Smart Pension Master Trust

Task Force on Climate-Related Financial Disclosures

("TCFD") Report (30 June 2024)

Smart Pension

A message from the Chair

We ("the Trustee") consider climate change to be a financially material risk for the Smart Pension Master Trust (the "Scheme"). Climate change has the potential to have long-term impacts on financial markets, which could in turn affect the value of members' pension investments.

We have a set of beliefs, policies and processes for managing climate and nature-related risks and opportunities. In particular, our Climate and Nature Policy goes into detail on how we address these specific risks. Climate change is considered as part of our ongoing monitoring activities, including monitoring the voting and engagement activities from underlying fund managers.
The Trustee recognises the need to consider climate and nature-related issues together in order to achieve a just transition in line with our net zero commitment, to help keep our global temperature rise to 1.5°C and our agenda to take action to prevent biodiversity loss including considering deforestation as a risk.

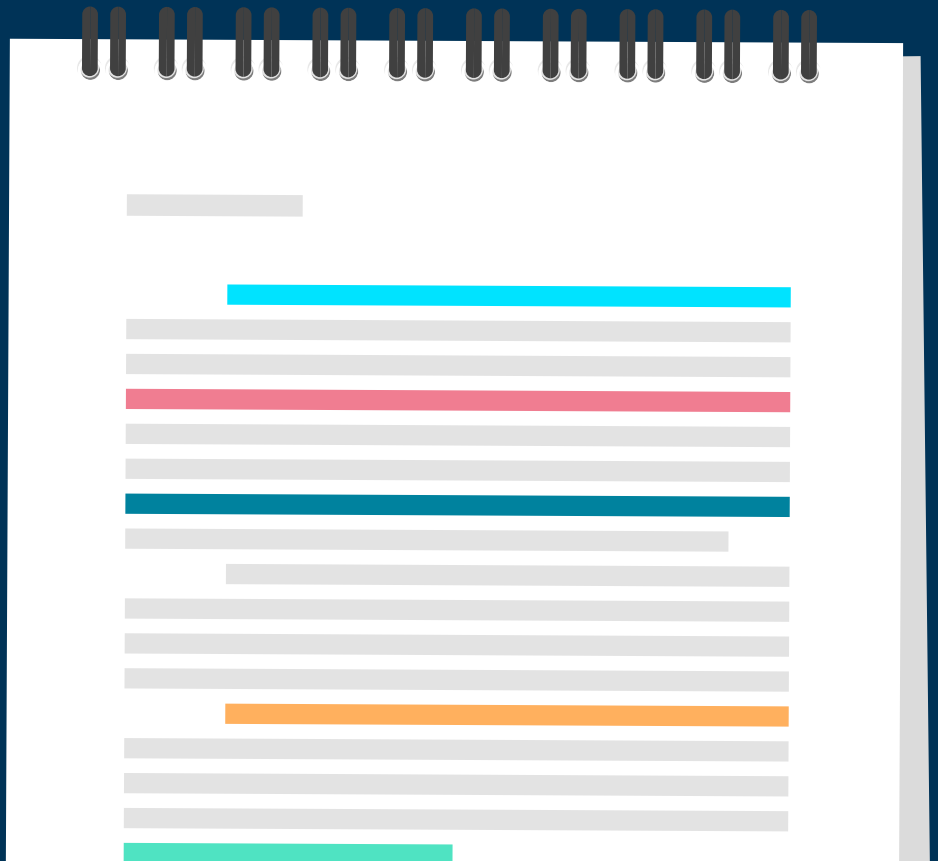
The Smart Sustainable Growth Fund (our "default growth fund" or our "portfolio") is our main default growth fund and invests in passive equities focused on transitioning to a lower carbon economy, in active equities investing in biodiversity solutions and in green bonds aiming to finance green projects. It also has an allocation to a dual private credit fund. We acknowledge that nature-related risks are intrinsically linked to climate-related risks and can also be financially material for the Scheme. We have started to consider nature-related impacts, dependencies, risks and opportunities.

In line with last year, we have undertaken analysis to assess our progress on reducing our greenhouse gas emissions and our temperature alignment, and have kept our climate scenario analysis included. We recognise the limitations of scenario analysis and therefore only use it to support our considerations of qualitative risks and opportunities related to climate. We have expanded upon these qualitative views in this year's report. We continue to effectively manage climate-related risks and capture opportunities, through decisions made about the way the assets are invested, engaged with and stewarded.

During the reporting period the intensity of our emissions (scopes 1, 2 and 3) reduced. This report shows how we identify and manage climate-related risks and opportunities with the intention of improving members' outcomes in retirement.

Andrew Cheseldine
Chair of the Smart Pension Master Trust

1 Introduction



Why is climate change important to us?

Climate change is one of the most important challenges facing the world today and cannot be solved overnight. The climate is intrinsically linked to nature and biodiversity as well as social factors surrounding people such as basic human rights. Being proactive in addressing the causes of climate change, and targeting a lower temperature outcome than is currently forecast, is a key sustainability goal. Nature loss is also an important consideration in our investment approach, with more information provided on our website[1].

The Trustee believes that climate and nature risks pose a real and material threat to members' investments and therefore their retirement outcomes. Generating an appropriate and sustainable financial return for members while also addressing these global challenges helps to mitigate these risks. The Trustee also believes that there can be opportunities for long-term performance when considering new technologies and solutions to assist with the global transition to net zero. Net zero is the balance between the amount of greenhouse gases produced and the amount removed from the atmosphere. In order to meet the 1.5°C global warming target in the Paris Agreement[2], with no or limited overshoot, the Scheme's net zero target date is 2040. Since the last report, we introduced a new interim target of 75% reduction in scope 1 and 2 emissions intensity by 2030. We met our initial interim target early for our scope 1 and 2 emissions (at the end of 2022), which was a 50% reduction by 2025. Our targets have been set without the use of carbon offsetting and we do not buy any carbon offsets.

Each stage of the investment decision-making process needs to consider ESG risks and opportunities (investment strategy, investment selection, reporting and so forth) which include climate as set out in this report. Being active owners of investments over the long term is also critical for responsible stewardship of assets. The Trustee has developed the Smart Sustainable Growth Fund (our "default growth fund") to identify and capture investment opportunities offering solutions to environmental and social challenges and will continue to do so, provided they are aligned with the Scheme's objectives and strategy[3].

Since our base year of 30 June 2019, our emissions intensity has reduced by 62.6% for our scope 1 and 2 emissions, and reduced by 63.6% for our scope 3 emissions, to 30 June 2024[4] (see section 6 'Climate-related Analysis' for further details). Our emissions are based on tonnes of CO_2 equivalent or CO_2e, which is a way of expressing all greenhouse gases (for example methane, ozone and so forth.) as a single metric, by converting them into CO_2.

The Trustee is a supporter of the Task Force on Climate-Related Financial Disclosures and has produced this report to show our progress in line with these disclosures.

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1. Climate and Nature
www.smartpension.co.uk/investments/climate-and-nature

2. The Paris Agreement is a legally binding international treaty on climate change, adopted by 196 Parties at the UN Climate Change Conference (COP21).

3. Statement of Investment Principles
www.smartpension.co.uk/governance/scheme-governance

4. Hymans Robertson, MSCI data

What is the Task Force on Climate-Related Financial Disclosures (TCFD)?

TCFD was created by the Financial Stability Board (FSB) to improve and increase reporting of climate-related financial information. The FSB has since handed over the monitoring of the progress of companies' climate-related disclosures to the International Financial Reporting Standards (IFRS) Foundation. The TCFD has four pillars of reporting:

The governance around climate-related risks and opportunities.

The actual and potential impacts of climate-related risks and opportunities on the business, strategy and financial planning.

The processes used to identify, assess and manage climate-related risks.

The metrics and targets used to assess and manage relevant climate-related risks and opportunities.

The Trustee of the Smart Pension Master Trust is supportive of initiatives it believes will be in the long-term financial interest of members. The Trustee believes greater disclosure, such as TCFD reporting, will lead to better investment decisions. The Trustee has a net zero transition plan[5] which details the steps to be taken to reach our greenhouse gas emissions, climate solutions and engagement targets, based on the Paris Aligned Investment Initiative's Net Zero Framework. Where appropriate, the Trustee will also engage with its appointed fund managers to support such initiatives. This report outlines the Trustee's position with regards to TCFD reporting as at 30 June 2024, including progress over the scheme year.

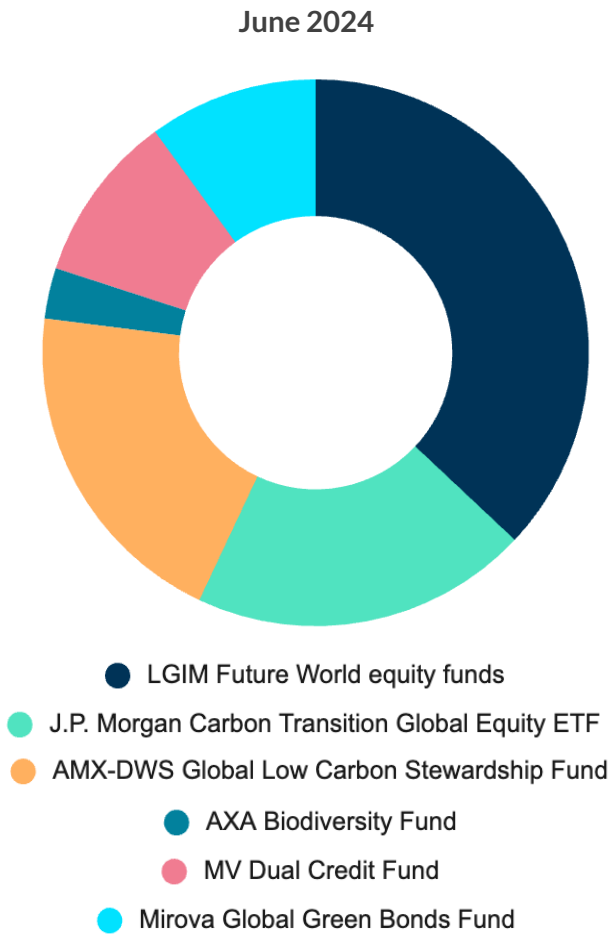
5. Our approach to achieving net zero for investments **www.smartpension.co.uk/investments/climate-and-nature**

2 Learnings and developments

The Trustee's net zero target of 2040 supports the goals of the Paris Agreement, by transitioning the Scheme's investments over time to an investment strategy that is aligned with achieving the goals of limiting global temperature increases to 1.5°C above pre-industrial levels, with no or limited overshoot. This target supports a just transition to net zero, to ensure that investments focus on decarbonisation, in a way that is fair and inclusive, while encouraging global long-term sustainability and growth. Our net zero targets apply to the main default growth fund, where the majority of the Scheme's assets are invested. As at 30 June 2024, over 80% of assets were invested in this fund.

