# Task Force on Climate-Related Financial Disclosures (TCFD) report

## Zurich Financial Services UK Pension Scheme

## Year ended 30 June 2024

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# Introduction

## Message from the Trustee Chair

Welcome to the annual TCFD report for the Zurich Financial Services UK Pension Scheme ("the Scheme") for year ended 30 June 2024.

This report aims to provide a clear understanding of the financial implications of climate change on the Scheme. It is structured to align with the TCFD's recommendations, focusing on governance, strategy, risk management and metrics and targets. It is designed to assist the Trustee, Scheme members, and other stakeholders in understanding how climate-related risks and opportunities are being managed within the Scheme.

Over the Scheme year the key activities are outlined below:

Implementation of the DC investment review – This year marked a significant milestone with the implementation of the DC investment review. By changing the investments within the Z Growth fund into a low carbon fund, the Trustee has considerably reduced the carbon footprint of ZPen DC section. These strategic changes were applied to the default investment strategies, where the majority of our members are invested, ensuring a widespread positive impact across the Scheme.

Climate risk assessment – Following the implementation of the DC investment review, the climate scenario analysis has been updated. The assessment evaluates both physical risks, such as extreme weather events and rising sea levels, and transition risks, such as policy changes and technological advancements, to understand their potential impacts on typical Scheme members.

Manager engagement – the Trustee recognises the importance of engaging with its asset managers to address climate-related risks and opportunities. The engagement is aimed at ensuring that the Scheme's investments are aligned with its climate-related objectives and that asset managers are effectively managing climate-related risks and opportunities.

Increasing metric coverage – the Trustee has increased the types of assets it is now disclosing metrics for, ensuring a more comprehensive understanding of the Scheme's environmental impact. This enhanced transparency allows for better tracking of progress towards sustainability goals and more informed decision-making.

## Scheme's profile

The Scheme is managed by Zurich Financial Services UK Pension Trustee Limited ("the Trustee"). The Trustee has a legal duty to run the Scheme in accordance with the governing Trust Deed and Rules for the benefit of members and their dependents.

The Scheme has two sections: The ZPen Section, with its associated arrangements (ZPen Defined Benefit (DB) and ZPen Defined Contribution (DC)), and the ES Executives' Section (ESExec DB). The assets in each section are kept completely separate. Each arrangement requires a different investment strategy that is tailored to meet the investment aims and objectives.

### ZPen DB

The ZPen DB arrangement is closed to new entrants and to future accrual. Active members are members of the ZPen DC arrangement. As at 30 June 2024, active ZPen DC members include 956 hybrid members who retained a link to final pensionable salary on their ZPen DB benefits.

For ZPen DB, there is a reasonable amount of time before there is expected to be a significant majority of pensioner members, therefore the Trustee invests around 32% of the assets for this arrangement in growth assets (e.g. equities and property). Investing in growth assets provides a higher expected return, but this brings a higher chance of volatility. Over time, whilst the membership profile matures, it is expected the amount of growth assets will reduce accordingly.

### ESExec DB

The section is closed to new entrants and future accrual. All members in the ESExec DB section are now pensioners. As such, the Trustee invests around 5% of the assets for this section in growth assets with the majority of investments in "matching" assets (e.g. government bonds). Investing in matching assets means that the assets are chosen because they react to market movements such as inflation and interest rate changes in a similar way to the liabilities of the section.

### ZPen DC

The Trustee provides default strategies and a number of self-select funds for members. The Trustee believes the default strategies are suitable for the majority of members based on modelling the expected fund values at retirement and how members are expected to take their benefits.

For detailed asset and membership information, please refer to the annual report and financial statements for the Scheme year ending 30 June 2024.

# Governance

## Approach to stewardship and responsible investing

The Trustee believes that incorporating responsible investments (RI) into investment decisions improves long term risk adjusted returns. The Trustee has been integrating environmental, social and governance (ESG) factors at various steps in its investment process for many years, and in June 2019 it formalised the Scheme's RI strategy to reflect the changing regulatory landscape. There are five core principles to the RI strategy that has been implemented:

**What**

We believe that incorporating ESG factors into investment decisions improves long term risk-adjusted returns

We are an active owner – we vote proxies and engage, where appropriate

**How**

We take a pragmatic approach to responsible investments – we focus on what matters

We note Zurich Group's strategy and will leverage its global resources where it makes sense

**When**

We will evolve our responsible investment approach over time – and acknowledge that we will never be done

## Governance framework

The Trustee is ultimately responsible for oversight of all strategic matters related to the Scheme. This includes defining the governance and management framework relating to ESG considerations and climate-related risks and opportunities. The Trustee is responsible for all material decisions related to climate change and the TCFD disclosure requirements, including those related to investments. This encompasses approving the Trustee's net zero ambition, metrics, and targets for the Scheme, as well as ensuring that investment strategies align with these objectives. The Trustee directors meet as a full board at least five times a year. Occasionally, it is necessary to have additional meetings to consider specific matters. In order to facilitate management of the Scheme, sub-committees of the Trustee board have been formed to concentrate on specific matters and meet on a quarterly basis. The separate committees are the DC Committee and the Funding Committee.

The Funding Committee has been established as part of the overall governance framework that is in place to oversee and manage the DB arrangements of the Scheme. The purpose of the Funding Committee is to manage the investment and valuation matters for the DB arrangements with a view to achieving appropriate funding of the Scheme. The Funding Committee provides oversight and guidance in line with relevant legal and regulatory requirements, including those of the trust deed and rules of the Scheme. The Funding Committee has delegated authority from the Trustee in respect of investment matters, except where a change to Scheme documentation is required e.g. the trust deed and rules, the statement of investment principles (SIP) etc. There is no delegated authority in respect of valuation matters.

The DC Committee has been established as part of the overall governance framework that is in place to oversee and manage the DC arrangements of the Scheme. The purpose of the DC Committee is to manage DC arrangements with a view to achieving good member outcomes. The DC Committee provides oversight and guidance in line with relevant legal and regulatory requirements, including those of the trust deed and rules of the Scheme. The Committee has delegated authority from the Trustee in respect of all matters relating to the ZPen DC section and legacy AVC arrangements of the Scheme, except where a change to Scheme Documentation is required.

Both sub-committees work with advisers to support with any decision making. Where a decision can't be made, a recommendation is made by the sub-committee to the Trustee board.

See appendix 2 for a diagram of how the Trustee's sub-committees work with advisers.

In addition to investment advice, the Trustee's Legal adviser, Covenant adviser and the Scheme Actuary provide advice to the Trustee on climate-related risks and opportunities.

### Resources

The rationale for dedicating time and resources to the governance of climate-related risks and opportunities for the Scheme is multi-faceted and crucial for several reasons:

- Fiduciary duty: the Trustee has a fiduciary duty to act in the best interest of their beneficiaries. As climate change poses significant financial risks and opportunities, it is essential to assess and manage these factors to protect and enhance the long-term value of the Scheme's investments.
- Financial stability: climate-related risks, such as physical impacts (e.g. extreme weather events) and transition risks (e.g. policy changes, technological advancements), can have substantial financial implications for the Scheme. By integrating climate risk governance, the Scheme can enhance its resilience and ensure the long-term financial stability of the fund.
- Regulatory compliance: In the UK, regulatory bodies such as the Pensions Regulator and the Financial Conduct Authority (FCA) have emphasised the

importance of climate risk management for pension schemes. The UK government has committed to achieving net-zero greenhouse gas emissions by 2050, and pension schemes are expected to play a role in this transition.

- Stakeholder expectations: Scheme beneficiaries, members, and other stakeholders are becoming more aware of climate change and its potential impacts. Stakeholders expect the Scheme to address climate-related risks and opportunities proactively. Demonstrating effective governance in this area can enhance trust, reputation, and stakeholder satisfaction.
- Long-term investment perspective: The Trustee is a long-term investor, with an investment horizon spanning several decades. Climate change is a long-term systemic risk that can significantly impact investment performance over time. By integrating climate risk governance, the Trustee can make informed investment decisions that consider the long-term implications of climate change on the Scheme's investments.
- Access to opportunities: climate change also presents opportunities for the Scheme to invest in low-carbon technologies, renewable energy, and other sustainable sectors. By actively managing climate-related risks and identifying these opportunities, the Trustee can align its investments with the transition to a low-carbon economy, potentially generating attractive returns while contributing to a more sustainable future.

The Scheme, with a total asset value of c.£6.5bn as at 30 June 2024, is a significant and complex entity. Given the scale and complexity of the Scheme, the Trustee recognises the need to tailor the approach to climate risk governance accordingly. Over the Scheme year the Trustee allocated a significant amount of resource to protect the funding level of the Scheme, particularly in response to the volatility in gilt yields during the Scheme year. This allocation on resources reflects the immediate priority of maintaining the financial stability and sustainability of the Scheme.

To ensure effective climate risk management, the Trustee engages advisers with expertise in this area. Additionally, the in-house team plays a crucial role in overseeing the governance and management of the Scheme. While the in-house team's primary focus has been on protecting the funding levels, climate risk considerations have also been integrated into the decision-making processes.

By tailoring the Trustee's approach to climate risk governance based on the size, complexity, and resource allocation of the Scheme, the Trustee is able to address climate risks in a manner that is proportionate to the Scheme's circumstances. This ensures that the Trustee's actions reflect the immediate priorities of maintaining financial stability and sustainability while also considering the implications of climate change.

The Trustee's Investment Analyst (provided through the agreement between the Trustee and Zurich Insurance Company Ltd) has explicitly included the provision of services to include support for the Trustee on its climate-related risks and opportunities.

DB investment strategy changes include considerations of climate-related risks and opportunities. The Investment Analyst develops the investment strategy, working with the Finance and Investment team, any proposals are challenged by Hymans Robertson, the Trustee's independent investment adviser. Hymans Robertson provide formal advice on any investment strategy changes (under Section 36 of the Pensions Act 1995) to the Trustee. In May 2024, the Funding Committee discussed climate change scenario analysis for ZPen DB, the complexities of the modelling involved and the likely impact of climate change given the de-risking that took place during the Scheme year.

For the DC arrangements, the DC Manager collaborates with the Investment Analyst and the Trustee's DC investment adviser, LCP, on the triennial review of the default investment strategies and fund range to ensure they are appropriate for the membership. The latest review was completed in December 2023 and implemented in May 2024. As part of this review the Trustee considered how best to incorporate RI into the default arrangement and self-select fund range, a number of changes were delivered (as set out on page 11).

All investment advisers to the Trustee have climate related objectives set within the annual investment consultant objectives, the Investment Analyst's main objective relating to climate change is the following:

- Support the Trustee to provide recommendations in developing and implementing the most suitable RI strategy through the integration of ESG, including climate change, stewardship and wider sustainability considerations into its investment and risk management arrangements, considering the Scheme's assets, as well as specific needs and requirements, including regulatory aspects.

Hymans Robertson and LCP both have objectives to support the Trustee with the annual production of the TCFD report.

The Trustee's actuarial advisers, Hymans Robertson, are responsible for identifying any climate considerations which should be incorporated into the Scheme's funding strategy (both short and long term) and in the Trustee's integrated risk management (IRM) approach. This will include the setting of individual financial and demographic assumptions, as well as identifying climate-related risks and opportunities to the funding strategy on our behalf. The Trustee challenges the actuarial adviser on their advice as necessary within its discussions. The Trustee maintains oversight of and review the actuarial adviser on at least a triennial basis, which includes ensuring that their knowledge and advice, including with respect to ESG and climate issues, meets the Trustee's expectations and supports the Trustee adequately in its decision making.

The Trustee's assessment of the sponsor's covenant is undertaken through dialogue with the sponsor and formal covenant reviews undertaken by PwC. PwC are responsible within their reviews for identifying any climate considerations that should be incorporated into the Trustee's strategic discussions and in the Trustee's IRM framework as well as identifying climate-related risks and opportunities to the covenant on the Trustee's behalf.

The next covenant review is expected to be undertaken after the forthcoming triennial valuation is finalised. The Trustee reviews the covenant adviser periodically. This includes giving consideration to the ability of PwC to support the Trustee with understanding the possible impact of climate-related risks and opportunities on the covenant.

The Trustee's legal advisers, Eversheds Sutherland, support us in ensuring the Trustee is able to meet all legal and regulatory requirements upon the Scheme. From time to time, this may include providing the Trustee with information and/or advice on potential relevant climate-related requirements, which in turn supports the Trustee's ability to manage the risk that the Trustee do not meet these requirements. The Trustee maintains oversight of and review its legal adviser on at least a triennial basis. This includes ensuring that their knowledge and advice, including with respect to ESG and climate issues, meets the Trustee's expectations and supports the Trustee adequately in its decision making.

