

TCFD Report 2022

1 October 2021 – 30 September 2022

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Retirement Solutions

Driving good solutions for people and planet





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Executive summary

This TCFD report looks at our objectives, actions, risks, opportunities and investments through a climate-related lens.

In 2015 the Financial Stability Board (FSB) created the Task Force on Climate-related Financial Disclosures (TCFD) – an industry-led group. In 2017 they provided a framework to help companies, asset managers and asset owners to report climate-related financial information. TCFD reporting requirements came into force on 1 October 2021 for all Defined Benefit (DB) schemes with over £5bn in assets (as at 31 March 2020) and authorised Defined Contribution (DC) master trusts. This report provides a way to help identify, measure and manage long-term climate-related risks and opportunities. Today, TCFD has over 4,000 supporters from more than one hundred countries around the world – and those numbers are steadily growing.

The Task Force developed four areas for climate-related disclosures: governance, strategy, risk management, and metrics and targets. The Trustee has arranged this report around these four pillars and believes it is through the actions of today that we will help to solve the climate problems of tomorrow. This will help to reduce risks to our members and the wider society as we transition to a low-carbon economy.

Our commitments¹

- By 2025: Reduce our carbon intensity by at least 25%. This aligns with the Intergovernmental Panel on Climate Change's (IPCC) decarbonisation pathway for the 1.5°C scenario, and is consistent with our 50% reduction target by 2030.
- By 2030: Halve our portfolio emissions. Reducing our emission intensity by half will ensure that we are on track to deliver our objective of net zero by 2050.
- Increase our investment in climate solutions to at least 6% of our return-seeking assets by 2030.
- Ensure that, by 2030, at least 90% of financed emissions in material sectors are either assessed as net zero, aligned with a net-zero pathway or the subject of engagement activities. Financed emissions are greenhouse gases (GHG) emitted as a result of financial institutions' provision of capital to the emitter.

We support the Financial Stability Board's view that "the occurrence of extreme climate events, as well as a disorderly transition to a low- carbon economy, could have destabilising effects on the financial system, including through a rise in risk premia and falling asset prices in the relatively short term". We are working continuously to assess and manage climate-related risks and opportunities.

- The full TCFD report can be found on [TPT's website](#)
- Our commitments to climate can be found in our [Climate Action Report](#)
- [Our Responsible Investment Framework](#) details how we implement responsible investing and stewardship
- Our Board's commitment to environmental, social and governance (ESG):
 - [Investment Beliefs](#)
 - [Responsible Investment Principles](#)

¹ All commitments are relative to a 2019 baseline year

Summary of findings against requirements

Theme	Disclosure Requirement	Summary of Findings
Governance	Disclose the organisation's governance around climate-related risks and opportunities.	<p>The Trustee is responsible for all aspects of running the Trust.</p> <p>Climate-related risks have been identified as a key risk – and are monitored closely through regular reporting by the Trustee, the Management Oversight Board, the Funding Committee and the Investment Committee.</p> <p>Day-to-day implementation is delegated to the Investment Management Team.</p>
Strategy	Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material.	<p>The risks, opportunities and impacts presented by three different scenarios of the transition to net zero across three different time horizons has been profiled for our different funding strategies. This creates many different potential outcomes across a spectrum of impact.</p> <p>We found large, least mature schemes in the Defined Benefit Master Trust to be vulnerable in the short term where a disorderly or failed transition to net zero occurs.</p> <p>Conversely, Defined Contribution members close to retirement where an orderly transition occurs are least likely to be vulnerable.</p> <p>Our investments work for a wide range of members and employers – we use stress tests to help us assess the resilience of our portfolio in relation to climate risks.</p>
Risk Management	Disclose how the organisation identifies, assesses, and manages climate-related risks.	<p>Our Risk Management Framework is embedded into our operations and is also used for climate-related risks. It has operational oversight by the Executive Board, the Risk Committee and ultimately the Audit, Risk and Compliance Committee.</p> <p>The key components of our Risk Management Framework are:</p> <ul style="list-style-type: none"> • Risk pillars • Risk appetite • Risk taxonomy • Risk scorecard • Risk registers • Key controls • Risk events <p>Our Risk Management Framework is supported by four enablers:</p> <ul style="list-style-type: none"> • Risk horizon scanning • Change management risk assessment • Risk management information • Training and education
Metrics and Targets	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	<p>We report against four climate metrics:</p> <ul style="list-style-type: none"> • Absolute emissions metric • Emission intensity metric • Additional climate metric (non-emission factor) • Portfolio alignment metric <p>Data coverage and quality varies across our investments with data coverage ranging from 51% to 97% and data quality ranging from 56% to 83%.</p> <p>Between 2019 and 2022 we achieved 35% and 27% yearly reductions, respectively, in the carbon intensity of our DB and DC portfolios.</p>

Climate change has the most potential to impact the value of our portfolio in the long term.

Introduction

We bring pension schemes together to improve outcomes; for our members, our employers and wider society.

About TPT Retirement Solutions

As a master trust, TPT delivers multi-employer and standalone workplace pensions for over 2,500 employers and over 420,000 members. We manage a hybrid pension scheme, which means that The Pensions Trust (the Trust) provides both DB and DC pension services for employers from a range of sectors including building societies, housing associations and well-known charities. Across our DB and DC schemes the total of assets under management (AUM) is £10 billion, as at 30 September 2022 – the primary purpose of these assets is to pay the pensions of our members. But we believe that, as asset owners, we can also make a difference to the world today.

Climate change and risk

The global climate is changing, these changes can have damaging impacts on the environment, people and even businesses. Climate is the average weather in a given area over a long period of time. The IPCC is the United Nations body for assessing the science related to climate change and defines climate change as the change in the state of the climate that can be identified by variances in the mean and/or variability of its properties which persist for an extended period.

It is estimated that human activities have caused approximately 1.0°C of global warming above pre-industrial levels. Global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate². The IPCC recognises the interdependence of climate, ecosystems and biodiversity, and human societies³. Increasingly severe, interconnected and often irreversible impacts of climate change can be seen in countries and communities across the world – with negative effects on ecosystems, biodiversity and human systems.

Our approach to investing

We integrate a range of ESG factors into the way we invest assets on behalf of our members through our Responsible Investment Framework. Of the environmental and social issues that we consider, we believe that climate change represents a material financial risk to the long-term value of our investment portfolio, and has the potential to reduce the security of our members' retirement benefits.

Supporting the drive for change and transparency

We therefore support the goals of the Paris Agreement and have signed the Global Investor Statements to Governments on Climate Change. We have developed an approach to ensure that climate-related risks and opportunities, including physical and transition risks, are considered more explicitly through the investment process, from asset allocation to security selection.

We believe that industry-wide focus and transparency will help facilitate the transition to a net zero economy. We welcome the opportunity to share this report and continue to be heavily involved in shaping the agenda, influencing policy and developing best practice for the industry.

This report covers The Pensions Trust (hereafter "The Trust") as a master trust with assets of £5bn or more at the end of its first scheme year ending on or after 1 March 2020.

² https://www.ipcc.ch/site/assets/uploads/sites/2/2022/06/SPM_version_report_LR.pdf

³ https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf

Governance

Good quality governance improves the quality of investment decision making and relies upon transparency – this approach is embedded in everything we do.

Supervising our exposure to climate change

The Trustee Board (the Trustee) is responsible for all aspects of running the Trust, including investment, administration and governance. It has the responsibility to act in the best interests of its beneficiaries. The Trust is governed by Verity Trustees Limited, the sole corporate Trustee. As at 30 September 2022, the Trustee Board consisted of eight directors, of whom, three are nominated by the members and three by the employers. In addition, two are co-opted onto the Trustee Board by the member and employer nominated directors. Directors of Verity Trustees Limited, other than those who are co-opted, can be nominated by members and employers of the Trust. The Trust is a centralised occupational pension fund for non-associated employers, and there are 53 segregated schemes (“schemes”) within the Trust.

Processes

The Trustee is charged with annually reviewing policies on, and determining the status of, the Trust’s response to opportunities and risks arising from climate change and wider Responsible Investment (RI) issues. The Trustee believes that our overall approach to RI helps to identify and mitigate risks and potentially enhances portfolio returns. The Trustee has also:

- developed a range of Responsible Investment Principles, which delineate the chosen implementation approach to RI and stewardship matters;
- embedded a process that ensures new and existing investments are managed to take account of climate-change risks and opportunities;
- followed the recommendation of TPT’s Investment Committee (IC), and approved the scheme’s overall climate-related strategy, including integration into investment strategy, scenario analysis, and metrics and targets;
- positioned climate change-related risk as one of the key risks that it must pay close attention to. These risks are discussed by the Management Oversight Board, the Funding Committee, and the IC, all of which are under the direct supervision of the Trustee Board.

Specifically, the Trustee handles issues requiring a group-wide perspective and, to this end, identifies important themes deserving intensive discussion, thereby managing these issues within an annual schedule. The Trustee actively addresses matters related to RI through dedicated sessions and deliberations at regular meetings.

Training

The Trustee receives periodic training and information sessions on climate and wider RI matters to ensure that its approach remains consistent with legislation and emerging best practices. In the reporting period, the Trust organised a Climate Away Day for the IC. The IC received training on regulatory landscape, climate risks facing the investment portfolio and opportunities through climate solutions.

With the support of in-house expertise across investment and governance matters, the Trust ensures that our Trustee Directors have sufficient knowledge and understanding of climate change to fulfil their statutory and fiduciary obligations. Training on climate is also delivered at management and departmental levels with the view of expanding its outreach in the coming years.

The Investment Management Team

The Trustee delegates the implementation of its Investment Beliefs and Responsible Investment Principles to the IC, which is supported in the implementation of its investment decisions by the Investment Management Team (IMT). The IMT is led by the Chief Investment Officer, who is assisted in forming capital market and other investment views by the Portfolio Construction Group, while the IC appoints the investment consultants. In 2022, the IMT was expanded by three people, with expertise in RI and climate, as well as wider risk management.

RI is fully integrated into the IMT's core investment functions. Our expanded resources complement the activities undertaken by the IMT, which include ensuring that third-party investment managers used in the implementation of the investment strategy act in accordance with the Trustee's Investment Beliefs and provide regular reporting on climate and other RI issues.

