirement	0.3%	-1.2%	-1.3%	-0.6%	0.7%	-0.6%	0.4%	-1.6%	-1.0%
JPMAM UK Liquidity	0.1%	2.2%	1.9%	0.1%	2.0%	-0.9%	-0.1%	-2.7%	-5.5%

Popular Arrangements invested in a multiple asset classes

	Rapid Transition – impact on cumulative investment return			Orderly Transition – impact on cumulative investment return			Failed Transition – impact on cumulative investment return		
	Year 3	Year 20	Year 40	Year 3	Year 20	Year 40	Year 3	Year 20	Year 40
Baillie Gifford Managed	2.8%	-5.4%	-4.2%	-2.6%	-1.9%	-7.2%	1.4%	-21.5%	-30.2%
LGIM Diversified	1.6%	-1.7%	-0.8%	-1.7%	-0.4%	-5.1%	0.9%	-16.5%	-23.7%
Annuity Portfolio	0.2%	-0.4%	-0.5%	-0.4%	1.0%	-0.7%	0.3%	-1.9%	-2.1%

Funds used in the Default Strategy

	Rapid Transition – impact on cumulative investment return			Orderly Transition – impact on cumulative investment return			Failed Transition – impact on cumulative investment return		
	Year 3	Year 20	Year 40	Year 3	Year 20	Year 40	Year 3	Year 20	Year 40
Initial Growth Portfolio	2.8%	-3.3%	-1.4%	-3.2%	-2.3%	-8.1%	1.8%	-25.6%	-35.3%
Mid Growth Portfolio	1.7%	-2.0%	-1.1%	-1.9%	-0.7%	-5.5%	1.1%	-16.9%	-24.1%
Flexible Portfolio	1.0%	0.3%	0.9%	-1.0%	0.5%	-3.3%	0.6%	-11.3%	-16.9%

Scenario Analysis Findings

In light of the above quantitative analysis, the Trustee notes the following findings:

Short Term (3 years)	Over the short term, transition risk dominates with the Rapid Transition having the biggest impact. An initial fall in asset returns (relative to baseline) is driven by a transition shock impacting the economy and investment markets causing losses. This could be driven by unprecedented policy action, with markets initially overreacting before partially recovering. The actual timing of any shock or recovery is uncertain. Given the short term nature of these risks, members close to retirement and intending to divest their Plan savings may be expected to be more exposed to these risks than younger savers.
Medium Term (20 years)	Over the medium term, transition risk and physical risk are both factors. The impact of transition risks under the Rapid Transition and physical risks under the Failed Transition are broadly similar. Members in the switching phase between the Initial Growth and Mid Growth Portfolios in the Default Option may be particularly affected by these risks. This is why the Trustee has sought to integrate climate change risk and opportunity management within the Default Option, to improve the resilience of the arrangements.
Long Term (40 years +)	Over the long term, physical impacts become significant, with the Failed Transition resulting in significant falls in asset value relative to the baseline. The Plan’s younger members are expected to be the most exposed to these risks, along with being potentially able to benefit from the long term investment opportunities associated with technology developments.

The analysis has led to the following findings and actions being taken forward:

1. **Over the long term, a successful transition is imperative:** a successful transition leads to enhanced projected returns when compared to scenarios associated with higher temperature outcomes. This is largely driven by lower physical damages.

2. **Sustainable allocations can protect against transition risks:** this reinforces the steps the Trustee has taken to integrate consideration of climate risk and opportunity management in the investment arrangements – for example, using certain lower carbon global equity index funds and other sustainable opportunities within the Default Strategy and Freestyle range, and considering the ESG ratings provided by the investment adviser when selecting and reviewing investment managers. The Trustee will continue to seek opportunities to further enhance this, taking into account overall risk and return considerations and suitability for the Plan’s membership profile.

3. **Sector exposure is important:** differences in return impact are most visible at an industry-sector level, with significant divergence between scenarios. Oil and gas, certain utilities, and renewable energy sectors are most impacted by the transition. This forms a useful discussion point for the Trustee when meeting with investment managers.

4. **Awareness of future shocks:** As markets react to new information because of the changing physical environment and government policies, investors may be vulnerable to short, sharp shocks. Understanding the potential impact that such repricing events can have on investments ahead of time helps the Trustee to understand and manage this risk.

Section 3

Risk Management

A key part of the Trustee's role is to understand and manage risks that could have a financially material impact on the Plan's investments. Climate change is one of the risks that the Trustee considers alongside other financially material risks that may impact outcomes for members.

This section summarises the primary climate-related risk management processes and activities of the Trustee. These help the Trustee to understand the materiality of climate-related risks, both in absolute terms and relative to other risks that the Plan is exposed to. The Trustee prioritises the management of risks based on their potential impact on members' benefit outcomes.

Risk Governance

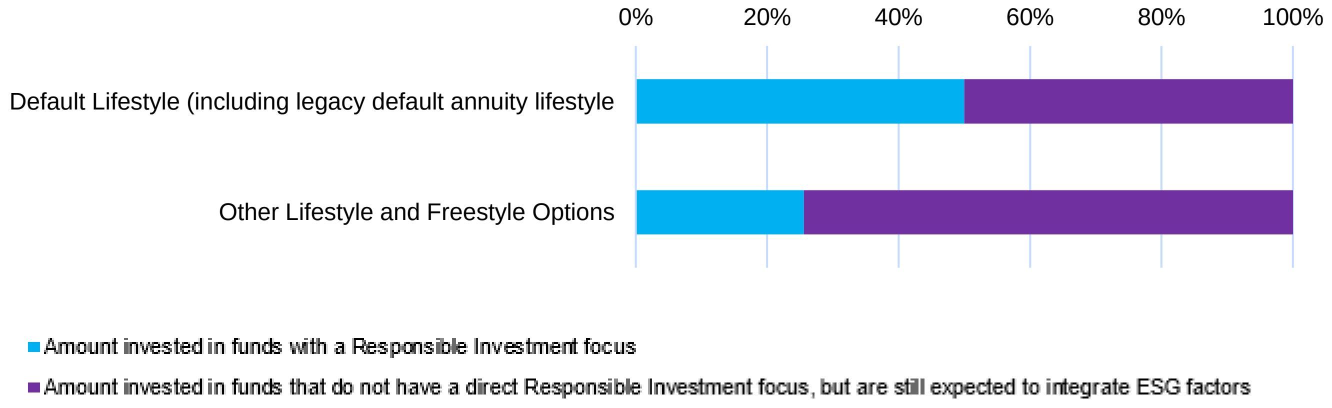
- The Trustee's SIP is reviewed annually and sets out how investment climate-related risks are managed and monitored.
- The Trustee maintains a risk register which includes sustainability risks, with explicit consideration of climate risks, in order to monitor and mitigate financially material risks. The Trustee Board Chair and each of the Committee Chairs undertake an annual detailed review of the risk register (during the Plan year, this meeting took place in January 2022). Within this review, there is an assessment of the coverage and resilience of the Plan's controls. The results of the review are presented to the full Trustee Board and any updates to the risk register are incorporated. Outside of the annual review, the risk register, including the climate related risks, are also reviewed at each of the quarterly Investment Committee Monitoring meetings.
- As outlined in the Governance section, the Trustee will receive training from time-to-time on climate-related issues. The training allows the Trustee to challenge whether the risks and opportunities are effectively allowed for in its governance processes and wider activities, and to be able to challenge its advisers to ensure the governance support and advice adequately covers the consideration of climate-related risks and opportunities. This process also affords the Trustee an opportunity to identify new and emerging risks related to climate change.

- Analysis of the extent to which ESG factors are integrated into investment decision making at the portfolio level is undertaken by the Trustee by monitoring the ESG ratings provided by Mercer, the Plan's investment adviser. This monitoring takes place on a quarterly basis, with more extensive annual reviews when each of the Plan's investment managers attend their scheduled Investment Committee meeting.

Risk and Strategy

- The Plan's advisers will take climate-related risks and opportunities into account as part of the wider strategic investment advice provided to the Trustee and its Committees. This includes highlighting any expected change in climate-risk exposure when asset allocation or investment manager changes are proposed, both from the top-down level (via climate scenario analysis) and bottom-up (via climate-related metrics and consideration of ESG ratings).
- The Trustee believes that good stewardship and ESG issues may have a material impact on investment risk and return outcomes and will therefore be considered as part of the Plan's investment process. The Trustee also recognises that long-term sustainability issues, particularly climate change, present risks and opportunities that require explicit consideration. When setting investment strategy, ESG factors, including climate change, will be considered alongside a number of other factors that can influence investment strategy.
- Climate scenario analysis will be reviewed at least triennially. The Investment Committee has also established a process whereby prior to any future proposed investment strategy changes, climate scenario analysis will be prepared in order to test the resilience of the strategy both "pre and post" the proposed changes. Climate scenario analysis is the primary tool to help the Trustee to understand the materiality of climate-related risks that could impact the Plan over time.
- The Trustee has implemented a number of responsible investment funds (all of which include climate change risk management approaches) within the Plan's investment strategy, both within the Default Option and the Freestyle fund range. A range of approaches are in place, including funds focused on investments that make a positive impact on the environment and society, funds focused on carbon reduction, and funds with certain exclusions embedded in their investment guidelines – or a combination of all of these approaches. These funds typically also embed strong stewardship principles (voting and engagement). The Trustee encourages the Plan's investment managers to seek out new investment opportunities in companies that are moving towards more sustainable business practices, products and services. We are pleased to have been able to influence and / or accelerate the development of new pooled fund investment opportunities available to members.
- The chart below summarises the Plan's holdings in funds offered as part of the Trustee's commitment to offering funds that follow a Responsible Investment approach across its Default Option and Freestyle investment options at 31 December 2022.

Allocation of investments to funds with a dedicated Responsible Investment outlook



Risk Reporting

- The Trustee receives annual reports of climate-related metrics and will monitor progress against targets established for the Plan. The Investment Committee also uses this information to engage with the investment managers.
- The Trustee receives a voting and engagement activity summary on an annual basis as part of the preparation of the Implementation Statement. The statement summarises how the investment managers vote and engage on climate-related issues (among other key engagement priorities). The statement is available on the Plan's website.
- As noted within the Implementation Statement, the Trustee has set stewardship priorities and will report on significant votes across the Plan's investment portfolio on matters that relate to these priorities. The stewardship priorities are climate change, labour practices and standards, and corporate governance, including board quality and diversity. As such, there will be annual reporting of significant votes on climate change incorporated in the Plan's disclosures.

Investment Manager Risk, Selection and Retention

- The Trustee, with advice from Mercer in its role as investment adviser, will consider an investment manager's firm-wide and strategy-specific approach to managing climate-related risks and opportunities 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.
- Mercer rates investment managers on the extent of integration of ESG factors (including climate change) into their processes. A manager's stewardship process forms part of the rating assessment. This is considered at the firm level and at the investment strategy/fund level. The ratings are presented in quarterly investment performance reports and are reviewed by the Trustee.

