## BP Pension Fund Climate Change Report

**1 January to 31 December 2022** 



# Welcome



#### Welcome to our second **Climate Change report.**

Addressing the issue of climate change remained a high priority for many governments across the globe in 2022. Although the

agreements achieved during the 27th Conference of the Parties (COP 27) received mixed reviews, the initiation of innovative clean energy policies, such as the US Inflation Reduction Act of 2022. has offered a renewed sense of optimism for driving forward progress on the global climate action agenda.

2022 has been an eventful year from the outset for the world economy. The initial signs of high inflation seen towards the end of 2021 took hold in early 2022 and contributed to global central banks raising interest rates at an unprecedent pace to suppress price increases. In February, Russia's invasion of Ukraine caused very significant humanitarian and economic impacts, contributing to a global energy crisis which compounded inflationary pressures.

In the midst of this challenging international backdrop, the UK's economic outlook remained uncertain due to rapid changes in political leadership and the ensuing gilt crisis which followed the government's September "mini budget" announcement.

The Fund remained resilient to the above challenges thanks to its prudent investment approach. Further significant progress was made in terms of monitoring and managing risks and opportunities in relation to climate change.

In 2022, we released our Net Zero Ambition statement and joined the Institutional Investors Group on Climate Change (IIGCC). We believe that by collaborating with our peers and industry specialists, we will be in a stronger position to successfully address the complex challenges faced by the Fund in relation to climate change. In addition, we built on the foundation of the prior year's Climate Change Report and focused more on understanding the quality of greenhouse gas emissions-related data. The availability of this data, although improving, generally remains low,

models.

#### **Brendan Nelson**

Chair

**BP Pension Trustees Limited** on behalf of the **BP Pension Fund** 

particularly for unlisted investments. Substantial challenges also remain in relation to establishing the reliability and credibility of existing estimation

Our 2022 Climate Change Report introduces forward looking metrics, which we use as an additional tool to analyse climate change from a more proactive perspective. We remain cognisant of the uncertainties underpinning the estimations and models used for these metrics, which can be substantial, and we consider the results with a degree of caution and with a sound understanding of the prediction limitations.

We hope you find this report informative, and we welcome any questions or comments, so please do not hesitate to contact the team using the details on the final page of the report.

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## Executive summary

#### About this Report

As Trustee of the Fund, we take our responsibility as a long-term investor on behalf of our members seriously. We recognise the value of integrating environmental, social and governance (ESG) factors, which include climate change, into our investment processes and through effective stewardship, and provide details of our approach in our Responsible Investment policy (RI policy), which is incorporated in the Fund's Statement of Investment Principles (SIP).

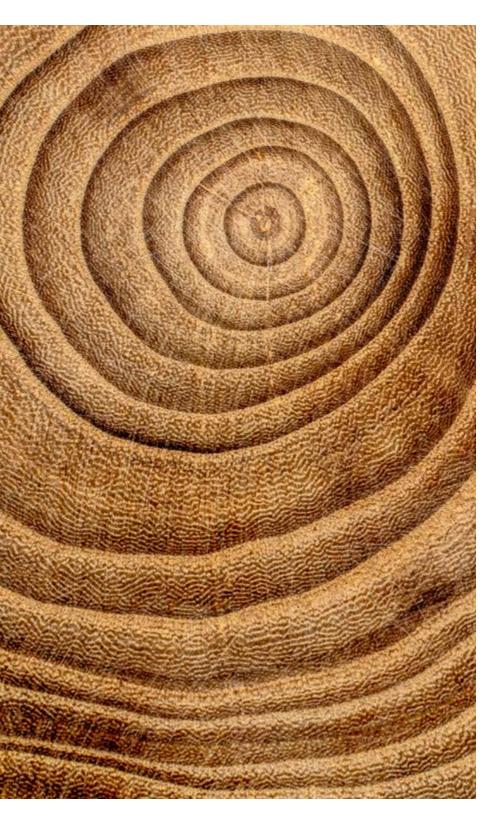
We recognise the scale of the climate change challenge and believe we can help drive positive change through our investment and stewardship decisions. Our fiduciary duty is to safeguard and pay the benefits of our members as and when they fall due, and with this in mind, we expect our managers to present us with investment opportunities which are in line with our investment strategy, and which support the low-carbon energy transition. We identify climate change as a systematic, long-term material financial risk to the value of the Fund's investments and the funding level. As part of our fiduciary duty, therefore, we consider climate-related risks and opportunities when making investment decisions. We also acknowledge that climate change may have an effect on the strength of the covenant (the ability of the Sponsor to support the Fund).

We continue to believe that sharing information on how the Fund addresses climate change is an important way to improve transparency and accountability to our members and all our stakeholders and we support the UK government and regulators in their endeavours to improve and enhance the standardisation of reporting in relation to climate change.

During 2022, we continued to assess and manage climate-related risks and opportunities and achieved the targets set forth in the 2021 Climate Change report. The data reported in the metrics and target section below has been obtained from third-party providers. While we believe that the data can be interpreted meaningfully, the evolving nature of this area means that there are limitations to the conclusions that can be drawn and, naturally, we cannot accept responsibility for the accuracy of this data.