Smart Sustainable Growth Fund (default growth fund)

The assets in our default growth fund grew by c. £1.5bn over the Scheme year to £4.79bn. Over the Scheme year, 20% of our passive equity allocation moved to a customised 2040 net zero global equity index with attached voting rights and a strong focus on engagement from the manager to progress the low-carbon transition. The overall asset allocation, risk and return have not changed, with 77% still allocated to global passive equities, 3% to active biodiversity solution equities, 10% to green bonds and 10% in a dual private credit fund. At the Scheme year-end, the 10% in the dual credit fund consisted of 3.7% corporate bonds (in scope of our targets) and 6.3% private credit (out of scope of our targets). As data and methodology improve, we expect to receive data on our private allocation too.



Scope 3 emissions continue to be the least accurate data provided. However, by taking into account scope 3 emissions, we aim to remain transparent and gain a deeper understanding of our goals and impact on the wider environment. For the first time, absolute emissions for scope 3 carbon emissions for the default growth fund also decreased (by 20%). This was largely driven by improvements in the majority of funds within the portfolio. Scope 3 trends are expected to be volatile due to the inconsistency in reporting globally. Once this becomes more standardised, we expect volatility to subside.

In our last report, we recognised the limitations of using scenario analysis and our ability to capture possible downsides from climate-related risks, such as climate tipping points and their second-order effects. On the other side, it is difficult to measure the impact of technological advances in a "green revolution" and what those advances may be. The analysis overweights volatile paths, widening the range of outcomes, but the "expected pot size" results are still likely to be overstated in the delayed and no transition scenarios. Therefore, it's important to consider these alongside a qualitative assessment of the risks. We have not re-done our quantitative analysis this year, as we believe last year's analysis remains relevant to our portfolio. This follows the view that the attached voting rights and engagements, through our new fund for 20% of our passive equity allocation, will have little effect on the perceived outcomes from the scenario analysis, due to its limitations.

Our wider analysis is carried out by our investment adviser, Hymans Robertson, using MSCI data for the purpose of reported and estimated emissions. The absence of a universal reporting standard across industries, geographies and data providers poses a challenge to data comparison. We use this reporting to measure progress against ourselves and remain dedicated to providing transparent and meaningful reporting, while being flexible in our approach to take into account a continually-evolving area.

3 Governance

The Trustee

The Trustee's investment strategy is based on an assessment of the retirement needs of members and their overarching investment beliefs, as set out in the Statement of Investment Principles. One of these beliefs is: 'ESG and climate risks pose a real and material threat to members' retirement outcomes. Generating an appropriate and sustainable financial return for members while also addressing global challenges helps to mitigate these risks.'

The Trustee's policies were updated over the Scheme year, to take into account nature risks in addition to the climate risks already set out. Our Climate and Nature Policy is an additional policy to our Responsible Investment Policy, and it details the Trustee's investment beliefs on environmental issues including climate, biodiversity and deforestation considerations. Our overarching Responsible Investment Policy considers the broader social and governance risks of our investments. Our Voting and Engagement Policy explains the process for implementing these views into the investments. The investment strategy implemented is in line with these beliefs. Our investment policies are available on our Scheme governance webpage[6] and more information can be found on our stewardship webpage[7].

The Trustee's approach to addressing climate change risks and capturing opportunities is set out in the Trustee's Climate and Nature Policy, and can be summarised as follows:

1. Analyse the risks in the investments made on behalf of our members and set investment strategy to take into account those risks. Limiting these risks is a key consideration in the selection of the investment funds selected for members; and
2. Seek appropriate investment opportunities which contribute to addressing climate change and are consistent with the best interests of members.

6. Scheme governance page
www.smartpension.co.uk/governance/scheme-governance

7. Investments page
www.smartpension.co.uk/investments/stewardship-voting-engagement

The Trustee's approach captures the transition over time to lower emissions, including lowering an allocation to fossil fuels and not investing in fossil fuel expansion, as well as choosing managers where engagements with high-emitting companies are well structured and implemented. The Trustee is ultimately responsible for the oversight of the Scheme's climate-related objectives, and action taken to meet these, but is supported by both its advisers, its sub-committees and working groups, as well as Smart Pension itself, including its internal Investment and Governance Teams. This support includes specialist training on climate-related areas at Trustee Board meetings and membership of various industry groups and initiatives to further thinking and progress in these areas. The groups which input into and are responsible for ESG for the Scheme are:

Board of Trustees Four Trustee Directors (Five since 1 April 2024)	Solely responsible for the investment of the assets of the master trust, including decisions regarding the design and selection of strategies.
Investment Sub Committee ("ISC") Two Trustee Directors	To assist the Trustee in making decisions about investments, implement and oversee the whole strategy and monitor compliance with their principles, including climate-related risks and opportunities.

The Trustee ensures knowledge of investment matters remains up to date with training, external activities and advice. The Trustee received investment training over the year to 30 June 2024 and discussed specific investment issues including climate solutions, nature disclosures and nature-related risks including deforestation and diversity, equity and inclusion.

We engage with our investment managers on at least an annual basis in order to determine whether they are meeting the objectives set out by the Trustee in relation to climate change, and action will be taken if this is found not to be the case. In addition, climate-related metrics are used to monitor the Scheme's progress against the objectives set, in particular the Trustee's carbon emissions reduction goals.

Supporting teams

The Trustee is supported by full-time teams within Smart Pension across various roles, including investment, governance, compliance, legal, marketing and communications. The ISC is responsible for undertaking climate risk analysis for the investments, set against the objectives of the Trustee, which is carried out by the in-house Investments Team and the Trustee's investment adviser.

The Trustee's investment adviser provides objective assessments of differing approaches to responsible investment to help the Trustee decide appropriate responsible investment objectives for the Scheme. This includes informing the Trustee of new responsible investment opportunities or emerging risks, including different risk metrics. The Trustee annually assesses the delivery of this advice using the Department for Workplace Pensions (DWP) Investment Consultant Objectives framework, and carries out a further formal review on a triennial basis. The Trustee's investment adviser is also a member of the Investment Consultants Sustainability Working Group.

The Trustee has included the following ESG and climate-specific objectives for their investment adviser:

- Help the trustee to implement an investment strategy which adds value through the integration of ESG, Responsible Investment, effective stewardship and climate change considerations in their investment manager appointments and strategy recommendations. This should be in line with the Trustee's policies, as well as the Trustee's net zero and impact investment frameworks; and
- As appointed adviser to the Trustee, to act in line with the Trustee's expectations of key advisers and suppliers.

The Trustee has delegated responsibility for the selection, retention and realisation of investments to the fund managers, within certain guidelines and restrictions. The Trustee requires its appointed fund managers to be cognisant of climate change risks and opportunities within their investment processes and manage climate-related risks effectively. Fund managers are required to report annually on how these risks and opportunities have been incorporated into the investment process, including descriptions of any engagement activity undertaken with companies in their portfolios and qualitative responses to the issues raised. Over the Scheme year, fund managers undertook engagement activities in line with the Trustee's policies. In addition, the Trustee reviewed the stewardship of the Scheme's investment managers, including from a voting and engagement perspective, as set out in the Trustee's Voting and Engagement Policy and their bespoke policy (for the AMX-DWS Global Low Carbon Stewardship Fund)[8]. This also sets out the Trustee's escalation process where managers are not meeting certain standards. The Trustee considers voting alerts issued by ShareAction, significant holdings and significant votes, as well as independent insights offered by the Transition Pathway Initiative (TPI). The TPI assesses companies' preparedness for the transition to a low-carbon economy. Examples of vote, engagements and the TPI assessments are shown in our UK Stewardship Code and Voting and Engagement report[8] for the year to 30 June 2024.

8. Governance page **www.smartpension.co.uk/governance/scheme-governance**

4

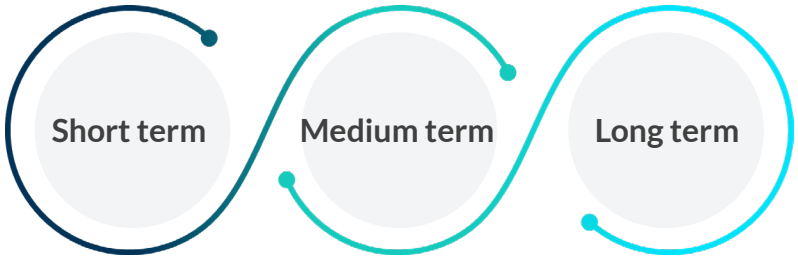
Strategy

Climate-related risks and opportunities

The risks

The Trustee believes that climate change, and policies to address the negative impacts of climate change and the transition to a lower-carbon future, will have a material impact on the value of investments over the time horizon of its members' pension savings. Given our membership we have considered the following time horizons:

- short (5-10 years);
- medium (20-25 years); and
- long-term (35+ years).



The Trustee aims to ensure that the investment strategy considers the physical and transition risks to its members' investments associated with climate change. Examples of a member in the different time horizons identified are shown below. These are unchanged from last year.

Short term	Medium term	Long term
60 year-old, with a time horizon of 5-10 years until retirement including retirement planning and potential for an earlier retirement.	40 year-old, 25 years from retirement, with a time horizon of 20-25 years to include retirement planning and potential for an earlier retirement.	25 year-old, 40 years to retirement with a timeframe of 35+ years to include retirement planning and potential for an earlier retirement.

The outcomes from the scenario analysis and other climate-related metrics are shown in section 6, with the assumptions outlined in the Appendix.

The main default growth fund has exposure to listed equities and listed and private fixed income, all of which have different climate risks. In terms of physical and transition risk:

- Physical risks are events that may occur due to climate change, such as flooding, droughts and wildfires, which impact the value of assets. Physical risks are assessed through climate scenario analysis undertaken by the Trustee.