An RI champion (the ZPen Finance & Investment Manager) was appointed by the Trustee to oversee the day-to-day implementation of the RI strategy. The RI champion is a part of the Zurich Group's network enabling the Trustee access to the Group's resources and expertise. The RI Champion attends any sub-committee or Trustee board meeting where matters relating to RI are discussed and has the primary day-to-day responsibility for the way in which climate-related investment risks are currently managed. The RI champion regularly collaborates with the DC Manager, who is responsible for overseeing the relationship with the asset managers related to the DC section and has responsibilities on a day-to-day basis with the asset managers relating to the DB section. As all assets are mandated with external asset managers, climate-related risk is delegated onwards to the portfolio managers through investment management agreements and fund guidelines. Asset managers are monitored on a regular basis by the sub-committees.

To truly embed RI into the Scheme's governance priorities, the Trustee has appointed a nominated Trustee for RI to oversee the integration of RI into the Scheme's strategy. The Trustee for RI will collaborate frequently with the RI champion to stay up to date with any RI developments. The RI Trustee will also attend appropriate meetings with asset managers.

### Policies

In 2021, the Trustee formalised its approach to climate change risks and opportunities and documented it in the climate change policies available on www.zpen.info. This report explains how the policies have been followed during the financial year.

The Trustee also has a Stewardship policy which was agreed in 2024. The last review of the asset managers' policies was performed in May 2024 and there have been no changes since.

The Trustee is monitoring voting and engagement activities delegated to the asset managers, appendix 3 provides engagement examples for all sections of the Scheme.

## Trustee training

All Trustee directors are required to maintain a CPD (Continuing Professional Development) log with a minimum requirement of completing 15 hours per year. Each Trustee director has a personal review with the Chair and the Head of UK Pensions at least annually. This includes a review of their trustee knowledge and understanding and specific development areas. Any training needs, including the topic of climate change, are identified by the assessments and met through tailored training programmes which use a variety of training tools, including interactive workshop sessions, seminars and individual study. Use is made of in-house expertise and the Trustee's own advisers as well as external training programmes and seminars.

During the year the Trustee received a briefing on the new Infrastructure Equity investments. This asset class has been introduced to the portfolio to deliver strong investment returns and diversification while providing access to activities that have a strong ESG impact.

## Key areas of strategy development

### ZPen DB

The majority of investments held in this arrangement are held directly, rather than through pooled funds, which means the Trustee can directly influence the investment mandate and objectives pursued.

- In 2016, the Trustee approved an allocation to Infrastructure Debt, which includes social and environmental impact investments.
- In 2019, the Trustee agreed a restriction list excluding companies mining or generating power from thermal coal, a list which has subsequently been updated to include the consideration of oil sands and shale oil.
- In 2021, the Trustee agreed a short-term carbon reduction target for its equities and corporate bond portfolios.
- In 2022, the Trustee agreed a 2050 net zero ambition for the Scheme.
- In 2023, the Trustee approved an allocation to Infrastructure Equity, which has the potential to provide investment returns aligned with the investment strategy while delivering positive environmental impacts.

### ZPen DC

All the investments in this arrangement are in pooled investment vehicles with performance of the funds being monitored regularly by the Trustee.

Every three years, the Trustee reviews the funds offered and makes changes if required. The latest comprehensive review was carried out by the DC Committee during 2023,

working with the Trustee's DC investment adviser, and ratified by the Trustee at its meeting on 21 December 2023. The work carried out by the DC Committee included:

- A review of the default strategies and their suitability for the membership:
    - No changes were made to the design of the default strategies, which were considered to be suitable for the membership.

- Consideration of the asset allocation within each stage of the default strategies, including asset classes, UK, overseas, and emerging market equities, and the use of currency hedging:
    - The Trustee decided to move away from a fixed proportion of the fund being held in UK equities and to continue including emerging market equities and a proportion of currency hedging in Z Growth Fund.
    - Considered an actively managed bond fund for Z Cautious Growth Fund as this would provide additional flexibility for the manager given the impact on bond funds of the recent economic conditions and interest rate movements.

- Consideration of the most appropriate way of incorporating responsible investment into the default arrangements:
    - Noting that Z Growth Fund had the highest exposure to carbon-intense companies and could more explicitly take ESG or climate change risks into account.
    - Considering a number of options for Z Growth Fund, including both low carbon and net zero strategies, and a combination of both.
    - Noting that to achieve net zero, many investment funds reduce their carbon footprint as much as possible and then purchase carbon credits to offset the remainder, which can add to the costs of the fund without adding to the investment performance.
- A review of the self-select options:
    - With the introduction of a low carbon fund in Z Growth Fund, the self-select fund range included a number of responsible investment equity funds. To simplify member choice, it was decided to close the L&G Ethical Fund to new contributors.
    - A carbon neutral fund will be added to the self-select fund range in 2025.

As a result of the investment review, the following changes were made in May 2024:

- Z Growth Fund is 100% invested in a low carbon global equity fund with a net zero target.
- Z Cautious Growth Fund is invested:
    - 55% in the low carbon global equity fund used in Z Growth Fund. 45% in an actively managed global bond fund which includes carbon targets and a commitment to net zero.
- The LGIM FTSE4Good Developed Equity Index Fund is closed to new contributors. Members already contributing to this fund can continue doing so.

### ESExec DB

The profile of this section is the most mature within the Scheme as all members are pensioners. As the liabilities have a shorter duration and the section has a strong funding position, the Trustee has agreed on a de-risking investment strategy. In practice, this means the investment allocation to growth assets, in this case, equities, is reduced, with more assets allocated to liability matching asset classes such as corporate bonds and gilts. At the Scheme year end, the Trustee was in the process of consulting with the Principal Company to further de-risk. De-risking has an impact on climate change by reducing the investment in growth assets, which may include high-carbon industries. While this shift reallocates funds to liability matching assets that typically have a lower carbon footprint, it also means there is less opportunity to support high emitters in their carbon reduction journey through active engagement and investment in their transition strategies.

### Asset manager engagement

The Trustee engages with its asset managers regularly. This includes engagements through the Funding Committee and meetings with Trustee and UK Pensions & Benefits team ("ZPen team") representatives. The Trustee has found direct meetings with asset managers is the most effective way to engage on RI and voting records.

### Annual RI meetings

### ZPen DB & ESExec DB

Annual RI meetings are generally held by a number of attendees representing the Trustee. This includes the nominated Trustee for RI, the Scheme's RI champion and the Trustee's Investment Analyst. The attendees are briefed ahead of each asset manager meeting with key information on each mandate in order to facilitate discussions.

The meetings all follow a similar format and are structured to discuss areas most pertinent to the Trustee's RI requirements topics. For more information on the key topics discussed during the Scheme year, please visit the DB implementation statement available on www.zpen.info.

### ZPen DC

The Trustee uses Scottish Widows as its DC platform provider, and as such the Trustee does not have a direct relationship with the DC asset managers; that relationship is held by Scottish Widows. The Trustee has found that direct meetings with Scottish Widows are the most effective way to engage on RI and voting records, and the provision of data required for the TCFD report.

For more information on the key topics discussed during the Scheme year, please visit the DC implementation statement available on www.zpen.info.

## Strategy

In its climate change policies, the Trustee has outlined how climate-related risks and opportunities could affect DB and DC assets and defined applicable time horizons.

### DB assets

The Trustee considers the risk over short, medium and long-term time horizons.

Short-term horizon is up to 5 years and risks are measured using a 5-year scenario analysis

Medium-term horizon is 5 to 10 years by the end of which approximately 80% of the Scheme's liabilities will be in respect of pensioners

Long-term horizon is greater than 10 years when over 80% of the Scheme's liabilities will be in respect of pensioners, which may result in a change in profile of the Scheme's assets

### DC assets

The Trustee considers the risk for DC assets over short, medium and long-term time horizons in line with the UN Paris Agreement. That agreement was adopted in December 2015 setting out actions up to 2035 to limit global warming to well below 2°C, preferably to 1.5°C, compared to pre-industrial levels.

As the Section is open to new entrants and therefore the membership profile is not static, the Trustee has used the time horizons from the UN Paris Agreement.

Short-term horizon is up to 5 years

Medium-term horizon is 5 to 10 years

Long-term horizon is greater than 10 years

### Climate related risks and opportunities

The Trustee's Climate change policy details how it identifies and manages the risks and opportunities that might affect the likelihood of meeting its objectives for the Scheme, especially where such risks and opportunities are interdependent.

The transition to a low-carbon economy requires significant changes to be made and will bring a variety of different types of risk. The financial and reputational impacts of such changes will vary depending on the type of organisation, political intervention and a variety of other factors. Depending on the success and speed of the transition, climate change will also pose physical risks, impacting the way organisations operate today. However, climate change is also a business opportunity. Transitioning to a low-carbon economy creates opportunities for efficiency, innovation and growth.

The table below shows a number of different identified risks and opportunities, with the associated impact, as has been initially assessed by the Trustee. The Trustee's actuarial adviser was instructed to consider climate risk as part of the triennial valuation as at 30 June 2022. The covenant advisers also considered consider climate risk as part of formal advice that has been received. This is important as the impact of climate change over the short, medium and long term will impact covenant resilience and therefore could impact the ability of the Scheme to pay members' benefits in full.

| Risk areas | Identified Risks & Opportunities | Impact | |
|---|---|---|---|
| | | Short term & medium term | Long term |
| Investment | Climate related physical risks | | Resource scarcity<br>Extreme weather events<br>Sea level rise |
| | Climate related transition risks | Carbon prices<br>Technological change<br>Policy tightening<br>Consumer preferences | |
| | Climate related opportunities | New market opportunities<br>'Green' investments | |
| Covenant | Climate related physical risk to the Zurich Group | Investment risk: Valuation changes to investments as a result of climate change (Medium term)<br><br>Changes in severity, frequency and geography of extreme weather events leading to:<br>• Larger/more frequent claims (Medium term)<br>• Changes in revenue and costs from changes to supply chain costs and reliability. | Investment risk: Valuation changes to investments as a result of climate change<br><br>Changes in severity, frequency and geography of extreme weather events leading to:<br>• Larger/more frequent claims<br>• Changes in revenue and costs from changes to supply chain. |
| | Climate related transition risk to the Zurich Group | Financing risk: Potential for increased borrowing costs (Medium term)<br><br>Regulatory risks: Requirements set by the PRA / government (Medium term)<br><br>Cost of and effective execution of transition, including changes in operating costs e.g. supply chain, | Market risk: Changes in GDP/growth rates, equity movements and currency risks<br><br>Financing risk: Potential for increased borrowing costs<br><br>Regulatory risks: Requirements set by the PRA / government |

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| | | compliance and enhanced reporting requirements, new production processes.<br><br>Consumer risks: Change in and shift in demand across geographies and lines of businesses (Medium term)<br><br>Reputational risks: Non-green products or not meeting transition targets could damage the Zurich brand, impact market share, impact new business and have lapse effects on existing business<br><br>Investment risk: Valuation changes to investments as a result of climate change (Medium term)<br><br>Asset risk: Write-offs and early retirement of assets (Medium term) | Cost of and effective execution of transition, including changes in operating costs e.g. supply chain, compliance and enhanced reporting requirements, new production processes.<br><br>Consumer risks: Change in and shift in demand across geographies and lines of businesses<br><br>Reputational risks: Non-green products or not meeting transition targets could damage the Zurich brand, impact market share, impact new business and have lapse effects on existing business<br><br>Investment risk: Valuation changes to investments as a result of climate change<br><br>Asset risk: Write-offs and early retirement of assets |
| | Climate related opportunities for the Zurich Group | Changes in products and services to attract customers as they increasingly look for policies/investments that have a positive effect for society and the environment. | By transitioning early to Net Zero by 2030 Zurich could differentiate itself within the market. |

The majority of, if not all, climate-related risks identified within the table above would be expected to have a negative impact on the Scheme over the different time horizons as set out. On the other hand, the identified opportunities could be expected to have a positive impact overall. The actual impact of each of these risks and/or opportunities is very difficult to quantify, especially as it will depend on the way in which the world responds more broadly to climate change, which is yet to become clear. However, over time the Trustee expects the scenario analysis that it undertakes, the metrics that it measures and other tools it uses (e.g. engagement with managers) to better inform its understanding of the potential impact to the Scheme of specific climate-related issues, at which point it will be able to add more clarity within its reporting. The risks and opportunities highlighted above are those that the Trustee has identified as relevant to the Scheme and important to monitor and manage, either directly or through delegation. This view has been informed by the Trustee's own considerations as well as advice and information provided by various advisers and providers.