This Report covers the period from 1 January 2022 until 31 December 2022 and, in accordance with the TCFD recommendations, explains our actions and our approach across the following four pillars: governance, strategy, risk management, and metrics and targets.

This Report is a public document available at https://pensionline.bp.com/ ClimateChangeReport



#### About the Fund

The Fund is a defined benefit pension arrangement (sometimes known as a final salary pension) that is closed to new members\* and the future build-up of benefits. The purpose of the Fund is to provide benefits as set out in the Fund's Trust Deed and Rules, for approximately 60,000 members. The Fund has a long time horizon, with some existing benefits expected to still be in payment in 2080.

As at 31 December 2022, it has assets of approximately £21 billion. As the funding position has gradually improved, we have substantially reduced the Fund's exposure to investment risk, moving from growth assets (mainly listed equities) to fixed income and UK government gilt investments. This is in line with changes in the value of the Fund's liabilities and with our prudent de-risking strategy.

Our funding position has further strengthened since last year. As at 31 December 2022, we were 133% funded on our ongoing technical provisions basis and so are not currently in need of any contributions from our Sponsor. We continue our journey to a position where we are no longer dependent on our Sponsor's financial support, and we are planning further changes to the Fund's strategic asset allocation to help secure our members' benefits. It is important to note that the investment decisions we take in support of paying members' benefits are independent of the business investment decisions our Sponsor makes to generate returns for its shareholders.

#### Governance

In this section we present how climate change considerations are incorporated into our governance and decision-making processes and we outline key roles and responsibilities for assessing and managing climate-related risks and opportunities relevant to the Fund.

One of the key 2022 achievements in this space was the Trustee Board finalising the results of a detailed governance review which sought to determine whether our core governance principles and structure remained appropriate and fit for purpose in view of the evolving UK pensions governance and regulation. In response to the findings, the committee structure was augmented to help address the specific governance challenges identified. We present the diagram outlining our current governance structure on **page 8**.

Last year, we also updated our RI policy in response to new regulatory obligations, which required publishing an implementation statement to set out how we complied with our SIP and publishing our first climate change report. We also updated our climate change policy to reference our net zero ambition statement. All of the policy updates followed through to the SIP, which incorporates our RI policy. In addition to policy updates, we have also enhanced our risk oversight, especially through improvement in our asset manager monitoring process; this will be articulated further in the Risk management section.

At the end of 2022, the Fund released its Net Zero Ambition. In order to assist the Investment Committee and Board in understanding the impact of such an ambition, with support from our advisers, the investment team delivered training on the Fund's GHG emissions baseline calculation and estimated carbon footprint, as well as the intended approach to achieve this ambition for the asset classes it currently covers.

#### Strategy

In this section we outline how we have integrated climate change considerations into our investment strategy. We remain supportive of the goals of the Paris Agreement and the world's efforts to achieve global net zero greenhouse gas emissions. The Net Zero Ambition statement which we released at the end of last year, has further demonstrated our commitment to addressing climate change risks and contributing to real economy decarbonisation.

The continuation of the de-risking process is expected to further reduce the Fund's sensitivity to climate-related risks. In 2022 the Trustee Board approved changes to our strategic asset allocation which targeted a lower level of investment risk and incorporated observations from the climate risk scenario analysis we performed last year and discussed in our 2021 Climate Change Report. As a result we reduced allocations to Listed Equities and Emerging Market Debt and increased the allocation to Liability Driven Investment (LDI).

The market events of 2022 had a substantial impact on the relative valuation of our assets, which we explain further in the report. However, in spite of the market volatility over the reporting period, the funding level remained strong, at 133% on a technical provisions basis as at 31 December 2022.

#### **Risk management**

As we continued to evaluate climate changerelated risks and opportunities through our manager monitoring process, we also paid close attention to market events. In this section, we present how we assess and manage the Fund's exposure to ensure it remains resilient to long-term climate change-related risks whilst concurrently being able to withstand short-term shocks.

As a well-funded and mature defined benefit fund, closed to new accrual, the focus of risk management is to minimise all risks including climate change while maintaining the current funding level. The Fund's overall de-risking strategy implemented over the past few years has contributed to reducing the Fund's risk exposure to climate-related risk by reducing the allocation to listed equities and increasing the level of hedging strategies. These activities showed positive impact from a climate-risk management perspective.

For our investments we apply our risk management process at a Fund level, via changes to the strategic asset allocation, and at mandate/asset class level, via manager selection, monitoring, and engagement.

In support of our net zero ambition, we have strengthened our asset manager oversight process and increased engagement with our asset managers on their efforts to influence investee companies' establishing credible climate transition, especially the high emitting companies they are invested in on the Fund's behalf. In 2022 we began monitoring whether our asset managers have established adequate engagement plans, which in our view are key in increasing the chance of a successful engagement leading to progressing real economy decarbonisation.



#### Metrics and targets

#### **Metrics**

We have significantly developed this section since last year, given updated requirements in the DWP Climate Change regulations. In particular, we expanded the scope of our reported greenhouse gas emissions for listed equities to incorporate GHG emissions of our investments' supply chains (Scope 3), and added a portfolio alignment metric, which represents a type of forward-looking climate-related metric aimed at indicating how the companies in the portfolio are progressing towards meeting the Paris Agreement goal of limiting the increase of the global average temperature to 1.5°C above the pre-industrial levels.