Section 4
Metrics and Targets

Metrics

The Trustee has chosen to present climate-related metrics across four different categories in this report. These metrics help the Trustee to understand the climate-related risk exposures and opportunities associated with the Plan's investments and to identify areas for further risk management, including investment manager portfolio monitoring, voting and engagement activity and priorities. The metrics in this report relate to the Plan's financed emissions and exclude emissions associated with the operation of the Plan. The metrics in this report are listed below and where metrics relate to emissions, these cover scope 1 and 2. The Trustee will begin reporting on scope 3 emissions from its next report.

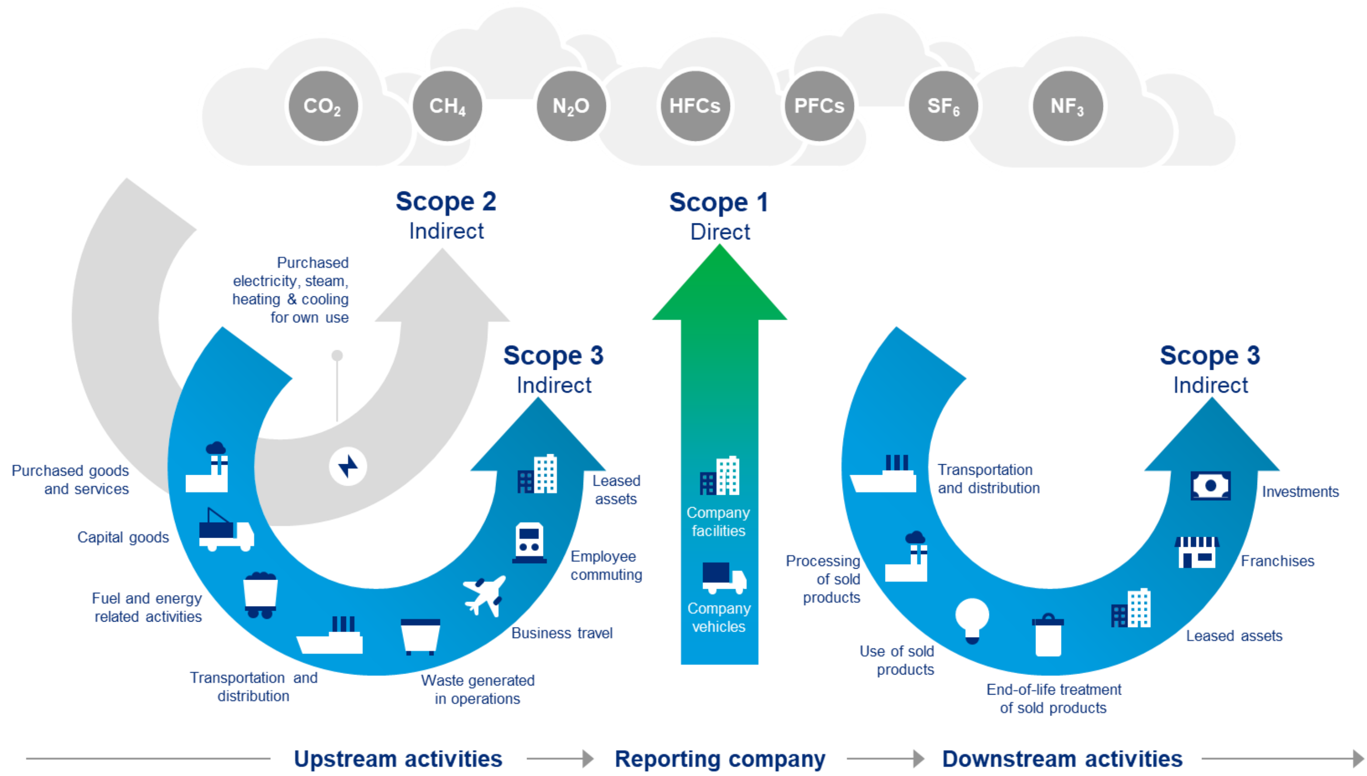
Metric category	Selected metric	Further detail
Absolute emissions	Total Greenhouse Gas Emissions	Tonnes of carbon dioxide and equivalents (tCO2e) that the Plan is responsible for financing.
Emissions intensity	Carbon Footprint	The amount of carbon dioxide and equivalents (tCO2e) emitted per million US dollars of Plan investments.
Portfolio Alignment	% of portfolio companies with targets approved by the Science Based Targets initiative (SBTi)	Assessment of the proportion of portfolio companies/issuers that have set net-zero targets that have been validated by SBTi.
	Implied Temperature Rise (ITR)	A forward-looking assessment of how aligned the Plan's portfolios are relative to the Paris Agreement's 1.5°C target. This is estimated based on the activities and decarbonisation targets of portfolio companies / issuers, relative to what global decarbonisation needs to be to achieve 1.5°C.
Additional	Data Quality	Represents the proportions of the portfolio for which there is high quality data.

The metrics presented in this report are as at 31 December 2021 and 31 December 2022 and are based on the actual asset allocation at that date, taking into account the quality of data that is available (for example, there are some asset classes where there is limited coverage, such as private markets and certain bond investments).

The Trustee recognises the challenges associated with various metrics, tools and modelling techniques used to assess climate change risks. The Trustee aims to work with its investment adviser and investment managers to continuously improve the approach to assessing and managing risks over time as more data becomes available. The Technical Appendix of this report sets out the data limitations and assumptions used in collating these metrics.

Total Greenhouse Gas Emissions

This metric takes an ownership approach to answer what proportion of a company's or asset's emissions an investor owns and is therefore responsible for financing. It includes seven types of greenhouse gas ("GHG") (as defined in the Kyoto Protocol), across the three scopes of emissions, as summarised below.



Source: GHG Protocol

Emissions of the seven greenhouse gases have different impacts on climate change. In order to simplify reporting, each greenhouse gas is calibrated relative to carbon dioxide and is reported as 'carbon dioxide equivalent' emissions (CO_2e). In this way the Trustee can compare companies that emit different amounts of different gases on a consistent basis.

The Trustee has chosen this metric to understand the absolute amount of emissions financed by the Plan's investments.

Note that this report excludes scope 3 emissions, which will be included from the next report. There are significant challenges relating to scope 3 emissions, and as such the reasons for excluding scope 3 emissions at this stage are:

a. Reliability of data - in measuring the "upstream" purchased goods and services emissions of a company, government, or other issuer of securities, there are varying levels of data accuracy.

Entities often struggle to collect relevant and sufficiently granular primary data from their suppliers. This results in the adoption of secondary data, which may come from industry averages or spend-based emission factors.

b. Lack of standardised methodology - while the greenhouse gas protocol Scope 3 standard and calculation guidance is helpful, there are certain practical challenges. The use of multiple data feeds and methodologies all come with their own assumptions and definitions, and the calculation approaches selected vary.

c. Lack of resources - calculating value chain emissions often requires specialists with technical expertise in carbon measurement, data management, and data quality processes. For a number of small and medium companies, this can present a barrier to reporting.

As Scope 3 reporting improves, the Trustee looks forward to considering this data as part of the suite of metrics considered.

Carbon Footprint

Carbon Footprint is an intensity measure of emissions that takes the Plan's total GHG Emissions figure and normalises it to take account of the size of the investment.

Analysing an investment fund's Carbon Footprint assists the Trustee in identifying carbon-intense sections of the portfolio. The Trustee has therefore chosen this metric to assist in prioritising carbon intense parts of the investment strategy for potential re-allocation or engagement as a means of mitigating associated climate-related risks.

% of portfolio companies with net zero targets approved by the Science Based Targets initiative (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.

SBTi use either a sector decarbonisation approach (SDA) of an absolute contraction approach (ACA). Under the SDA approach, SBTi allocate the 2°C carbon budget to different sectors, taking into account differences between sectors today and mitigation potential going forwards (e.g. this takes into account the fact that power generation will likely be able to decarbonise faster than cement production). The ACA approach is a broad assumption that assumes that all companies should decarbonise at the same rate. The ACA approach is the most popular target that companies who submit their targets to the SBTi choose.

The Trustee has chosen this metric because it provides a measure of portfolio alignment with the goals of the Paris Agreement, and is independently verified. 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.

Implied Temperature Rise

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.

The calculation of the level of warming is determined by mapping a given company's/issuer's level of over/undershoot (relative to its carbon budget) to a temperature outcome.

The Trustee has chosen this metric to include in this report because of its simplicity in presentation and a useful way to see, at a glance, the positioning of a fund relative to 1.5°C economy. This is also a measure of climate transition risk with greater transition risk highlighted in asset allocations with a higher Implied Temperature Rise.

Data Quality

Data Quality aims to represent the proportions of the portfolio for which the Trustee has high quality data. The Trustee has considered whether the underlying emissions data has been verified by a third party, reported by the company, estimated by the data provider, or unavailable to determine the how representative the analysis is of the actual portfolio.

Data Quality also assists with monitoring the quality of reporting over time, as companies are expected to continually improve their reporting on climate-related metrics. As the quality of data improves, the decision usefulness of the climate metrics reported on the Plan's portfolio increases.

Metrics for the Plan's Popular Arrangements

The plan has 16 investment strategies qualifying as "popular arrangements." A popular arrangement is defined in the statutory guidance as a fund or lifestyle strategy in which £100m or more of the Plan's assets are invested, or which accounts for 10% or more of the assets used to provide money purchase benefits. A table with asset values for all popular arrangements at 31 December 2021 and 31 December 2022 is available in the appendix of this report.

The popular arrangements cover c. 90% of all Plan assets at both reporting dates. Hence, while some assets are excluded, the metrics shown in this section provide a good representation of the Plan's metrics.

For the purpose of identifying popular arrangements, lifestyle strategies are regarded as one unit. This means that any assets held by lifestyle members are attributed to the relevant lifestyle arrangements rather than the underlying funds. In practice, this means that a popular underlying fund may not count as a popular arrangement. This is because once the assets invested in the fund that pertain to lifestyle arrangements are accounted for, the remaining Freestyle assets may not exceed the threshold test.

Lifestyle arrangements have different climate metric exposures at different points of the retirement savings journey. For example, a member investing in the current default would be 100% invested in the Initial Growth Portfolio up to age 40, and this allocation would gradually move towards a 100% allocation to the Mid Growth Portfolio at age 50. The lifestyle glidepath allocation tables are provided in the Technical Appendix. In order to account for this and make this section most useful for members, it has been set up as follows:

- The absolute emissions metric is shown on a total basis for all popular arrangements.
- The carbon intensity metric (carbon footprint), the portfolio alignment metrics (SBTi alignment and Implied Temperature Rise) and data quality are shown for all single funds that qualify as popular arrangements. They are shown for the underlying funds of the Flexible Pathway and Annuity Pathway lifestyles in the report and on an aggregated basis in the appendix.
- Graphs have been included for the lifestyle arrangements to show the progression of climate metrics exposures across the savings journey of a member.

Note that the Flexible Pathway and its underlying Flexible Portfolio only launched in 2022 and therefore data as at 31 December 2021 is not relevant.

Metrics – Important Limitations and Context

The Trustee notes that the availability of accurate data for some asset classes is an industry-wide issue and standards are still developing. The following points should also be noted:

- **Absolute emissions** are a function of a fund's total asset value. Therefore, for the Plan, popular arrangements with relatively high levels of assets invested in them will generally have higher absolute emissions than smaller arrangements (in terms of asset values).