- Transition risks occur as a result of moving to a low-carbon economy, such as carbon taxes or stranded assets. Transition risks are also incorporated into the climate scenario analysis.

In addition to the climate scenario analysis, physical and transition risks are assessed through carbon footprint analysis, as well as temperature alignment analysis. As detailed in section 6, since 30 June 2023 the carbon footprint (emissions intensity) of the main default growth fund has been reduced by c. 15.8% for scope 1 and 2 and by 29.5% for scope 3 emissions, and temperature alignment has increased by 0.3°C. This shows that there has been some progress in global companies' emissions reduction, but the slight increase in temperature alignment represents the majority of companies still not on track to meet the Paris Agreement's goals. We believe in investing in meaningful ways to reduce global emissions and temperature alignment, such as biodiversity and green bonds, which may today have higher emissions than alternative investment strategies but will in the long term make a real difference to lowering global temperature and alignment with the Paris Agreement. Over the Scheme year, we had allocations to specific impact and carbon transition funds. Our Mirova Global Green Bond Fund (10% of our default growth fund) finances specific projects with high environmental and social impact. Our AXA Biodiversity Global Equity Fund aims to have a positive impact, investing across several Sustainable Development Goals (SDGs) in three main areas – sustainable agriculture, responsible production and consumption, and resilient infrastructure – while also considering technology enablers across these. Our AMX-DWS Global Low Carbon Stewardship Fund does not have a specific environmental and/or social objective, but has a targeted engagement strategy and includes criteria to reduce exposure to or to exclude companies which are negatively aligned with certain principal adverse ESG indicators. Any companies violating the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights are excluded.

The opportunities

The Trustee looks for climate-related opportunities in their investments and new strategies being developed. We have embedded our impact investing framework into our Responsible Investment Policy. The policy states that we aim to identify sustainable companies and capture investment opportunities offering solutions to environmental and social challenges, provided they are aligned with the investment objectives and strategy of our fund offerings. When assessing opportunities for new investments, we also use the United Nations' Sustainable Development Goals and the United Nations Principles for Responsible Investment Impact Investing Market Map, which aims to bring more clarity to the process of identifying mainstream impact investing companies and thematic investments so that asset owners and fund managers can better assess opportunities in the market.

Our impact allocations look to strengthen risk management and return potential. Our 3% allocation to the AXA Biodiversity Fund aims to take advantage of alpha return opportunities and mitigate biodiversity loss by investing in best-in-class companies offering innovative solutions to address issues such as pollution on land and water, land degradation, sustainable materials and recycling. Our 10% allocation to the Mirova Global Green Bond Fund aims to contribute to the low-carbon transition while making a twofold impact, financial and environmental.

We also have additional investment options available to members, including a higher impact growth fund with an increased allocation to specific impact investments across climate, biodiversity and social progress.

Managing climate-related risks and opportunities

Climate-related risks influence the Trustee's business, strategy and financial planning insofar as mitigating them, as well as wider ESG risks, is integrated into the investment strategy. Climate-related risks and opportunities are included in our processes:

When we select a new fund we work with the Trustee's investment adviser, Hymans Robertson, to research and assess each fund to ensure their practices align with our Responsible Investment Policy. This includes detailed questions of their approach to managing climate risk and their advocacy for climate action. As we move towards monitoring and reporting the climate performance of our funds, we ensure that external managers measure and disclose the carbon footprint of their funds, using consistent methodology where possible.

By including the assessment of ESG and climate-related risks as a key part of the objectives of the Trustee's investment advisers, Hymans Robertson, the Trustee receives advice on monitoring the suitability of fund managers and how to react to any ratings downgrades that take place.

Consistent with its long-term horizon and strategic approach, the Trustee reviews each appointed fund manager at least annually. A core part of such reviews is assessing how the manager is incorporating ESG risk mitigation within its process, with a focus on climate-related risk.

The Trustee assesses managers as part of their wider strategic asset allocation by favouring allocations that are aligned with sustainability goals, tilting towards stronger ESG areas and applying exclusions in line with their Responsible Investment Policy.

The Trustee will determine whether it is comfortable its managers show continued commitment to manage new and emerging risks associated with climate change. If, through analysis, investment managers are shown to have unexpected or significantly high exposure to certain risks, for example the transition to clean energy, we would escalate this with the investment manager. Should their response not be sufficient, we may look to reduce or terminate their mandate.

In addition to the above, the Trustee has a dynamic risk register in place, which is reviewed at least annually and discussed at each quarterly meeting, discusses ongoing risks to investments regularly at Trustee and Investment Sub-committee meetings, and regularly requests details from our managers on the risks they are seeing, and how they are managing them, as part of our oversight process. This includes risks that are more systemic in nature, such as geopolitical risk and inflation.

Over the Scheme year, the Trustee considered a number of risks, including the risk that the Trustee fails to address ESG considerations. The Trustee looks to engage with ESG requirements, climate change considerations and their own stated policies. The risk of not adhering to these is an ongoing identified risk with the potential consequence that the Trustee holds assets which do not comply with policy or market sentiment and finds itself in 'stranded assets'. A further risk is that investment managers do not implement and follow their own responsible investment and stewardship policies.

The Trustee agreed that nature-related risks were a significant consideration in investments and inter-related to climate risks. Economies rely on goods and services generated by natural capital, such as food, raw materials and water. Details of our nature considerations are available on our website[9]. We believe our process remains effective in addressing the risks identified, as well as in reviewing ongoing stewardship activities that are associated with the Scheme's investments.

The Trustee's voting and engagement approach is documented in our Voting and Engagement Policy. In summary, the Trustee currently delegates voting to its appointed fund managers and expects the managers to vote consistently with the Trustee's fiduciary responsibility. Whilst the Trustee undertakes large amounts of oversight and stewardship currently, over time, as the funds we use incorporate more flexibility, we will look to take a more active role in voting in particular. In September 2023, we added a new 20% allocation to the default growth fund from the current equity allocation in a stewardship climate transition fund, which has a split-voting process allowing us to direct our own voting and engagement policy. This was put in place through Minerva. The Trustee receives annual reports from its appointed equity fund managers and Hymans Robertson on their voting and engagement activities, and reviews significant votes as set out in our Voting and Engagement report and Implementation Statement[10].

As an asset owner, the Trustee believes it is important that it engages with its fund managers to continually drive best practice, as it believes this is in its members' best interests. The Trustee, through the Investments Team and its advisers, will regularly discuss this with managers. Managers will be invited to present either to discuss their evolving ESG thinking and practices, or to discuss any issues in meeting the ESG objectives set by the Trustee. A key area of focus is the asset managers' approach to incorporating climate considerations into their fund, at both the overall strategic level and portfolio level, and the steps they have already taken and plan to implement to ensure they are better-placed to assess and manage the climate risk of their portfolios.

9. Investments page
www.smartpension.co.uk/investments/climate-and-nature

10. Governance page
www.smartpension.co.uk/governance/scheme-governance

Resilience to different climate scenarios

We undertook climate scenario analysis to test the resilience of the Scheme in different climate scenarios, in particular a 'green revolution', 'delayed transition' and 'head in the sand', all with individual likelihoods of reaching a less than 2°C temperature increase. These scenarios have been chosen as a representation of where we are on track to meet climate targets, where there is a delay and where no consideration is given to meet climate targets. We believe this will give a broad examination of possible scenarios which will help us develop our strategic plans to be robust and flexible over time. Our analysis is in line with the guidance on ways to approach scheme climate governance and TCFD disclosures produced by the Pensions Climate Risk Industry Group ("PCRIG"). Overall, the results from this analysis showed all of the climate scenarios tested could lead to worse outcomes for members of different ages, but members closer to retirement are relatively immunised from expected climate risks when compared to the other member scenarios, with further detail provided in section 6.

This reflects the well-diversified investment strategy we have put in place for members.

The Trustee continues to work with its advisers and managers to explore different climate scenario analysis tools and climate stress tests methodologies to develop and refine its climate scenario testing as industry best-practice evolves, including whether any additional stress testing is appropriate.

5

Risk Management

Identifying and assessing climate-related risks

Climate-related risks and opportunities are identified and assessed through a combination of advice received from the Trustee's investment adviser, internal-driven research and engagement with a number of industry groups.

Identify climate-related risks and opportunities:
These are identified from the above activities and prioritised and outlined in our Trustee's Responsible Investment Policy, Climate and Nature Policy and Voting and Engagement Policy.

Implement:
We liaise with our fund managers to ensure they are aligned with Trustee policies and consider these when researching and exploring other opportunities.

Monitor:
We have Investment Sub-Committee meetings where we regularly discuss our climate-related investment activities and review our progress against our objectives and targets.

Review:
Our metrics and targets, as well as our policies (mentioned above) are reviewed annually.

All the underlying funds in the main default growth fund have strong ESG integration and a focus on engagement. The Trustee has a preference for engagement, rather than exclusion, as a means to encourage greater disclosures and better practices with regard to identifying and assessing climate-related risks. However, we do have minimum exclusion criteria which are set out in our Responsible Investment Policy. Some of our managers may go beyond others in terms of exclusions but at a minimum, at the Scheme year-end, our managers excluded companies which cover the following:

- involved in the manufacture and production of controversial weapons;
- perennial violators of the United Nations Global Compact ("UNGC"); and
- involved in the mining and extraction and generation of thermal coal and oil sands from total exclusion to a 30% revenue threshold (varies by fund manager, this is the maximum threshold).

It should be noted that any portfolio changes that take place as a result of this change represent part of an ongoing process. Companies divested from the fund could be repurchased if their sustainability planning improves, and other companies divested if they do not deliver on pledges. As noted previously, the Trustee has also allocated to a strategy which allows a Trustee specific voting policy.

The Trustee's Climate and Nature policy clarifies the Trustee's guiding principles, beliefs and investment strategy with regards to identifying, assessing and managing climate-related risks. It sets out our expectation that managers have a clear Paris-aligned plan to phase out coal by 2030 in Organisation for Economic Co-operation and Development (OECD) countries, and by 2040 in non-OECD countries. Our escalation process is set out in our Voting and Engagement policy and applies to situations where managers are not aligned with this or our other expectations, set out in our policies.