### Climate related physical risks

To mitigate this risk, the Trustee engages with its asset managers on a regular basis to ensure sufficient emphasis is put on including these aspects in security selection and the ongoing monitoring process. The Trustee reserves its right to impose specific investment guidelines within its segregated mandates to help ensure the Scheme's risks are mitigated and targets are met.

### Climate related transition risk

In dialogue with the Group, the Trustee has recognised that certain assets are likely to be subject to transition risk through early policy change, creating the risk of asset stranding. Accordingly, the Trustee has implemented a restriction list, this list is updated on a quarterly basis and is based on direct engagement with the investee companies.

This restriction list excludes investment in the equity and debt of companies that:

- generate more than 30% of their revenue from mining thermal coal, or produce more than 20 million tons of thermal coal per year;
- generate more than 30% of their electricity from coal;
- are in the process of developing any new coal mining or coal power infrastructure;
- generate at least 30% of their revenue directly from the extraction of oil from oil sands;
- are purpose-built (or "dedicated") transportation infrastructure operators for oil sands products, including pipelines and railway transportation;
- generate more than 30% of their revenue from mining oil shale, or
- generate more than 30% of their electricity from oil shale.

The Trustee periodically reviews this approach to ensure that the restrictions are appropriate.

From a covenant perspective, the Trustee, alongside its independent covenant adviser as appropriate, will monitor the possible impact of physical and transitional climate risks on the Scheme's covenant and the interaction of the risks with the Scheme's longer term strategy. Where appropriate, the Trustee will consider changes to the Scheme strategy to mitigate any impact on the covenant, whilst noting ongoing risk management being undertaken by the Group.

### Climate related opportunities

The Trustee increased its allocation to the Infrastructure Debt portfolio, between 2016 and 30 June 2022. This asset class includes a mix of impact investments and other investments that may not have any specific social or environmental impact. The impact investments address social projects in healthcare and social housing as well as green impact investments focusing on cleaner energy and utilities. In 2023, the Trustee approved an allocation to infrastructure equity, this has the potential to increase green

impact metrics once the Scheme formally invests in the asset class. Valuations of the green impact investments as at 30 June 2024 are shown below.

Green impact

The green impact investments increased available sources of sustainable energy avoiding emissions of conventional energy production.

Offshore wind £19m

Onshore wind £42m

Ground mounted solar £91m

Utility – waste water £39m

## Net zero ambition

Over the last few years as the Trustee has developed its RI strategy for the Scheme, a key consideration has been to set an ambition for the Scheme to achieve net zero by 2050. Net zero represents a position where the carbon emissions generated by economic activity is balanced by the ability of natural and human-developed processes to absorb these emissions. The ambition of the Trustee is to have a similar position within the Scheme's assets.

Climate change is perhaps the most complex environmental risk facing society today. The risks and opportunities associated with climate change are intergenerational, international and interdependent. The Trustee has a duty to pay benefits as and when they fall due and in doing so recognises its responsibility to work proactively to tackle climate change. Setting a net zero ambition seeks to align the Scheme with a longer-term transition to a low carbon economy and support the process of change, recognising that climate change is a material financial risk.

The main focus for the Trustee when setting a net zero ambition has been on the Scheme's final salary arrangements due to the size of the fund and impact the Trustee can have in relation to these assets. The Trustee owns the majority of assets directly, meaning it has substantial influence to make a tangible difference by using voting rights and engaging directly with asset managers.

When the Scheme achieves maturity (i.e. a significant number of members are pensioners) the scope of the available assets to invest in may be limited, so, as the Scheme has not reached that position, now is the perfect time to act.

## DB assets

To achieve its ambition, the Trustee has agreed a plan based on the following pillars:

- Investments
- Engagement

- Monitoring

Investments

The Trustee is seeking to develop monitoring of climate related metrics for all assets within the Scheme. The Trustee recognises different characteristics of the asset classes it is invested in and availability of data. Once methodologies of measuring emissions are available the Trustee will work to set targets for remaining asset classes. The table below shows the current status and actions to be taken. For the asset classes that do not yet have an agreed methodology to account for emissions or reliable data is not available, the Trustee will continue to work with the Zurich Group and the asset managers to address these points.

| Asset class | Asset allocation | |
|---|---|---|
| Equities | 19.0% | 5 year weighed average carbon intensity (WACI) reduction target set |
| Real Estate | 4.0% | Real Estate investment is through a CTI fund, the fund has formally committed to operational Net Zero by 2040 |
| Corporate Bonds | 16.5% | 5 year WACI reduction target set |
| Infrastructure Debt | 8.5% | There is not yet an agreed methodology to account for the emissions. The Trustee will work with the Group on measurement and target setting once reliable data is available |
| LDI | 43.0% | Emissions are now being disclosed. Methodology for measurement has been provided by the asset manager, this is provided in the Metrics and target section |
| European Loans | 4.0% | The funds are co-owned with the Zurich Group. The Trustee will work with the Group on measurement and target setting once reliable data is available |
| Middle Market Loans | 2.5% | |

| | | |
|---|---|---|
| Infrastructure equity | 2.5% | As at 30 June 2024, the Scheme had not yet invested in the agreed infrastructure equity funds. Work will commence on the methodology to account for emissions after subscribing to the funds. |

Engagement

The Trustee will continue to delegate engagement with investee companies to its asset managers.

If the Trustee holds the same stock as Zurich Insurance Group ("Group"), the Trustee could leverage from the Group's direct engagement and engage jointly.

Monitoring

Monitoring activities are described in the risk management section of this report.

### Operational ambition

The ZPen team is employed by the Group and works in line within the Group's operational model. Therefore, the in-house team is aligned with the Group's 2030 operational net zero target

The contribution the ZPen team makes is to stop adding to the amount of carbon dioxide equivalent emissions that are released into the atmosphere. Significant progress has already been made and there is a clear path to further reduction by, for example, increasing our use of renewable energy and embracing hybrid working, meeting via Teams and travelling in smarter ways.

The Trustee will monitor its suppliers and the ZPen team.

### Working with the Group

For the Group, RI is about achieving the mission of "doing well and doing good", by not only creating long-term, sustainable financial value, in line with Zurich's fiduciary duty, but, at the same time, also creating non-financial value such as reduction of carbon emissions. RI is the creation of long-term benefits for all key stakeholders, while remaining true to the proven approach of maximising economic value based on a structured and disciplined investment process.

The Group are transitioning the investment portfolios to net-zero greenhouse gas emissions by 2050, consistent with a maximum temperature rise of 1.5°C above pre-industrial temperatures, taking into account the best available scientific knowledge. Science-based interim targets for 2025 have been set for listed equity, corporate debt and real estate. The Trustee has been working with the Group on the Scheme's net zero ambition as it can benefit, especially from the mandates where the Group use the same asset manager.

## Scenario analysis

One of the tools employed by the Trustee in the financial management of the Scheme is scenario analysis. The purpose of scenario analysis is to explore how the Scheme's asset and liabilities behave under different stressed conditions and thus assess the overall resilience of the Scheme to different potential future outcomes.

The Trustee has conducted separate scenario analyses for the DB and DC sections of the Scheme. This approach acknowledges the distinct characteristics and requirements of each section. For the DB section, the Trustee has engaged Hymans Robertson as the investment adviser, who employs established modelling techniques that are suitable for its structure and liabilities. Similarly, for the DC section, the Trustee has collaborated with Lane Clark and Peacock (LCP) as the DC investment adviser, who utilise recognised modelling methodologies that are appropriate for assessing the potential impact of different climate scenarios on DC benefits. By leveraging the expertise of these advisers and their proven modelling approaches, the Trustee ensures that the scenario analyses are robust and accurately reflect the specific risk profiles and strategic considerations of both the DB and DC sections of the Scheme.

Building on this general approach, climate scenario analysis helps the Trustee to analyse climate-related risks and opportunities. The Trustee acknowledges that, in the current landscape there is no single methodology or tool employed by asset owners to assess the potential impacts of climate change, and that this is an evolving field of enquiry. Further the Trustee recognises that there are different climate policy pathways that would each result in outcomes consistent with 1.5-2°C warming by 2100. Additional information regarding the limitations of climate scenario analysis is set out later in this paper, along with insights of the Trustee's ongoing efforts to overcome these limitations.

## ZPen DB

For the purpose of the analysis set out in this report, the Trustee focuses on the three core climate scenarios as follows:

| Scenario | Description |
|---|---|
| Green revolution | Corresponds to a world where there is concerted and collaborative policy action starting now, e.g. carbon pricing, green subsidies with increased public and private spending on "green solutions".<br><br>Improved disclosures encourage market prices to shift quickly. Transition risks arise in the short term, but less physical risk in the long term. The intensity of the disruption is high and immediate. Scenario assumes a high likelihood of achieving an emissions trajectory consistent with limiting the average global temperature increase to at or below 2°C. |

| | |
|---|---|
| Delayed Transition | Reflects a world where no significant additional policy action is taken in the short-term, meaning the response must be stronger when it does happen. This results in a shorter and sharper period of transition with greater (but delayed) transition risks but similar physical risks in the long term.<br><br>Assumes a reasonably high likelihood of achieving an emissions trajectory consistent with limiting the average global temperature increase to at or below 2°C. |
| Head in the Sand (BAU) | Corresponds to a world where currently existing policies for Greenhouse Gas (GHG) emissions, renewables deployment and energy efficiency are carried out and where no additional policies are implemented compared to what have been legislated as of June 2019, it covers worldwide policies.<br><br>Growing fears over ultimate consequences leads to market uncertainty and price adjustments; Ineffective and piecemeal action increases uncertainty and transition risks exceeded by physical risks. Assumes a very low likelihood of achieving an emissions trajectory consistent with limiting the average global temperature increase to at or below 2°C. |

The modelling for the DB sections also uses a base case which reflects standard capital market assumptions based on consensus views on economic outlook, which feed into long-term views on what is currently priced into the market. This base scenario therefore indirectly captures the climate risk and opportunities that are priced into current market conditions but does not allow for specific scenarios such as those defined above.

The Trustee will monitor ongoing research and developments in this area and might change the above scenarios if more meaningful conclusions could be drawn from alternative scenarios.

### Approach taken by the Trustee

For the year to 30 June 2023, the Trustee built on the previous year's quantitative analysis of the Scheme's resilience to different climate change scenarios. The 2023 analysis for the ZPen and ESExec DB sections includes both the assets and liabilities of the Scheme, thereby considering both funding and investment strategy in conjunction.

The two key outputs when understanding the resilience of the ZPen and ESExec DB sections to each of the climate scenarios in the modelling undertaken below are:

- 'Likelihood of success': this means the probability that the section will be 100% funded (i.e. assets are at least equivalent to the liabilities) over time.

- ‘Downside risk in 20 years’: this means the possible fall in the funding level over time in the worst 5% of cases modelled.

There have been no significant changes to the investment strategy, therefore the Trustee is comfortable that the scenario analysis carried out on the ZPen DB Section during 2023 is still appropriate and so has retained this analysis within the main body of this report.

### Limitations of scenario analysis

It is important to note that climate scenario analysis as has been undertaken below for the Scheme is still in very early stages of development and is likely to evolve some way further. As such, there are a number of limitations with respect to the modelling that should be taken into consideration when contemplating the outputs below.

In particular, climate scenario modelling is only one of the tools used by the Trustee to consider the impact of potential climate-related risks; the output of this modelling will therefore form part of the discussions held with respect to the management of these risks alongside other tools such as the climate-related metrics chosen for the Scheme.

Additionally, the analysis does not try to answer how the Scheme’s funding and investment strategy will fare in a 2, 3 or 4°C world, nor assign a likelihood to any given climate scenario. Instead, it performs what is called a ‘stress test’ of the resilience of a funding and investment strategy under outcomes that may be expected under different climate pathways, where uncertainty over different periods is emphasised. Finally, as with any modelling, there is some subjectivity in the underlying assumptions chosen. As a result, interpretation of the outputs should be carefully considered and should inform decisions on potential investment strategy changes, rather than decide them; this is the approach that the Trustee will take when considering the outputs of the climate scenario analysis.