Both of these developments signal progress in how we analyse the climate-change risk of our Fund, however we do exercise caution when considering those metrics in our decision making. The disclosure of Scope 3 GHG emissions is currently quite limited hence most metrics including Scope 3 are predominantly based on estimation models and assumptions linked to sectoral and geographical information.

Similarly, while we appreciate the use of alignment metrics could help us understand the direction of travel regarding our net zero ambition, the lack of standardisation in how these metrics are calculated often leads to different and non-comparable results between various methodologies.

We understand that accurate and robust data is necessary for informed decision making and assessment of progress towards real economy decarbonisation. As such we continued engagement with our asset managers on their efforts in urging investee companies and issuers to disclose their GHG emissions, as well as maintained an active dialogue with our data providers on ways they can help in this area.

Mindful of limitations in data guality, we were pleased to observe a roughly 50% reduction in the absolute financed GHG emissions for listed equities and corporate bonds between 2021 and 2022. This has been partially driven by the enhancement to the listed equities passive mandate benchmark, sector rotation within the corporate bonds portfolio, and overall reduction in both listed equities and corporate bonds. We are treating this reduction with caution, as with the increasing number of companies disclosing their GHG emissions data, and the overall quality of data improving, the estimates of the total portfolio GHG emissions should become more accurate, and hence can result in higher numbers. Additionally, given we do not have any net zero related restrictions on our mandates, the exposure to various sectors and regions within our portfolio can change at the discretion of our asset managers, which can impact the overall Fund's GHG emissions profile.

#### **Targets**

We support policymakers and regulators in their efforts towards standardisation and establishing best practice for climate-related data disclosure. The work on improving the quality of data is helping us to gain more confidence in the metrics we monitor and targets we can set to measure our progress. In 2022, we met a target, set forth in the 2021 Climate Change report, in relation to the climate data quality process metric, which allowed us to progress in understanding the guality of data underlying the portfolio alignment metrics, the assumptions and methodological choices they are dependent on, and limitations in applying those models to various asset classes. Additionally, while remaining cognizant of the uncertainties around the alignment metrics, we gain some insight into our portfolio's degree of consistency with the Paris Agreement goals.

In order to build on the climate-related work carried out last year, we aim to expand the coverage of our preparatory portfolio alignment analysis to cover all of the Fund's assets. We plan to use the results of our analysis and our improved knowledge to set subsequent targets in support of our net zero ambition.

## Governance

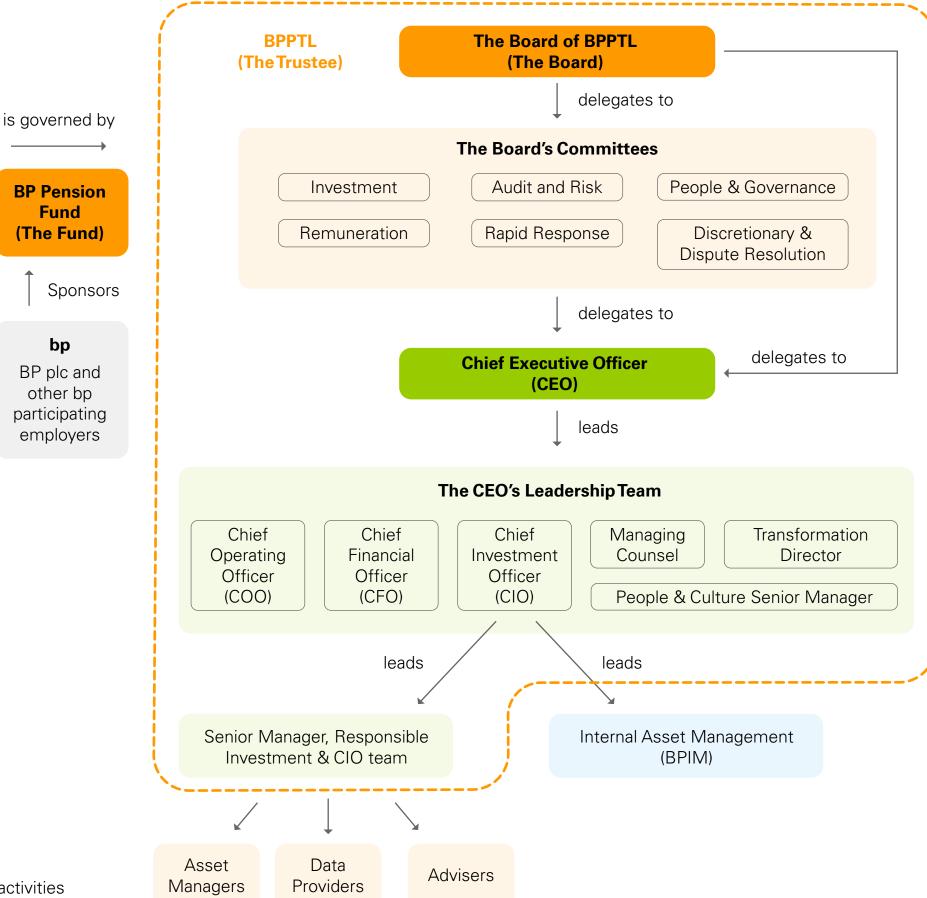
### Our Fund's governance structure

As Trustee of the Fund, we have a responsibility to establish climate-specific objectives and measure the progress we make against them. We have done this by establishing a climate change governance framework. The Board is kept informed of progress on the Fund's climate-related activities mainly through guarterly reports issued by the Fund's investment team and discussions with the Board's strategic adviser.