The Climate and Nature policy allows the Trustee to understand the climate-related risks the Scheme is exposed to. In particular, it outlines that the Trustee seeks to:

- ensure that the investment strategy considers the physical and transition risks to its members' investments associated with climate change and current and future policy action and is positioned accordingly;
- identify opportunities which are sustainable and offer climate solutions; and
- position the members' investments, in a manner consistent with providing strong returns on members' assets and limiting global warming to 1.5°C above pre-industrial levels with limited or no overshoot, in line with the best efforts target of the Paris Agreement on Climate Action and recommendations by the Intergovernmental Panel on Climate Change ("IPCC").

Our Responsible Investment Policy, Climate and Nature Policy and more details on our Net Zero transition plan are set out on our website[11].

[11] Investments page **www.smartpension.co.uk/investments/climate-and-nature**

Managing climate-related risks

The Trustee's approach to managing climate change risks and opportunities can be summarised as follows:

During the Scheme year the Trustee monitored all managers to understand how they continue to manage climate-related risks, and further steps being taken by the fund managers to manage and mitigate the risks. At the Scheme year-end, the equity allocation, in the main default growth fund, was split across four investment managers; Legal and General Investment Management ("LGIM") with 37% to their Future World equity funds, J.P. Morgan Asset Management ("JPM") with 20% to their climate transition fund, DWS Asset Management ("DWS") with 20% to their low-carbon global stewardship fund and AXA Investment Managers ("AXA") with 3% to their biodiversity solutions fund. Each of these managers takes into account ESG-related risks and integrates them into the investment process.

LGIM's Future World funds implement a climate methodology which uses a decarbonisation pathway to reduce the carbon emissions of each fund's index by 50% relative to its parent index (using 2021 as the base year), and 7% year-on-year thereafter. LGIM also uses 34 metrics, targeting key engagement themes, which make up an LGIM ESG Score. This score combines an environmental "E" score, a social "S" score and a governance "G" score, with adjustments made for a company's overall levels of transparency with regards to ESG issues – "T" score. The "E" score assesses the carbon emissions intensity including value chain, climate transition, green revenues, temperature alignment and carbon reserves, as well as nature-related categories covering biodiversity, water management and deforestation. LGIM will engage directly and collaboratively (with other investors and investor groups) with companies in their Future World fund range. LGIM's Future World fund range is categorised as Article 8 at minimum under the EU's Sustainable Finance Disclosure Regulation ("SFDR"). These requirements do not apply to UK-domiciled financial products such as the Future World funds that Smart Pension is invested in. However, they do apply to the EU-domiciled versions of the funds.

The JPM fund follows a bespoke index designed to capture the performance of companies which have been identified through its rules-based process as best positioned to benefit from a transition to a low-carbon economy by effectively managing their emissions, resources and climate-related risks. This fund is classified as Article 9 under EU SFDR, which means it has sustainable investment as its objective or a reduction in carbon emissions as its objective.

The DWS fund invests in a new bespoke low-carbon transition global equity index. The fund uses split-voting technology from Minerva Analytics which aims to track the global equity index, offering diversified equity exposure which is aligned with the long-term targets of the Paris Climate Agreement. The fund is also aligned with Smart Pension's Smart Sustainable Growth Fund target of being net zero by 2040.

The AXA Biodiversity fund is actively managed and invests in sustainable investments for issuers acting positively for biodiversity by reducing or limiting the negative impact of human activities on biodiversity. In particular, the fund seeks to achieve its objectives by investing in sustainable companies that support, in the long run, the United Nations Sustainable Development Goals ("SDGs"), with a focus on Clean Water and Sanitation (SDG 6), Responsible Consumption (SDG12), Life Below Water (SDG14) and Life on Land (SDG 15). Therefore, this is not a specific climate transition strategy, but the Trustee recognises that we cannot deliver on net zero commitments and keep global temperature rise to 1.5°C without considering nature including biodiversity risks. The Fund is also classified as Article 9 under EU SFDR.

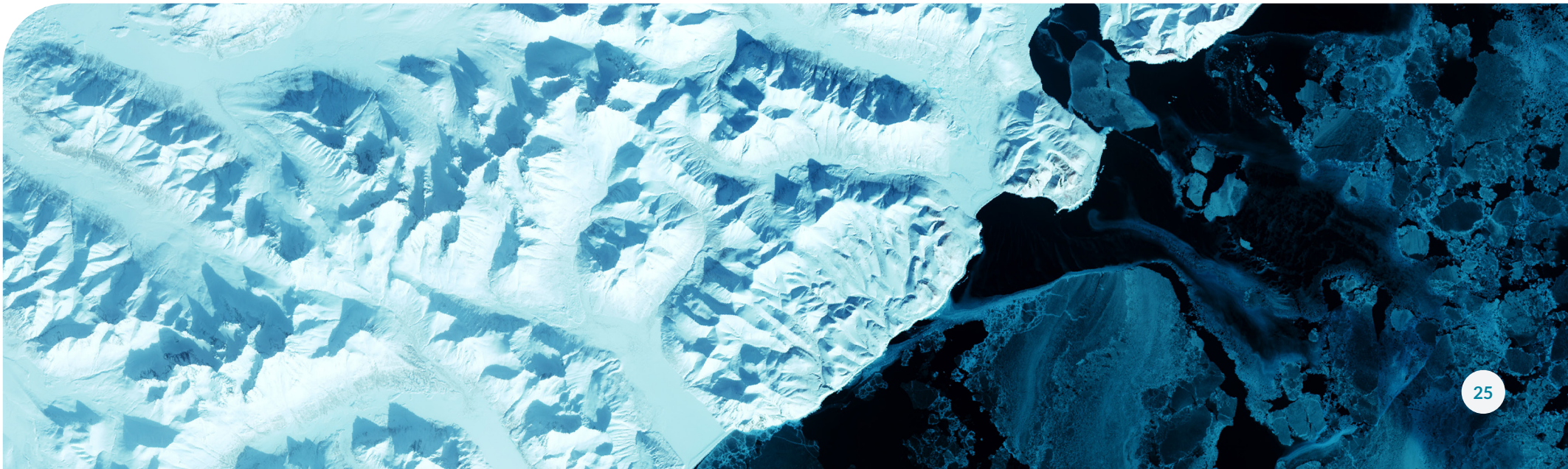
Discussions with managers and their data provision help to feed into the Trustee's priorities for management of risks and seeking new opportunities, along with collaboration with industry groups, initiatives and experts (for example investment consultant). The Trustee reviews the metrics and tools used in this report, with the aim of increasing the coverage of risk assessments undertaken.

Integrating climate-related risks into our overall risk management

Climate change is explicitly identified as a risk on the Trustee's risk register, which is discussed by the Trustee on a quarterly basis. The Trustee considers climate change risk to be a systemic risk. It is managed through a combination of both positive and negative tilts, where appropriate, as well as stewardship policies, set out in the Statement of Investment Principles, as well as in the Voting and Engagement Policy. The Trustee's Climate and Nature Policy further integrates the Scheme's processes around climate risks into its overall risk management processes.

Where feasible, mitigation of climate-related risks is factored into the mandates the Trustee has with its appointed fund managers. For all appointed fund managers, evaluation of ESG risk management, which includes climate-related risks, is an explicit part of both the onboarding process as well as the ongoing due diligence and monitoring that the Trustee undertakes. The Trustee will regularly review which metrics identify, assess and monitor the climate-related risks and opportunities of its appointed fund managers' portfolios. The fund managers are required to provide descriptions of engagement activity undertaken with companies in their portfolios and qualitative responses to issues raised. Examples of managers' engagements can be found in our Voting and Engagement Report[12].

[12.] Governance page
www.smartpension.co.uk/governance/scheme-governance



The Trustee believes that through memberships of industry initiatives and organisations, it can contribute towards wider public policy solutions that are aligned with an orderly transition to a low-carbon economy. The Trustee will support organisations or initiatives where doing so will help the Trustee achieve its net zero ambitions and/or progress industry best practice and thinking. Currently the Trustee is associated with the following climate-related organisations:

IIGCC
The Institutional Investors Group on Climate Change

Member of the Institutional Investors Group on Climate Change ("IIGCC"), an investor-led body which provides a framework for transitioning to net zero. We are a member of the group, and have built our net zero framework using the IIGCC template.

Climate Action 100+

Supporting member of Climate Action 100+, an investor-led initiative to ensure the world's largest corporate greenhouse gas emitters take necessary action to improve climate change governance, cut emissions and strengthen climate-related financial disclosures. We use this as a tool to work with our investment managers on engaging and stewarding the world's largest emitters.

Nature Action 100

Participating in Nature Action 100, another investor engagement initiative focused on driving greater corporate ambition and action to reverse nature and biodiversity loss. Similar to Climate Action 100+, it has selected companies in key sectors that are deemed to be systemically important to the issue. Nature loss is a cause and effect of climate change and we can not solve one without addressing the other.

MMM

Supporter of Make My Money Matter, a pressure group looking to ensure that UK pension schemes commit to net zero by 2050. We have signed up to this pledge and, as detailed above, we are aiming for our default growth fund to be net zero by 2040.

Whilst not specifically a climate-related organisation, the Trustee has also signed up to the Impact Investing Principles for Pensions, developed by the Impact Investing Institute and Pensions for Purpose.

6 Metrics and Targets

Our metrics

With regards to quantitative metrics, the Trustee has commissioned the calculation of carbon intensity and absolute emissions metrics for its main default growth fund, the Smart Sustainable Growth Fund. Where the data is available, analysis is undertaken on an annual basis, starting from our net zero base year of 2019. We note that data quality has improved significantly since then. Our main default growth fund had holdings in a UK government bond fund at our base year 2019, one which does not have available emissions data and is therefore not included in our base year reporting. The UK government bond allocation is no longer in the default growth fund. In addition, our current fund has an allocation to private credit (6.3%). Few data providers are able to estimate emissions in private markets and there can be significant gaps in the data and a lack of accuracy. Therefore, our private credit allocation is not reported within the metrics tables. We note this material data gap and continue to work with our investment adviser and private credit manager to improve the quality and availability of this data.