The IMT reports to the IC; climate change issues are part of the regular updates in the agenda. The Chief Investment Officer also sits on the Executive Board. To comply with the TCFD Regulations, climate-change reporting has been integrated into the Executive Board's key deliverables.

Climate change is also part of the Scheme's covenant risk framework, reviewed by the Funding Committee and assessed by the Trustee's in-house covenant team.

Working with our investment partners

The Trustee relies on investment consultants (e.g. Redington Investments Limited) to advise the IC on the investment strategy and fund selection for the various pools of assets. These are used to create the scheme-specific strategies. The IC considers factors such as: the expected risk and return of each asset class, diversification benefits, liquidity requirements and fees when constructing these pools of assets. To support its decision making, the IC takes independent advice from the Trustee's investment consultants and receives input from its Chief Investment Officer. The Trustee has delegated the power to set investment strategy to its IC and Funding Committee.

The ongoing suitability and objectives of the DC default arrangement and the range of self-select funds are also reviewed annually by the IC in conjunction with its investment consultant, considering member feedback and benchmarking material provided by the investment consultant.

The Trustee runs an annual review of the investment consultants' performance which takes into account integration of climate change and responsible investment as part of the advice provided during year. This covers investment strategy and fund selection. As part of the Trustee's selection process, investment partners are required to demonstrate robust climate expertise to be included in the cohort of prospective investment advisers.

Aligning our investment beliefs and investment strategy

Our aim is to provide best-in-class, cost-efficient investments that make a difference to the world and support the transition to a net zero economy. To do this, it is essential that we manage risk effectively, work in unity with our external partners and follow a robust reporting framework.

Strategy

To deliver financial resilience we manage many risks and opportunities across the portfolio – since 2013, climate change has been integral to our strategy.

We conduct climate scenario analysis⁴ to stress-test the Trust’s DB and DC portfolios against climate-change risks. In this analysis our baseline scenario is a ‘climate uninformed baseline’ where all currently existing policies and physical past impacts are assumed to have been priced in by markets but no future physical risks are accounted for.

The Trust’s chosen climate scenarios are:

Orderly Net Zero by 2050

- Orderly transition, 2°C or lower scenario
- Emission reductions start now and continue in line with the Paris Agreement

Disorderly Net Zero by 2050

- Disorderly transition, 2°C or lower scenario
- Little climate action in the short term, followed by sudden unanticipated tightening in 2025 as countries rush to get on track

Failed Transition

- Failed transition, pathway to 4+°C scenario
- Continuation of historic emission trends and failure to transition away from fossil fuels

The Trustee has adopted time horizons for considering the impact of climate-related risk and opportunities that are applicable to both our DB and DC schemes. These are set out in Table 1.

Table 1: Scenario horizons

Time Horizon	Years	Reason
Short Term	10 Years	Time horizon over which transition risks are expected to take effect.
Medium Term	20 Years	Expected ‘pricing-in’ dynamic expected to take effect, with the second repricing in 2030s.
Long Term	40 Years	Time horizon over which a member’s monies are invested from joining the workforce through to retirement. Also the time horizon representative of climate-change risks and opportunities applicable to a Young vintage in our DC range. Physical risks are expected to take effect.

⁴ In 2022 Ortec Finance was appointed to provide advice on how climate-change risk can affect Schemes’ assets and liabilities under different climate scenarios at dates in the future. The purpose of Ortec’s climate scenarios is to create a range of plausible future states, not to accurately predict the future. The result of the climate scenario analysis is climate-risk aware economic and financial outlooks up to 2060 for each asset class, country and year. The Trustee can then use this outlook to form narratives around these plausible futures and inform risk management and decision making around Strategic Asset Allocation.

Risks and opportunities and the impact on investment strategy

We believe that changes to macroeconomic factors, caused by climate change, have varying levels of impact across all asset classes and apply globally. We do not know when and how these changes will take effect or their exact impacts on the financial system. We use scenario analysis to consider the potential impact on our portfolios, and to inform the investment decision making.

The key risks:

- **Physical risks** are driven by effects created by a gradual increase in global temperatures and by the increase in severity and frequency of extreme weather events. Over the longer term these are expected to come mainly in the form of natural events affecting investee companies and the impact of changing temperatures on mortality rates.
- **Transition risks** are driven by a combination of policy actions and innovations in technology. These risks are generally expected to occur in the short and (in particular) the medium term. These risks mean some high emitting sectors in the economy could see material decreases in their valuations.

With risks come opportunities – in transition these opportunities are likely to include assets that will benefit from the transition to a net zero economy. Assets such as renewable energy or the creation of new technologies developed to address the transition to net zero will provide new investment opportunities.

In the table below we have considered how climate change may affect some of the key asset classes employed by the Trustee through different risks and opportunities.

Table 2: Transition and physical risks relating to the Scheme

Asset Class	Transition Risks (Short and Medium Term)	Physical Risk (Long Term)	Opportunities
Listed Equities	Risk of asset impairment and stranded assets in fossil fuel energy stocks.	Eroded profitability and value of corporate assets in climate-vulnerable locations, increased risks to supply chains, water scarcity, logistical operations, supply disruptions, loss of services, increased insurance and regulatory costs.	Increased profitability of companies involved in clean-tech revolution.
Corporate Fixed Income	Reduced credit rating and potential default risk of issuers that finance high carbon assets and activities.	Eroded profitability and value of corporate assets in climate-vulnerable locations, increased risks to supply chains, water scarcity, supply disruptions, loss of services, increased insurance and regulatory costs.	More stable credit ratings and lower default risk associated with physical and transition risk for issuers that finance low-carbon assets and activities.
Real Estate	Properties with poor energy efficiency ratings or standards are likely to underperform more highly rated assets, e.g. older properties may require capital spending to improve energy efficiency.	Higher insurance costs and declines in value of properties that are at high risk from climate-related weather events.	Increased valuation of properties that have high environmental credentials (also referred to as the 'greenium').
Infrastructure	Policy changes and technological advancements could affect the value of infrastructure assets less suited to a low-carbon world, or render them redundant (e.g. coal power not compatible with carbon capture and storage).	Higher insurance costs (or uninsurable assets) and lower valuation of assets in climate-vulnerable locations.	Strong performance of renewable energy infrastructure assets, also encompassing renewable energy enabling and distribution assets.

Strategy (continued)

Both direct and indirect risks of climate change are considered. Direct risks of climate change take time to affect the economy and markets, so if we only considered direct risks we might underestimate the aggregate effects of climate change, making our analysis unrealistic and less useful for decision making.

Financial markets are constantly anticipating market shocks and sentiment. It is, therefore, useful to include analysis of how markets price in the present value of these future risks and their expected impacts. This pricing-in of climate risk is a new and evolving area, with it sometimes being referred to as the third climate risk after transition and physical risk. The key assumption surrounding this pricing-in dynamic is that current market valuations have not fully priced in the impact of the change in the expected future economic growth caused by climate change. The indirect risks associated with each scenario are detailed below.

Orderly Net Zero by 2050	Disorderly Net Zero by 2050	Failed Transition
<ul style="list-style-type: none"> • Gradual repricing of equity, fixed income and real estate from now until 2025 • Due to perception of climate risk in coming 40 years 	<ul style="list-style-type: none"> • Sudden repricing of these assets in 2025 • This is accompanied by a sentiment shock as investors panic 	<ul style="list-style-type: none"> • First pricing-in shock is in 2026–2030 due to perception of risk in coming 40 years • Second pricing-in shock in the late 2030s, taking physical risks beyond 2060 into account

Our DB scheme assets are held to meet member benefits as determined by a set of liabilities linked to a member’s salary. We expect that changes in interest rates and inflation will have a limited impact on funding positions as the liabilities are hedged through the Trustee’s Liability Hedging Policy. We therefore do not consider these two impacts in our scenario analysis, but recognise that a scheme’s liabilities may be affected by climate change impacts on mortality assumptions.

Impact on the Scheme assets and liabilities

DB pension schemes must meet the statutory funding objective, which means the Trust must make sure it has sufficient assets to pay the pension benefits to members. The funding position of a scheme compares the market value of a particular scheme’s assets with the present value of its liabilities. This can be expressed as a ratio of the scheme’s assets to liabilities (referred to as the funding ratio) or the scheme’s assets minus liabilities (referred to as either a deficit or surplus). The Scheme’s Actuary determines the assumptions used in valuing the liabilities.

Climate change can affect DB schemes by:

- Impacting the investment returns that assets can achieve
- Changing mortality assumptions
- Changing the strength of the covenant provided by the sponsoring employer(s)

DC pension schemes must invest members’ contributions wisely in order to provide a retirement pot of sufficient size to support a member through retirement. Climate change can affect DC schemes by:

- Negatively affecting the investment returns that the assets can achieve

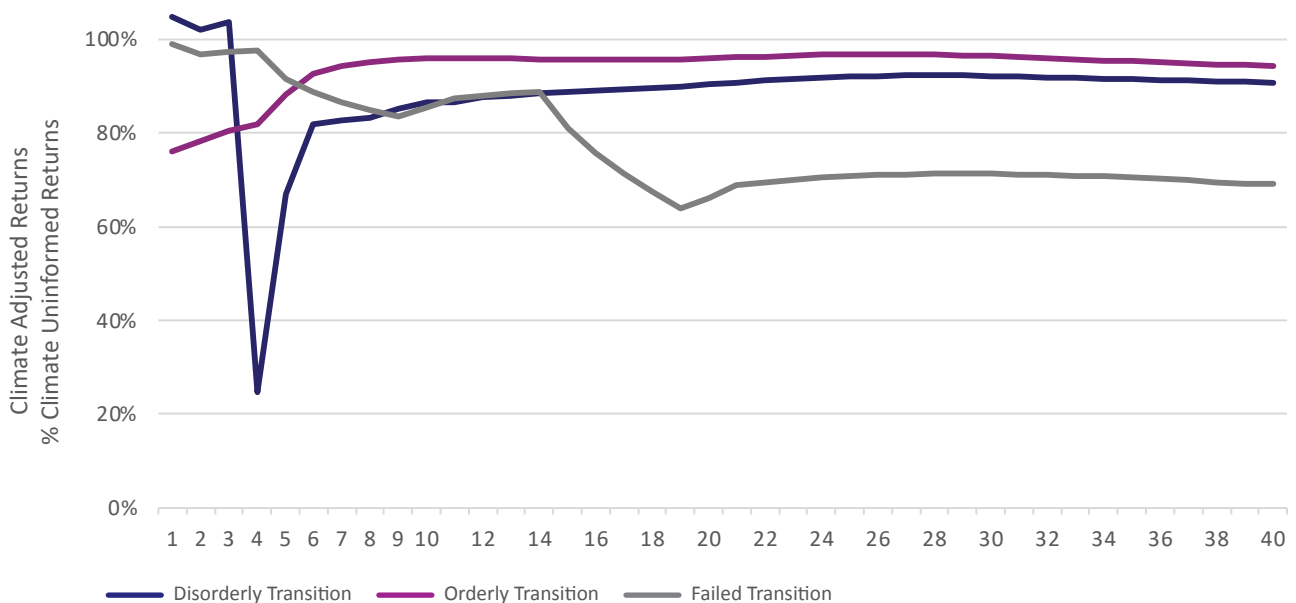
For DB pension schemes we consider changes in covenant strength and mortality caused by climate change on a qualitative basis. Assessing the change to each employer’s covenant strength as a result of climate change quantitatively is not yet possible. This is due to the complex exercise of assessing the impact on each of the 2,500 underlying employers’ covenant strength and the lack of published, comparable data linking climate change and covenant strength. The Trustee is currently working to increase the data it collects in this area and build it into its covenant-assessment framework to increase the level of quantitative analysis over time. We are also in the early stages of analysing the effects on mortality due to similar data problems; both of these are detailed further on Page 16.

Resilience of the investments and funding strategy

DB schemes

There are over 50 individual schemes (a number of which are multi-employer schemes, which leads to the large number of underlying sponsoring employers) within the Trust. The Trustee is expected to measure the impact of the climate scenarios on each individual scheme's funding level, creating a lot of data on which to provide narrative in this report. Therefore, we have analysed internally the funding level on a scheme-specific basis and provided commentary on an aggregate basis for this report. The analysis found downside risk in expected returns (that is, the rate of return at which the Trust's assets are expected to grow) in all three scenarios when compared to a climate uninformed baseline as indicated in Chart 1. This climate uninformed baseline is the scenario in which climate-change risks are not considered in the long term. However, the magnitude of the downside risk to asset values changes across the short-, medium- and long-term time horizons as well as across the three climate scenarios. The pricing-in dynamics previously discussed are also seen in Chart 1, namely the repricing in the Disorderly Transition in 2025 and the two repricing events that take effect in the Failed Transition.

Chart 1: Cumulative returns of climate-adjusted scenarios versus climate uninformed baseline



In Tables 3 and 4 below we split out the return-seeking assets of our DB portfolio into two sub-portfolios: the Growth Assets Portfolio and the Matching-Plus Portfolio. The purpose of the Growth Assets Portfolio is to deliver an equity-like return in excess of the Scheme's liabilities. The Matching-Plus Portfolio is expected to provide a return above the Scheme's liabilities by investing in assets that provide a high degree of outcome certainty; this is generally achieved by holding a portfolio of investment-grade assets that deliver returns through yield. The level of risk, and therefore return, is expected to be lower than that found within the Growth Assets Portfolio. Splitting out the two portfolios allows us to further examine the nuances between the effects of climate change on 'riskier' assets such as equities compared to 'safer' assets such as corporate fixed income. In our representative portfolio, the Growth Assets Portfolio and the Matching-Plus Portfolio are weighted 60% and 40% respectively. However, it should be noted that the actual weight held by each underlying scheme varies depending on the required rate of return needed to reach the funding objectives. Lastly, in Tables 3 and 4 the portfolio return is the excess return over cash for the Growth Assets Portfolio and the excess return over gilts for the Matching-Plus Portfolio. This results from the portfolios having an objective to deliver returns above scheme liabilities.

Strategy (continued)

Table 3: Scenario analysis results on the Growth Assets Portfolio

	Climate Uninformed Baseline	Orderly Transition	Disorderly Transition	Failed Transition
Short term (10 years)				
Portfolio Return (% p.a.)	4.25%	4.10%	3.76%	3.77%
Medium term (20 years)				
Portfolio Return (% p.a.)	4.25%	4.10%	3.93%	3.16%
Long Term (40 years)				
Portfolio Return (% p.a.)	4.25%	4.13%	4.04%	3.35%

Table 4: Scenario analysis results on Matching-Plus Portfolio

	Climate Uninformed Baseline	Orderly Transition	Disorderly Transition	Failed Transition
Short term (10 years)				
Portfolio Return (% p.a.)	1.40%	1.35%	1.20%	1.10%
Medium term (20 years)				
Portfolio Return (% p.a.)	1.40%	1.38%	1.30%	0.86%
Long Term (40 years)				
Portfolio Return (% p.a.)	1.40%	1.33%	1.29%	0.97%

Chart 1 and Tables 3 and 4 provide a good overview of how the Scheme's DB assets are most negatively affected by the Failed Transition scenario and are especially impacted as time evolves. It also illustrates that the assets in the Growth Asset Portfolio are more vulnerable to climate change compared to the investment-grade assets in the Matching-Plus Portfolio.

Funding strategy

Due to the difference in asset returns, the funding level evolution is different under the three scenarios and time horizons. For example, the fall in asset returns in the short term of the disorderly transition scenario (as seen in Chart 1) means that the scheme's funding level suffers. This dip in the funding level (which manifests as the scheme being in deficit) may require more contributions from the sponsoring employer in order to make up for the funding gap. The decision on whether the sponsor has to make up the contributions will be done on a case-by-case basis and will be affected by factors such as the maturity of the scheme (younger schemes may not be required to make up the difference) and the covenant strength (sponsoring employers whose businesses may be negatively affected by climate change may not be able to clear the deficit given reduced profitability).

We analysed the resilience to climate change of one of our largest and least mature schemes. As previously noted, this exercise was not intended to predict the future or the exact impacts of climate change, instead it is intended to guide thinking and decision making around 'what if' scenarios. It is also important to note that the asset returns in Tables 3 and 4 are not directly comparable with the asset returns that are used in the calculations of scheme funding levels. This is because the Actuarial Team uses a level of prudence when it considers asset returns and uses a figure lower than the target return of the portfolio (4.25% for Growth Asset Portfolio and 1.40% for Matching-Plus Portfolio), i.e. they use 'prudent returns'. The individual scheme analysis is also dependent on scheme valuations which are completed every three years. The data may, therefore, be out of date and a qualitative assessment would be more appropriate in this context.

In the short term the assets in this scheme are vulnerable to transition risks present in the disorderly scenario meaning we may have to consider the sponsoring employer's ability to make up for the loss of return. In a disorderly or failed transition scenario the funding level is well below where it is expected to be, meaning that the sponsoring employer has less chance of having sufficient assets to pay its liabilities as they fall due unless some action is taken. This should guide decision making as to what assets the scheme should be invested in and whether any change in Strategic Asset Allocation is required or whether deficit recovery contributions should be increased (or introduced if not already being paid). There should also be consideration as to the covenant strength of the sponsoring employer and whether their business might be negatively affected by climate change – this may influence the level of risk that the scheme can bear and/or the period over which the Trustee looks to bring additional contributions into the scheme.



Strategy (continued)

Liabilities – covenant analysis

Employer covenant is one of the main risks that any pension scheme is exposed to and it is one of the most difficult to mitigate. Modelling climate risks for employers' covenants is a nascent area and its development is determined by the availability of data, which is often sparse.

The Trust's internal covenant reviews (September 2022), included a separate ESG section to provide a proportionate review of the ESG areas that are significant to the individual employer, including climate risks and any mitigation. The Trustee's Covenant Team carries out ongoing monitoring of the robustness of the sponsors' ability to meet their funding obligations and may reach out to sponsors if any issues arise between formal assessments.

Due to the number of individual schemes within the Trust (42 standalone pension and seven multi-employer schemes as at 30 September 2022), the Trustee's climate change covenant review is driven by a scheme's operating sector.⁵ We assess the likelihood of climate change affecting a sponsor's ability to meet its obligations; for this assessment we consider macroeconomic factors, current regulatory standards and supply-chain considerations.

Standalone schemes

Three sectors are predominant among the Trust's standalone schemes: social housing, national/international charities and financial institutions.

- Housing associations: We note that housing associations comply with EPC 'C' rating by 2030 and have made a public commitment to reach carbon neutrality by 2050.
- National/international charities: We note that most national/international charities report against the guidance set by Streamlined Energy and Carbon Reporting and others have disclosed their strategies for curbing operational carbon consumption.
- Financial institutions: We note that the majority have commenced disclosing against the TCFD requirements and almost a quarter of them have published more detailed TCFD reporting.

Multi-employer schemes (MES)

The large majority of these schemes are housing associations, who need to respond to the requirements set for social housing providers. We also request disclosures of each scheme's forecasted costs for complying with climate-change regulations over the next five years. The Regulator for Social Housing also assesses and rates the viability and governance of regulated organisations.

Liabilities – mortality assumptions

Changes in mortality assumptions can affect the liabilities of UK DB pension schemes. Climate change can have direct and indirect impacts on mortality assumptions, but these are hard to predict.

- Direct impacts relate to the direct effects of climate change such as an increase in temperatures resulting in additional deaths and so affecting the longevity assumption.
- Indirect impacts are the knock-on effects due to climate change, for example water supply disruption.

It is difficult to measure the size and timing of mortality effects, especially the indirect effects. Therefore, for this climate scenario analysis, we only consider changes in mortality rates qualitatively. We will look to include a quantitative analysis as soon as data improves to a satisfactory level, an area that is under constant review by the Trustee.

⁵ The full methodology for making assessment is available in in Appendix 1.