The Trustee's governance structure is designed to provide transparency and visibility of the Fund's activities to the Board and its committees while ensuring the Trustee Board can operate in an effective and efficient manner. The governance structure facilitates timely, effective decision-making by individuals with the appropriate skills and experience, including active dialogue and constructive challenge to any proposals put forward to the Board and its committees.

The diagram shows our Fund's governance and organizational structure as it relates to all climate-related activities.

Visual 1: The Fund's governance structure for climate-related activities



The Board has primary responsibility for climate change oversight

The Investment Committee provides recommendations for Board approval

The reporting of climate change risks and opportunities is under the general delegation of the CEO

The CIO undertakes work as explained with support as required from the executive management team and advisers

### Key roles and responsibilities

The Trustee is supported by our executive management team. This includes the Chief Executive Officer (CEO), who is responsible for managing climate-related risks and opportunities, and the Chief Investment Officer (CIO) who, supported by the Responsible Investment Senior Manager and the broader investment team, is responsible for investment strategy and climate-scenario analysis in line with the climate change regulations.

The Responsible Investment team's key accountabilities are to:

- address material climate-related risks and opportunities in relation to investments, actuarial matters, and covenant, including developing processes to manage climaterelated risks.
- advise on and help develop the Fund's climate-related strategies.
- assess the performance of the Fund's asset managers in terms of how they manage climate-related risks and opportunities.

Additionally, we use external investment consultants and advisers to assist us in carrying out our responsibilities, and they are chosen on the basis that they are highly skilled, experienced, and adequately equipped to assess and advise on climate-related risks and opportunities.

We have expanded our review of external consultants and advisers, and further details on actions and outcomes will be presented within the appropriate pillar of this report.

On an annual basis we review the performance of our external consultants and advisers against the objectives and standards expected of them. The results of this review are shared with the respective consultant or adviser to ensure that any potential development points can be addressed. Where improvements are considered insufficient, we reserve the right to initiate a tender process to onboard a new adviser or to amend the team's composition.

Our current advisers who assist us in fulfilling our climate-related responsibilities include:

- **Redington** is our strategic investment adviser, whose responsibilities include reviewing and providing feedback on our RI strategy, policy and beliefs and our broader stewardship and governance activities. Redington attend and actively participate in our IC and Board meetings to provide input in relation to the strategic direction of the Fund, and they provide training for both the investment team and the Board.
- Ortec Finance supports the investment team with climate scenario modelling and portfolio alignment analysis on the Fund.
- Cardano is our covenant adviser and incorporates climate risks as part of their analysis.

Over the course of 2022, our external climate data provider, Ortec Finance, provided frequent training to the investment team, to explain the methodology used when performing climate analysis on the Fund, including any updates to the models and methodology. The Board also received dedicated training from our strategic investment adviser, Redington, to provide them with sufficient knowledge and understanding to consider issues and challenges relating to climate change, including the implications of net zero for the Fund.

During the quarterly responsible investment updates, Board members and IC members were able to debate, question and challenge the information provided by advisers and the investment team with regard to the progress made on the implementation of the RI strategy and how climate change-related risks and opportunities were monitored and managed via engagement with the Fund's managers. This process allowed the Trustee to gain comfort that the advisers and the investment team are taking adequate steps to integrate climate change considerations into provided advice and investment decisions.

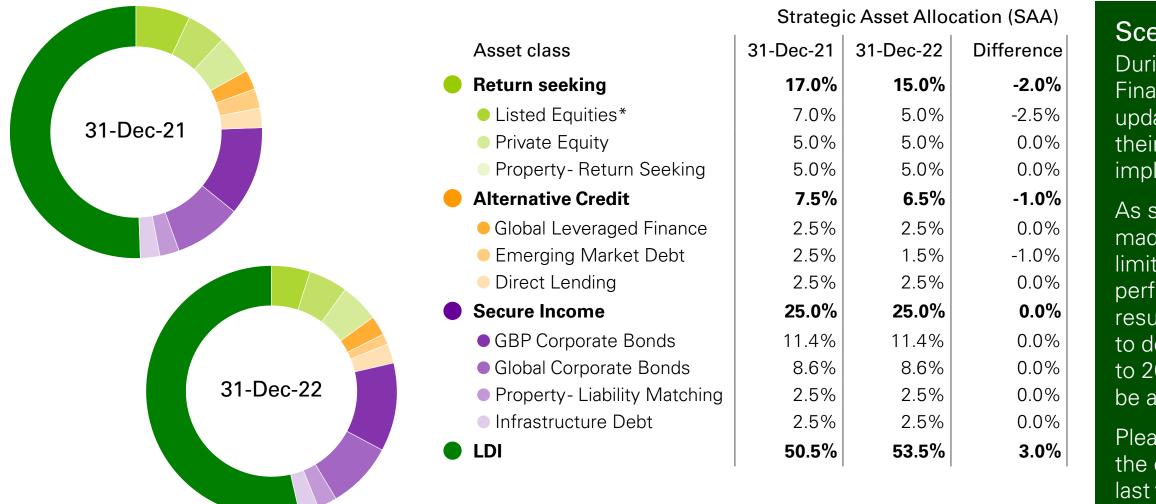
• **Mercer** provides ESG ratings on prospective and current asset managers, which supplements our manager-monitoring process, and they also offer an independent view of managers' climate change credentials.