The Trustee has analysed the quality of the data, detailing what proportion is reported, estimated or unavailable (for scopes 1 and 2 currently). Metrics are provided by Hymans Robertson with data sourced from MSCI. MSCI collects company-specific greenhouse gas emissions data from company public documents and the Carbon Disclosure Project (CDP). If a company does not report emissions then a proprietary methodology is used to estimate them. MSCI noted the low quality and quantity of data reported for scope 3 emissions[13] and we have acknowledged this limitation, reporting scope 3 emissions separately. Hymans Robertson has confirmed that this approach is consistent with DWP guidance, which in turn is consistent with the Partnership for Carbon Accounting Financials (PCAF) standards.

In addition to the three metrics mentioned above, the Trustee has commissioned the calculation of the main default growth fund's implied temperature alignment, in line with TPR's consultation with regards to a fourth climate metric. This section provides analysis of the main default growth fund (Smart Sustainable Growth Fund)'s listed holdings, split into scope 1 and 2, and scope 3 emissions. Data coverage (i.e. the percentage of assets within each portfolio where the data was available to calculate the carbon metrics) of scope 1, 2 and 3 emissions of these investments increased slightly over the Scheme year, with more companies reporting on emissions and higher levels of disclosures. We will remain flexible to make sure we are reporting information with a focus on improving accuracy. Please see further detail on the coverage figures in section 6. The Scheme's own operational emissions, which are scope 1 and scope 2 emissions directly relating to its business operations, are likely to be immaterial, and are therefore not disclosed.

13. www.msci-institute.com/wp-content/uploads/2024/04/NetZero-Tracker-April-cbr-en.pdf

Our targets

The Trustee has set meaningful targets that are in line with the Scheme's investment and climate objectives. Further details are provided in the Net Zero Framework, but in summary the targets set are:

Net zero investments by 2040
We are making investments which will help to align our default growth fund to a pathway which reaches net zero emissions by 2040.

50% reduction in scope 3 emissions by 2025
Our 50% reduction target is set over six years from our base year, 2019. We have already met this target for our scope 1 and 2 emissions at the end of 2022, two years early.

75% reduction in scope 1 and 2 emissions by 2030
Our 75% reduction target is set over 11 years from our base year 2019, and based on tonnes of CO_2 equivalent per million pounds invested (tCO_2e/£m). We will look to report on our emissions annually in TCFD reports.

Invest a minimum of 10% into climate solutions
We are aiming to consistently allocate a minimum of 10% of our main default growth fund to climate solutions, which are projects or products which help to adapt to climate change occurring and/or reduce and stabilise the amount of greenhouse gases in our atmosphere, such as companies supplying renewable energy. We would like to explore this further over time as we monitor this allocation and continue to search for new investment opportunities and focus on new developments in the market.

Align our assets in material sectors to our net zero pathway by 2025
We recognise that reducing our emissions and targeting net zero by 2040 will require active engagement with companies and investments in new opportunities. Our Voting and Engagement Policy focuses on aligning material sectors to a net zero pathway including power, coal mining, oil and gas upstream sectors, car manufacturing, cement, steel and aviation. We are exploring solutions which allow us to have more control over our voting as issues arise.

The Trustee has taken a considered approach to setting climate-related targets and is in the process of reviewing how it can use additional quantitative analysis and recognised industry frameworks, including the IIGCC framework, to allow it to review progress against these targets. The Trustee is also reviewing its approach to stewardship, including engagement and voting activities, as a part of its effort to reach its climate ambitions. The Trustee continues to look at enhanced implementation of managing climate risks and/or capturing climate opportunities at fund level, as well as ongoing stewardship to influence and progress longer-term climate goals.

We continue to aim to invest a minimum of 10% of the default growth fund into climate solutions. We define climate solutions as mitigation and adaptation activities, in line with EU taxonomy. It is important to note that the funds in our default growth fund look at a range of sustainable investment opportunities, seeking to invest to protect water, promote a circular economy, reduce pollution and protect nature and biodiversity. All of these issues are intrinsically linked to climate change. We have exposure to climate solutions across our passive equities and our global green bond allocations. The Mirova Global Green Bond Fund (10% of our default growth fund) allocates c. 60% to climate-related Sustainable Development Goals ("SDGs") with further information provided on the factsheet[14]. As mentioned, we are working towards a metric and source to disclose climate solutions at portfolio level.

14. www.mirova.com/en/funds/shares/3527/mirova-global-green-bond-fund

Climate-related analysis

As detailed in previous sections, the Trustee has undertaken analysis on the Smart Sustainable Growth Fund Fund, as the default growth fund with the majority of assets invested, in order to obtain the following metrics:

- **Data coverage:** proportion of the portfolio, weighted by company allocations, for which scope 1, 2 and 3 emissions are available (reported or estimated).
- **Absolute emissions metric:** absolute tonnes of CO2 equivalent.
- **Emissions intensity metric:** tonnes of CO2 equivalent per £m invested.
- **Implied temperature alignment:** this is the temperature rise, versus pre-industrial levels, that the portfolio is aligned to. The Paris Agreement's target is well below 2 degrees Celsius, preferably to 1.5 degrees Celsius.

The Trustee's investment adviser, Hymans Robertson, provides the analysis for the above metrics. The climate data is sourced from MSCI. MSCI collects company-specific greenhouse gas emissions data from company public documents and the Carbon Disclosure Project. If a company does not report emissions, then a proprietary methodology is used to estimate them. The data is updated on an annual basis and we expect data coverage to continue to improve year-on-year. Scope 3 emissions remain incomplete but there has been a rise in disclosures from companies. MSCI reported[15] that emissions disclosures are growing, with nearly 60% of listed companies globally disclosing their scope 1 and/or scope 2 emissions, as of 31 January 2024, an increase of 16 percentage points in two years, while nearly 42% of listed companies reported at least some of their scope 3 emissions, a rise of nearly 17% over the same period.

Absolute emissions will continue to rise as we continue to grow in asset size, as we invest more into companies. Therefore, we look to our emissions intensity metric to monitor progress and whether we are trending in the right direction. Emission intensity is achieved by calculating the carbon intensity (scope 1 and 2 emissions / £million invested) and (scope 3 emissions / £million invested) for the portfolio. The carbon intensity represents our portfolio's estimated greenhouse gas and equivalent emissions per £ million invested, to allow for comparison between portfolios of different sizes, which allows for comparison between companies of different sizes. However, we note that comparison against other provider's funds is still not suitable at this stage, given the number of different data sources and methodologies to calculate climate-related emissions. In addition, data sourced at different dates could also have a significant impact on the figures reported, as suggested by the improvement in scope emissions disclosures over time.

Our final metric, the implied temperature alignment, looks at the remaining carbon budget left for the world if we are to keep warming this century to well below 2 degrees Celsius (2°C). This budget is allocated to the public companies the portfolio holds.

15. www.msci-institute.com/wp-content/uploads/2024/04/NetZero-Tracker-April-cbr-en.pdf

Results

Overall, our metrics show an improvement in the position of our portfolio. Total carbon emissions for scopes 1 and 2 increased over the year to 30 June 2024 , reflecting the significant increase in the main default growth fund's total assets under management by over 45%. For the first time, our total scope 3 emissions decreased. However, as we have noted before, scope 3 trends are expected to be volatile due to the inconsistency in reporting across the globe. Once this becomes more standardised, we expect volatility to subside. Our carbon footprint (emissions intensity) reduced by 15.8% and scope 3 reduced by 29.5%. Data coverage for scopes 1, 2 and 3 increased slightly. The only metric to show no improvement was the implied temperature alignment, resulting in a portfolio temperature of 2.3°C as at 30 June 2024. This metric is forward-looking and an important consideration for our climate strategy. It suggests that the majority of global companies are still not on track to meet the Paris Agreement's goals, with sufficiently ambitious long-term climate goals, despite reducing their emissions. However, the metric does not take into account scope 4 avoided emissions.

Since 2019, the base year for our net zero targets, there has been a 62.6% reduction in scope 1 and 2 emissions intensity and a 63.6% reduction in scope 3 emissions intensity. Absolute emissions have increased, but, given the above, this is being driven by increases in assets held by the Scheme, not an increase in emissions of the companies we invest in.

A summary of the outcomes for the Smart Sustainable Growth Fund is provided below:

	Metric	30 June 2019	30 June 2023	30 June 2024	Change since 2023	Change since 2019
Portfolio coverage	**Scope 1 and 2 emissions**	76.7%	86.8% (6.3%[1])	87.6% (6.4%[1])	0.9%	13.0%
	Scope 3 emissions	55.7%	74.4%	77.4%	4.0%	49.4%
	Implied temperature	75.3% (2020)	87.3%	86.8%	-0.6%	13.8%[2]
Absolute emissions	**tCO2e scope 1 and 2**	47,705	261,685	279,302	6.7%	485.5%
	tCO2e scope 3	287,807	1,830,352	1,460,596	-20.2%	407.5%
Emissions intensity	**tCO2e/£m scope 1 and 2**	189.0	84.0	70.7	-15.8%	-62.6%
	tCO2e/£m scope 3	1,138.0	587.5	414.2	-29.5%	-63.6%
Implied temperature alignment	**°C**	3.0 (2020)	2.0	2.3	+0.3	-0.7[2]

Source: Hymans Robertson, MSCI.

[1] The proportion of emissions data that has been estimated, the remaining coverage data has been reported on by underlying companies.
[2] 30 June 2019 data was not available through MSCI. This shows the change since 30 June 2020.

Climate scenario analysis

The climate scenario analysis uses top-down analysis to test the resilience of the investment strategy to stressed climate scenarios, assessing the current carbon efficiency and scope to improve it. Our approach considers three different climate scenarios that represent different levels of intervention to address climate change, and consequential impacts on the world and financial markets. These are carried over three different time horizons, as discussed in section 3: short (5-10 years), medium (20-25 years), long (35+ years). The Trustee uses Hymans Robertson to produce the quantitative analysis. Each scenario is also considered from a qualitative or narrative view. The Trustee focuses on these views to understand the potential impacts of climate change over time and incorporate this into their risk management and strategy (outlined in sections 4-5), as the quantitative analysis doesn't capture the full extent of these risks. We will continue to review our approach on scenario analysis going forward, including further consideration to our narrative analysis, for example the Universities Superannuation Scheme (USS) and the University of Exeter report on the development of new climate scenarios.