Defined Contribution

The climate scenario analysis for our DC schemes is different from the DB analysis since there are no liabilities in DC schemes and we do not consider covenant risk. In a DC scheme the risk of not having sufficient income to support retirement shifts from the employer to the individual member. In our analysis we have used four vintages of the Target Date Funds (TDFs) that are the most popular arrangements and are representative of a member's journey through the accumulation stage, i.e. as the member is saving for their retirement. They are:

- **At retirement**
- **Pre-retirement**
- **Mid-life**
- **Young**

In this context a vintage represents the date at which an individual intends to retire. The cohort of scheme members that share this retirement age will be invested in the same vintage, with the asset allocation adjusted over time as the expected retirement date (or 'target date') approaches. These vintages contain different combinations of equity, equity-like and investment-grade assets – similar to the split between the Growth Asset Portfolio and Matching-Plus Portfolio in the DB portfolio. As members move through the vintages their asset allocation will change and they will de-risk as they approach retirement by moving out of equity and equity-like assets into investment-grade assets. This means that the climate-change risks and opportunities differ throughout the vintages and therefore the effect climate change has on asset returns within the vintages is also different. For example, with the Young vintage having the highest allocation to equities, and with equity values being most likely to be adversely affected by climate change, younger members' pensions are most likely to be adversely affected by climate change.

How to read the charts

In charts 2 to 5:

- The number of years to retirement based on the age profile of the vintage is shown on the X-axis. It is worth noting that in the At-retirement vintage the member is expected to be retired so the X-axis starts at Year 0 (the year of retirement) and continues for 40 years post-retirement (this also results in asset allocation remaining constant over this period).
- Asset allocation (or the percent in each asset class) is illustrated on the right-hand Y-axis.
- The ratio of the specific pathway returns compared to our climate uninformed baseline, i.e. the impact of the specific pathway, is illustrated on the left-hand Y-axis.

There is an important distinction in reading the X-axis between the DB and DC scenarios. In the DB chart, the X-axis begins at Year 0 (today) and projects out to Year 40 showing how the returns on scheme assets evolve over time. The DC X-axis indicates how far a member is from retirement because the number of years to retirement is used to determine the asset allocation at a point in time.

Strategy (continued)

Chart 2: At retirement TDF cumulative returns of climate-adjusted scenarios versus climate uninformed baseline

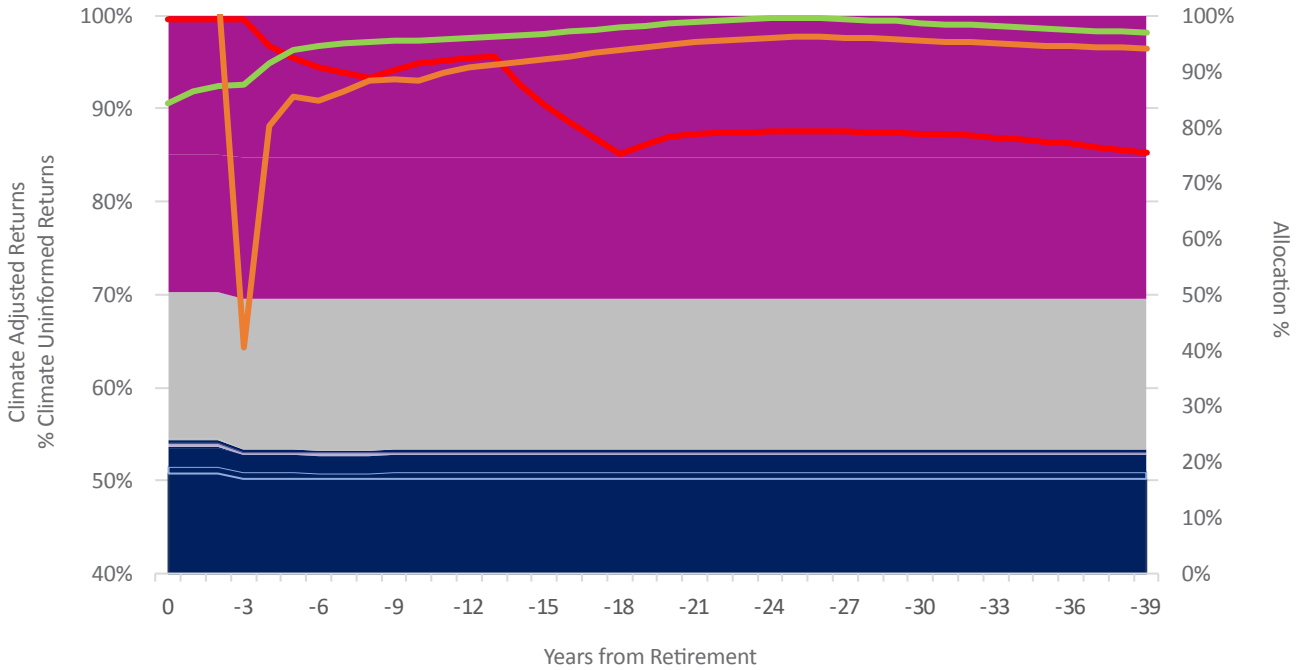


Chart 3: Pre-retirement TDF cumulative returns of climate-adjusted scenarios versus climate uninformed baseline

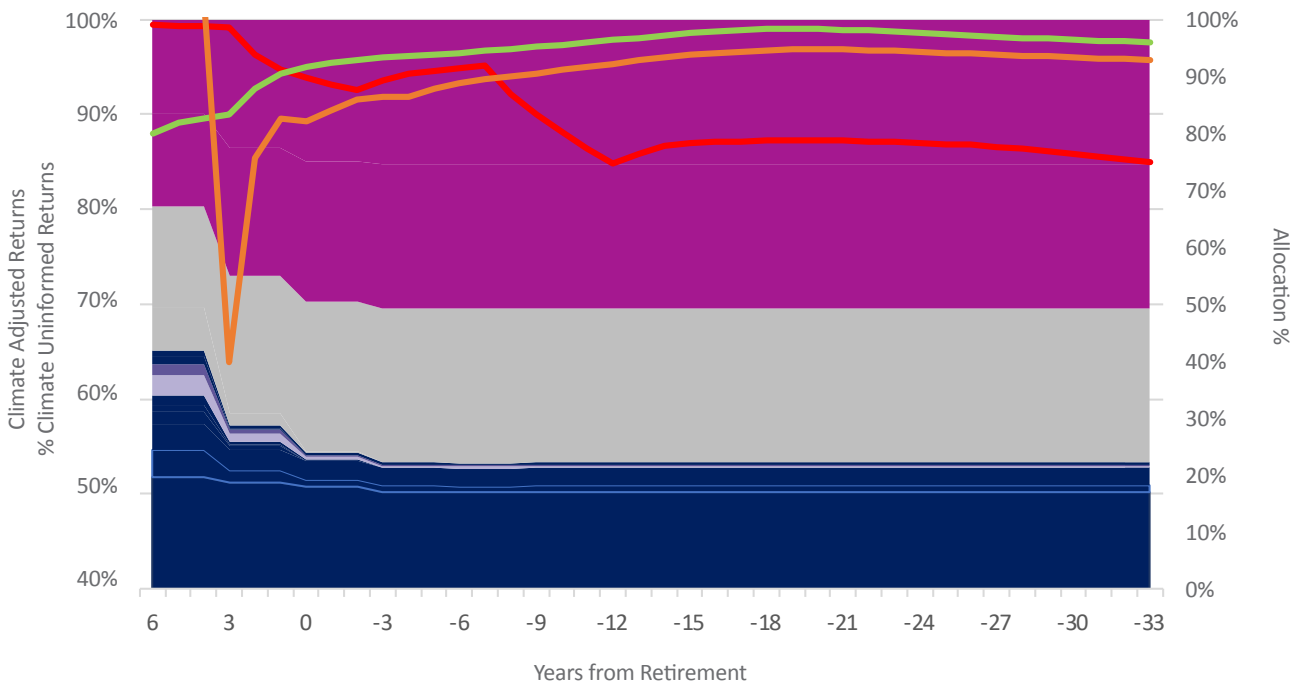


Chart 4: Mid-life TDF cumulative returns of climate-adjusted scenarios versus climate uninformed baseline