## Strategy

#### Our strategic asset allocation

The new strategic asset allocation was approved by the Trustee Board in the second half of 2022, and incorporated observations from the climate risk scenario analysis performed in collaboration with Ortec as part of the Fund's 2021 Climate Change Report. The revised investment strategy targeted a lower level of investment risk, reducing allocations to Listed Equities and Emerging Market Debt and increasing the allocation to LDI. These changes were also expected to further mitigate the potential impact of climate transition and physical risks under the disorderly energy transition scenario on the portfolio.



**Visual 2**: Difference in our strategic asset allocation between 31 December 2021 and 31 December 2022 (\*Listed Equities include a return risk coverage via derivatives of 5% in both 2021 and 2022)

#### Scenario analysis considerations

During 2022, we were engaging with Ortec Finance on their improvements and further updates to the climate scenarios within their ClimateMAPS offering which are to be implemented in 2023.

As such, considering the minimal changes made to the Fund's asset allocation and the limited time available for gathering the data, performing the analysis, and reviewing the results, we decided it would be more optimal to delay any further climate scenario analysis to 2024, once Ortec's updated offering would be available.

Please refer to **Appendix 1** for details of the climate scenario analysis performed last year and reported in our 2021 Climate Change report.



The market events of 2022 had a substantial impact on the relative valuation of our assets. Gilt yields rose over the year, which resulted in negative performance of fixed income assets, especially LDI. As such, the actual asset allocation of the Fund deviated from its intended strategic asset allocation, and although rebalancing activity was undertaken, differences remained due to some of the challenges relating to illiquid assets (see Visual 3). In particular, illiquid assets can be harder to sell on a short-term basis, and the valuations are not typically on a 'mark-to-market' basis. Both of these factors can result in significant differences in the actual and target allocations to illiquid assets.

In spite of the market volatility over the reporting period, the funding level remained strong, at 133% on a technical provisions basis as at 31 December 2022.

		Strategic v	s Actual Asse	t Allocation
Strategic	Asset class	Strategic Asset Allocation 31-Dec-22	Actual Asset Allocation 31-Dec-22	Difference
Asset Allocation	😑 Return seeking	15.0%	22.1%	7.1%
Anocation	Listed Equities*	5.0%	5.1%	0.1%
	Private Equity	5.0%	11.0%	6.0%
	Property- Return Seeking	5.0%	6.0%	1.0%
	😑 Alternative Credit	6.5%	7.0%	0.5%
	Global Leveraged Finance	2.5%	3.4%	0.9%
	Emerging Market Debt	1.5%	1.4%	-0.1%
	Direct Lending	2.5%	2.2%	-0.3%
	Secure Income	25.0%	27.4%	2.4%
Actual	<ul> <li>GBP Corporate Bonds</li> </ul>	11.4%	12.2%	0.8%
Asset	<ul> <li>Global Corporate Bonds</li> </ul>	8.6%	9.2%	0.6%
Allocation	Property- Liability Matching	2.5%	3.3%	0.8%
	Infrastructure Debt	2.5%	2.0%	-0.5%
	Cash & Other Balances	0.0%	0.7%	0.7%
	LDI	53.5%	43.6%	9.9%

**Visual 3**: Difference between our strategic and actual asset allocation as at 31 December 2022 (\*Listed Equities include a protection overlay).

#### mate change and longevity

mate change not only can influence the risk ofile of investments but will also directly oact our lives. As the world gets warmer, air more polluted and extreme weather ents more frequent and severe, our life bectancies will likely change. Climate ange impacts on the beneficiaries' longevity I be affected by many variables, including ographical location, age and access local sanitary/health services facilities and her utilities.

rrently this is an issue we have not investigated in detail, but plan to so during 2023. We are considering forming a longevity impact analysis with onsultant that leverages the insight from 6th Intergovernmental Panel on Climate ange (IPCC) report, including the Shared cioeconomic Pathways.

#### Our net zero ambition

We are supportive of the goals of the Paris Agreement, and the world's efforts to achieve global net zero greenhouse gas emissions and pursuing efforts to limit the temperature rise to 1.5°C above pre-industrial levels. In this respect, in December 2022, we published our **Net Zero Ambition Statement**.

Our net zero ambition is to transition our investments to achieve net zero GHG emissions for the whole portfolio by 2050, or sooner, and see a reduction of at least 50% GHG emissions across public listed equity and corporate bond mandates by 2030. We believe adopting this net zero ambition will help us to contribute to real economy decarbonisation, while effectively managing the Fund's climate-related risks and opportunities. To achieve our net zero ambition, we also require governments and policy makers to deliver on their existing commitments and provide necessary new policy changes.