More generally, it is acknowledged that when climate scenarios are being developed for modelling purposes, it cannot be assumed that the future is going to be the same as the past or that the traditional relationships between economic variables will hold. Instead, what should be explored is how the future economy could be impacted by evolving energy production, how society may change in response, and how our economic and social systems will adapt to the growing physical impacts of a warmer climate as well as associated government policy change.

For a climate scenario narrative to be realistic, one must consider how different actors within our global system respond to stress. This is to add in the human response to environmental or other stimuli, recognising that different entities may not always take decisions that lead to an optimal outcome.

Future climate scenario analysis modelling will hopefully build on this approach and should better inform decision making by recognising the systemic nature of climate risk and that it can only be modelled with significant uncertainty. As such, the Trustee will look

to evolve their approach to climate scenario modelling in the coming years in order to improve it in light of current criticism and limitations.

## Overall conclusions from the scenario analysis

ZPen DB Section

All scenarios, including the base case, trend upwards similarly with respect to the likelihood of success.

The climate-specific scenarios do suggest slightly lower probabilities of success than the base case modelled, however not significantly so. This suggests that over the longer term in particular the section is relatively resilient to the climate scenarios modelled and their associated risks using this measure. This is likely due to the high hedging in place within the investment strategy as well as other risk management controls such as diversification of strategy.

The base case downside risk output represents particularly poor economic scenarios (similar to a severe recession or depression) and the climate scenarios modelled are producing results that are similar to the base case. However, the impact is broadly similar across the scenarios, including the base case, and this also thereby suggests that the section is resilient to the different climate scenarios.

As the particular scenario that will materialise is unknown, at this time remaining diversified is an important part of the Trustee's approach to addressing the risks posed.

The Trustee will reassess next year as to whether or not this scenario analysis remains appropriate for the section and undertake new analysis if they decide that the analysis needs refreshing. In the meantime, the Trustee will use the climate scenario analysis, where appropriate and noting its limitations, to inform their decision making.

ESExec DB Section

Within the ES Exec Section, all scenarios, including the base case, start at 100% likelihood of success at the modelling date. This is due to the section being fully funded at that point in time. Due to the investment strategy in place, including the high level of matching offered by the Section's strategy, the likelihood of success remains at 100% over the time periods modelled. Therefore the Trustee is satisfied, based on this measure, that the Section is resilient across all of these scenarios.

Similarly, when considering the downside risk for the section, despite this output representing particularly poor economic scenarios (similar to a severe recession or depression), all the climate scenarios modelled as well as the base case, produce projected funding levels that continue to ensure that the section remains above full funding. Further commentary is included in the more detailed section below, however, this also thereby suggests that the section is resilient to the different climate scenarios. This

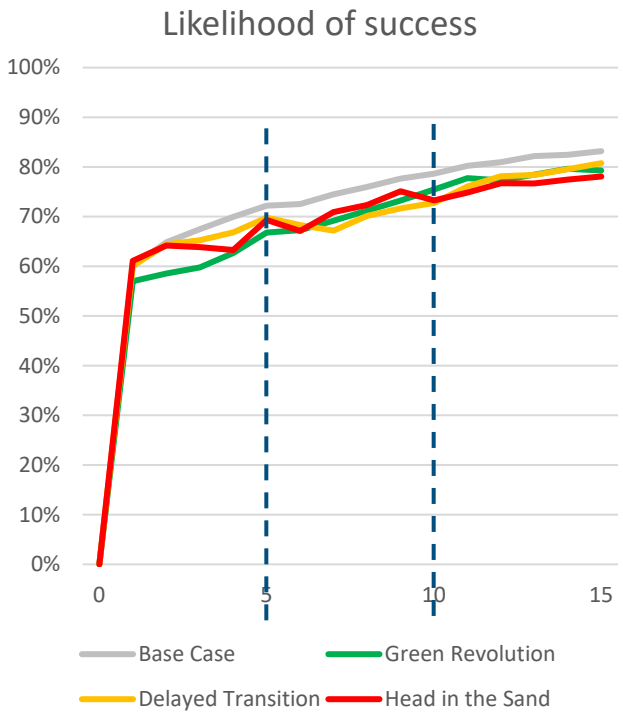
is likely in particular due to the high funding level and lower risk investment strategy in place.

The Trustee will reassess next year as to whether or not this scenario analysis remains appropriate for the section and undertake new analysis if they decide that the analysis needs refreshing. In the meantime, the Trustee will use the climate scenario analysis, where appropriate and noting its limitations, to inform their decision making.

### Detailed outputs: ZPen DB Section

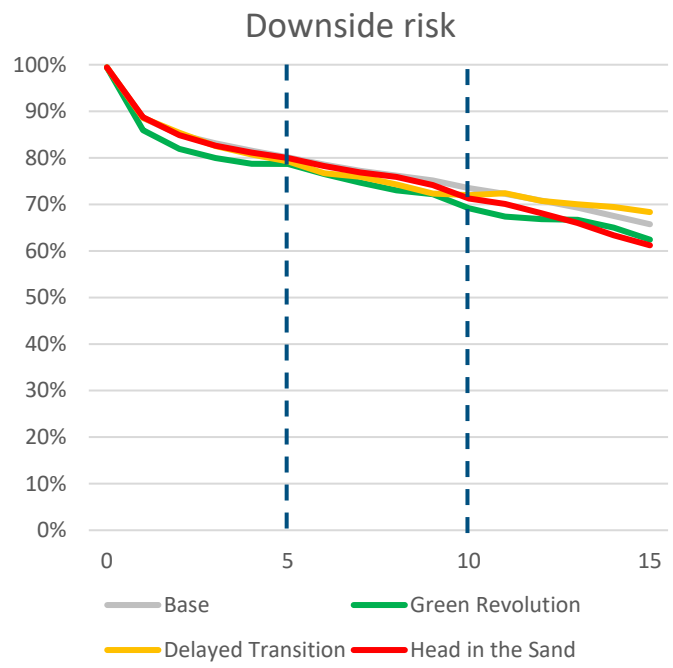
The Trustee undertook analysis based on both the funding and investment strategy of the section as at 30 June 2023. In doing this, the resilience of the whole section was considered with respect to the different quantitative impacts of the climate scenarios as set out above. For instance – should interest rates over time be impacted by the different climate scenarios, both the assets and the liabilities will reflect these impacts. However, due to protection provided by hedging assets within the section's investment portfolio, the impacts of interest rates to the liabilities may be mitigated by similar changes in the investments, thereby reducing the overall strategic impact of negative interest rate changes. As such, modelling across both the assets and liabilities of the section may provide a broader view of strategic resilience than asset-only analysis.

The graphs and commentary below and overleaf set out the results of the scenario analysis for the section. The impact at the five and ten year points in time has been highlighted in order to reflect upon the potential impact of the different scenarios with respect to the time horizons chosen for the Scheme earlier in this report.




For the ZPen Section, the probability of success of the section is similar across the different climate scenarios modelled, particularly over the longer term. The key differences are as may be expected; a slightly higher impact to projected funding level in the first 0-5 years under the green revolution scenario, between the years 5-10 under the delayed transition scenario and from year 10 onwards under the BAU scenario. This is reflective of when the different risks to the section may manifest depending on the scenario experienced. As the section was not fully funded at the modelling date, the likelihood of success starts at 0% but then significantly increases by year 1, reflective of the likelihood that the section achieves full funding by that point.

However, despite slight negative impacts to the section's funding level experienced across all scenarios versus the base case, the results remain relatively similar over the longer term (i.e. years 10 onwards). This indicates resilience of the section to the different climate scenarios as the modelling suggests that there is a high likelihood (70%+) of the section achieving full funding over the time periods modelled despite these impacts. It is also important to note that whilst the base case assumes that the market outlook has 'priced in' climate-related risks and opportunities, it does not make an allowance for specific climate scenarios or risks.



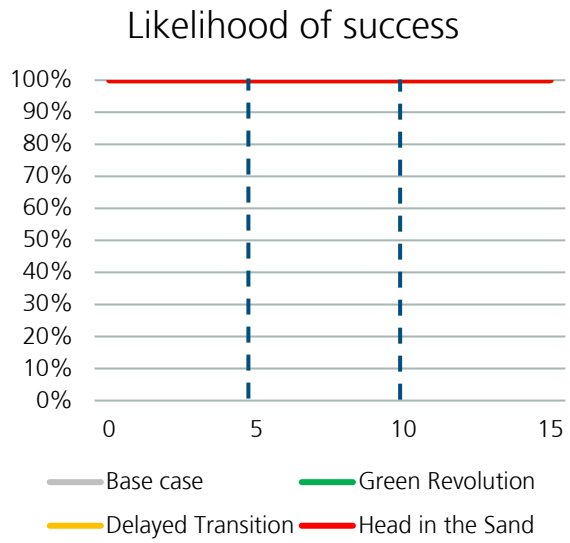

The graph to the left, focusing on downside risk to the section of the different climate scenarios, shows the average of the worst 5% of funding levels for the section. Therefore, the projected funding level of the section for this graph does appear under each scenario, to decline somewhat significantly over time, however this is the nature of downside risk as an output. It is important to note, though, that despite the risks to the section experienced under each scenario modelled, over the period to 10 years from the modelling date the funding level does not differ much between the scenarios. At the five year position, the average of the worst 5% of outcomes across all scenarios including the base case are 79% - 80%, and at the 10 year position this has reduced to 69% - 73%.

This Trustee is satisfied that this demonstrates resilience of the section to different climate scenarios over the medium-longer term as defined by the Trustee, as the differences between the outputs across these scenarios at these points in time are relatively small.

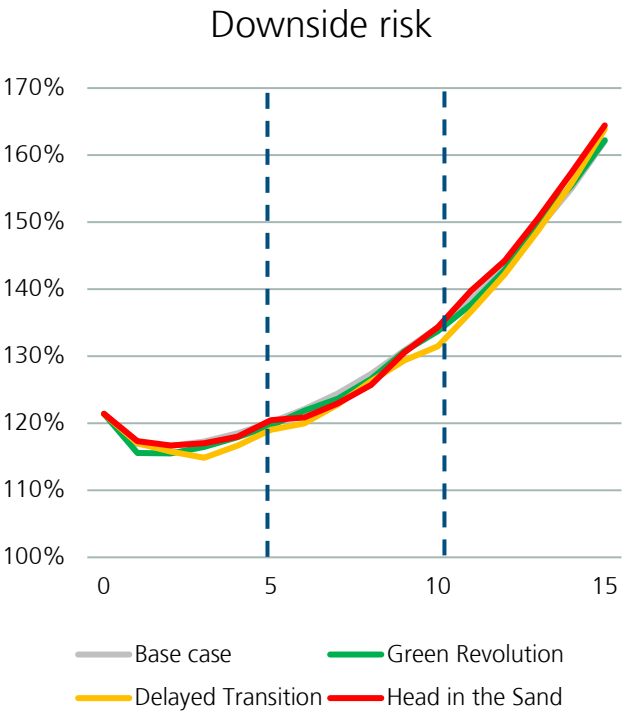
### Detailed outputs: ESExec DB Section

As with the ZPen Section, the Trustee undertook analysis based on both the funding and investment strategy of the Section as at 30 June 2023. In doing this, the resilience of the whole section was considered with respect to the different quantitative impacts of the climate scenarios as set out above. As such, modelling across both the assets and liabilities of the section may provide a broader view of strategic resilience than asset-only analysis.

The graphs and commentary below and overleaf set out the results of the scenario analysis for the Section. The impact has been highlighted at the five and ten year points in time in order to reflect upon the potential impact of the different scenarios with respect to the time horizons chosen for the Scheme earlier in this report.




For the ES Exec Section, the probability of success of the section is the same across the different climate scenarios modelled, as shown by the graph to the left. For all scenarios, due to the high funding level of the section and high level of matching between the investment and the funding strategies, the likelihood of success therefore remains 100% across all time periods modelled. However, despite this positive result, the Trustee is cognisant of the potential climate-related issues that will continue to pose a risk to the section and, on an ongoing basis, continue to monitor and manage these.




The graph to the left looks at the potential downside risk to the section of the different climate scenarios. The downside risk measure focuses on the average of the worst 5% of outcomes. Despite this, whilst the projected funding level of the section for this graph does appear under each scenario, to decline over the shorter term, by the 5 and 10 year points it has recovered and then improved. Additionally, the projected funding levels do not differ much between the scenarios or between each scenario and the base case.

The Trustee is therefore satisfied that, based on the measures as shown above, this demonstrates resilience of the section to different climate scenarios over the medium-longer term as the difference between the outputs across these scenarios at these points in time are relatively small.