- **Carbon Footprint** "normalises" emissions by size of the pooled investment, so a fall in market prices can make the denominator lower and therefore carbon footprint may be "pushed up". However, it still provides a better idea of the carbon intensity of each portfolio (when compared with absolute emissions).

- For some funds, the **data coverage** has improved between 2021 and 2022. This means that reported emissions and related measures such as carbon footprint may increase simply as there is more of the portfolio where emissions are reported.

- There can be a **time lag** in the provision of climate data from individual companies to data providers, and then from data providers to investment managers. For example, for the 2022 reporting year, investment managers may have received climate data at different times, some of which may be based on disclosures at the company level over the course of past periods. With a reporting date of 31 December 2022, this means that the metrics presented in this report are likely to be subject to time lags. The Trustee recognises that this leads to a certain amount of uncertainty regarding the drivers of changes in carbon emissions from year-to-year.

A Note on Carbon Metrics Aggregations

Please note that Carbon Footprint, SBTi, Implied Temperature Rise and Data Quality have been aggregated based on the underlying fund metrics for the following blended portfolios:

- Initial Growth Portfolio
- Mid Growth Portfolio
- Flexible Portfolio
- Annuity Portfolio
- JPMAM UKPP Sustainable Global Equity Portfolio

The aggregated metric is a weighted average of the underlying fund metrics. However, if a metric is not available, the weighted average is scaled.

As an example, carbon footprint was not available for one of the blended portfolios in 2021. This fund constituted 30% of the blended portfolio. The weighted average carbon footprint was therefore divided by 70% (i.e. 100% - 30%). This method ensures that any missing metric for an underlying fund is not merely treated as a carbon footprint of zero. Instead, this method scales the metric up, creating an implicit assumption that the missing metric has the same value as the average of the share of the portfolio that is available. By following this method, the Trustee ensures that blended metrics are not understated and that a "best estimate" is made for the part of the portfolio with no carbon metric.

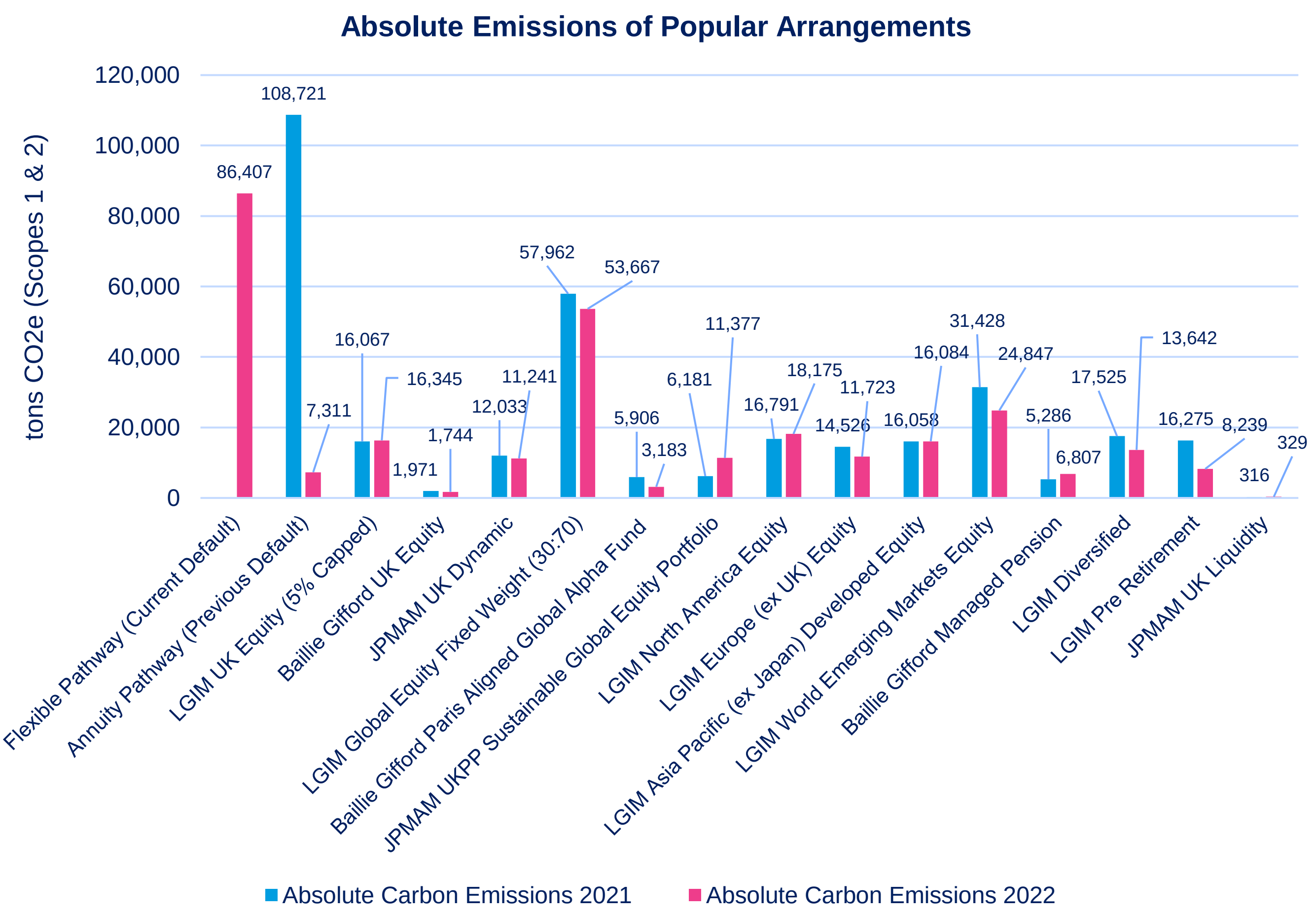
Absolute Emissions

The following chart shows the absolute emissions for popular arrangements as at 31 December 2021 and 31 December 2022. As noted above, absolute emissions are a function of both a fund's carbon intensity as well as its total asset value. As members can choose their individual investments, the Trustee does not directly control the total emissions of the Plan.

Arrangements with higher total asset values have, as expected, the highest absolute emissions. These arrangements are the lifestyle pathways, as well as the LGIM Global Equity Fixed Weight (30:70).

The Trustee implemented changes to the Default Strategy in November 2022. The Default was changed from targeting annuity purchase and tax free cash at retirement ("Annuity Pathway") to targeting a diversified asset allocation that is not aligned to any single retirement benefit, in order to better reflect the wide range of ways in which members may withdraw benefits ("Flexible Pathway"). Assets in the Annuity Pathway totalled £1,955m on 31 December 2021. As a result, absolute emissions were highest for the Annuity Pathway. Following the change in strategy, the new default lifestyle, the Flexible Pathway, had £1,735m invested at 31 December 2022 and therefore the highest absolute carbon emissions. Many of the underlying components in these strategies (and the entire Initial Growth and Mid Growth phases) are identical, but the allocation of assets at the strategy level has been re-categorised.

The absolute emissions for the two lifestyle arrangements are based on the value of all assets invested as part of these arrangements at the reporting dates.



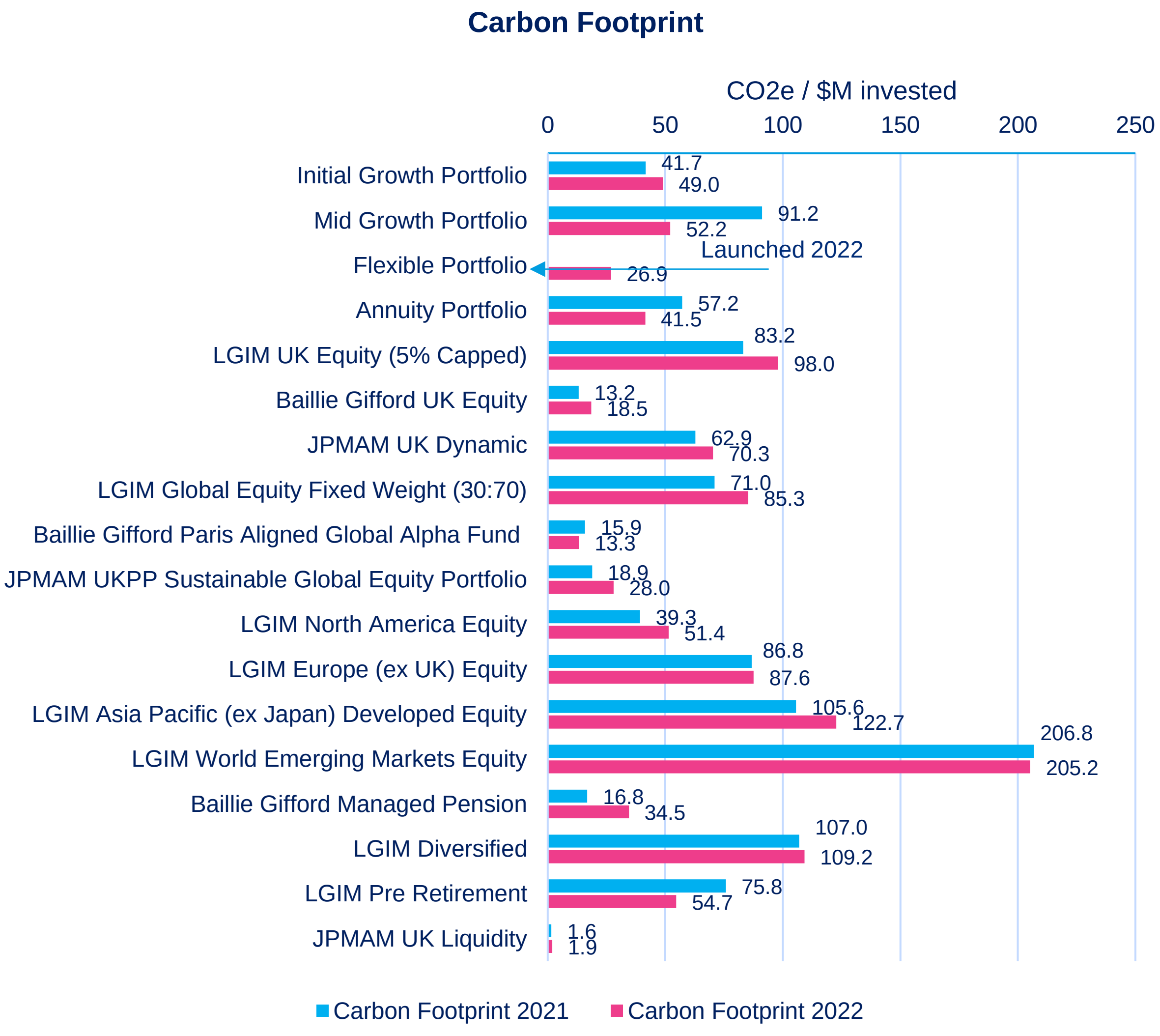
Source: Investment Managers as at 31 December 2021 and 31 December 2022.
Absolute emissions have been calculated by multiplying the carbon footprint of each fund with its asset value and eligibility ratio (or individual carbon footprints of underlying funds in the case of lifestyle arrangements, multiplied with their eligibility ratios and underlying asset values), including an adjustment for the £ to USD exchange rate at the relevant date.