Prior to announcing our net zero ambition, we discussed with our asset managers their stance on net zero and completed a high-level assessment of the effects of our net zero ambition on each of the mandates. At present we have not modified our segregated mandates and have not initiated any amendments to the mandates with our asset managers to reflect our net zero ambition.

We will continue to monitor the progress towards reaching our net zero ambition, and as we review our investment strategy and the strategic asset allocation, we will also periodically reassess whether there is a need to adjust any of the parameters of individual mandates.

Our intention is to continue the ongoing dialogue with our asset managers on how we can collectively work to progress real economy decarbonisation and drive the whole society to achieve the net zero GHG emissions. An important aspect of our asset manager oversight process includes ensuring they have established adequate engagement plans for any high emitting companies they are invested in on the Fund's behalf.



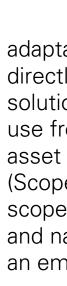
#### Our asset managers' stance on net zero

It is very encouraging for us that as of the end of 2022, half of our asset managers have publicly committed to net zero by joining the Net Zero Asset Managers Initiative (NZAMI)\*. The majority of our remaining asset managers are publicly supporting the goals of the Paris Agreement, although have not at present set any net zero ambitions. We present the summary of our asset managers public stance on net zero in the chart below.

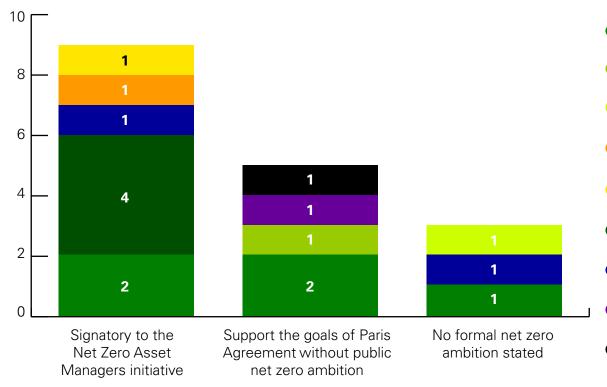
Although we would prefer all our asset managers to be more incisive and clearer on their net zero stance, we appreciate this may be challenging for some of them on account of their exposure to certain markets or clients. Nonetheless, our approach is to engage with these asset managers to better understand the reasoning behind their approach and to encourage them to take a stance more aligned with the Fund's net zero ambition.

Equally, especially within the less liquid asset classes, we are looking beyond asset managers' net zero commitments, and often through to the underlying portfolio companies within individual mandates, to understand their stance on net zero and overall approach to the energy transition. We request our asset managers to engage with those companies, as and when possible, on establishing credible transition plans. One of the examples of that approach is our infrastructure debt mandate, run by a manager which, due to their relatively small scale, has not issued a formal net zero statement. However, three out of the four companies to which we provided infrastructure project financing, via this mandate, have their own formal net zero commitments, and our asset manager continues engaging with those and the outstanding company on their low-carbon transition approach.

Another interesting approach has been demonstrated by our global leveraged finance manager. They are currently investigating how emissions could be accounted for in the private and relatively illiquid asset class they manage before making any formal communication on their net zero position. However, recognising the importance of action in both mitigation and



More details on how we hold our managers to account are provided under the manager selection and monitoring section of the Risk management pillar of this report.



Visual 4: The Fund's asset managers public stance on net zero.

\* The Net Zero Asset Managers Initiative is an international group of asset managers committed to supporting the goal of net zero greenhouse gas emissions by 2050 or sooner, in line with global efforts to limit warming to 1.5 degrees Celsius, and to supporting investing aligned with net zero emissions by 2050 or sooner.

adaptation to climate change, the asset manager directly invested in nature-based carbon credit solutions. This includes forestry via change of use from previous existing plans, which the asset manager uses to offset its direct emissions (Scopes 1 and 2, details on the coverage of each scope are provided in **Appendix 3**). Carbon credit and nature-based forms of investments represent an emerging asset class we are closely monitoring.

- Listed Equities managers (external)
- Private Equity manager (internal)
- Global Leveraged Finance manager (external)
- Liability Driven Investments manager (external)
- Emerging Market Debt manager (external)
- Corporate Bonds managers (external)
- Infrastructure Debt managers (external)
- Property manager (internal)
- Direct Lending manager (external)



### Our Sponsor covenant and funding requirements

Our low-risk investment strategy and the surplus in our funding position mean that we reasonably expect a low probability of future reliance on our Sponsor covenant. However, the market and broader economy are difficult to predict, hence we remain vigilant in our investment risk management and analysis.

One example of our analysis into the likely reliance on our Sponsor is a reverse stress test we performed in light of the unprecedented volatility in gilt yields in September 2022. Our aim was to understand the one-year probability of our funding level falling below 100%. Results of this test indicated that only events with severity beyond a 1 in 200 scenario coupled with a step change in the mortality expectations would potentially result in the funding level dropping below 100%.