ZPen DC Section

The Trustee carried out climate scenario analysis in November 2024, with the support of its DC investment adviser, LCP. For the purpose of the analysis set out in this report, the Trustee focused on the three core climate scenarios as follows:

| Scenario | Description |
|---|---|
| Net Zero financial crisis | Global net zero CO2 emissions achieved by 2050 via rapid and effective climate action. Financial markets react abruptly in 2025. |
| Limited action | Policymakers implement limited new climate policies and fall short of meeting the Paris Agreement goals, resulting in a combination of transition and physical risks |
| High warming | No new low-carbon policies enacted and some existing ones are scaled back. Current technological trends continue. Paris Agreement goals not met, and the resulting high warming leads to severe physical impacts |

The key features of each of the climate scenarios considered are summarised in the table below[1].

| Scenarios | High warming | Limited action | Net Zero financial crisis |
|---|---|---|---|
| Low carbon policies | There are no new low-carbon policies enacted in this scenario and some existing ones are scaled back. Current technological trends continue (e.g. significant falls in renewable energy prices). | Moderate steps taken by policymakers to increase climate action including working towards the 2030 targets and net zero commitments. Carbon capture and storage also used. | Ambitious low carbon policies, high investment in low carbon technologies and substitution away from fossil fuels to cleaner energy sources and biofuel. Carbon capture and storage also used to achieve global net zero by 2050 |
| Paris Agreement outcome | Paris Agreement goals not met | Paris Agreement goals not met | Global net zero CO2 achieved by 2050; Paris Agreement goals met. |

[1] New compared to the International Energy Agency's World Energy Outlook 2021 – Stated Policies Scenario (STEPS).

| | | | |
|---|---|---|---|
| Global warming | Average global warming is about 2°C by 2050 and 3.7°C by 2100, compared to pre-industrial levels. | Average global warming is about 1.8°C by 2050 and 2.6°C by 2100, compared to pre-industrial levels. | Average global warming stabilises at around 1.5°C above pre-industrial levels. |
| Physical impacts | Severe physical impacts. Multiple climate tipping points are reached and modelled and many countries suffer from extreme weather events. | High physical impacts. | Moderate physical impacts |
| Impact on GDP | Global GDP in 2100 predicted to be almost 80% lower than in the Ortec[2] Finance / Cambridge Econometrics base case. | Global GDP in 2100 predicted to be about 50% lower than in the Ortec Finance / Cambridge Econometrics base case. | Global GDP is slightly behind the Ortec Finance / Cambridge Econometrics base case by 2100. |
| Financial market impacts | Physical risks priced in over the period 2026-2030. A second repricing occurs in the period 2036-2040 as investors factor in the severe physical risks. | Physical risks priced in over the period 2026-2030. A second repricing occurs in the period 2036-2040 as investors factor in the high physical risks. | Abrupt repricing of assets and a sentiment shock to the financial system in 2025. |

## Approach taken by the Trustee

The scenario analysis is based on a model developed by Ortec Finance and Cambridge Econometrics. The outputs were then applied to the ZPen DC section's Drawdown Lifestyle, the default for DC only members. The three climate scenarios are projected year by year for the accumulation phase[3]. The results are intended to support the Trustee to consider how resilient the default strategy is to climate-related risks. The three climate scenarios are intended to be plausible narratives of how the future could unfold. They are only three scenarios out of numerous other which could be considered. Other scenarios could give better or worse outcomes for default strategy. The Trustee will carry out

[2] Source: Ortec Finance, modelling as at 31 December 2023. Figures quoted are medians.
[3] The current modelling capability does not allow the Trustee to consider members in retirement. For this reason, the climate scenario analysis presented in this report only extends to a retirement age of 65 for each example member.

scenario analysis at least every three years and check annually if the review should be carried out sooner.

### Limitations of scenario analysis

The scenario modelling considered here makes no allowance for:

- Tail risks;
- Variations from median outcomes;
- Impacts of migration and increased likelihood of armed conflict;
- Impacts of food and other resource shortage; or
- Other (systemic) risks (eg new pandemics, financial market volatility, energy security).

Tipping points are allowed for to some extent in the High Warming scenario, but not in the other scenarios. Some aspects, such as market pricing-in shocks and the level of adaptation to climate risks are modelled, but the impact and timing is highly uncertain and could mean actual outcomes are very different to what has been modelled.

These are key limitations of the modelling and can result in:

- Underestimating downside risks
- Simplifications masking some impacts that could be significantly better or worse (eg using simplified metrics to allow for weather events).

Further information on the limitations of the modelling approach can be found in the Appendix 5.

Climate risk can only be modelled with significant uncertainty and climate scenario analysis modelling is an evolving field. The Trustee continue to monitor future developments in this area and evolve its approach to climate scenario modelling in the coming years, as appropriate, in order to improve it in light of current limitations and better inform decision-making.

Outputs: ZPen DC Section

The table below summarises the change in projected pension pots under each scenario compared to the LCP base case.

| Scenario – Active members | Member aged 25 | Member aged 35 | Member aged 45 | Member aged 55 |
|---|---|---|---|---|
| Net zero financial crisis | +0.1% | -2% | -3% | -4% |
| Limited action | -23% | -19% | -13% | -2% |
| High warming | -40% | -37% | -25% | -3% |

| Scenario – Deferred members | Member aged 25 | Member aged 35 | Member aged 45 | Member aged 55 |
|---|---|---|---|---|
| Net zero financial crisis | -7% | -8% | -8% | -7% |
| Limited action | -34% | -27% | -16% | -3% |
| High warming | -56% | -49% | -31% | -4% |

The High Warming scenario is the worst outcome for younger members as they would be most severely impacted by the long-term impacts of the severe physical risks associated with this scenario.

Net Zero financial crisis is the worst scenario for members in their late 50s as they will not have sufficient time to recover from short-term market shocks before retirement. Since the short to medium term only considers the next 10 years, these members are unlikely to be largely impacted by the progress of the climate transition.

For the deferred members, all scenarios have a greater negative impact on their retirement pot compared to the average active member of the same age. As deferred members are no longer making contributions, they are less able to recover from market shocks.

Overall conclusions from the scenario analysis

In conclusion, the climate scenario analysis highlights the varying impacts on different member groups within the ZPen DC Section based on their proximity to retirement and the nature of the climate scenario. Older members within 10 years of retirement are particularly vulnerable to short-term market shocks, as seen in the Net Zero financial crisis scenario, and face significant transition risks in the medium term. Conversely, younger

members, with a longer horizon until retirement, are more exposed to the physical risks associated with the High Warming pathway, as financial markets price in the severe physical impacts.

To address these challenges, it is essential to engage with investment managers to ensure they are exercising stewardship in support of net zero pathways, thereby mitigating the risks of a failed transition. The DC Section's default strategy has been enhanced to incorporate climate considerations, including an allocation to the Wellington Global Credit ESG Fund, which integrates responsible investment principles into the fixed income allocation. Additionally, the inclusion of low carbon equity investments through the L&G Low Carbon Transition Global Equity Index Fund aims to mitigate the impact of market shocks and align the investment approach with long-term climate resilience goals.

As part of the scenario analysis discussions, the Trustee noted the significant decrease to carbon emissions as a result of the DC fund review, it supports the Trustee's decision to more explicitly take ESG/climate change risks into account in order to improve member outcomes.

Overall, the scenario analysis underscores the importance of a proactive and adaptive investment strategy that not only mitigates risks but also capitalises on opportunities arising from the transition to a low carbon economy, promoting the resilience of members' retirement outcomes. For a detailed understanding of the constraints and assumptions underlying this analysis, please refer to the 'Limitations of Scenario Analysis' section, which highlights key areas that may impact the comprehensiveness of the Trustee's assessment.

# Risk management

## Identifying and assessing climate related risks

The Trustee has included climate change and broader RI consideration into the Scheme's Statements of Investment Principles ("SIP") for DB and DC assets. Implementation statements available on the Scheme's website www.zpen.info/Library/Responsible Investment describe compliance to SIPs during the year.

Various parties support the Trustee in the identification and assessment of climate related risks, including its sub-committees, advisers, investment managers and in-house team. Climate risk is particularly considered within the following processes:

## Valuation process, with asset, liability and covenant scenario modelling

The Trustee instructed its actuarial and covenant advisers to consider climate change risk as part of the formal advice for the triennial valuation as at 30 June 2022:

- The Scheme Actuary undertook scenario modelling in order to stress-test the resilience of the funding valuation outcomes and investment strategy under different climate scenarios over different time horizons.
- The covenant advisers provided covenant considerations of the materiality and timing of the sponsor's key ESG risks and opportunities (including climate change), informed by company information and sector insights.

## Selection of asset classes and mandates

The Trustee expects that its investment advisers will consider the extent to which any individual asset class will be affected by climate factors in providing advice although recognises that climate factors are currently more likely to arise when considering the mandate design within asset classes. For investment decisions, the Trustee has oversight of the investment advisers through its sub-committees (DC Committee/Funding Committee), both sub-committees report activity quarterly to the full Trustee board. For a diagram of the Trustee's investment governance structure of its advisers and sub-committees, see Appendix 2.

## Selection/Monitoring of asset managers

In both the selection and ongoing evaluation of asset managers, the Trustee uses an internal system set up by the Zurich Group. It forms a part of the Investment Management application capturing scores based on various hard and soft factors that relate to the asset managers' performance. Each external asset manager's ESG and climate integration is assessed against the following criteria:

1. Interaction with portfolio manager/relationship manager, and overall RI approach
2. Training
3. Access to information

4. Investment Process
5. Active ownership

For any asset managers deemed to be underperforming on the ESG and climate integration criteria, the Trustee will provide feedback to the asset manager in order to request improvements are made. The respective DC/Funding Committees would consider further remedial action if standards were not improved.

## Selection of individual assets

Investment managers are expected to take account of climate related factors within their decision making processes and to adopt a forward-looking approach to identify emerging risks.

## Monitoring

### Regular monitoring

The Trustee receives regular reports from its asset managers to track GHG reduction on a portfolio and asset manager level. The emissions will fluctuate on a short-term basis, but those fluctuations will be analysed by the UK Pensions & Benefits team, any large fluctuations will require engagement with the asset managers.

### Annual monitoring

The Trustee instructs its investment adviser to prepare climate change analysis covering the ZPen DB and ESExec DB arrangements. The report includes suggested next steps for the Trustee to improve an environmental impact of the Scheme's assets. The data included in this report forms a basis for the Trustee's metrics variance analysis and engagement with the Scheme's asset managers.

### Monitoring at a board/sub-committee level

Reports are prepared for the Trustee, this includes the Scheme's progress on its net zero journey. The topic will be added to the agenda if there are proposals to be assessed by the Trustee or significant changes to the emissions that need to be reported/discussed.

### Monitoring of advisers

The Trustee evaluates its advisers on an annual basis. To assess if the Scheme's advisers are meeting expectations, the Trustee and key UK Pensions and Benefits team members provide feedback based on a set of high-level adviser objectives in the five key areas (knowledge, advice, service, relationship management and value for money). Going forward, the Trustee intends to monitor the capabilities of their advisers by using the Investment Consultant Sustainability Working Group climate competence framework.

The Trustee's Investment Analyst (provided through the agreement between the Trustee and Zurich Investment Management) has explicitly included the provision of services to

include support for the Trustee on its climate-related risks and opportunities. In addition, the investment consultant objectives integrate this service and measures the Investment Analyst as part of an assessment annually.

### Asset manager engagement

One of the Trustee's five core principles is to be an active responsible investor and vote proxies and engage where appropriate.

This is the Trustee's primary mechanism for the management of climate related risks. In the year ended 30 June 2024 all engagement activities were delegated to the Scheme's asset managers - with the Trustee exercising scrutiny over the managers' activities.

In 2024, the Trustee agreed a Stewardship policy for the Scheme to replace the proxy voting policy. As a long-term investor, the Scheme applies a longer-term focus, and will vote in order to support the investee companies' strong and sustainable governance, as well as a long-term oriented strategy and its implementation. Long-term value creation is preferred over short-term gains. Voting rights for financial investments shall be exercised actively following clearly defined voting guidelines. The Trustee reviews its asset managers' proxy voting policies every three years or more frequently if there are any material changes.

The Trustee reports on voting activities during the year via the implementation statements, the most recent documents are saved under www.zpen.info/Library/Responsible Investment.

Appendix 3 includes engagement examples from the Scheme's asset managers.