The limitations of using quantitative scenario analysis to capture possible downsides include the possibility for further technological advances in a "green revolution" to those assumed, as well as an impact from human choice, whether humanity chooses to be sustainable or not. In addition, models are calibrated to historic data and therefore can downplay the biggest forward-looking risks. Our different climate scenarios are outlined in the table below. These remain unchanged from last year.

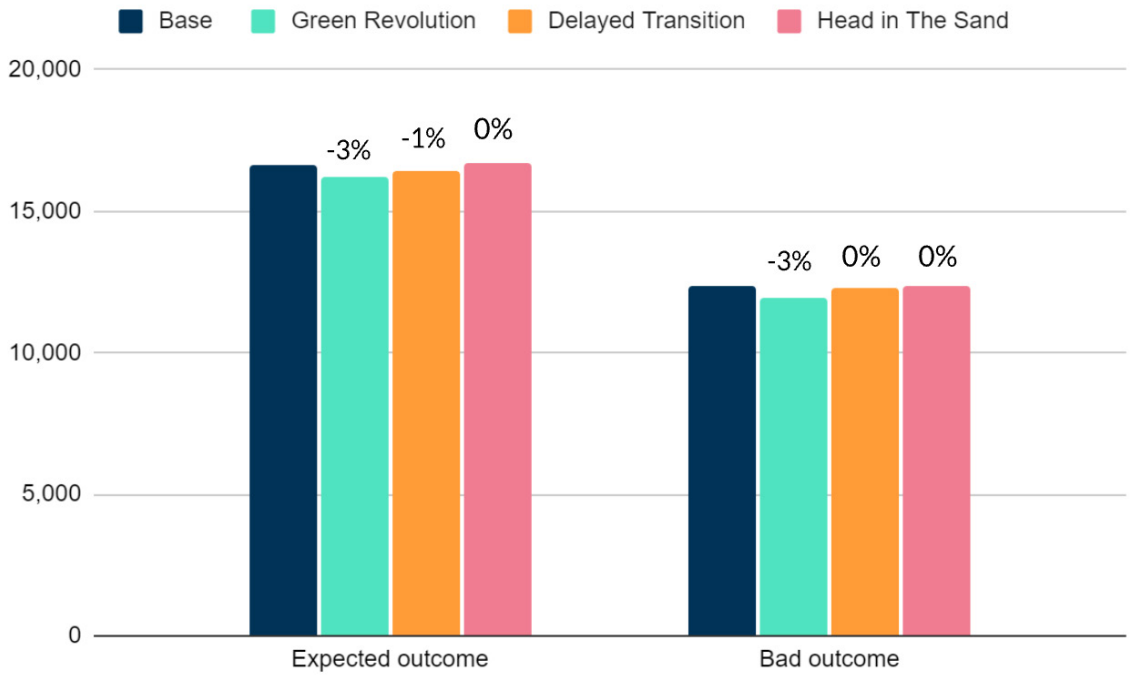
The different climate scenarios are outlined in the table below:

	Short term	Long term
Scenario 1: Green revolution / smooth transition	Concerted action taken by governments and corporations around the world to address the negative effects of climate change. We expect to see increased levels of investment in clean technology, and increased research and development activity to accelerate a move to a world less reliant on fossil fuels. We expect short-term disruption in markets.	With more immediate intervention, we should have more confidence in meeting global objectives to keep global warming to well below 2 degrees. The impact of this intervention will also be to minimise the physical impacts of climate change, such as melting polar ice caps and rising sea levels. Our future world will be supported to a significant degree by renewable energy as a crucial part of our energy mix. We expect more stability in markets over the longer term if the physical effects of climate change reduce.
Scenario 2: Challenging times / delayed transition	Largely a continuation of the current approach, which is more modest and incremental action being taken globally by governments and corporates. We should expect to see some (but limited) investment in new technologies in the near term. We expect some disruption in markets in the short to medium term.	We still expect to be broadly on track with a 2 degrees warming target, but delays in intervention to address climate change will mean further physical effects of climate change will be experienced over the longer-term. We expect some disruption in markets while action continues to be taken by governments and companies globally.
Scenario 3: Head in the sand / no transition	Limited or no material policy action implemented by governments or companies globally. Societal pressure for change is met with a degree of resistance globally. We anticipate little short-term disruption in markets.	We anticipate a realisation point in the future around the significant physical impacts of climate change. Ultimately, we are likely to miss global objectives to keep global warming below 2 degrees. Increasing fears that we will miss global climate-related targets. The severity and cost of intervention in future will be significantly higher than earlier action. We anticipate significant levels of disruption in markets over the longer term as the impact of policy intervention and physical climate effects are felt more severely.

Quantitative analysis

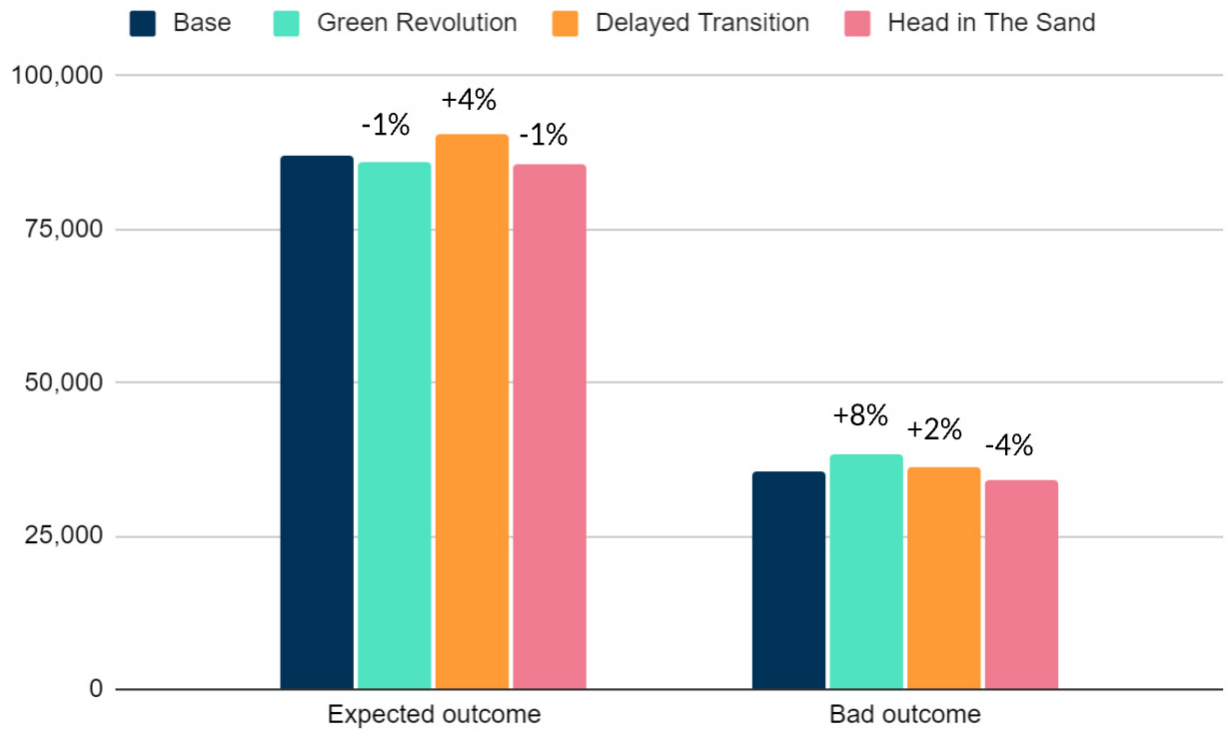
Short term: impact on 60 year old member

	Base	Green revolution (1)	Challenging times (2)	Head in the sand (3)
Expected pot size (£)	16,620	16,202 (-3%)	16,423 (-1%)	16,675 (0%)
Bad outcome pot size (£)	12,367	11,942 (-3%)	12,312 (0%)	12,347 (0%)



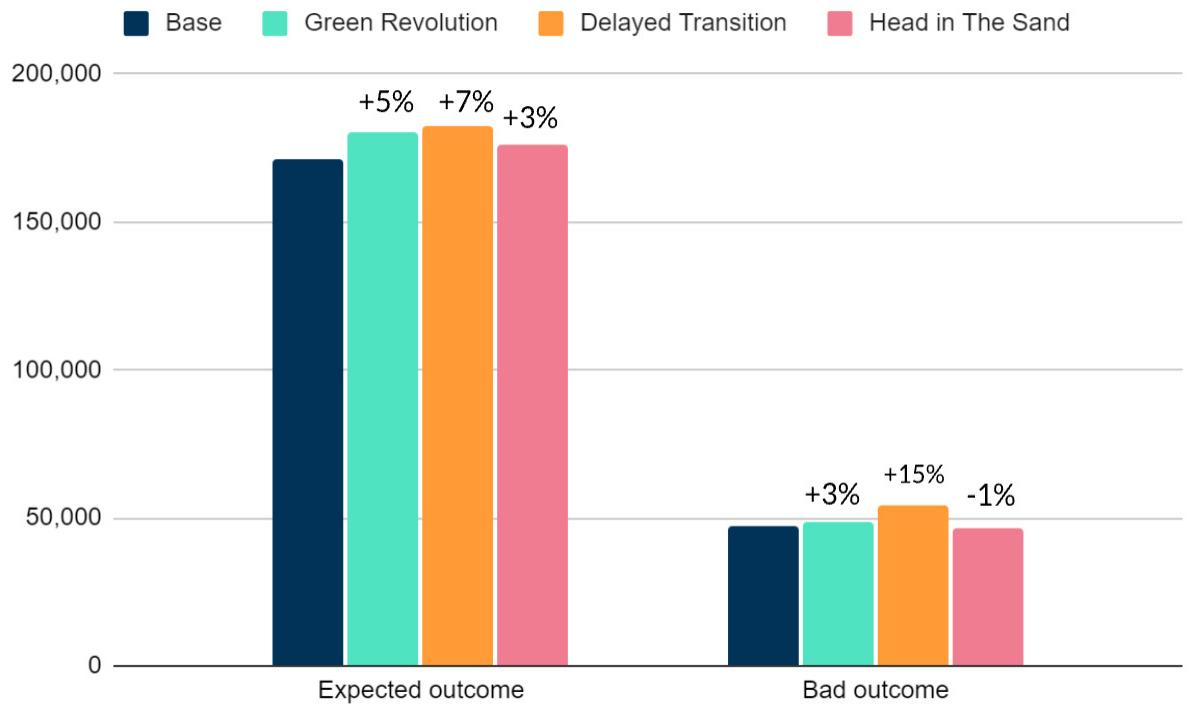
Medium term: impact on 40 year old member