Carbon Intensity Metric

Carbon Footprint

As carbon footprint takes the Plan's total GHG emissions figure and normalises it to take account of the size of the investment, it is not influenced by the size of Plan assets invested in the fund and is therefore a more helpful metric to identify portfolios with high carbon intensity.

In comparison to the portfolio alignment metrics later in this section, there is more data availability for carbon footprint. The JPMAM UK Liquidity Fund has the lowest carbon footprint, but this is due to the cash based nature of the mandate. The fund is not exposed to company investments. The sustainable equity mandates, including the Baillie Gifford Paris Aligned Global Alpha Fund and the JPMAM UKPP Sustainable Global Equity Portfolio (a blended fund) have comparatively low carbon footprint, for example when compared with passive UK equities (the LGIM UK Equity 5% Capped Fund). This is driven both by the sustainability aims of the funds, as well as by the sectors in global vs regional funds (the UK stock market has a relatively high number of oil and gas companies, for instance). The highest carbon footprint at both dates is in respect of the LGIM World Emerging Markets Equity Fund. Emerging markets tend to have higher exposure to carbon-intensive industries and commodity-based economies.

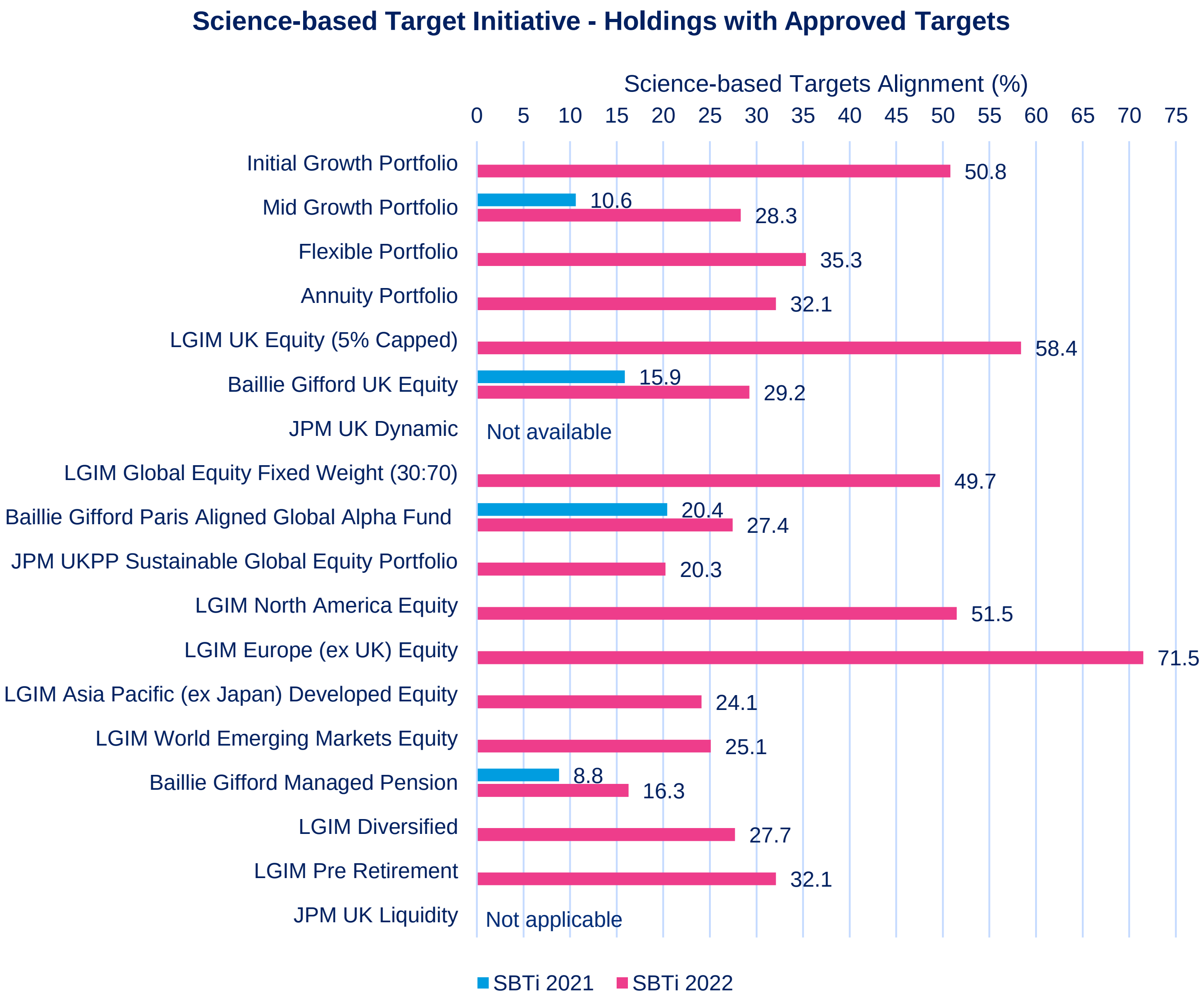


Source: Investment Managers as at 31 December 2021 and 31 December 2022. Figures shown include carbon footprint from corporate as well as sovereign assets where applicable. Carbon footprint has been aggregated for the blended mandates (Initial Growth Portfolio, Mid Growth Portfolio, Flexible Portfolio, Annuity Portfolio and the JPMAM UKPP Sustainable Global Equity Portfolio) based on the data provided by the managers for the underlying funds.

Portfolio Alignment Metrics

Percentage of holdings with approved Science-based Targets

The chart below details the SBTi metrics for the popular arrangements at both reporting dates. This metric was only available for four of the popular arrangements at 31 December 2021. In contrast, at 31 December 2022, the metric was only missing for the JPMAM UK Dynamic Fund. It should be noted that the JPMAM UK Liquidity Fund is a popular arrangement, but due to the cash nature of the mandate, the SBTi metric is not applicable and it is therefore excluded from the graph..

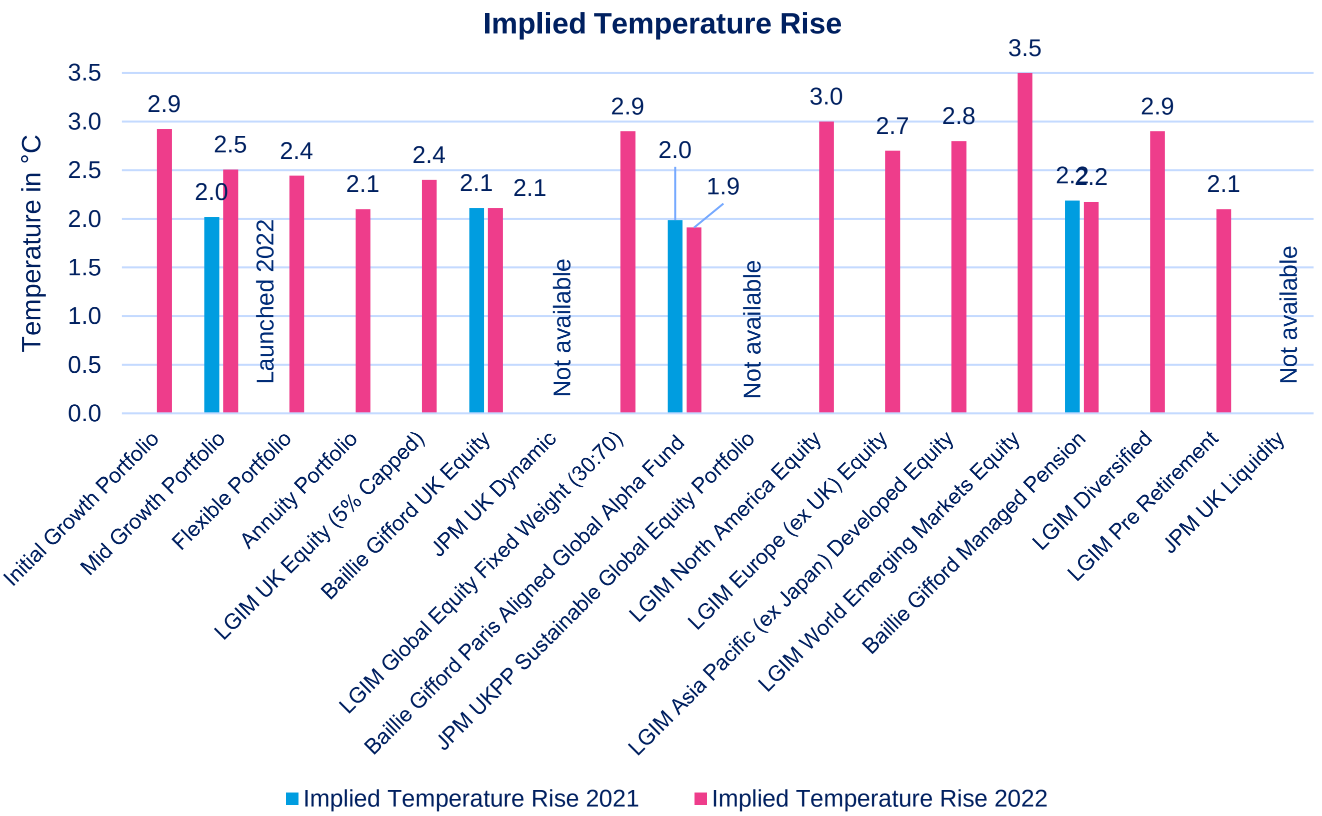


Source: Investment Managers as at 31 December 2021 and 31 December 2022. This only includes the proportion of portfolio companies/issuers that have set net-zero targets that have been validated and approved by SBTi. It excludes companies/issuers which have declared net-zero targets that had not been validated and approved at the reporting date.

SBTi metric for blended funds (Initial Growth Portfolio, Mid Growth Portfolio, Flexible Portfolio, Annuity Portfolio and the JPMAM UKPP Sustainable Global Equity Portfolio) calculated based on SBTi figures provided by the managers of the underlying funds.

Implied Temperature Rise

This metric was only available for four popular arrangements in 2021. As at 31 December 2022, the metric was available for **all popular arrangements bar three funds**. All funds currently have an Implied Temperature Rise exceeding the Paris goal of 1.5°C, which will be an area for discussion with the investment managers as part of the ongoing governance and review processes.