### Integration into risk register and integrated risk management (IRM) framework

The Group assesses risk through its Total Risk Profiling (TRP) methodology and process. The Trustee has agreed to identify, assess, manage and monitor Scheme risks using the sponsor's TRP methodology, with appropriate adaptations. A separate TRP is considered for DB and DC assets, it documents the most relevant and material risks to the Trustee in meetings its objectives to (i) ensure that the Scheme is run properly, (ii) have sufficient and appropriate assets to pay the promised DB benefits as they fall due, and (iii) create and maintain a framework within ZPen to help members with DC benefits achieve what they consider to be a good outcome when taking their benefits.

Risks are expressed and documented in vulnerabilities, triggers and consequences, and rated in terms of severity and frequency/probability. The risk assessment takes account of existing controls in place to manage risk. Any improvement actions should reduce the severity or frequency/probability of risk scenarios that are above the risk priority boundary. The overall risk categorisation is based on the most relevant and impactful trigger.

For the DB and DC TRP, RI and climate change risks are identified, this ensures that the Trustee classifies, reviews and considers improvement actions that it can take to manage the risks.

The Trustee also has an IRM policy, this helps the Trustee to identify and manage the risks that might affect the likelihood of meeting its objectives for the Scheme, especially where the risks are interdependent. The Trustee recognises the link between covenant, funding and investment, all proposals are considered in the context of IRM.

### Consistency in risk management

The Trustee recognises the importance of consistency in managing climate-related risks. The measures shown above ensure that the Trustee's approach to risk management is consistent across different areas of the Scheme.

# Metrics and target

## Metrics and target selection

### ZPen DB and ESExec DB

Metrics

In line with regulations, the Trustee is required to select and report on four metrics. This must include one absolute emissions-based metric, one emissions intensity-based metric, one additional climate change metric and one portfolio alignment metric.

The Trustee has considered a number of factors when determining metrics to measure to have a comprehensive view of the Scheme's emissions. As availability of data varies between the asset classes and characteristics of assets held varies, the Trustee has decided to apply metrics on an asset class basis.

Publicly available data for private asset classes like infrastructure debt and private loan funds is not currently available. The Trustee is working with the relevant asset managers on obtaining the data.

In the table below, the Trustee has mapped metrics against climate change risks and opportunities described in the climate change policies. Ensuring the metrics address climate related risks and opportunities was key to the Trustee to provide a regular and a more holistic view of the investment risks.

| | Weighted Average Carbon Intensity (WACI) | Total Carbon Emissions | Low Carbon Transition Score | Climate ESG score | Avoided Emissions |
|---|---|---|---|---|---|
| Type of metric | Emissions intensity-based | Absolute emissions | Portfolio alignment | Climate change | Additional |
| Climate related transition risk | ✓ | ✓ | ✓ | ✓ | ✓ |
| Climate related physical risks | | | | ✓ | |
| Climate related opportunities | | | ✓ | ✓ | ✓ |

Target

The Trustee agreed a short-term carbon reduction target for its equities and corporate bond portfolios for the ZPen DB assets. A target for a 25% decrease to the WACI metric over a 5 year period measured on a baseline of 31 December 2020.

In order to achieve the WACI reduction target, the Trustee has set out guidance for its asset managers in their investment management agreements on the expected annual reduction to the metric. The target has been defined at an aggregate level leaving asset

managers to allocate targets to individual portfolios. It mainly applies to CTI, who manage the equities and one of the Scheme's corporate bond portfolios. M&G was allocated its target as the other corporate bond portfolio manager. The Trustee acknowledges that the change will not be linear and the investee company's carbon exposure is one of the factors taken into consideration during the investment process by the asset manager.

This target was chosen in order to reflect the importance of reducing carbon emissions within the Scheme's investments, whilst recognising that it is easier to drive progress for some investments over others in the short term. The Trustee also acknowledges that, by implementing an emissions reduction target, this can form part of the risk management approach of the Scheme to some of the climate-related risks identified for its investments; in turn, this supports its fiduciary duty to prioritise long-term member outcomes as Trustee. The Trustee will consider building on this target in future years, not only by considering areas of potential climate-related risks, but also taking into account longer term reduction plans of the sponsor and the UK more broadly, improvements in data availability and decarbonisation opportunities that may arise – all of which should additionally form part of our risk management approach to improve member outcomes in the context of a low-carbon future.

The WACI reduction target aligns with the longer Scheme ambition to be net zero by 2050.

The table below represents a change in WACI in comparison to the December 2020 baseline.

| Asset class | Manager | AUM | Dec-20 | Jun-21 | Jun-22 | Jun-23 | Jun-24 | Change vs baseline |
|---|---|---|---|---|---|---|---|---|
| Equities | CTI | £1.0bn | 97.0 | 98.6 | 95.5 | 80.1 | 68.9 | -29.0% |
| Corporate Bonds | M&G | £0.4bn | 101.6 | 152.1 | 99.6 | 87.6 | 63.4 | -37.6% |
| Corporate Bonds | CTI | £0.4bn | 123.7 | 97.2 | 64.1 | 73.5 | 86.9 | -29.7% |
| **Combined** | | **£1.8bn** | **106.8** | **102.2** | **90.3** | **80.3** | **71.5** | -33.1% |

Metrics data source: Hymans Robertson LLP

The Trustee is pleased with the progress made against the WACI targets, demonstrating effective management of the Scheme's assets. As the Trustee continues to work towards the target of 30 June 2026, it will remain vigilant and committed to maintaining the positive trajectory, collaborating closely with the asset managers to ensure the Scheme remains on track.

The asset managers and the Trustee will review the progress quarterly and discuss any deviations from the agreed annual ranges. CTI, as asset manager of all equities and a proportion of the corporate bonds allocation, aggregate the overall WACI reduction target across of all its mandates.

The Trustee monitors the change in WACI and engages with the asset managers regularly to understand variances. The scheme remains on target to meet the target reduction by 30 June 2026 for both equity and corporate bond portfolios.

Data limitations

- The majority of the data presented is sourced from Hymans Robertson LLP, who use a third party provider, MSCI. Whilst the Trustee has conviction in the supplier, the results may differ if an alternative provider was used. Specific data for Real Estate and Gilt disclosures is sourced from the relevant asset manager.
- Data used includes estimates for certain asset classes. These estimates are derived from information provided by MSCI and are incorporated into the reporting framework established by Hymans Roberton LLP.
- Data is collected periodically to align with the reporting year, but in certain cases, there may be delays in updating the data, resulting in the inclusion of emission data from the previous year.
- There may be overlap or duplication in the reported scope 3 emissions data due to the nature of the value chain and the multiple reporting entities involved. This overlap can occur when different entities report emissions from the same activities or when the same emissions source is reported by multiple entities within the value chain.

### ZPen DC

The Trustee is dependent on Scottish Widows for DC metrics as they own the primary relationship with asset managers.

| | Carbon footprint | GHG emissions | Investments with validated science based targets | Data quality |
|---|---|---|---|---|
| Type of metric | Emissions intensity-based | Absolute emissions | Portfolio alignment | Climate change |
| Climate related transition risk | ✓ | ✓ | ✓ | ✓ |
| Climate related physical risks | | | | ✓ |
| Climate related opportunities | | | ✓ | ✓ |

The Trustee worked with Scottish Widows on sourcing suitable metrics for the section. As a result of the dependency on Scottish Widows producing standardised TCFD metrics the above metrics were agreed.

## Metrics data

### ZPen DB and ESExec DB

For the year ended June 2024 the Trustee has focused on measuring asset classes for which reliable data is available. Disclosures have been extended to include metrics for both Real Estate and Gilt holdings. Measurement of remaining asset classes has been discussed with the asset managers and next steps are shown in the table included within the net zero section of this report. Asset classes not currently measured are: European Loan Fund and Middle Market Loans. For the asset classes that do not yet have an agreed methodology to account for emissions or reliable data is not available, the Trustee will continue to work with the Zurich Group and the asset managers in order to address these points.

Due to the materiality of the ESExec DB holdings relative to ZPen DB, for the year ended June 2024 the metrics for the sections have been combined.

### Listed asset metrics

Good quality disclosure ensures that the Trustee's analysis of climate-related risks is valuable and decision-useful as possible. Data availability for the equity portfolio remained high, with over 96% of assets having reported or estimated emissions data available for analysis. Data availability for the bond portfolios remains lower although emissions data is available for over 80% of portfolio holdings.

Across all listed portfolios, emissions data availability showed no significant change over the last 12 months. The Trustee engaged with its providers during the Scheme year to enhance the availability and quality of emissions data. These engagements included regular meetings with asset managers to discuss data gaps and improve data coverage and accuracy.

| | MV (£bn) | Emissions data available | Absolute Emissions tCO2e | Weighted Average Carbon intensity tCO2e/£m sales |
|---|---|---|---|---|
| Equity | 1.0 (1.3) | 96% (96%) | 52,002 (81,078) | 68.9 (80.1) |
| Corporate Bonds | 0.8 (0.9) | 80% (81%) | 23,605 (41,141) | 75.3 (80.2) |

*Source: Hymans Robertson LLP (figures in brackets represent prior year figures)*

For equity assets, Weighted Average Carbon Intensity (WACI) fell by 14% over the 12 months to 30 June 2024 albeit portfolio positioning by the equity manager is biased away from most carbon intensive sectors, other than industrials.

Within corporate bond portfolios, WACI has varied with one portfolio having seen a 27.6% decrease in emissions intensity whilst another has seen an increase of 18.2%. This latter

increase in carbon intensity has been a consequence of changes in the underlying positioning of the portfolio with increased allocation to holdings within the utilities sector. The ZPen team, on behalf of the Trustee has discussed the positioning of the portfolio with the manager on a quarterly basis.

The Trustee measures other attributes of their listed asset portfolios, including both how companies are preparing for the transition and how they are managing environmental risks. The Trustee expects its managers to be assessing and managing expectations and meets with its managers on a regular basis to ensure that investee companies are acting to address shorter and longer term risks.

| | Low Carbon Transition Score (/10) | Climate ESG score(/10) |
|---|---|---|
| Equity | 5.9 (6.1) | 6.2 (6.1) |
| Corporate Bonds | 5.7 (6.3) | 7.7 (7.8) |

*Source: Hymans Robertson LLP (figures in brackets represent prior year figures)*

Over the 12 months, transition scores across both equity and credit portfolios fell. The Trustee will continue to engage with asset managers on the low carbon transition score and environmental risk assessment to understand the movements over time.

### Property portfolio metrics

The Trustee gains exposure to real estate assets through investment in a pooled property fund. The fund reports absolute emissions, the Trustee has presented below the ZPen DB share of the emissions value and an associated intensity figure based on £m fund value.

| | MV (£bn) | Data availability (by floor area) | | |
|---|---|---|---|---|
| | | Landlord controlled assets | Tenant controlled assets | Total portfolio |
| Property | 0.2 (0.2) | 97.7% (92.7%) | 67.1% (85.7%) | 84.8% (90.0%) |

*Source: Columbia Threadneedle Investments*

The manager reported an increase in data availability for landlord-controlled assets within the portfolio over the 12 months to 31 December 2023 whilst reporting of data for tenant-controlled assets fell over the year. The increase in reporting for landlord-controlled assets reflects the greater control and ability to gather data in respect of such assets.

| | Absolute emissions (tCO2e) | Emissions intensity (tCO2/£m invested) |
|---|---|---|
| Property | 2,174 (1,812) | 11.1 (7.8) |

*Source: Columbia Threadneedle Investments*

Emissions intensity for property has been calculated with reference to the amount invested rather than being normalised for any other metric. This is primarily a consequence of data availability, and the Trustee will engage with the manager on other approaches for future reporting.

Portfolio absolute emissions represent the share of emissions attributable to the Scheme based on the Trustee's investment in the fund. Over the year, the emissions intensity increased somewhat, with both absolute emissions for the whole mandate having increased, as well as the NAV of the assets (i.e. the denominator for emissions intensity calculations) having decreased, each of which contributes to the increase over the year.

In addition to the emissions data, the asset manager also reports on energy and water consumption, and waste generation and has set a goal for reducing energy consumption for landlord-controlled assets. Over the year to 31 December 2023, a reduction of 3.9% (on a like for like basis) was reported. The Trustee will work with the asset manager to report increased metrics going forward.