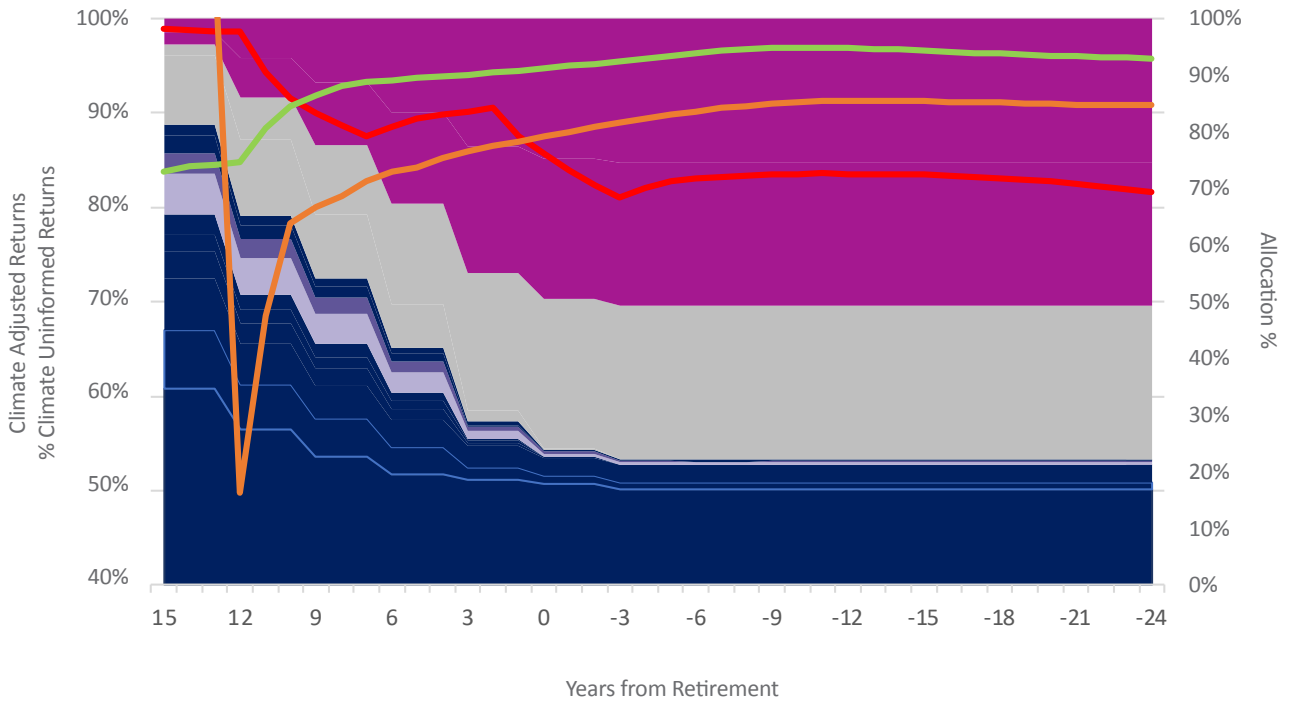
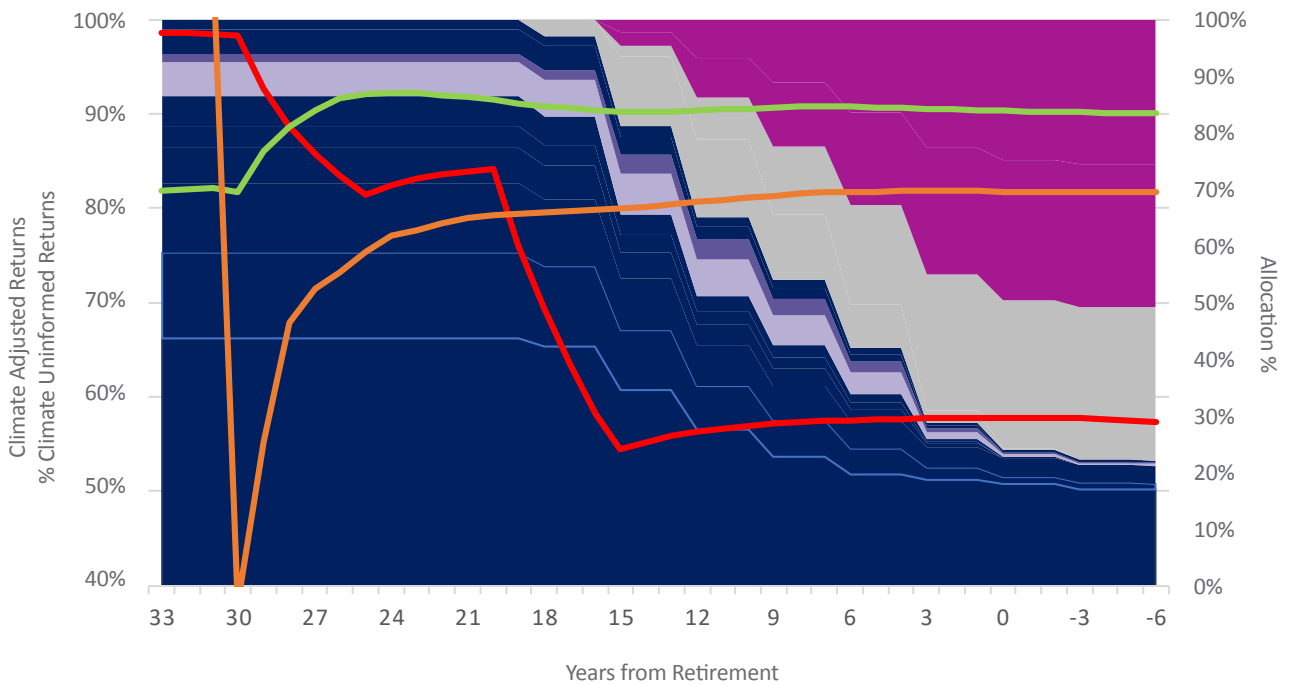


Chart 5: Young TDF cumulative returns of climate-adjusted scenarios versus climate uninformed baseline



Key: Equities Gilts Corporate Fixed Income Property Commodities
 Orderly Transition Disorderly Transition Failed Transition

Strategy (continued)

In the short term all four vintages share similar characteristics in terms of the shape of the impacts, but the magnitude of the impacts differs. The three scenarios play out in a similar manner, but on the asset returns change in the different vintages. Taking the Disorderly Transition as an example, the market repricing that occurs in 2025 has a far greater effect on the Young vintage than on the Pre-retirement vintage because of the Young vintage's greater allocation to equities which are more affected by climate change. The repricing results in a fall of c.60% (or equivalent to 40% of the climate uninformed baseline) in the Young vintage's return 30 years from retirement compared to a fall of c.35% (equivalent to 65% of the climate uninformed baseline) in the Pre-retirement vintage's return four years from retirement.

The long-term effects of climate change are most prominent in the Failed Transition throughout all four vintages with the effect being most notable in the Young vintage. Returns of the Young vintage are c. 60% lower than the climate uninformed baseline. This results in members' pension pots being smaller and members potentially having to increase their contributions to make up for this. In the long run, the Orderly Transition scenario is the most acceptable scenario out of the three. Apart from in the Young vintage, the Orderly Transition scenario results in minimal deviation of returns from the climate uninformed baseline. The largest dispersion of asset returns is seen in the Young vintage; this is driven by the high allocation to growth assets such as equities.

The key assumptions and limitations

Assumptions

The analysis above involves the projection of assets and liabilities over the short, medium and long term using assumptions for future economic scenarios.

The assets are projected on a gilts plus asset outperformance basis. The assumption for outperformance uses a best estimate return for growth assets, matching asset and liabilities driven investments that have been adjusted year-on-year using data supplied by Ortec Finance.

The scheme liabilities have been produced and projected based on: (a) our long-term funding target using a discount rate based on gilt yields plus 0.5% return, this assumes a low dependency investment strategy; or (b) gilts flat basis using a discount rate based on gilt yields with no allowance for asset outperformance. All other assumptions are derived in a prudent manner based on assumptions agreed at the most recent triennial funding assessment.

In our scenario analysis we assume no impact on liabilities from interest rates and inflation. We consider the impact on liabilities to be qualitative affecting covenant strength and mortality rates. Apart from that, liabilities are assumed not to change so there are no other changes in technical provisions needed.

In order to map the assets in our investment portfolio to the benchmarks provided by Ortec we had to make a number of assumptions. These assumptions mean that our mapping may not be perfect but it gives a good indication of where our climate risks lie. As data improves we will be able to categorise our assets more granularly and enhance our climate scenario analysis.

Limitations

The analysis is dependent on data supplied by third parties and is therefore limited by the accuracy and completeness of this data. The scheme liability calculations ultimately rely on member data supplied by the sponsors of the scheme and are therefore limited by the accuracy of this data.

The scheme liability calculations use third-party propriety software, called PFaroe; the calculations are thus constrained by the limitations of this software. All projections are based on assumptions derived using market conditions at the calculation date. All assumptions are assumed to be borne out in practice.

All projections assume the cost of future pension accrual is fully funded by future regular contributions.

Climate scenario analysis is relatively nascent and there is inherent uncertainty around the modelling of different climate scenarios. Climate-scenario modelling is also quite complex and the interactions between climate, macroeconomic and financial factors need to be expanded.

Projecting so far out into the future comes with increased uncertainty and use of assumptions. The modelling is also done on a top-down basis meaning that the analysis does not consider individual securities and also does not yet cover certain sectors that we are invested in, for example renewable energy infrastructure.

The analysis does not consider climate tipping points. A tipping point is a critical threshold beyond which a system reorganises, in relation to climate change. This means large and often irreversible changes to the climate. This includes the economic and financial impacts of climate-related health impacts, biodiversity loss, geopolitical conflict and migration. As climate tipping points are not considered, physical climate risks are underestimated.

The climate uninformed baseline which we use is not an accurate reflection of our real-world baseline. However, it is hard to decipher to what extent climate impacts have already been priced into macroeconomic and financial factors. The climate uninformed baseline is a prudent view which leads to bigger climate scenario impacts. We continue to work with data providers, regulators and other investors.

Risk Management

We invest in opportunities with a range of risk and return characteristics, managing these is integral to everything we do.

Processes for identifying, assessing and managing climate-related risks in relation to the scheme

Climate change is a factor that interacts with other risks to which the schemes are exposed. Risk factors associated with climate are identified, managed and integrated into the Risk Management Framework. Our Statement of Investment Principles and our Investment Risk Management Framework are formally documented. As both physical and transitional climate risks could negatively affect a sponsoring employer's ability to support a scheme, climate-related risks are embedded within the funding-risk assessment when determining the sponsor's covenant strength. The risks associated with climate change are reported and monitored via the Investment Risk Management Framework by key operational and oversight governance forums including, the Executive Board, the Risk Committee, and ultimately the Audit, Risk and Compliance Committee.

The Investment Committee (IC) and the Investment Oversight Committee are responsible for overseeing the effectiveness of the Investment Risk Management Framework.

As part of the Investment Risk Management Framework, the Trustee monitors the risk that the Trust may be overly invested in an asset, manager, sector, country or region so that any downturn in such investments would negatively affect investment returns. Within this framework, we believe investment returns can be affected by climate-related risks and investment appetite towards those opportunities presented by climate change. Within the Trustee's Investment Risk Management Framework, such risk is inherently identified as high but mitigated by the current procedures and policies that adequately address such risk. Similarly, the Trustee identifies the risk that it fails to comply with regulatory requirements or invest in a manner consistent with the Trustee's Statement of Investment Principles, Investment Beliefs and Responsible Investment Principles. This could result in regulatory scrutiny, sanctions and reputational damage.