Our Sponsor's current operations are exposed to both the transition and physical risks of climate change, in particular noting transition risks posed by a Paris Disorderly Transition scenario (see **Appendix 1** for details). However, the progressive decarbonisation envisaged by the Sponsor's strategy should reduce this exposure over time, and the fact the energy transition is now focused more on biogas, electric vehicle charging, renewables, and hydrogen solutions, where our Sponsor has a more proven track record of successful projects.

For further details of the impact of climate change on our Sponsor's financial position, we refer you to our Sponsor's 2022 Annual Report\*.

We understand the importance of independent covenant analysis and we continue to review the quarterly analysis provided to us by Cardano, our covenant adviser. Based on their report as of 4Q 2022, our Sponsor covenant remains in a strong position, and our short-term covenant reliance has reduced further given our strong funding position and surplus.



## Risk management

Risk identification and assessment is the first of the three areas of the Fund's Integrated Risk Management (IRM) framework. We define IRM as the risk management tool that helps the Trustee identify and manage the factors that affect the prospects of meeting the Fund's objective, especially those factors that affect risks in more than one area. This is in line with the definition of IRM by the Pensions Regulator (TPR).

We identify and assess the impact of climate risks on the Fund across all areas of our investment process, at both Fund and mandate level, which often corresponds to a specific asset class. Climate risk management at the Fund level As part of the incorporation of climate change considerations within our strategic asset allocation, we have carried out a top-down climate-risk assessment via scenario analysis at the asset class level.

In addition, we continue to combine internal research, as well as research received from our asset managers, external data providers, policymakers, and industry groups, to determine and assess the climate-related risks and opportunities which are relevant and impactful to our Fund.

For the Fund, climate change poses both physical and transitional risks, which could affect both the assets and liabilities, as well as our covenant. Physical effects of climate change are expected to cause increased damage to the world's economy as extreme weather events become more severe and more frequent with longer and dryer heat waves. These events will impact regions disproportionately with unclear effects on local populations. As anticipated under the Strategy pillar, we intend to perform an analysis of this impact on the Fund's liabilities in 2023.



2021	20	20		022
Asset class	Market Value £bn	Strategic Asset Allocation %	Market Value £bn	Strategic Asset Allocation %
Return seeking	6.3	17.0	4.5	15.0
Listed Equities	2.3	7.0	1.1	5.0
Private Equity	2.7	5.0	2.3	5.0
Property- Return Seeking	1.3	5.0	1.2	5.0
Alternative Credit	1.7	7.5	1.4	6.5
Global Leveraged Finance	0.7	2.5	0.7	2.5
Emerging Market Debt	0.7	2.5	0.3	1.5
Direct Lending	0.3	2.5	0.5	2.5
Secure Income	7.4	25.0	5.5	25.0
<ul> <li>GBP Corporate Bonds</li> </ul>	3.5	11.4	2.5	11.4
<ul> <li>Global Corporate Bonds</li> </ul>	2.7	8.6	1.9	8.6
Property- Liability Matching	0.7	2.5	0.7	2.5
Infrastructure Debt	0.5	2.5	0.4	2.5
LDI	15.8	50.5	9.0	53.5
Total	31.2	100.0	20.4	100.0

The chart compares the Fund's actual market value vs. the Fund's strategic asset allocation as at the end of 2021 and 2022.

Looking at the market value of each asset class, we observe the substantial impact of the market turmoil which followed the UK government "minibudget" in September 2022. Despite the major impact on the LDI asset class (nearly halving its value during 2022) causing a major shift at the asset allocation composition compared to what we initially planned, the Fund's investment strategy and risk approach helped to face the crisis and maintain the robust funding level.

Climate scenario modelling and portfolio alignment analysis are key tools which allow us to consider a range of potential outcomes, links, impacts and concentrations across investment risk, funding risk and covenant risk. We overlay our findings with a qualitative assessment of climate change impact on our Sponsor when assessing the strength of its covenant, and seek independent external advice, when required, from our covenant adviser.

The Fund's overall de-risking strategy implemented over the past few years has contributed to reducing the Fund's risk exposure to climate-related risk by reducing the allocation to listed equities and increasing the level of hedging strategies. These activities showed positive impact from a climaterisk management perspective.

Visual 5: The Fund's actual market value (excluding cash held) vs. strategic asset allocation as at the end of 2021 and 2022.

Climate risk management at the asset class level

We formally require our asset managers to be aligned with the Fund's SIP, our RI policy and have regard to the UK Stewardship Code (or an equivalent), all of which cover the management of climate-related risks and opportunities.

We have established a thorough manager selection and monitoring process which allows us to gain a comprehensive understanding of each manager's responsible investment policies, processes, and level of implementation and consideration of climate-related risks and opportunities.

We closely monitor our managers' climate changerelated stewardship and engagement activities to confirm they engage directly and collectively for both information and impact. The managers we select have clearly stated investment processes which encompass multiple disciplines. Climaterelated metrics form a major part of the ESG factors incorporated alongside the main financial and performance metrics they review when they are carrying out analysis and make investment decisions on our behalf.

We believe engagement and a forward-looking assessment of climate risk will bring better outcomes than exclusions or divestment, and we require our managers to review investments in detail from a climate-risk perspective. We expect our managers to assess companies and their business strategy, including their approach to

the energy transition and physical risks, which if addressed proactively, could also represent a potential investment opportunity.