### LDI portfolio metrics

The Trustee invests a significant proportion of its assets in a Liability Driven Investment (LDI) strategy with investment being made in both funded and unfunded gilts, the latter creating exposure to gilt investments. The approach to measuring sovereign emissions has been determined by the investment manager based on guidance provided by the Partnership for Carbon Accounting Financials (PCAF). Data provided is as at 30 June 2024.

| | MV (£bn) | Absolute Emissions tCO2e | Emissions intensity tCO2/£m invested | Emissions intensity tCO2e/GK$m GDP |
|---|---|---|---|---|
| Funded gilts | 1.8 | 266,449 | 167.1 | 98.1 |
| Gilts on repo + TRS | 2.1 | 299,340 | 167.1 | 98.1 |
| Combined gilts | 3.9 | 565,789 | 167.1 | 98.1 |

*Source: Insight Investment*

The emissions intensity measure is based on total UK greenhouse gas emissions (Scope 1 and 2 only) as published by the UK government and a PPP adjusted measure of UK gross domestic product, as published by the IMF.

### Scope 3 emissions

The Trustee has again reported Scope 3 emissions across listed asset portfolios although note that the availability of data is lower than for Scope 1 and 2 emissions.

| | MV (£bn) | Emissions data available | Absolute Emissions tCO2e |
|---|---|---|---|
| Equity | 1.0 (1.3) | 74% (66%) | 604,137 (777,082) |
| Corporate Bonds | 0.8 (0.9) | 59% (57%) | 214,926 (479,834) |

*Source: Hymans Robertson LLP*

The Trustee has not set any targets with regard to Scope 3 emissions.

### Avoided emissions

The green impact investments increased available sources of sustainable energy avoiding emissions of conventional energy production. The investments are held within the infrastructure debt portfolio. The total impact of the avoided emissions noted below is the equivalent to 11,300 cars driven for a year. The avoided emissions data did not change during the Scheme year as no new infrastructure debt investments were made.

| | Kt CO2e/yr avoided |
|---|---|
| Ground-mounted solar plants | 64.2 |
| Offshore wind farm | 12.8 |
| Onshore wind farm | 24.7 |

| Metric name | Metric description |
|---|---|
| WACI | A measure of a portfolio's exposure to carbon intense companies. This is expressed in terms of tons of CO2 equivalent emitted per million dollars of revenue, weighted by the size of the allocation to each company. WACI is measured using scope 1 + scope 2 emissions. 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. |
| Total carbon emissions (scopes 1 & 2) | This represents the portfolios estimated scope 1 + scope 2 greenhouse gas emissions. This is expressed in terms of thousand tons of CO2 equivalent emitted by the companies invested in by the portfolio, weighted by the size of the allocation to each company. |
| Total carbon emissions (scope 3) | This represents the portfolios estimated scope 3 greenhouse gas emissions. This is expressed in terms of thousand tons of CO2 equivalent emitted by the companies invested in by the portfolio, weighted by the size of the allocation to each company. |
| Low carbon transition score | A company level score that measures a company's level of alignment to the Low Carbon Transition. Companies with higher Low Carbon Transition score are more aligned with the Low Carbon Transition compared to the companies with lower scores. (Score: 0-10) |
| Climate ESG score | A company level score that represents the weighted average of all Key Issues that fall under the Environment Pillar. The weight given to each Key Issue is dictated by MSCI's process which determines the relevance of each pillar to a given company and sector. At a portfolio level this is the weighted average of individual company scores by the weight in the portfolio. |
| Avoided emissions | Greenhouse gas emissions avoided or reduced from the use of the reporting company's product. |

For more information on the calculation methodology, please refer to appendix 4.

## ZPen DC

Metrics selection for ZPen DC is driven by the platform provider Scottish Widows Limited (SW). The Trustee has discussed its reporting requirements and objectives and worked with SW on the common approach.

The metrics presented below are for the year ending 31 December 2023. The availability of data is measured in the first metric. SW have committed to providing the data on an annual basis as at 31 December.

| | Z Growth Fund | | Z Cautious Growth Fund | | Z Cash Fund | |
|---|---|---|---|---|---|---|
| | 31-Dec-22 | 31-Dec-23 | 31-Dec-22 | 31-Dec-23 | 31-Dec-22 | 31-Dec-23 |
| AUM | £0.3bn | £0.4bn | £0.1bn | £0.1bn | £21.3m | £24.9m |
| Investments with scope 1&2 data (data quality) | 86% | 95% | 75% | 78% | 96% | 104%[4] |
| - reported | 81% | 89% | 71% | 72% | 72% | 82% |
| - estimated | 5% | 6% | 5% | 6% | 24% | 22% |
| GHG emissions (tCO2e) | 19,633t | 23,341t | 2,908t | 3,005t | 6t | 6t |
| Carbon Footprint (tCO2e / £m) | 68.6 | 60.1 | 59.3 | 51.1 | 0.3 | 0.3 |
| Investments with scope 3 data (data quality) | 85% | 96% | 75% | 73% | 96% | 104% |
| - reported | 20% | 71% | 21% | 53% | 67% | 79% |
| - estimated | 66% | 25% | 54% | 20% | 30% | 25% |
| GHG emissions (tCO2e) | 154,993t | 246,558t | 22,327t | 30,294t | 763t | 1,897t |
| Carbon Footprint (tCO2e / £m) | 543 | 634 | 457 | 550 | 37 | 73 |
| Investments with validated science based target | 53% | 69% | 44% | 53% | 46% | 53% |

Investments with validated science-based targets improved significantly over the year, reflecting a positive trend within the fund towards companies that are actively pursuing measurable and credible climate action goals.

The data quality also improved, especially for the scope 3 data, providing a more comprehensive and accurate representation of the indirect emissions associated with the investments, including those from upstream and downstream activities.

[4] The value of greater than 100% for scope 1,2 and 3 emissions data represents the aggregate data value for all listed investments held within the fund.

Metrics data for the DC assets are provided to the Trustee by SW. The Trustee does not have a direct impact on which metrics are selected by SW and reported on.

| Metric name | Metric description |
|---|---|
| Investments with scope 1, 2 & 3 data | A proportion of investments within the fund with reported and estimated emission data. The higher reported emissions % the more reliable data. |
| GHG emissions | This represents the portfolios estimated greenhouse gas emissions. This is expressed in terms of thousand tons of CO2 equivalent emitted by the companies invested in by the portfolio, weighted by the size of the allocation to each company. |
| Carbon footprint | A measure of a portfolio's exposure to carbon-intense companies. This is expressed in terms of tons of CO2 equivalent emitted of a company's most recently available enterprise value including cash, weighted by the size of the allocation to each company. |
| Investments with validated science based target | A proportion of investments with valid science based targets that reports on companies that are aligned with the goals of the Paris Agreement and contribute to reducing GHGs |

The Trustee approves the TCFD report.

Signed on behalf of the Trustee by:

Trustee director: 

Name: David Sims

Date 16 January 2025

# Glossary

Active ownership is when shareholders engage in a company they have invested in to influence the company's strategy and actions. It is a method often used in responsible investing to directly influence a company's decisions and when working with corporate social responsibility.

Engagement - A long-term active dialogue between investors and companies on environmental, social and governance factors. An active dialogue offers investors the opportunity to discuss sustainability risks and opportunities with companies and provides them with insights into investors' expectations of corporate behaviour.

ESG stands for Environmental, Social and Governance. It is a framework used to assess the sustainability and ethical impact of a company. Environmental factors focus on the company's impact on the natural environment, social factors consider its relationships with employees, customers and communities, and governance factors evaluate its leadership and management practices. ESG criteria are used to evaluate the long-term viability and ethical practices of a company.

GHG emissions from human activities strengthen the greenhouse effect, contributing to climate change. Most is carbon dioxide from burning fossil fuels: coal, oil, and natural gas.

Infrastructure investments are a form of "real assets," which contain physical assets that are observed in everyday life like bridges, roads, highways, sewage systems, or energy.

Net zero is a balance between the amount of greenhouse gas produced and the amount removed from the atmosphere. Net zero is reached when the amount of GHGs added is no more than the amount taken away.

Proxy voting – most institutional investors do not attend AGMs and EGMs, they are represented through proxy votes, through which they instruct someone who is attending to vote in a certain way.

Responsible investment is a strategy and practice to incorporate ESG factors into investment decisions and active ownership. It considers both how ESG might influence the risk-adjusted return of an asset and the stability of economy, as well as how investment in and engagement with assets and investees can impact society and environment.

Scenario analysis is an approach for the forward-looking assessment of risks and opportunities. Scenario analysis describes a process of evaluating how an organisation, sector, country or portfolio might perform in different future states, in order to understand its key drivers and possible outcomes.

Scope 1 emissions are direct emissions – controlled by the company (e.g. fossil fuel heating and fuel for the car fleet).

Scope 2 emissions are indirect emissions – this includes electricity and warmth that is not burnt on-site (e.g. electricity from the local utility provider)

Scope 3 emissions are emissions resulting from a company's operations or actions but not directly controlled by the company (e.g. staff commute, investment portfolio etc.)

The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015 and entered into force on 4 November 2016. Its goal is to limit global warming to well below 2, preferably to 1.5°C, compared to pre-industrial levels.

# Appendices

## Appendix 1: RI strategy developments

### ZPen DB

### 2016: Impact investments

The Trustee approved an allocation to Infrastructure Debt, which includes environmental impact investments. The portfolio has grown over time with £191m of environmental impact investments as at 30 June 2024.

### 2019: Restriction list

The Trustee agreed its first restriction list excluding companies that generate more than 50% of their revenues from mining thermal coal and utility companies that generate more than 50% of their energy from coal.

### 2020: Restriction list update

The Trustee strengthened the restriction criteria to exclude investment in the equity and debt of companies that:

- generate more than 30% of their revenue from mining thermal coal, or produce more than 20 million tons of thermal coal per year;
- generate more than 30% of their electricity from coal;
- are in the process of developing any new coal mining or coal power infrastructure;
- generate at least 30% of their revenue directly from the extraction of oil from oil sands;
- are purpose-built (or "dedicated") transportation infrastructure operators for oil sands products, including pipelines and railway transportation;
- generate more than 30% of their revenue from mining oil shale, or
- generate more than 30% of their electricity from oil shale.

### 2021: Carbon reduction target and climate change driven metrics

- The Trustee agreed a short-term carbon reduction target for its equities and corporate bond portfolios. The total value of the equity and corporate bond portfolios total £1.8bn as at 30 June 2024.

  | | |
  |---|---|
  | Time period: | 5 years |
  | Reduction: | 25% |
  | Metric: | Weighted Average Carbon Intensity (WACI) |
  | Baseline: | December 2020 |

- A selection of metrics have been agreed to measure and report on in this report (see Metrics and target section). The selection of metrics was driven by:
    - Different characteristics of each asset class
    - Insights provided for the climate related risks and opportunities defined in the Climate Change Policy
    - Data availability
- The Trustee agreed approach to metrics and scenario analysis for ZPen DC
- The fund review was completed, resulting in the following changes driven by RI
    - LGIM 30/70 Global Equity now forms a part of the default fund, one of the reasons for the change was LGIM's strong active ownership activities
    - LGIM Future World Fund was added to the self-selection options
- For Exec DB, a selection of metrics has been agreed to measure and report on in this report (see Metrics and target section). The selection of metrics was driven by:
    - Different characteristics of each asset class
    - Insights provided for the climate related risks and opportunities defined in the Climate Change Policy
    - Data availability

### 2022: Net zero ambition

In September 2022, the Trustee agreed a 2050 net zero ambition. The ambition covers DB investments as well as the Scheme's operations.

For more information, please refer to the 'Net zero ambition' section of this report.