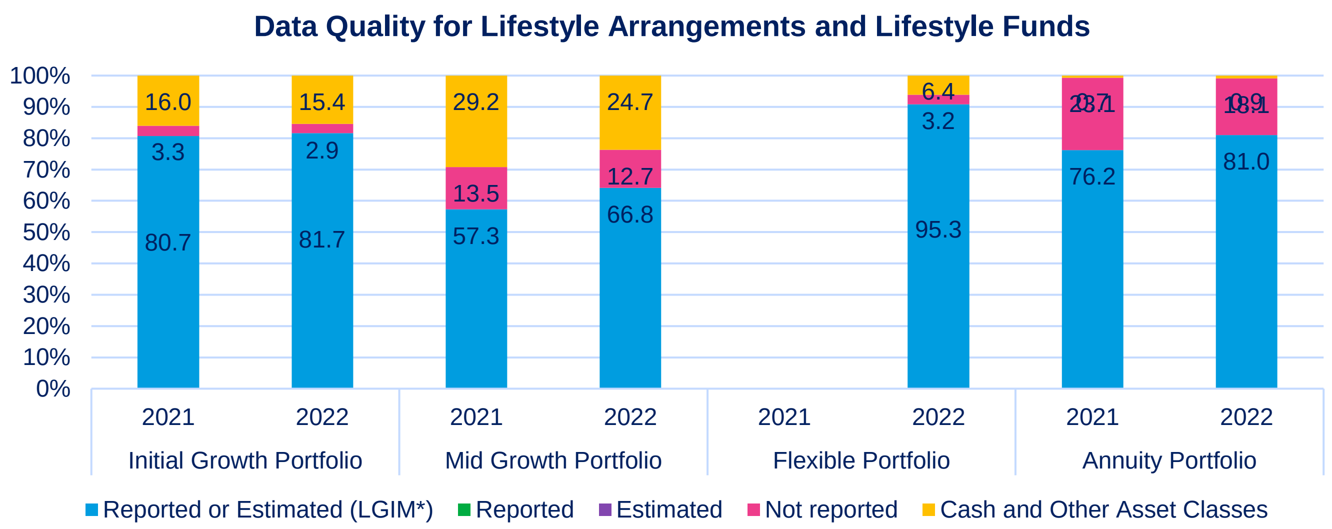
Source: Investment Managers as at 31 December 2021 and 31 December 2022. Metric for blended funds (Initial Growth Portfolio, Mid Growth Portfolio, Flexible Portfolio, Annuity Portfolio and the JPMAM UKPP Sustainable Global Equity Portfolio) calculated based on the metrics provided by the managers of the underlying funds.

Data Quality

In the following charts, data quality for the Plan's popular arrangements is broken down into four categories:

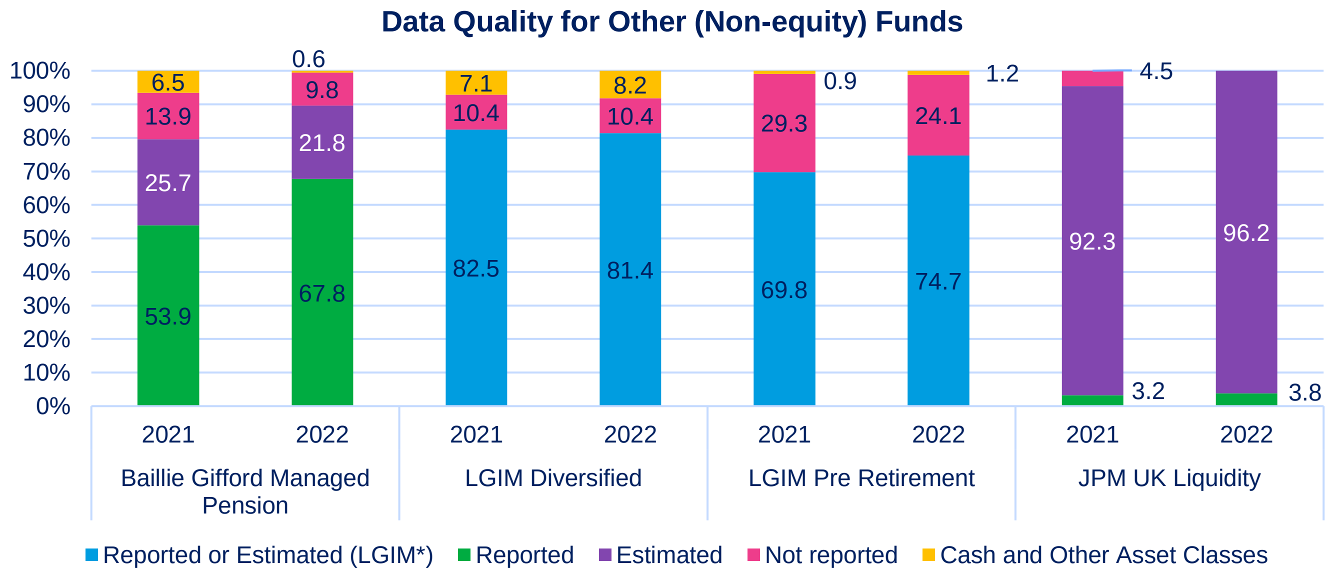
- **Reported Data** – Climate data which has been sourced directly from companies
- **Estimated Data** – Climate data which has not been sourced directly from companies, but from a data provider. The data providers for different managers are disclosed later in this report.
- **Not reported** – The underlying assets are in scope for climate reporting, but no data is available.
- **Cash and Other Assets** – Climate data is not available for the asset class held, such as cash and derivatives.

Please note that LGIM is not currently able to split data quality between "reported" and "estimated" and these categories have therefore been aggregated for all LGIM funds as well as blended funds with underlying LGIM exposures.



Source: Investment Managers as at 31 December 2021 and 31 December 2022.
Metric for blended funds (Initial Growth Portfolio, Mid Growth Portfolio, Flexible Portfolio and Annuity Portfolio) have been calculated in aggregate based on the provided by the managers for the underlying funds.

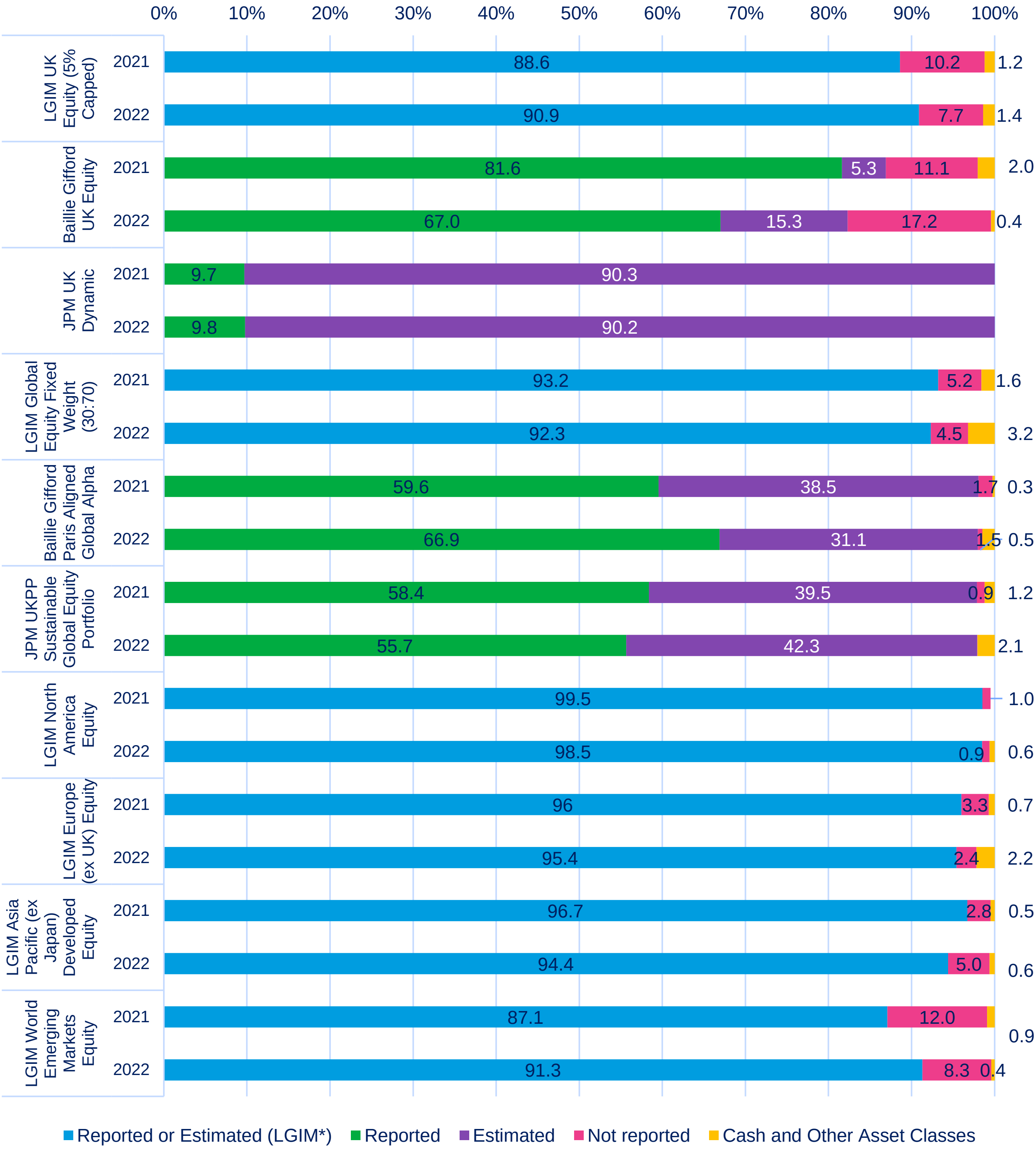
The highest amount of reported data can be seen for the Flexible Portfolio, which was implemented in November 2022.The Mid Growth Portfolio exhibits, unsurprisingly, the largest amount of assets out-of-scope for reporting, as well as a high degree of unreported data both at 31 December 2021 and 31 December 2022. The Mid Growth Portfolio allocates a portion of assets to diversified growth funds and private markets, with diverse underlying asset exposures, including alternative assets where data availability is less complete. The improvement in data quality is largely due to the introduction of the allocation to the Berenberg Managed Volatility Equity Fund which has better data quality than the diversified funds.



Source: Investment Managers as at 31 December 2021 and 31 December 2022.

The other funds shown here are mandates with different underlying strategies. The Baillie Gifford Managed Pension Fund is a multi-asset mandate and the LGIM Diversified Fund is a diversified growth fund. The LGIM Pre-Retirement Fund is a bond mandate and the JPMAM UK Liquidity Fund is a money market mandate. Data quality is variable across these funds, as it is driven by the nature of the asset classes within the funds. For example, "cash" investments cover a variety of money market instruments. Many such assets are out of scope for climate reporting and in this case they fall in the "cash and other asset classes" category. However, data providers can measure or estimate climate metrics for some money market assets, such as the ones held in the JPMAM UK Liquidity Fund, which have been for the most part estimated by the data provider.

Data Quality for Equity Funds



Source: Investment Managers as at 31 December 2021 and 31 December 2022. Metrics for the blended JPMAM UKPP Sustainable Global Equity Portfolio based on figures provided by the managers of the underlying funds.

Most of the Plan's popular arrangements are equity funds. Data quality is generally good, although many of the funds are run by LGIM and it is therefore not possible to see the split between reported and estimated data, as LGIM do not yet report on this basis. Actual reported data is highest for the Baillie Gifford UK Equity Fund and lowest for the JPMAM UK Dynamic Fund.

Most investment managers rely on data providers to supply both reported and estimated data for the investments. The data providers are listed in the table below, sourced from the investment managers.