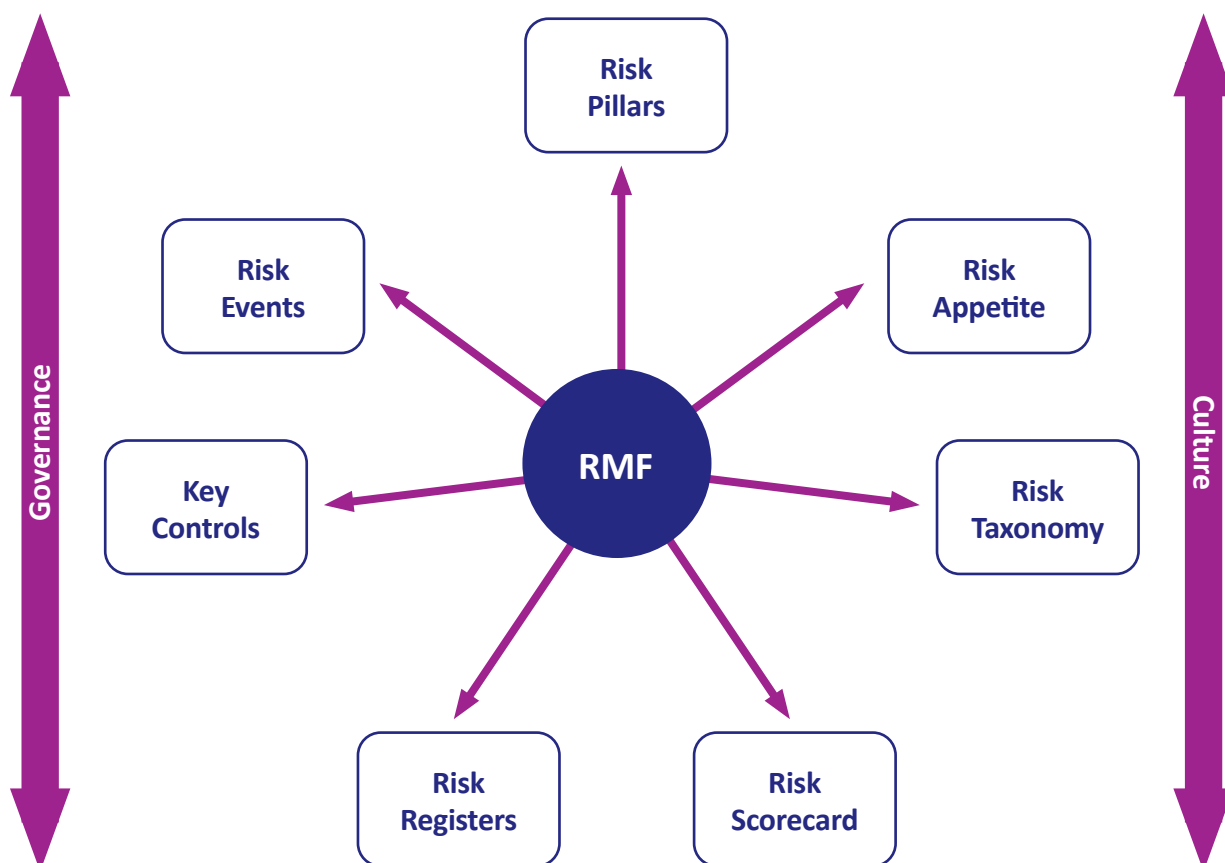
Integrating climate-related risk management

The Trustee integrates consideration of investment risks at the portfolio level through the adoption of a climate change policy and a RI framework. We also assess how a scheme's external managers integrate considerations of RI and climate within their investment and business activities. The Trustee annually reviews the climate-change policy and the wider RI framework. External managers are monitored annually on their investment performance and RI credentials. Through the IC, the Trustee ensures that it remains satisfied with the external managers' implementation of the Trustee's Investment Beliefs, Responsible Investment Principles and processes.

The Statement of Investment Principles embeds the spirit of the Trustee's policies and processes towards RI, climate and stewardship. The Statement of Investment Principles is also reviewed annually by the Trustee and communicated to the schemes' members. Subsequently, the Implementation Statement serves as an annual account for the schemes' members and related parties about how the Trustee discharges the policies and principles encapsulated in the Statement of Investment Principles.

Overall, the approach to identifying, prioritising, assessing and managing climate-related risks is the same as the method applied to all risk types across the Investment Risk Management Framework.

The Investment Risk Management Framework consists of individual components that support the consistent and effective identification, consideration and mitigation of risk. The key elements are detailed in the graphic below.



TPT's Investment Risk Management Framework is further supported by enablers, specifically:

- Risk Horizon Scanning – Formalised consideration of the upstream risk environment, identifying potential risks which could impact TPT and its management of the Trust's assets in the short, medium and long term. Performed to ensure that potential risks are understood and tracked.
- Change Management Risk Assessment – Formalised risk assessments performed at the inception point of significant change (e.g., new projects, processes, products) to capture new risks entering the TPT risk universe.
- Risk Management Information (RMI) and Reporting – Risk information and insight provided to key stakeholders and forums to aid informed decision making. Each element of the Investment Risk Management Framework is used to produce RMI and reporting, while techniques such as theme, trend and root cause analysis provide useful insight.
- Training and Education – Risk training and education are offered to key stakeholders, forums and employees to ensure that the required standard of risk understanding is embedded throughout TPT. Risk Management is used to identify specific training requirements, e.g. thematic risk event failings.

Metrics and targets

We use evidence-based decision making – data is essential to understand the impact of our investments and allows us to measure and monitor progress.

Metrics for calculating climate change risks and opportunities

In line with Department of Work and Pensions (DWP) regulations, occupational pension schemes that are subject to TCFD reporting requirements must now report on four climate metrics to better understand and address climate-related risks and opportunities:

1. Absolute emissions metric
2. Emission intensity metric
3. Additional climate metric (non-emission factor)
4. Portfolio alignment metric

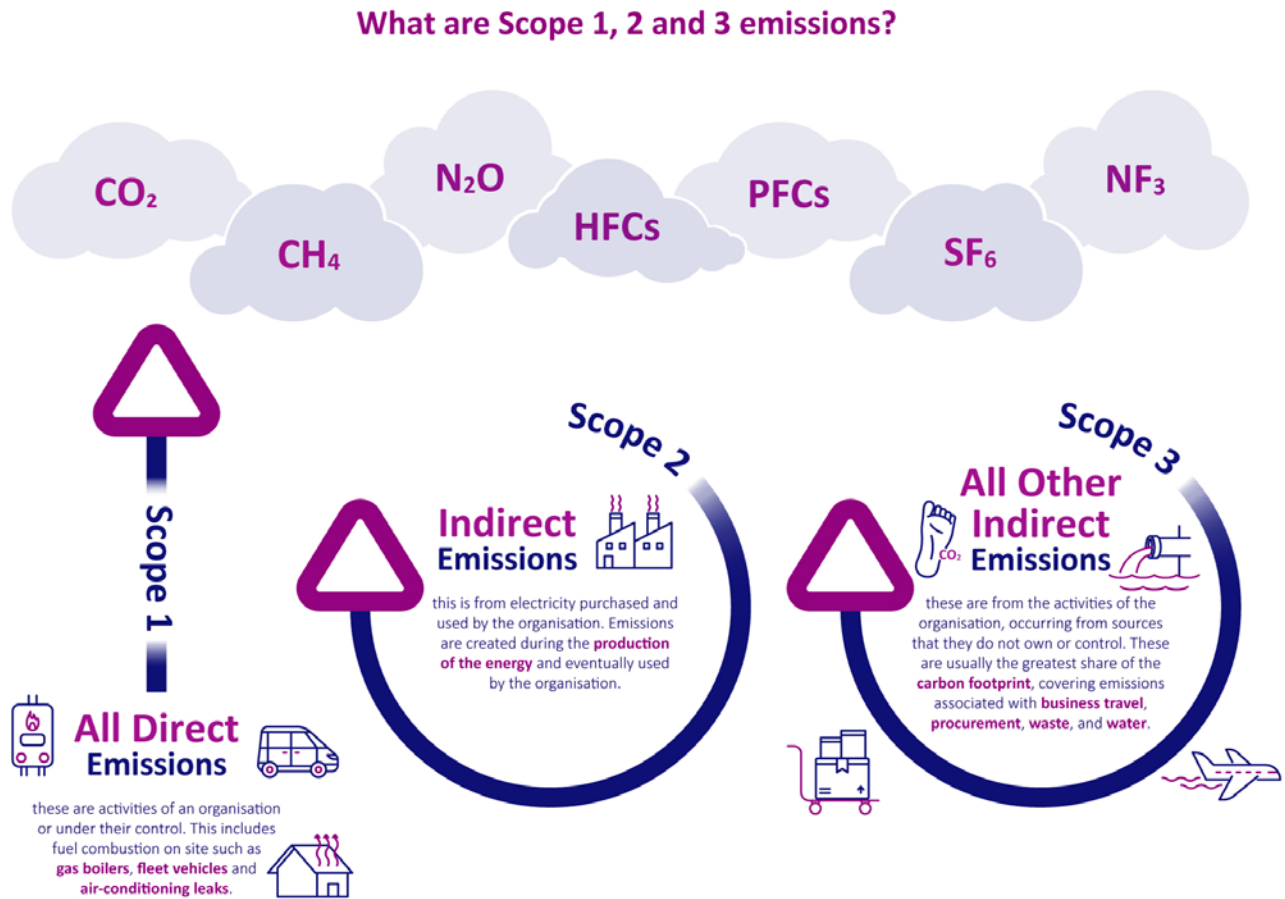
These climate change metrics help the Trustee to understand the carbon emissions in the Trust's investment portfolio and identify climate-related risks and opportunities. Assessments are also compiled to measure whether the Trust is on track to achieving its net zero targets.

Table 5: Chosen climate metrics

TCFD Metric	Chosen Metric	Description	Rationale
Absolute Carbon Emissions	Absolute carbon emissions	The total greenhouse gas emissions attributable to a portfolio. Measured in tCO ₂ e.	Helps to track emissions reduction. Emissions reductions in our investment portfolio should primarily be achieved through a reduction in absolute emissions from the companies and assets in which we invest, rather than by avoiding or divesting from certain geographies, sectors or companies.
Carbon Intensity	Carbon footprint (tCO ₂ e/£m invested) for corporate assets Carbon intensity (kg/CO ₂ e/m ²) for real estate assets	Total carbon emissions for a portfolio normalised by an appropriate factor related to the portfolio.	Measuring emission intensity is important to help understand the portfolio's emission composition. Carbon intensity can enable comparison between portfolios of different sizes and between different time horizons.
Additional Climate Metric	Data quality	The proportion of our data which we hold good quality data for.	Carbon data is still quite nascent and there are problems around the quality and transparency. It is, therefore, important to understand the quality of the data within our portfolio and what proportion of our assets our carbon metrics relate to.
Portfolio Alignment Metric	Implied Temperature Rise (ITR) for corporate assets Aggregate Warming Potential (AWP) for real estate assets	Measures temperature alignment based on the cumulative emissions of the investment portfolio with global temperature goals in degrees Celsius. Measures temperature alignment based on the emissions intensity of the investment portfolio as at 2030 with global temperature goals in degrees Celsius.	Considers companies' transition plans and is an intuitive, forward-looking metric. This metric allows investors to assess compliance with globally agreed temperature thresholds as set in the Paris Agreement. AWP seeks to assess the alignment of real estate assets with globally agreed temperature thresholds as set out in the Paris Agreement. We consider ITR a superior metric for this purpose. However, it is not yet available for real estate.