	Base	Green revolution (1)	Challenging times (2)	Head in the sand (3)
Expected pot size (£)	87,046	85,969 (-1%)	90,640 (+4%)	85,763 (-1%)
Bad outcome pot size (£)	35,538	38,454 (+8%)	36,112 (+2%)	33,994 (-4%)



Long term: impact on 25 year old member

	Base	Green revolution (1)	Challenging times (2)	Head in the sand (3)
Expected pot size (£)	170,952	180,338 (+5%)	182,356 (+7%)	176,089 (+3%)
Bad outcome pot size (£)	47,115	48,362 (+3%)	54,100 (+15%)	46,468 (-1%)



Each scenario is modelled as a 'stress' to test resilience in heightened market conditions. In general, the changes shown in this analysis are relatively modest. Hymans Robertson has commented that change results falling within a +/- c. 5% range around zero indicate that the climate scenario has no meaningful impact relative to their standard projections of member outcomes. This suggests that the current portfolio is well-positioned so that in the majority of these climate scenarios, there would not be a material impact on expected outcomes for members or worse potential downsides for members. Short and medium members closer to retirement are relatively immunised from expected climate risks, when compared to this +/- c. 5% range. Meanwhile, younger members show the potential for a slight increase in expected outcomes and higher downside in the "delayed transition" scenario but are relatively unaffected by alternative scenarios.

Qualitative views

Climate tipping points such as the melting of ice sheets or permafrost[16] collapse could trigger each other and accelerate global warming and increase the severity of physical impacts. This is a risk to economies and people worldwide, and therefore a physical risk to the companies in which our portfolio invests. Melting ice sheets cause sea levels to rise, which can cause power and water outages, as well as damage to infrastructure leading to supply chain disruption for multiple industries. These qualitative views can not yet be expressed in the previous quantitative analysis shown, but they are taken into account when developing our strategy and targets towards climate change.

The Trustee recognises that delays in addressing climate change (scenario 2 outlined on the previous pages) leads to long-term physical impacts that worsen economic and social consequences, creating a more challenging financial environment for companies, including those in which our portfolio is invested.

The Smart Sustainable Growth Fund is diversified across a range of sectors and has a tilt away from carbon-intensive sectors. However, climate change can affect all sectors, even if the type and extent of this exposure varies. The highest allocation within the portfolio (as at 30 June 2024) to one sector was the communications sector, at 15.6%. Communications companies own many types of infrastructure. For example, telecommunications companies providing internet and mobile services will own cell towers, data centres and fibre-optic cables. These types of infrastructure are vulnerable to extreme weather events like floods and hurricanes. They are also exposed to transition risk; where companies are lagging behind their transition to lower emissions, they could face higher taxes or legislative penalties, affecting their profitability and therefore our portfolio's financial returns.

The second highest allocation (as at 30 June 2024) was 13.3% to non-cyclical consumer goods. Companies producing food, drink, household and personal care products are reliant on agricultural, land and sea supply chains, global transport and distribution networks and operational factories or workshops. The raw materials used in producing these products can be adversely affected by climate change, as extreme weather events or changes to biodiversity impact the amount of resources available and accessibility to them. For example, droughts in key agricultural regions will reduce crop yields, leading to higher costs for raw materials and higher costs for companies sourcing those materials. In turn, this may reduce profit margins and therefore our portfolio's financial returns. These are the forward-looking risks that are not yet adequately reflected in the quantitative scenario analysis outputs.

16. Permafrost is a frozen layer on or under the Earth's surface which consists of soil, gravel, and sand. When global air temperatures rise, permafrost can turn into a carbon dioxide emitter as well as releasing viruses and bacteria and destroying ecosystems.

With limited or or no material policy action implemented by governments, some of these companies will have less incentive to make changes and improve their climate approaches (scenario 3 outlined on the previous pages). This will only exacerbate these issues as companies are even less prepared for the physical risks associated with climate change, including the example narrative scenarios discussed above. The sector and geographical allocation of our portfolio is outlined on its factsheet, available on our website[17].

In summary, with a longer delay or inaction, governments, companies and sectors will face more difficulties in mitigating the damage caused by emissions and other negative impacts from climate change, including nature loss. This feeds into the Trustee's target-setting and their overarching net zero target of 2040, where this aims to offer the balance between the urgent need to ensure no or limited overshoot of the Paris Agreement's 2050 target and the need to carry out robust engagement of our investments to encourage improvements and make a real difference. Details are further outlined in our net zero plan[18].

17. www.smartpension.co.uk/governance/scheme-information

18. www.smartpension.co.uk/investments/climate-and-nature

7 Appendix

Climate-related metrics by asset class

Listed equities

Listed equities account for 80% of our portfolio. The data below has been prorated

Metric				
Portfolio coverage	**Scope 1 and 2 emissions**	98.6%	98.6%	0.0%
	Scope 3 emissions	84.6%	88.1	4.1%
	Implied temperature	97.8%	97.9	0.1%
Absolute emissions	**tCO2e scope 1 and 2**	136,983	121,181	-11.5%
	tCO2e scope 3	1,287,284	1,165,488	-9.5%
Emissions intensity	**tCO2e/£m scope 1 and 2**	55.2	38.4	-30.4%
	tCO2e/£m scope 3	516.2	368.8	-28.6%
Implied temperature alignment	**°C**	1.9	2.2	15.8%

Listed bonds

Metric		30 June 2023	30 June 2024	Change
Portfolio coverage	**Scope 1 and 2 emissions**	39.2%	54.1	38.0%
	Scope 3 emissions	33.2%	43.2	30.1%
	Implied temperature	44.6%	52.3	17.3%
Absolute emissions	**tCO2e scope 1 and 2**	124,703	158,121	26.8%
	tCO2e scope 3	543,068	470,341	-13.4%
Emissions intensity	**tCO2e/£m scope 1 and 2**	201.8	177.5	-12.0%
	tCO2e/£m scope 3	878.9	579.5	-34.1%
Implied temperature alignment	**°C**	2.2	2.6	18.2%

Listed bonds account for 13.7% of our portfolio (10% green bonds and 3.7% corporate bonds). The data below has been prorated for this allocation. The remaining 6.3% is invested in private credit, for which data is currently unavailable. However, our emissions intensity figure in our "Results" section includes this allocation as in the MV Dual Credit Fund (our blended fund of private credit and corporate bonds). This results in a slightly higher emissions intensity than excluding the private credit allocation.

Climate-related metrics by sector

The table on this page show the sector breakdown of the portfolio's carbon footprint for scope 1 and 2 emissions versus the MSCI All Countries World Index as a benchmark, along with the relative weightings to each sector of the overall portfolio against the index. Please note relative weights do not sum to zero due to differing levels of data coverage in the portfolio and the benchmark index. These figures are not fully representative of the whole portfolio as there is a further c. 408 tonnes per £m that is not aligned with a sector in the MSCI tool used. Hymans' in-house tool is currently limited to scope 1 and 2. However, they are looking to develop this with the inclusion of scope 3 data. The highest-emitting sector in the portfolio is the utilities sector, although the benchmark has three times the emissions and a higher allocation to this sector (than our portfolio).

Sector	Portfolio tCO_2e scope 1 and 2	Benchmark tCO_2e scope 1 and 2	Relative sector weights vs benchmark
Communication services	16.4	11.4	-0.6%
Consumer discretionary	39.1	25.3	-1.6%
Consumer staples	31.5	38.8	0.1%
Energy	241.4	437.0	-1.9%
Financial	9.1	5.5	1.8%
Health care	7.0	7.2	1.0%
Industrials	117.1	174.8	1.4%
Information Technology	12.7	15.5	-1.6%
Materials	369.5	640.0	-0.2%
Real estate	10.1	13.9	0.9%
Utilities	427.4	1,485.2	1.4%

Climate-related metrics

Metric outcomes are provided by Hymans Robertson. Data is sourced from MSCI[19].

Data coverage: proportion of the portfolio for which scope 1, 2 and 3 emissions are available or estimated. MSCI collects company-specific greenhouse gas emissions data from company public documents and the Carbon Disclosure Project (CDP). If a company does not report emissions, then a proprietary methodology is used to estimate them. The data is updated on an annual basis. Most reports of scope 3 emissions were incomplete and MSCI noted the limitations of the quality of data[20].

Absolute emissions metric: absolute tonnes of greenhouse gases. This dataset represents a company's scope 1, scope 2 and scope 3 greenhouse gas emissions as reported (if available) or estimated by the MSCI proprietary estimation model.

Scope 1 emissions are those from sources owned or controlled by the company, typically direct combustion of fuel as in a furnace or vehicle.

Scope 2 emissions are those caused by the generation of electricity purchased by the company.

Scope 3 emissions include an array of indirect emissions resulting from activities such as business travel, distribution of products by third parties, and downstream use of a company's products (for example by customers).

Emissions intensity metric is achieved by calculating the carbon intensity (scope 1 + 2 Emissions / £M Invested) and (scope 3 / £M Invested) for the portfolio. The carbon intensity represents our porfolio's estimated greenhouse gas and equivalent emissions per £ million invested, to allow for comparison between portfolios of different sizes, which allows for comparison between companies of different sizes.

Implied temperature alignment looks at the remaining carbon budget left for the world if we are to keep warming this century well below 2 degrees Celsius (2°C). This budget is allocated to the public companies the portfolio holds. It includes scope 1, 2 and 3 emissions.

Projected emissions from companies over the next five decades are calculated based on their current emissions and analysis of their stated reduction targets. A company whose projected emissions are below budget can be said to "undershoot," while those whose projected emissions exceed the budget "overshoot". The collective over or undershoot of these companies is then converted to an implied global temperature rise - meaning how much would the temperature of the world increase if the whole economy had the same carbon overshoot or undershoot as the company in question.