Investment Manager	Data Provider
Legal & General Investment Management ("LGIM")	Institutional Shareholder Services (ISS)
Baillie Gifford	MSCI
J.P. Morgan Asset Management ("JPMAM")	MSCI and TruCost
Berenberg	MSCI
Nordea	MSCI
Abrdn	TruCost
Jupiter	MSCI

Lifestyle Arrangements

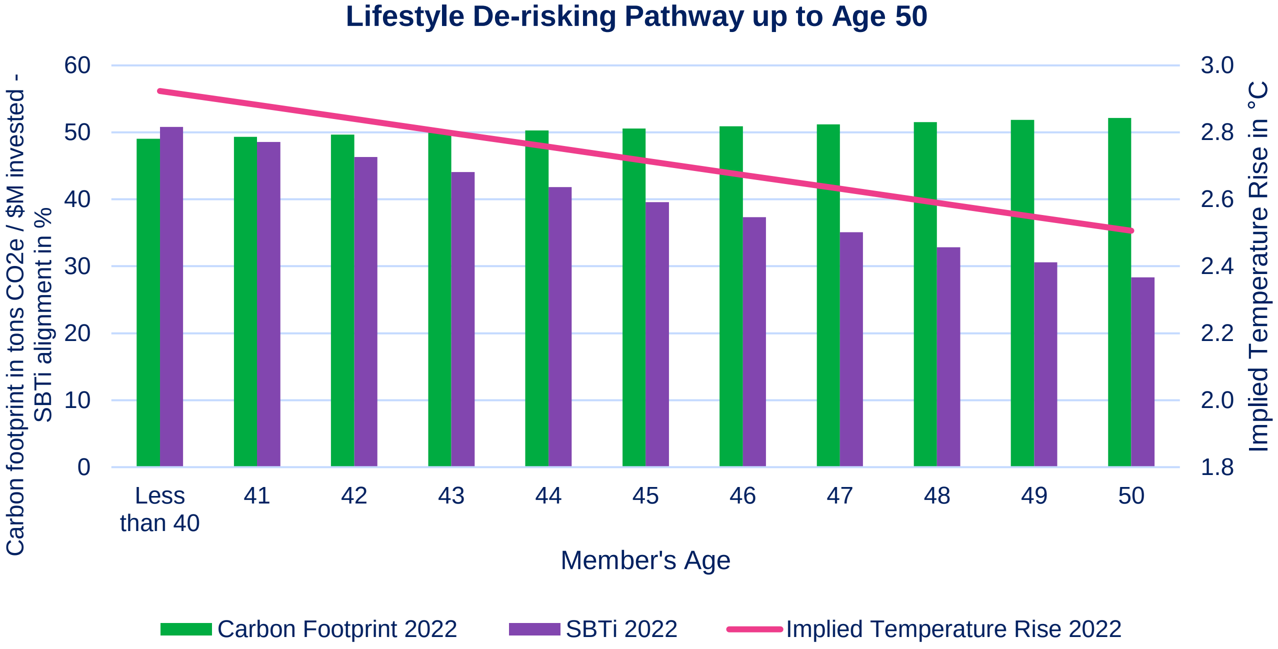
The Plan offers four lifestyle arrangements with automatic investment de-risking as members approach retirement. Each lifestyle caters to a different retirement goal. The following charts show lifestyle members' climate metric exposures over the course of the relevant de-risking pathway.

Only two of the lifestyle arrangements are also "popular arrangements", however, this section shows all lifestyle pathways for completeness, as at 31 December 2022.

Up to age 50, all lifestyle members are invested in the same way. The climate metric exposures are shown in the first chart. There is a small gradual increase in carbon footprint as members move from the Initial Growth Portfolio to the Mid Growth Portfolio. Over the same timeframe, the share of holdings with approved SBTs falls from more than 50% to under 30% as the member reaches age 50 – this is because the equity exposure in the strategy reduces. The implied temperature rise over the timeframe decreases from close to 3°C to just above 2.5°C.

The graphs show that different climate metrics do not necessarily move in tandem. For example, in this chart we illustrate that the carbon intensity as measured by carbon footprint increases over time, while SBTi alignment and implied temperature rise point towards improvement.

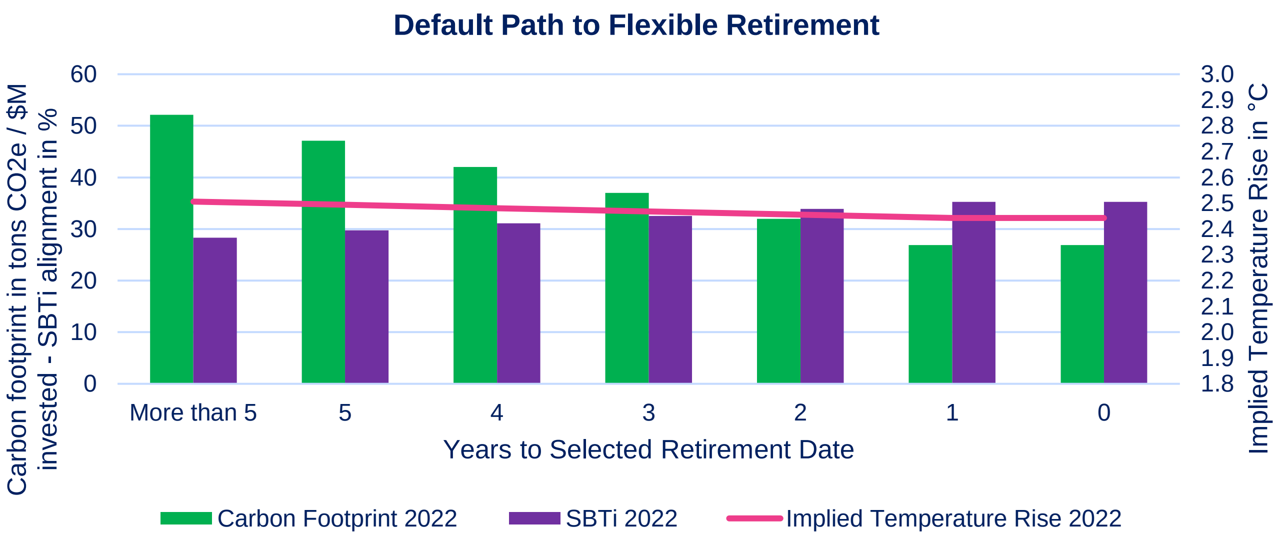
These charts are illustrative based on the data as at 31 December 2022 and hence subject to change. Lifestyle paths are designed to reduce investment risk over time, and while generally climate risk also declines as a member approaches retirement, this is a consequence of the structure (asset allocation) of the glidepaths rather than being the primary purpose.



Source: Investment Managers as at 31 December 2021 and 31 December 2022.

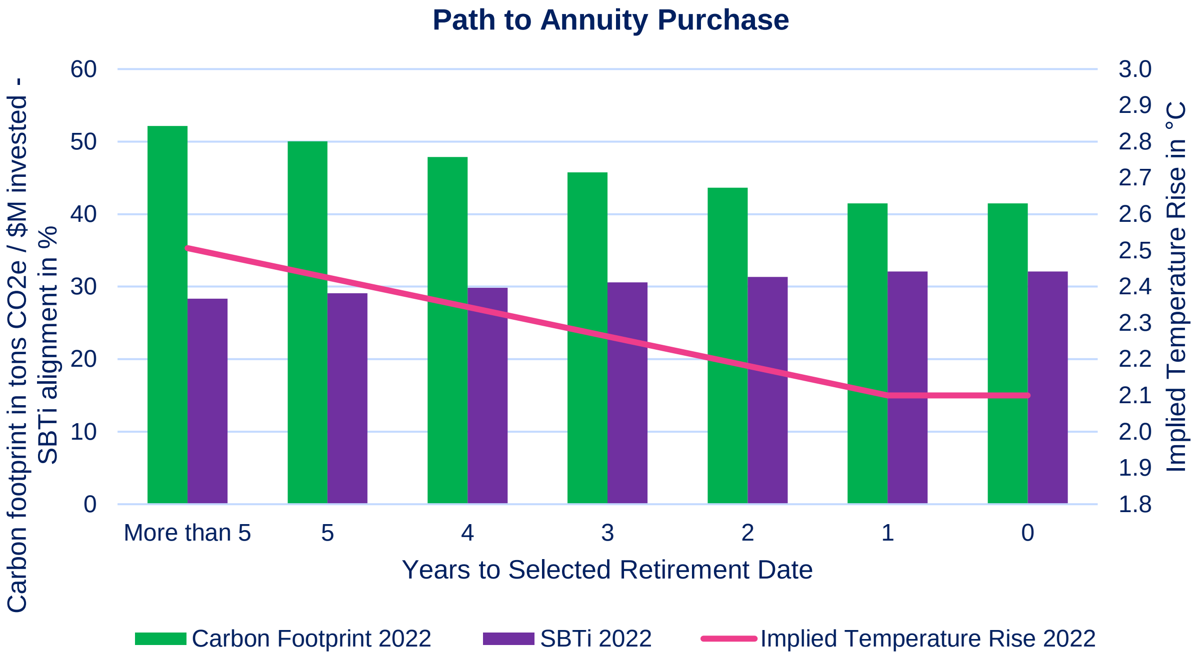
Members can choose between four different retirement objectives. If members opt for the Drawdown target, their investments will stay allocated 100% to the Mid Growth Portfolio until they retire. Due to the same underlying asset allocation as at age 50, the exposures to the different carbon metrics will also continue to be the same as at age 50.

Default Strategy members move towards a flexible retirement aim. Over the course of this path, the metrics move in a positive direction, i.e. a decrease in carbon footprint and implied temperature rise, as well as an increase in SBTi alignment.



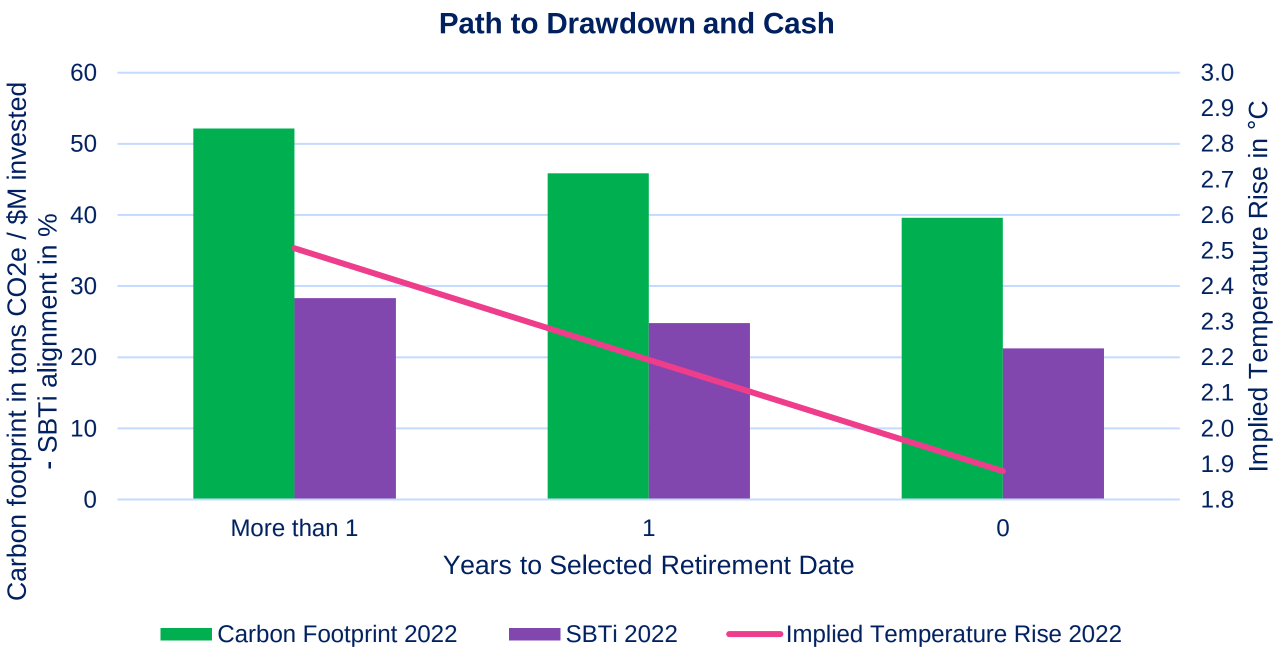
Source: Investment Managers as at 31 December 2021 and 31 December 2022. Mercer has calculated the relevant climate metrics at each stage of the lifestyle path based on the underlying asset exposures.