The Trustee currently measures Scope 1 and Scope 2 emissions from its investment portfolio, the only exception being for real estate which is discussed later on in this report.

Figure 1: GHG emissions



Scope 1 emissions are all the direct emissions from the activities of our investments;

Scope 2 emissions are the emissions from energy purchased and used by our investments; and,

Scope 3 emissions are all other indirect emissions within the value chain.

Metrics and targets (continued)

Data coverage and quality

The data we currently have available only covers a proportion of our DB and DC portfolios. As data improves over time we will include other assets in our metrics and targets, as far as we are able. The expansion of asset classes is dependent on the availability of methodological frameworks.

Data coverage and the quality of climate data available creates challenges for the Trustee's climate change reporting. Data varies considerably across asset classes, geographies and sectors. This means we may need to rely on estimated or proxy data from third-party data providers. As disclosed data increases and methodologies for estimated data improve, the Trustee expects to provide improved disclosure around climate change metrics. We define data coverage to be the proportion of assets where carbon data is available (either reported emissions or proxy data provided by a data provider) and high quality data to be the proportion of assets with reported carbon data directly from companies or assets. As data quality increases so can our assurance in the climate metrics we report.

Table 6: Data coverage and quality

Portfolio	Asset	Data Coverage	Data Quality
DB	Listed Equity	97%	78%
DB	Corporate Fixed Income	51%	56%
DB	Real Estate	78%	78%
DC	Listed Equity	97%	80%
DC	Corporate Fixed Income	90%	83%

We rate our data based on the average data coverage and data quality proportion. The rating system is as follows:

- Excellent: 75% – 100%
- Good: 50% – 74%
- Average: 25% – 49%
- Poor: 0% – 24%

Table 7: Data commentary

Asset	Data Coverage and Quality Rating	Commentary
Listed Equity	Excellent	We continue monitoring data provisions from third parties.
Corporate Fixed Income	Good	We continue monitoring data provisions from third parties.
Real Estate	Excellent	Our third-party data provider is unable to provide proxy data split into emission scope for real estate assets due to methodology barriers. We will look to include these proxy emissions in the future to increase coverage to 100%. To improve data quality we will engage with managers who have direct relationships with third parties and tenants.
Infrastructure	Due to current regulations and portfolio being composed of mainly private holdings, no data is currently available. Funds are not required to publish GHG data.	Data will be collected directly through managers.
Liquid Alternatives and Private Credit		In addition to reliance on third-party investment manager reporting, data can be sourced via third-party data providers using estimation models. This data is often seen as less accurate and incurring a service cost.

We plan to phase in Scope 3 emissions for listed equity and corporate fixed income as soon as its data coverage becomes robust enough to aid decision making. Scope 3 emissions are often the largest proportion of a company's emissions, and are also the most complex to measure.

We are taking steps to address the issues in infrastructure, liquid alternatives and private credit asset classes. Infrastructure is our main focus as it is our next largest asset class exposure after listed equity, corporate fixed income and real estate which are already included in this report. We are engaging with our infrastructure asset managers on how best to collect this data. We are a member of the Paris Aligned Investment Initiative (PAII) Global Steering Group and recently provided feedback on the need for standardised data collection across infrastructure assets. We are also responding to consultations on improving climate disclosure for infrastructure. For example, in July 2022 we responded to the PAII Consultation on Proposed Components for Infrastructure which detailed how to assess infrastructure assets in net zero targets. In relation to liquid alternatives and private credit, several of our managers are part of the ESG Integrated Disclosure Project which aims to improve transparency and accountability in the disclosure of key ESG indicators in private credit transitions.

The Trustee is cognisant that data quality impacts data mapping and carbon apportionment. Companies may appear more than once in our dataset if they issue financial instruments in different forms or from different entities. These problems in entity mapping can lead to the miscalculation of the correct amount of carbon a company is responsible for.

Greenhouse gas summary

GHG emissions and intensities for the Trust's DB and DC portfolios are outlined in the tables below.

Table 8: DB equity and fixed income climate metrics as at 30 September 2022

	AUM (£m)	Absolute Emissions (tCO ₂ e)	Emission Intensity (tCO ₂ e/ £m invested)	Implied Temperature Rise (° Celsius)
Equity and Fixed Income	501	12,090	24.1	2.04

Table 9: DB real estate climate metrics as at 31 December 2021

	AUM (£m)	Absolute Emissions (tCO ₂ e)	Emission Intensity (kgCO ₂ e/m ²)	Aggregated Warming Potential (° Celsius)
Real estate – Scope 1 & 2	694	23	0.3	3.13
Real estate – Scope 3		6,197	33.8	

Our reporting for DC includes four vintages of the TDFs that are the most popular arrangements and are representative of members' journeys through the vintages. As previously mentioned, these are At retirement, Pre-retirement, Mid-life and Young.

Table 10: DC equity and fixed income climate metrics as at 30 September 2022

	AUM (£m)	Absolute Emissions (tCO ₂ e)	Emission Intensity (tCO ₂ e/ £m invested)	Implied Temperature Rise (° Celsius)
Equity and Fixed Income	457	17,257	40.1	2.23
At retirement	35	1,096	33.4	2.19
Pre-retirement	118	4,222	38.6	2.21
Mid-life	194	7,620	41.9	2.23
Young	111	4,318	40.4	2.23

Metrics and targets (continued)

Methodologies and rationale behind the Trust's approach

Listed equity and real estate

For the carbon intensity metric, emissions can either be apportioned by the market capitalisation of the organisation or the Enterprise Value Including Cash (EVIC). We have chosen to use EVIC as it takes equity and debt issuance into consideration, ensuring alignment with similar asset classes and attributing emissions across a broader range of financial instruments. Using EVIC is also consistent with the GHG emissions accounting and reporting standard developed by the Partnership for Carbon Accounting Financials (PCAF)⁶.

Real estate

The Trust follows the PCAF operational control approach⁷ to set its organisation boundaries for real estate. In the context of real estate, since tenants have operational control of the buildings, the Trust is responsible for the Scope 1 and 2 emissions of the shared services, common areas or vacant buildings, with the tenants being responsible for individual tenant spaces. While this categorisation of our ownership of emissions is correct, it may not accurately reflect the Trust's responsibility for the emissions of our property portfolio. We will continue to work closely with tenants and our managers to increase the energy efficiency of these properties. Therefore we are including the downstream Scope 3 emissions of our real estate portfolio.

We measure the carbon intensity differently for real estate. We do not believe that normalising by capital employed is as an accurate reflection of the carbon intensity of a building because property prices vary depending on factors such as location: a property in a more expensive location may be viewed as being more carbon efficient than a property in a less expensive location. Therefore, we have decided to normalise our carbon emissions for our property portfolio by area i.e. metres squared (m²).

Further details about the data assessment methodology are provided in Appendix 1.

Proportion of assets for which data was available

The Trust's absolute emissions and carbon intensity relate to:

- Listed equity
- Corporate fixed income
- Real estate⁸

Our targets are also set relating to these assets against our 2019 carbon emissions (i.e. our baseline year).

These performance targets will be regularly reviewed in line with the approach endorsed in the Paris Agreement. We currently include listed equity, corporate fixed-income and real estate assets in target setting. Targets do not cover Liability Hedging Instruments as the Net Zero Investment Framework (NZIF) states that investors could exclude domestic issuance held for liability matching purposes. We will include more of our assets when methodologies and data improve.

⁶ <https://carbonaccountingfinancials.com/files/downloads/PCAF-Global-GHG-Standard.pdf#page=54>

⁷ <https://carbonaccountingfinancials.com/files/downloads/PCAF-Global-GHG-Standard.pdf#page=39>

⁸ Covering Scope 1 and 2 emissions for listed equity and corporate fixed income, and Scope 1, 2 and 3 for real estate.

Targets and the performance

The Trustee made a Net Zero Commitment in June 2021 by signing the PAII Asset Owner Commitment.⁹

Within this commitment¹⁰ we have agreed to:

- transition our investments to achieve net zero portfolio GHG emissions by 2050 or sooner
- reduce Scope 1, 2 and 3 emissions by 50% by 2030
- reduce portfolio emissions by a minimum of 25% by 2025

As indicated in Table 11, between 2019 and 2022, we achieved 35% and 27% yearly reductions in the carbon intensity of our DB and DC portfolios, respectively.

Table 11: The Trust's performance against carbon intensity targets

	2019 Carbon Intensity	2022 Carbon Intensity	Reduction (Annualised)
Listed Equity and Corporate Fixed Income (DB)	88.4	24.1	-35%
Listed Equity and Corporate Fixed Income (DC)	101.7	39.9	-27%
	2019 Carbon Intensity	2021 Carbon Intensity	Reduction (Annualised)
Real Estate (DB)	Scope 1 and 2: 0.3	Scope 1 and 2: 0.3	Nil
	Scope 3: 48.24	Scope 3: 41.2	-8%

Table 11 provides evidence that we are performing well against our interim target of a 25% reduction in carbon intensity by 2025. Note that it is expected that the pace of intensity reduction in real estate will be lower compared to equity and fixed assets. This is due to the fact that it may take longer to implement energy efficiency improvements within a building, and it may only be possible to implement these when leases expire making it more challenging to implement decarbonisation plans.

Our target-setting methodology is consistent with that of the NZIF. When reviewing targets, we will consider our performance, improving data quality and advances in the wider economy, which will influence the decarbonisation pathway we follow. We will consider extending these targets to include Scope 3 emissions and more asset classes in due course.

Nine of our external asset managers are signatories of the Net Zero Asset Managers Initiative (NZAM) which accounts for 96.4% of the Trust's assets as at 30 September 2022. NZAM is an international group of asset managers committed to supporting the goal of net zero GHG emissions by 2050 or sooner, in line with global efforts to limit warming to 1.5°C; and to support investing aligned with net zero emissions by 2050 or sooner. As at 31 December 2022, NZAM has 301 signatories representing over GBP 60 trillion in assets under management.