19. www.msci.com/index-carbon-footprint-metrics
20. www.msci.com/www/blog-posts/reported-emission-footprints/03060866159

Climate scenario analysis

Hymans Robertson has a standard model, their Economic Scenario Simulation (ESS) Modeller, of different financial markets that explores a range of 5,000 potential outcomes over different time periods, reflecting current expectations of risk and return.

To produce assessments of the potential impact on investment portfolios, the 5,000 outcomes are weighted in favour of the financial market assumptions in the three different climate scenarios defined, i.e. green revolution, challenging times and head in the sand.

The impacts on investment portfolios are then translated into retirement outcomes for different groups of members. Members' annual salaries are assumed to be £20,000, £22,500 and £25,000 for the 20-, 40- and 60-year-olds respectively. The scenario analysis aims to help us to better understand the potential impact of climate change on a range of members with different needs and time horizons.

As mentioned in our paper, we recognise the limitations of using scenario analysis and capturing possible downsides. Hymans Robertson aims to improve their modelling by focusing on the speed and strength of real-world action and market response, but expected pot sizes could still be overstated in high climate risk scenarios.

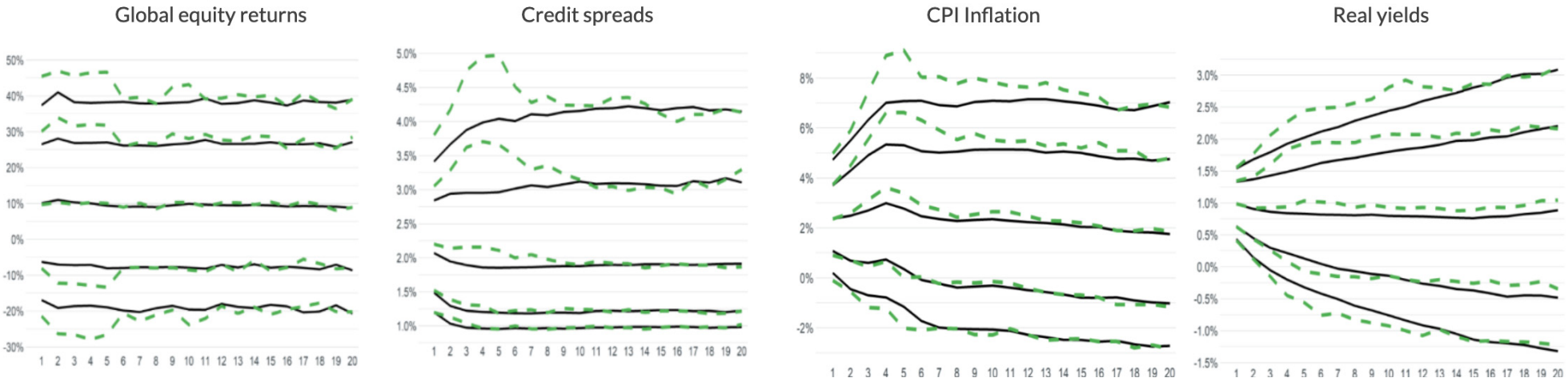
The following charts show the impact on different markets, for the different climate scenarios tested, shown in section 6. For each scenario, there are higher weights towards more volatile simulations. The target increase in volatility, from the standard model, is shown in the volatility tables. For example, in years one to five for the Green Revolution scenario, the weighted average volatility corresponds to the very high 85 percentile volatility in the standard model.

The pairs of dotted and black lines represent the following percentiles: 95%, 84%, 50% (median), 16%, and 5%.

———————— : Standard forward-looking projections from Hymans Robertson's Economic Scenario Simulation Modeller

---------- : Stressed scenario of the corresponding standard projections

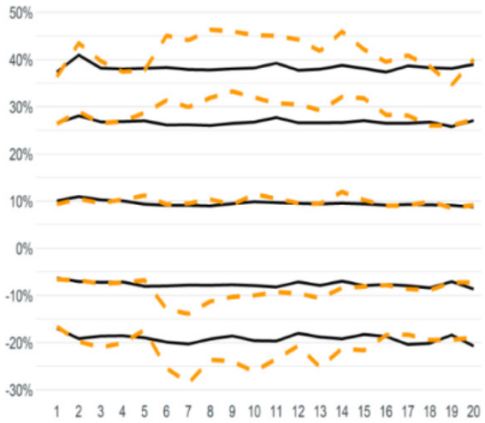
Green revolution – smooth transiation



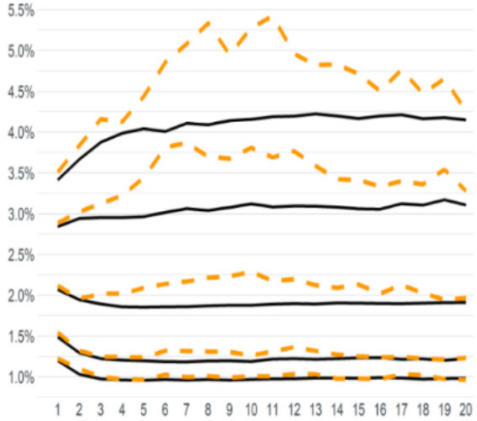
	Years 1-5	Years 6-10	Years 11-15	Years 16-20
Volatility criteria (DT)	Very high (85 percentile)	Moderate (60 percentile)	Moderate (60 percentile)	Standard

Challenging times – delayed transition

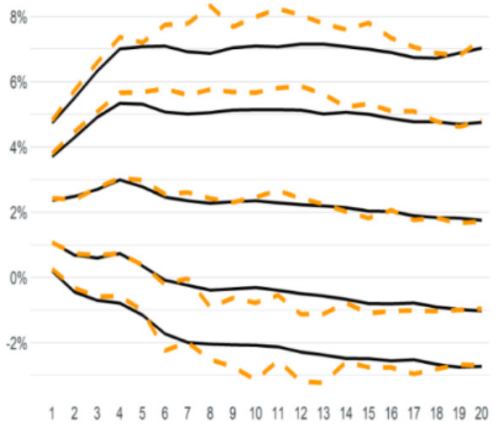
Global equity returns



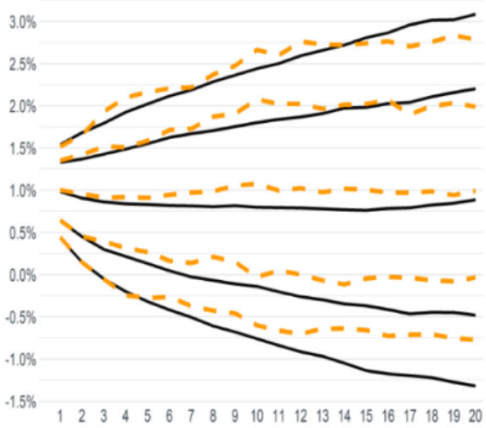
Credit spreads



CPI Inflation



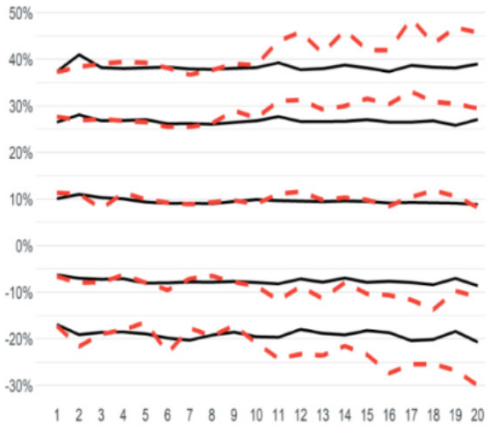
Real yields



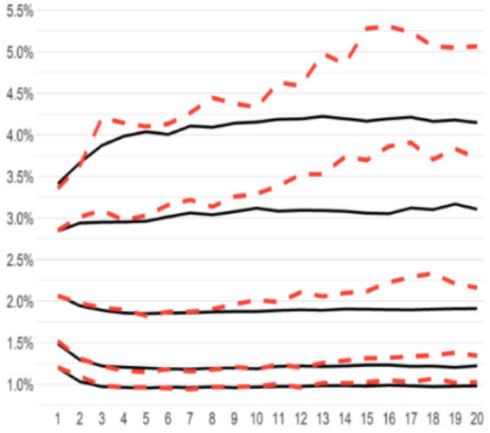
	Years 1-5	Years 6-10	Years 11-15	Years 16-20
Volatility criteria (DT)	Standard	Very high (85 percentile)	High (75 percentile)	Standard

Head in the sand – no transition

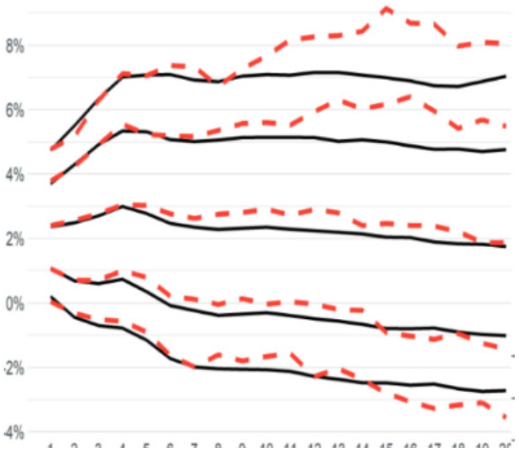
Global equity returns



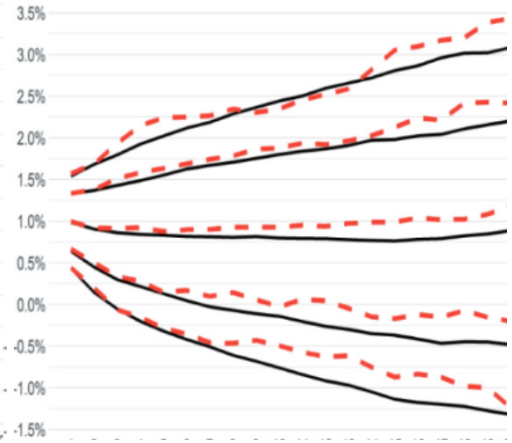
Credit spreads



CPI Inflation



Real yields



	Years 1-5	Years 6-10	Years 11-15	Years 16-20
Volatility criteria (DT)	Standard	Standard	High (75 percentile)	Very high (85 percentile)

Smart Pension