### 2024: DC investment review

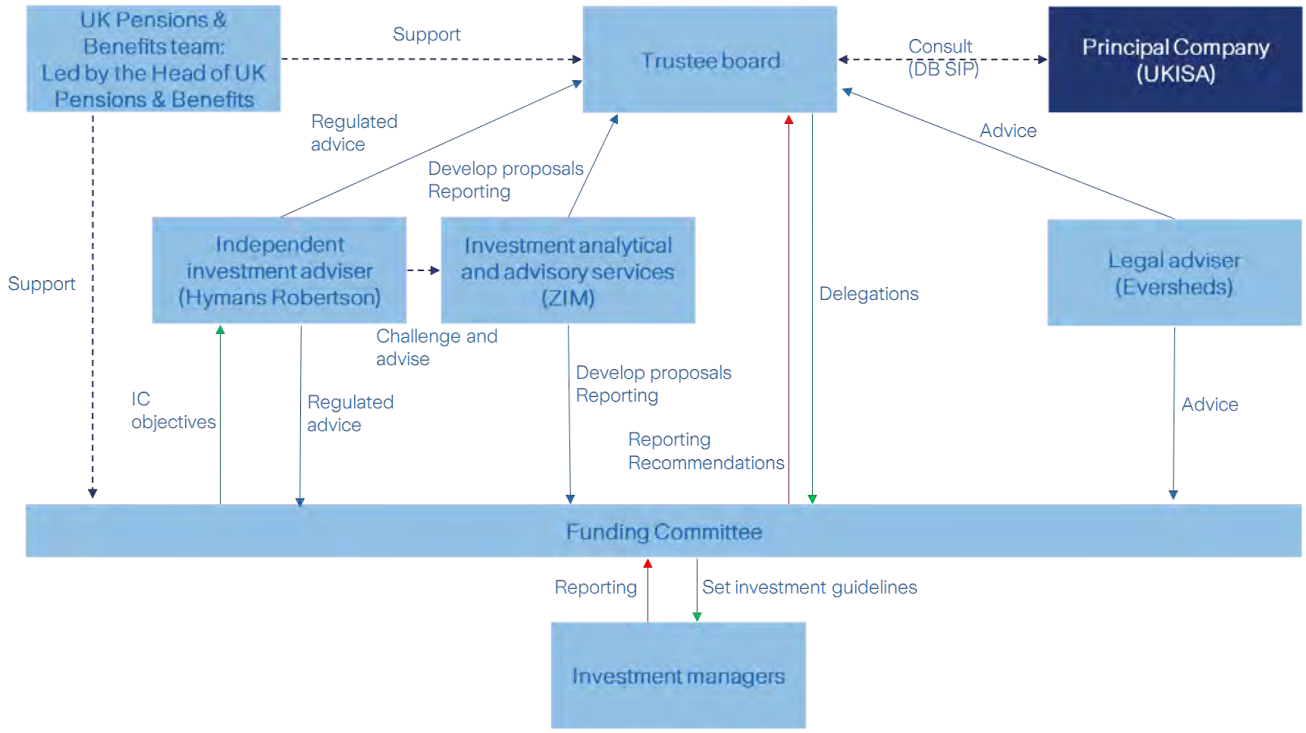
- The fund review was completed, resulting in the following changes driven by RI
    - Z Growth Fund is 100% invested in a low carbon global equity fund with a net zero target.
    - Z Cautious Growth Fund is invested 55% in the low carbon global equity fund used in Z Growth Fund. 45% in an actively managed global bond fund which includes carbon targets and a commitment to net zero.

### 2024: Infrastructure equity investments

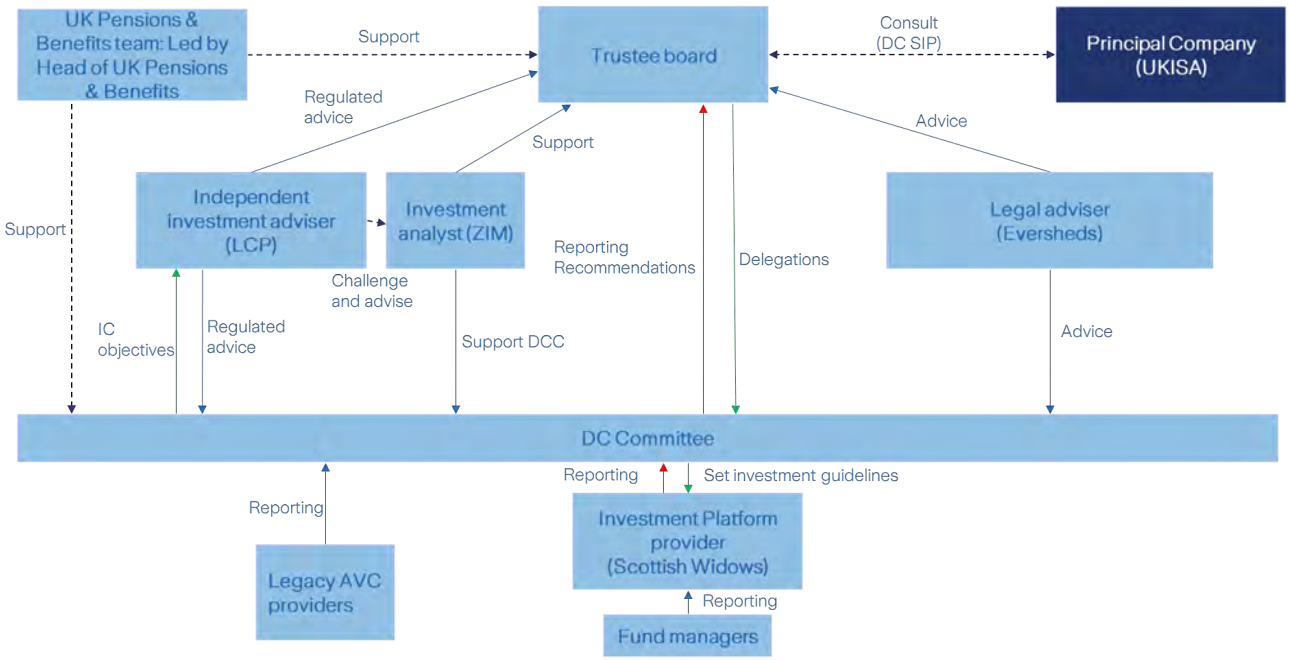
In 2023 & 2024, the Trustee approved commitments to infrastructure equity funds, this has the potential to increase green impact metrics once the Scheme formally invests in the asset class.

Appendix 2: Investment governance

## DB Investment governance




## DC Investment governance



## Appendix 3: Engagement case studies

### ZPen DB

Example 1 – ESG engagement

The asset manager met with a British multinational food retailer to encourage the company to enhance disclosure around the key drivers for nature loss, to take positive actions towards regenerative agriculture practices and to publicly disclose the actions they are taking to reduce the risk of modern slavery in their supply chain. The company confirmed they are focusing on their agricultural footprint, in particular water health, pollinators and soil health. The company also provided an update on the work being done in the River Wye region, where they are working closely with local industry and suppliers to help increase the standard of farming in the region to prevent pollutants getting into the river and on pollutant removing technologies. In terms of regenerative agriculture practices, the company confirmed they are conducting a trial of low carbon fertilizers. The company is currently working with 5 five suppliers, covering 1,300 hectares, in an effort to reduce emissions by 50%. The initial trials suggest that the low carbon fertilizer is just as effective as standard fertilizer and as such they are looking to expand coverage ten-fold to 13,000 hectares over 2024. The asset manager continues to monitor developments.

Example 2 – Climate change

The asset manager met with a global oil and gas producer to discuss the company's progress on reducing production scope 3 targets by 20-30%. The asset manager was seeking to understand how the company is engaging with its customers, and how they are actively trying to help them reduce their scope 1 and 2 emissions which ultimately feed into the company's overall scope 3 emissions. As a result, the company confirmed that they will provide the asset manager with evidence of their previous engagements with their customers, and provided reassurance that they are engaging with specific transport customers and companies involved in the broader transport system. The asset manager will continue to monitor the company and will follow up in due course.

Example 3 – ESG engagement

Following previous engagement with a global food and beverage company to assess its progress against climate milestones and targets, the asset manager met with the company's global head of climate and sustainable sourcing, its global public affairs lead - packaging and sustainability, and investor relations to revisit how the company was dealing with deforestation in its supply chain. Additionally, the asset manager also wanted to discuss nutrition in light of the company's recently announced targets to increase sales of the healthier portion of its portfolio and revisited the discussion on plastic packaging.

The global food company has since adopted SBTi approved targets to reduce absolute scope 1, 2 and 3 GHG emissions 20% by 2025 and 50% by 2030 from a 2018 base year, as well as a 2050 approved net zero target, and commits to increase annual sourcing of

renewable electricity from 40% in 2019 to 100% by 2025 - it currently appears to be on track to achieve these targets.

### ZPen DC

ESG reports, including voting statistics, for the pooled funds are published on the asset managers' websites. More detailed active ownership information is included in the ZPen DC's implementation statement available on the Scheme website.

## Appendix 4: Metric methodology

### Listed assets

• Absolute Emissions (tCO2e): This represents the portfolios estimated Scope 1 + Scope 2 greenhouse gas emissions. This is expressed in terms of thousand tons of CO2 equivalent emitted by the companies invested in by the portfolio, weighted by the size of the allocation to each company.

• Emissions intensity (tCO2e/$m sales): A measure of a portfolio's exposure to carbon-intense companies. This is expressed in terms of tons of CO2 equivalent emitted per million dollars of revenue, weighted by the size of the allocation to each company. Is measured using scope 1 + scope 2 emissions. 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.

The calculation methodologies across scopes 1, 2, and 3 are the same, with Scope 1 + 2 replaced by Scope 3.

### Property portfolio

Only absolute GHG emissions for the total property portfolio and data availability have been provided by Columbia Threadneedle; these have been collected by the manager on behalf of the properties within the Threadneedle Pensions Limited Pooled Property Fund.

In order to calculate emissions intensity for the mandate, the absolute GHG emissions figures (i.e. 16,320) have been divided by the market value of the total portfolio (i.e. NAV of £1.472 billion as at 30 June 2024). This can then be multiplied by the market value of the fund that is held by the Section in order to calculate absolute emissions of the mandate which can be attributed to the Section.

### LDI portfolio

*UK gilts carbon calculation methodology*

Key considerations, assumptions and sources

- Production emissions data used[5]
- Figures cannot be sensibly aggregated across different asset classes (e.g. due to the use of different denominators for normalised metrics)
- There is a risk of 'double counting' emissions, as it is difficult to obtain sovereign emissions data that excludes corporate emissions
- Little consideration for 'exported' emissions in raw data

[5] DWP guidance defines production emissions as Scope 1 and 2, and consumption emissions as Scope 3. PCAF defines production emissions as Scope 1, and consumption emissions as Scope 2 (emissions imported relating to electricity) and Scope 3 (other imported emissions).

    - exporting countries retain carbon responsibility for production, even if the good is used elsewhere, for example:
        - China, Thailand, South Africa: considered higher emitters, as exporters of CO2-intensive goods
        - France, Switzerland, Sweden: considered lower emitters, as importers of CO2-intensive goods
- Purchasing power parity (PPP) adjusted GDP is used for certain metrics, to achieve consistency across all sovereigns
- Carbon values include land use, land use change, and forestry (LULUCF)
- Germanwatch Climate Change Performance methodology provides more sophisticated (but less measurable) output and is a recommended alignment tool by Paris Aligned Investment Initiative (includes IIGCC)

### Weighted average cost of capital

$$\frac{UK\ GHG\ emissions\ (tCO2e)}{UK\ PPP\ adjusted\ GDP\ (GK\$)}$$

### Carbon footprint

$$\frac{UK\ GHG\ emissions\ (tCO2e)}{market\ value\ of\ gilts\ in\ issuance\ (£)}$$

### Absolute emissions (previous method)

$$\frac{UK\ GHG\ emissions\ (tCO2e)}{market\ value\ of\ gilts\ in\ issuance\ (£)} \times market\ value\ of\ gilts\ held\ (£)$$

### Absolute emissions (PCAF method)

$$\frac{Market\ value\ of\ gilts\ held\ (£)}{UK\ PPP\ adjusted\ GDP\ (£)}\ x\ UK\ GHG\ emissions\ (tCO2e)$$

## Appendix 5: Climate scenario analysis – modelling limitations

- As this is a "top-down" approach, investment market impacts were modelled as the average projected impacts for each asset class. This contrasts with a "bottom up" approach that would model the impact on each individual investment held by the default strategy.
- As such, the modelling does not require extensive scheme-specific data and so the Trustee was able to consider the potential impacts of the three climate scenarios for all of the Scheme's assets in the default strategy. In practice, the Scheme's investments may not experience climate impacts in line with the market average.
- Like most modelling of this type, the modelling does not allow for all potential climate-related impacts and, therefore, is quite likely to underestimate some climate-related risks. For example, tipping points (which could cause runaway physical climate impacts) are not modelled and no allowance is made for knock-on effects, such as climate-related migration and conflicts.
- In addition, the model presumes that the UK government and bank counterparties will remain solvent, thereby making no allowance for credit risk on government bonds and derivative exposures. However, in a scenario where global warming exceeds 4°C, this assumption may no longer be valid.
- Medians from Ortec Finance's model outputs are used to project forward assets, which means the results reflect the model's "middle outcomes" for investment markets under the three scenarios. Allowing for market volatility would result in better or worse model outputs than shown. Investment markets may be more volatile in future as a result of physical and transition risks from climate change, and this is not illustrated in the modelling shown.