⁹ <https://www.parisalignedinvestment.org/media/2021/03/PAII-Net-Zero-Asset-Owner-Commitment-Statement.pdf>

¹⁰ Full details of this Net Zero Commitment can be found in our Climate Action Plan, which was released in December 2022. <https://www.tpt.org.uk/docs/default-source/investments/responsible-investment/tpt-climate-action-report.pdf>

Metrics and targets (continued)

Steps taken to achieve climate-change targets

Using metrics to measure our climate-related risks and opportunities enables us to integrate climate data into our investment decision making and guides us on what actions we should be taking to achieve our targets.

'Climate solutions' in general refers to activities whose deployment underpins substantial reductions in, or the abatement of, GHG emissions.

We also consider assets that are financially linked with climate change resilience to be a climate solution, because parts of their revenues or capital expenditure are related to activities that continue to support net zero, e.g. green revenues and green capital expenditure. To meet our targets, we intend to allocate capital to climate solutions without giving up returns for members.

In 2016, we made our first dedicated allocation to renewable energy generation and renewable supporting technologies. In 2021, we invested in two additional renewable energy strategies. An area of particular focus has been greenfield investments, i.e. developing new renewable energy infrastructure. This has the positive impact of increasing the stock of assets for generating renewable energy and helps finance the build-out of supporting technologies, such as battery storage. Portfolio allocation to green infrastructures and renewable energy is part of our asset allocation approach. We have committed to increasing its investment in climate solutions to at least 6% of return-seeking assets by 2030.

Active ownership

The Trustee firmly believes that our target emission reductions should be primarily achieved through real-world decarbonisation. We value the role that active ownership can play in meeting our targets and make use of our engagement and voting tools to help achieve our net zero objective.

Engagement

The Trustee's current engagement priorities targets listed equity, corporate fixed income, real estate and sovereign bonds. Our engagement is shaped by direct dialogue with companies and managers about our expectations and engagement with the wider investment community, policymakers, official bodies and other financial participants to improve data quality, integrate new asset class frameworks and identify opportunities presented by the net zero transition.

Successful outcomes driven by engagement may require a long-term commitment of internal resources and interactions with other investors and companies. We review performance against engagement expectations annually. We retain the ability to modify our exclusion approach if evidence shows negative long-term alignment with net zero through our investments.

Voting

The Trust's assets are held in both segregated and pooled mandates, we leverage influence through the mechanisms at our disposal. We favour mandates with investment managers that have credible net zero plans, especially for those mandates where voting rights are weakest. This could be an investment through pooled vehicles, for example, where it is more challenging to implement our Voting and Engagement Policy. We follow the guidance of the Pensions and Lifetime Savings Association (PLSA) Corporate Governance Policy and Voting Guidelines, G20/OECD Corporate Governance Principles and the International Corporate Governance Network (ICGN) Global Governance Principles, and we expect our managers to steward our assets via dissent votes when companies have not set up credible plans and governance for achieving net zero.

Although voting rights are delegated to investment managers, we may choose to exercise our voting rights (or wish to express interest in exercising our voting rights) when companies' actions toward net zero are not deemed satisfactory and will hinder us from reaching our targets. For example, a lack of confidence in the Board's strategy in achieving net zero or support for shareholder resolutions when asking for the adoption of a credible transition may lead us to adopt this approach. In line with our Responsible Investment Framework, manager voting is reviewed annually against our voting guidelines.

Portfolio construction and asset allocation changes

We will have to integrate climate change into our investment decisions to achieve our targets. One way of doing this is by changing our asset allocation and portfolio construction. For example, in 2021 we changed our passive equity implementation from a traditional market capitalisation approach to the Legal and General Investment Management (LGIM) Low Carbon Transition Global Equity Fund. We believe this helps manage our exposure to climate risk inherent in a market capitalisation approach, which allows us to continue to effectively implement our approach to voting and engagement.

Replacing our passive equities with a climate tilt resulted in a decrease in absolute portfolio emissions from the equity portfolio of c.79% in 2021 compared to 2019. In the future, we will look to allocate capital where it will benefit our members but also contribute towards net zero targets. This may include the previously mentioned climate solutions.

Collaboration

TPT is a member of the Global Steering Group of the PAII, which drives portfolio and asset level guides (for example, it developed the NZIF), promotes net zero objectives and collaborates with global member groups such as CERES (North America) and the Investors Group on Climate Change (Australia and New Zealand).

Glossary

Term	Acronym	Data Coverage
Aggregated Warming Potential	AWP	Measures temperature alignment based on the emission intensity of the investment portfolio as at 2030 onwards with global temperature goals in degrees Celsius.
Defined Benefit	DB	A Defined Benefit pension scheme is one where the amount you are paid is based on how many years you have been a member of the employer's scheme and the salary you have earned when you leave or retire. They pay out a secure income for life which increases each year in line with inflation.
Defined Contribution	DC	Defined contribution pension schemes are occupational pension schemes where your own contributions and your employer's contributions are both invested and the proceeds used to buy a pension and/or other benefits at retirement.
Department of Work and Pensions	DWP	The Department for Work and Pensions is responsible for welfare, pensions and child maintenance policy in the UK.
Environmental Social and Governance	ESG	The incorporation of Environmental, Social and Governance issues into investment analysis and decision-making processes.
Enterprise Value including Cash	EVIC	The sum of the market capitalization of ordinary shares at fiscal year-end, the market capitalisation of preferred shares at fiscal year-end, and the book values of total debt and minorities' interests. No deductions of cash or cash equivalents are made to avoid the possibility of negative enterprise values.
The Group of Twenty	G20	An intergovernmental organisation working on major issues related to the global economy, such as international financial stability, climate change mitigation and sustainable development.
Greenhouse Gases	GHG	Gases that trap heat in the atmosphere.
International Corporate Governance Network	ICGN	A trade association promoting good corporate governance and best practices for investor stewardship.
Intergovernmental Panel on Climate Change	IPCC	The United Nations body for assessing the science related to climate change.
Implied Temperature Rise	ITR	Measures temperature alignment based on the cumulative emissions of the investment portfolio with global temperature goals in degrees Celsius.
Net Zero Asset Managers initiative	NZAM	An international group of asset managers committed to supporting the goal of net zero GHG emissions by 2050 or sooner, in line with global efforts to limit warming to 1.5 degrees Celsius; and to supporting investment aligned with net zero emissions by 2050 or sooner.
Net Zero Investment Framework	NZIF	Provides a common set of recommended actions, metrics and methodologies through which investors can maximize their contribution to achieving global net zero emissions by 2050 or sooner.
Organisation for Economic Co-operation and Development	OECD	An international organisation promoting policy standards on sustainable economic growth.
Paris Aligned Investment Initiative	PAII	A collaborative investor-led global forum enabling investors to align their portfolios and activities to the goals of the Paris Agreement.
Partnership for Carbon Accounting Financials	PCAF	PCAF is a global partnership of financial institutions that work together to develop and implement a harmonised approach to assess and disclose the GHG emissions associated with their loans and investments.
Pensions and Lifetime Savings Association	PLSA	A trade association representing pension schemes and setting up good practices, e.g. pensions advice.
Responsible Investment	RI	Responsible investment involves considering ESG issues when making investment decisions and influencing companies or assets (known as active ownership or stewardship). It complements traditional financial analysis and portfolio construction techniques.
Task Force on Climate-Related Financial Disclosures	TCFD	A reporting framework that helps organisations disclose climate-related financial risks and opportunities.

Appendix 1 – Data methodologies

Summary of climate metrics

Metric	Definition	Strengths	Drawbacks
Absolute Emissions	<ul style="list-style-type: none"> Absolute GHG emitted by portfolio Tons CO2e Equity ownership approach 	<ul style="list-style-type: none"> Can be used to track GHG emissions in portfolio 	<ul style="list-style-type: none"> Not used for portfolio comparison as data is not normalised
Carbon Footprint	<ul style="list-style-type: none"> Carbon emissions of a portfolio normalised by market value Tons CO2e / \$M invested Owned emissions approach 	<ul style="list-style-type: none"> Can be used to compare portfolios and benchmarks across time as size changes Allows for portfolio decomposition and attribution analysis 	<ul style="list-style-type: none"> Does not take carbon efficiency into account Changes in market cap can skew data
Data Quality	<ul style="list-style-type: none"> Proportion of portfolio that has high quality data 	<ul style="list-style-type: none"> Simple to understand 	<ul style="list-style-type: none"> Not critical for decision making
Implied Temperature Rise	<ul style="list-style-type: none"> Translates degree of alignment to Paris Agreement in form of temperature score 	<ul style="list-style-type: none"> Takes companies net zero targets into account Alignment on a cumulative basis Considers a time horizon to 2070 More accurately reflects climate science and best practice 	<ul style="list-style-type: none"> Data quality and consistency Problems when comparing figures due to methodology updates
Aggregated Warming Potential	<ul style="list-style-type: none"> Warming potential of investment at 2030 based on carbon intensity and required decarbonisation. Alignment is at one point in time 	<ul style="list-style-type: none"> Portfolio alignment metric available provided by our third party data provider for real estate portfolio 	<ul style="list-style-type: none"> Only considers carbon intensity of a company at a point in time and does not consider carbon reduction plans Considers a time horizon to 2030 – dismisses net zero targets and actions beyond this date

Methodology for climate metrics

Metric	Methodology
Absolute Emissions	$\frac{\text{Current value of investment}}{\text{Issuer's market cap}} \times \text{*Issuer's Scope 1 and 2 GHG emissions}$
Carbon Footprint	$\frac{\text{Current value of investment}}{\text{Issuer's market cap}} \times \text{*Issuer's Scope 1 and 2 GHG emissions}$ <hr/> <p style="text-align: center;">Current portfolio value</p>

If you would like to contact us about this report, please feel free to, via:



enquiries@tpt.org.uk



tpt.org.uk/investments/our-pension-investment-solutions



**TPT Retirement Solutions, Verity House,
6 Canal Wharf, Leeds, LS11 5BQ**