The pattern is very similar for a member who targets annuity purchase in retirement, with a steeper decrease of the implied temperature rise but slower decrease of carbon footprint.



Source: Investment Managers as at 31 December 2021 and 31 December 2022. Mercer has calculated the relevant climate metrics at each stage of the lifestyle path based on the underlying asset exposures.

Finally, members targeting drawdown and a 25% tax-free cash lump sum in retirement will increase their allocation to the JPMAM UK Liquidity Fund accordingly in the last 2 years before retirement.



Source: Investment Managers as at 31 December 2021 and 31 December 2022. Mercer has calculated the relevant climate metrics at each stage of the lifestyle path based on the underlying asset exposures

Targets

Introduction

The Plan invests in pooled funds managed by a number of different investment managers, and members can choose their individual investments. As such, the Trustee does not directly control the climate-related metrics at the Plan level.

This issue notwithstanding, the Trustee has chosen to set a target in relation to science-based targets (SBTs). As noted above, SBTs provide a clearly-defined pathway for companies to reduce greenhouse gas emissions. Targets are considered ‘science-based’ if they are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement – limiting global warming to well-below 2℃ above pre-industrial levels and pursuing efforts to limit warming to 1.5℃.

The long-term and forward looking nature of SBTs provide a clear direction of travel and assist the Trustee in assessing the risks and opportunities associated the transition to a lower carbon world.

The SBT initiative (SBTi) is an independent organisation that is a collaboration between the World Resources Institute, the Carbon Disclosure Project, the World Wide Fund for Nature and the UN Global Compact. SBTs are a voluntary commitment for corporates, and to be verified by the SBTi they require the development of an emissions reduction target in line with the SBTi’s criteria, presenting the target to the SBTi, and receiving official validation.

The Plan’s Target

The Trustee has set a target for all relevant funds (those investing in listed equity and/or credit) to achieve SBTi metric of 65% or higher by 2030. The rationale for this target is:

- The Trustee believes that a 65% target balances both realism and ambition, taking into account the specific nature of the Plan’s portfolios. It represents a clear majority of companies whilst recognising that there can be practical challenges for certain companies and sectors.
- In particular, whilst a 100% SBTi alignment figure would clearly be desirable, there are sectors where SBTi has not yet developed its methodologies (notably oil and gas) meaning that 100% coverage is not yet possible.
- The metric is by definition science-based, and independently verified.

The Trustee, via the Investment Committee, will be able to work closely with its investment managers to monitor this metric and track progress over time. Discussions with each investment manager will take place at least annually.

A wide range of factors will affect whether the Plan achieves its targets, and the Trustee has varying degrees of control over these factors.

Ultimately achieving the desired level of decarbonisation will depend on global economies overall successfully decarbonising. Notwithstanding that there are factors outside of the Trustee’s control, the intention is to meet the target set.

Technical Appendix

Asset Allocations Modelled

DC Section Popular Arrangements

A popular arrangement is defined in the statutory guidance as a fund or lifestyle strategy which £100m or more of Plan assets are invested, or which accounts for 10% or more of the assets used to provide money purchase benefits (excluding assets solely attributable to Additional Voluntary Contributions).

For the purpose of identifying popular arrangements, lifestyle strategies are regarded as one unit. This means that any assets held by lifestyle members are attributed to the relevant lifestyle arrangements rather than the underlying funds. In practice, this means that a popular underlying fund may not count as a popular arrangement. This is because once the assets invested in the fund that pertain to lifestyle arrangements are accounted for, the remaining Freestyle assets may not exceed the threshold test.

The following strategies are defined as popular arrangements:

Asset Class	Lifestyle / Fund Name	Value at 31.12.21 (£m)	Value at 31.12.22 (£m)
Lifestyle Arrangements	Flexible Pathway[3]	0.0	1734.8
	Annuity Pathway[4]	1955.3	147.5
UK Equity	LGIM UK Equity (5% Capped)	142.6	138.7
	Baillie Gifford UK Equity	110.1	78.5
	JPMAM UK Dynamic	141.3	132.9
Global Equities	LGIM Global Equity Fixed Weight (30:70)	602.7	523.0
Sustainable Global Equities	Baillie Gifford Paris Aligned Global Alpha	274.2	198.3
	JPMAM UKPP Sustainable Global Equity Portfolio	345.3	299.7
Regional Equities	LGIM North America Equity	315.4	294.0
	LGIM Europe (ex UK) Equity	123.6	111.2
	LGIM Asia Pacific (ex Japan) Developed Equity	112.3	109.0
	LGIM World Emerging Markets Equity	112.2	100.7
Balanced	Baillie Gifford Managed Pension	231.8	163.9
Diversified Growth	LGIM Diversified	130.2	113.1
Bonds and Cash	LGIM Pre Retirement	158.5	125.2
	JPMAM UK Liquidity	146.2	145.9
Total Value of Popular Arrangements		**4901.6**	**4416.3**
Popular Arrangements' Share of Total Plan Assets		***89.7%***	***89.5%***

Please note: All values in the table are priced at mid.

[3] The Flexible Pathway was newly created as the default lifestyle since November 2022. It was not available as a lifestyle at 31 December 2021.

[4] The Annuity Pathway was the default lifestyle before November 2022. Default members within 5 years of their target retirement date were kept in this lifestyle.

Lifestyle Allocations

Any member, aged 50 or below, invested in one of the Plan's lifestyles will follow the de-risking path shown below.

Member's age	Less than 40	41	42	43	44	45	46	47	48	49	50
Initial Growth Portfolio	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%
Mid Growth Portfolio	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

The pre-retirement de-risking phase depends on a member's chosen lifestyle strategy and their selected retirement age. If a member invests in the **Path to Drawdown**, they will stay fully invested in the Mid Growth Portfolio.

Path to Flexible Retirement (Default)

Years to selected retirement age	More than 5	5	4	3	2	1	0
Mid Growth Portfolio	**100%**	**80%**	**60%**	**40%**	**20%**	**0%**	**0%**
Flexible Portfolio	**0%**	**20%**	**40%**	**60%**	**80%**	**100%**	**100%**

Path to Annuity Purchase

Years to selected retirement age	More than 5	5	4	3	2	1	0
Mid Growth Portfolio	**100%**	**80%**	**60%**	**40%**	**20%**	**0%**	**0%**
Annuity Portfolio	**0%**	**20%**	**40%**	**60%**	**80%**	**100%**	**100%**

Path to Drawdown and Cash

Years to selected retirement age	More than 1	1	0
Mid Growth Portfolio	**100%**	**87.5%**	**75%**
JPMAM UK Liquidity	**0%**	**12.5%**	**25%**

Climate scenario modelling approach

The return impacts of the climate scenarios represented in this report are relative to the ‘baseline’. The baseline represents what we are assuming the market is currently pricing in. The baseline includes a 10% weight to a **Failed Transition**, 40% weight to an **Orderly Transition**, 10% to a **Rapid Transition** and 40% to a range of **low impact scenarios**.

Climate scenario narratives and assumptions

	Rapid Transition	Orderly Transition	Failed Transition
Summary	Sudden divestments in 2025 to align portfolios to the Paris Agreement goals have disruptive effects on financial markets with sudden repricing followed by stranded assets and a sentiment shock.	Political and social organizations act quickly and predictably to implement the recommendations of the Paris Agreement to limit global warming to below 2°C above pre-industrial levels by 2100.	The world fails to meet the Paris Agreement goals and global warming reaches 4.3°C above pre-industrial levels by 2100. Physical climate impacts cause large reductions in economic productivity and increasing impacts from extreme weather events.
Cumulative emissions to 2100	416 GtCO2e	810 GtCO2e	5,127 GtCO2e
Key policy and technology assumptions	An ambitious policy regime is pursued to encourage greater decarbonisation of the electricity sector and to reduce emissions across all sectors of the economy. Higher carbon prices, larger investment in energy efficiency and faster phase out of coal-fired power generation under a ‘Rapid’ transition.		Existing policy regimes are continued with the same level of ambition.
Financial climate modelling	Pricing in of transition and physical risks of the coming 40 years occurs within one year in 2025. As a result of this aggressive market correction, a confidence shock to the financial system takes place in the same year.	Pricing in of transition and physical risks until 2050 takes place over the first 4 years.	Physical risks are priced in two different periods: 2026-2030 (risks of first 40 years) and 2036-2040 (risks of 40-80 years).
Physical risk impact on GDP	Physical risks are regionally differentiated, consider variation in expected temperature increase per region and increase dramatically with rising average global temperature. Physical risks are built up from: Gradual physical impacts associated with rising temperature (agricultural, labour, and industrial productivity losses) Economic impacts from climate-related extreme weather events Current modelling does not capture environmental tipping points or knock-on effects (e.g., migration and conflict).		
Physical risk impact on inflation	Gradual physical impact (supply shocks) on inflation included through damages to agriculture and change in food prices. Total impact on a Global CPI Index is +2% in 2100.	No explicit modelling of physical risk impact on inflation (supply-side shocks). Impact on inflation follows historical relationship between GDP and CPI.	Severe gradual physical impact (supply shocks) on inflation included through damages to agriculture and change in food prices. Total impact on a Global CPI Index is +15% in 2100.

Source: Mercer and Ortec. Climate scenarios as at 31 December 2022.

Limitations associated with climate modelling

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

1. The further into the future you go, the less reliable any quantitative modelling will be.
2. 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.
3. 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.
4. Most adaptation costs and social factors are not priced into the models. These include population health and climate-related migration.
5. New and emerging risks, such as the impact of climate change on biodiversity loss, and vice versa, is expected to be integrated into climate scenario modelling over time once the supporting science and impact on econometrics and finance is better understood.

Climate metric analysis approach

Data sources

Climate-related metrics have been sourced from the investment managers.

Scope of emissions

Only Scope 1 and 2 emissions data has been included in this report except where noted. This means that for some companies the assessment of their carbon footprint could be considered an understatement. Scope 1 and 2 emissions are as defined by the GHG protocol.

Data coverage

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

- Some public listed companies are not publishing climate-related data or are providing poor quality data. This is relevant to public equity and corporate bonds. Obtaining data for emerging market equity and debt can also be challenging due to general disclosure and transparency challenges.
- Many private companies do not currently produce climate-related data and coverage for private markets, such as private equity and private debt, will be low, or zero for mature funds.
- Sovereigns, or governments, may not publish climate-related data in the public domain. This is a particular challenge for emerging market debt. For UK government debt, data is available but there is a delay in the data being published.
- Short-term instruments, such as secured finance assets, have limited data available due to the short-term nature of the individual assets.
- For property assets, the occupiers of the buildings in the portfolio have full operational control and there are no Scope 1 or 2 emissions associated with the investments. The relevant investment managers are looking to improve the collection of Scope 3 emissions data – this includes occupier activities where they have direct utility supplier contracts.

The Trustee has used a pro rata approach to scale up each metric in order to present the data as if full coverage was available for each asset. This assumes that the part of an investment fund that does not have data available has the same climate metrics as the part where there is data.

Climate metrics additional information

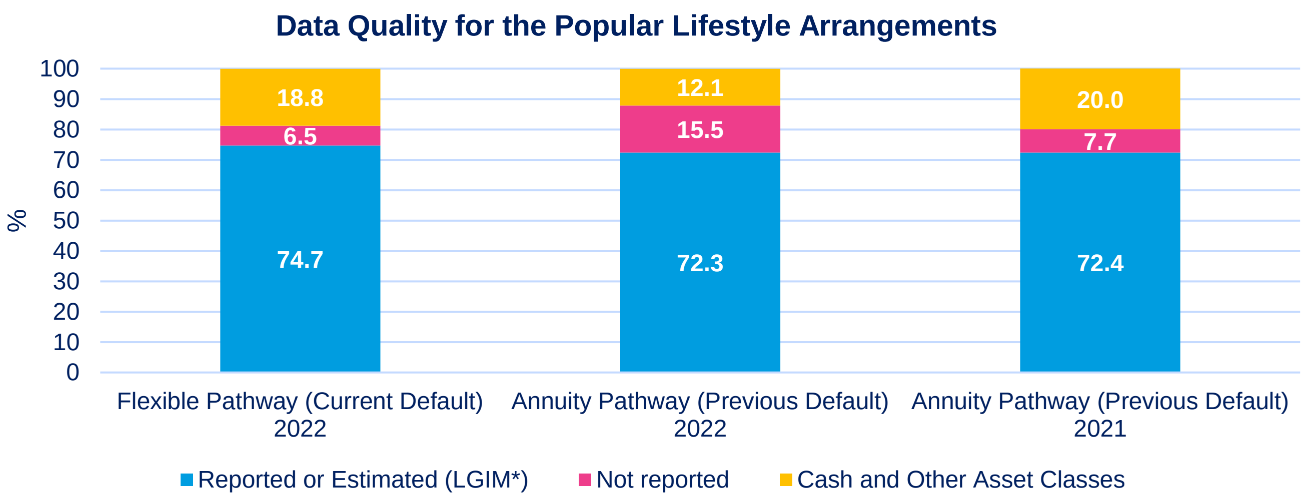
Lifestyle metrics

The report shows the metrics (except absolute emissions) for the underlying funds of the Flexible Pathway and Annuity Pathway lifestyles and graphs which show the progression of these exposures for a lifestyle member over the retirement savings journey.

The metrics for the Flexible Pathway and Annuity Pathway are shown on an aggregated basis below. This is done by weighting the metrics of the underlying funds based on their allocation within the lifestyle glidepath, as well as by their eligibility for carbon reporting. Please note that they are based on values invested as at 31 December 2021 and 31 December 2022. The Flexible Pathway was only created and launched in 2022, and therefore there are no metrics for 2021.

Strategy	Date	Carbon Footprint Coverage (%)	Carbon Footprint (CO_2e/$m invested)	Holdings with Approved SBTi targets (%)	Implied Temperature Rise Coverage (%)	Implied Temperature Rise (°C)
Flexible Pathway (Current Default)	31.12.2022	76.0	50.1	43.2	61.1	2.8
Annuity Pathway (Prior Default)	31.12.2022	74.6	45.8	30.6	43.4	2.3
Annuity Pathway (Prior Default)	31.12.2021	74.6	57.8	3.3	2.5	2.0

Source: Investment Managers and Mercer calculations.
Figures shown include carbon footprint from corporate as well as sovereign assets where applicable.
SBTi metrics include the proportion of portfolio companies/issuers with net zero targets that have been validated and approved by SBTi. It excludes companies/issuers which have declared net zero targets that had not been validated and approved.
Coverage and SBTi figures are weighted averages of the underlying holdings. Carbon footprint and Implied Temperature Rise figures exclude underlying portfolios for which the metric is not available.



Source: Investment Managers as at 31 December 2021 and 31 December 2022. LGIM does not provide a split between reported and estimated data, hence these categories have been combined.

Science-based Targets initiative data for all funds

The Trustee’s set target applies to all of the Plan’s equity and credit mandates. This data is shown in the tables below, alongside asset values, weights, and the percentage change of the SBTi metrics between the reporting dates. Dark grey fields show where the metric is unavailable.

Asset Class	Manager/Mandate	SBTi 2021 (%)	Portfolio Allocation for Asset Class 2021 (£)	Percentage of Portfolio Allocation for Asset Class 2021 (%)	SBTi 2022 (%)	Portfolio Allocation for Asset Class 2022 (£)	Percentage of Portfolio Allocation for Asset Class 2022 (%)	SBTi 2021 to 2022 Change (%)
Lifestyle Funds	Initial Growth Portfolio		1215.5	22.2	50.8	1127.2	22.8	
	Mid Growth Portfolio	10.6	766.2	14.0	28.3	793.4	16.1	166.6
	Flexible Portfolio				35.3	0.7	0.0	
	Annuity Portfolio		80.7	1.5	32.1	77.7	1.6	
UK Equity	LGIM UK Equity (5% Capped)		142.6	2.6	58.4	138.7	2.8	
	Baillie Gifford UK Equity	15.9	110.1	2.0	29.2	78.5	1.6	84.1
	JPM UK Dynamic		141.3	2.6		132.9	2.7	
	JPM UK Sustainable Equity		0.4	0.0		0.7	0.0	
Global Equities	LGIM Global Equity Fixed Weight (30:70)		602.7	11.0	49.7	523.0	10.6	
	LGIM World Equity		11.2	0.2	51.6	14.4	0.3	
	LGIM World Equity (GBP Hedged)		8.6	0.2	48.1	9.2	0.2	
	LGIM FTSE Global Developed Small Cap Equity		12.1	0.2	14.4	11.6	0.2	
	LGIM MSCI Minimum Volatility Equity		6.6	0.1	56.0	12.7	0.3	
	LGIM Carbon Transition Global Equity 30:70		0.8	0.0	59.3	1.9	0.0	
	Baillie Gifford Worldwide Discovery Fund	0.4	14.1	0.3	0.0	10.5	0.2	-100.0
	HSBC Islamic Global Equity		5.2	0.1	65.0	6.1	0.1	
Sustainable Global Equities	Baillie Gifford Paris Aligned Global Alpha Fund	20.4	274.2	5.0	27.4	198.3	4.0	34.4
	Baillie Gifford Positive Change	12.5	64.5	1.2	34.7	48.3	1.0	177.5
	Jupiter Global Sustainable Fund		5.3	0.1	3.0	5.7	0.1	
	Nordea Global Climate and Social Impact		0.9	0.0	37.5	1.3	0.0	
	JPM Global Sustainable Equity		2.2	0.0		3.9	0.1	
	JPM UKPP Sustainable Global Equity Portfolio		345.3	6.3	20.3	299.7	6.1	
	Berenberg Limited Volatility Equity				35.4	0.4	0.0	
	Berenberg Managed Volatility Equity				35.4	0.5	0.0	

Asset Class	Manager/Mandate	SBTi 2021	Portfolio Allocation for Asset Class	Percentage of Portfolio Allocation for Asset Class	SBTi 2022	Portfolio Allocation for Asset Class	Percentage of Portfolio Allocation for Asset Class	SBTi 2021 to 2022 Change
		(%)	(£)	(%)	(%)	(£)	(%)	(%)
Regional Equities	LGIM North America Equity		315.4	5.8	51.5	294.0	6.0	
	LGIM Europe (ex UK) Equity		123.6	2.3	71.5	111.2	2.3	
	LGIM Japan Equity		43.8	0.8	41.2	39.1	0.8	
	LGIM Asia Pacific (ex Japan) Developed Equity		112.3	2.1	24.1	109.0	2.2	
	LGIM World Emerging Markets Equity		112.2	2.1	25.1	100.7	2.0	
	JPM Emerging Market Equity		47.4	0.9		40.5	0.8	
	Baillie Gifford Emerging Markets	4.3	27.7	0.5	3.1	23.5	0.5	-29.6
Balanced	Baillie Gifford Managed Pension	8.8	231.8	4.2	16.3	163.9	3.3	84.6
Diversified Growth and Private Markets	LGIM Diversified		130.2	2.4	27.7	113.1	2.3	
	Baillie Gifford Sustainable Multi-Asset	11.6	20.7	0.4	8.1	16.9	0.3	-30.4
	abrdn Global Absolute Return Strategies	9.7	37.5	0.7	10.2	31.9	0.6	6.1
	Nordea Diversified Return		3.4	0.1	46.8	4.9	0.1	
	Partners Group Generations		17.0	0.3		17.9	0.4	
Bonds and Cash	LGIM Pre Retirement		158.5	2.9	32.1	125.2	2.5	
	LGIM Over 5 Year Index Linked Gilts		54.6	1.0		33.7	0.7	
	Fidelity Aggregate Fixed Income	24.0	32.8	0.6	28.0	25.8	0.5	16.7
	Insight Absolute Return Bond		4.6	0.1		5.6	0.1	
	JPM Flexible Credit		13.4	0.2		12.6	0.3	
	Putnam Global High Yield Bond		2.7	0.0		3.5	0.1	
	Colchester Local Markets Bond		1.2	0.0		3.2	0.1	
	Euro Liquidity		6.9	0.1	6.9	7.2	0.1	
	JPM UK Liquidity		146.2	2.7		145.9	3.0	
Property	abrdn Property		9.6	0.2		8.0	0.2	

Source: Investment Managers as at 31 December 2021 and 31 December 2022.

Additional Disclaimers – Implied Temperature Rise

Many managers do not capture Implied Temperature Rise, due to the lack of a standardised methodology. LGIM and Baillie Gifford have provided this data for all relevant funds and notes regarding their methodology are shown below.

LGIM

Implied Temperature Rise is calculated by projecting forward the expected emissions intensity/absolute emissions (dependent on sector) of an issuer to 2030 and comparing this projection to temperature-aligned sectoral decarbonisation pathways. The projection integrates backward-looking trend analysis and probability-adjusted forward-looking targets. The scenarios used to calibrate the sectoral decarbonisation pathways are all ‘orderly’ scenarios which require smooth and coordinated action towards decarbonisation. The carbon intensity used in the analysis, includes all greenhouse gases adjusted to tonnes of carbon dioxide equivalents using the IPCC AR4 GWP (Global Warming Potential) factors in line with GHG protocol guidance.

Implied temperature alignment is a function of two mappings: first, global emissions onto global temperatures, and second, a company’s projected emissions onto global emissions pathways. In aggregate, a company is then mapped to a temperature. For more details, please refer to Net zero - A practical guide.

Baillie Gifford

Baillie Gifford use the Implied Temperature Rise metrics provided by MSCI. For more details, please refer to MSCI – Implied Temperature Rise.

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