Manager selection and monitoring When assessing prospective asset managers, we review how climate change is considered from a long-term risk management and valuation perspective, including how it is integrated into investment processes, business focus, operational infrastructure, and engagement activities. We also consider whether the asset managers have appropriate resources to analyse and understand how climate change could impact investment returns and take the necessary steps we would expect of them.

Some specific ways in which we promote integration of climate change include the following:

#### • Investment Manager mandates

The investment mandates with each of our asset managers require them to comply with our RI policy, as we expect all our asset managers to take appropriate steps to integrate potentially material ESG factors, including our three priority stewardship themes, which include climate change, into their investment analysis, investment decision-making and engagement activities with investee companies or issuers.

#### Segregated mandates and pooled investment funds

We review the investment objectives and guidelines of pooled funds to ensure alignment with our investment policies, including our RI policy. For segregated mandates, we set guidelines on climate change expectations to fulfil our Net Zero Ambition within our mandates where it is appropriate to do so. At present, all the Fund's investments are via segregated mandates\*.

#### • Engagement & exclusions

When it comes to our exposure to carbonintensive sectors, we favour engagement over exclusion and do not have an exclusion policy, except for restricting our asset managers from investing in securities issued by bp, to mitigate further exposure to the Fund's Sponsor. We also comply with all relevant sanctions legislation with regards to any investments that we make.

Our managers may have firmwide restrictions linked to internal policies and/or regulations they need to abide to in certain markets in which they operate, such as exposures to controversial weapons (for instance cluster mines, uranium depleted and land mines), tobacco, coal, or recreational cannabis. Through dialogue with them, we may agree to have these restrictions applied and integrated into our mandates.

<sup>\*</sup> Given the de minimis exposure, we do not account for the 0.08% (c£18m) of the Fund's assets covering additional voluntary contributions (AVCs), which are referenced in the Fund's Annual Report and Financial Statements under disclosure relating to pooled investment vehicles.

#### • Assessment period

We appoint asset managers with the expectation of a long-term partnership which encourages active ownership of the Fund's assets. When assessing an asset manager's performance, the focus is on longer-term outcomes and is assessed over a medium to long-term timeframe, subject to a minimum of three years.

Our ongoing engagement with asset managers and thorough monitoring of their investment and stewardship activities, are key in enabling us to effectively assess and manage climate change and other ESG related risks in our portfolio. By requiring the asset managers to comply with our RI policy, we were able to set clear expectations, and subsequently hold them to account, on how their actions contribute to achieving the goals of the Paris Agreement, drive positive change towards the real economy decarbonisation, and help to improve long-term, risk-adjusted returns for the benefit of our members.

We hold quarterly investment review meetings with our asset managers to discuss their investment performance and receive updates including those relating to business or personnel developments. We include stewardship as a standing agenda item with a focus on engagements around climate change and our key themes.

In order to gain a comprehensive understanding of each asset manager's responsible investment policies, stewardship, and management of climate change, we hold annual responsible investment review meetings with all of our asset managers. These meetings form an important part of our manager monitoring process, covering each asset manager's investment, stewardship and climate change management and metrics monitoring for the prior 12 months. In particular, there is a focus on our managers' stance on net zero and their engagements with companies or issuers which represent a higher share of emissions in our mandates.

Through these meetings we try to ensure continued progress in ESG integration, stewardship, and climate change risk management across all asset classes and mandates to the extent possible.



### Climate change driven investment activities

We encourage our managers to present us with investment opportunities and development initiatives which deliver good risk-adjusted returns for the Fund and help address climate change risks and identify opportunities. We are finding that these are more and more aligned with those that support and positively contribute to the low-carbon energy transition. We also believe that there is substantial scope for investment in infrastructure to help improve resilience to physical risks.

More widely, we set out below examples of the progression of our investment strategy during 2022:

#### **Listed Equity**

In 2022 we implemented an enhancement to the passive portion of our listed equities portfolio moving from a standard market-cap weighted global index to a new customised global index.

The initiative was driven by two objectives:

1. To develop a passively implemented solution that benefits from an index construction methodology that seeks to deliver attractive risk characteristics, such as reduced volatility and drawdowns (when compared to a standard market-cap weighted index).

2. To incorporate environmental, social and governance data, including specific GHG emission measures, to create a customised index that systematically reflects ESG factors, including climate, risks, and opportunities in its construction methodology.

The methodology achieves its goals by using a portfolio optimiser with the objective of minimising volatility subject to various constraints including the requirement for a 10% improvement in ESG score which is derived based on the manager's internal methodology and a carbon emissions requirement to be better or in-line with the parent index.

We believe that the ESG perspectives incorporated into the customised index construction methodology are relevant to both these expectations.

A further rationale for the customised solution is the ability to adapt what we do in the future which is likely to be valuable from an ESG and GHG emissions perspective.

Infrastructure debt Our infrastructure manager, Macquarie, has provided a loan to refinance a 365MW portfolio that comprises 24 ground-mounted solar photovoltaics ("PVs") projects located across the UK. The portfolio will contribute to avoiding 144 kt CO2e in carbon dioxide equivalent emissions per year, which is the equivalent of powering more than 90,000 homes each year.

LDI

Our mandate for this asset class requires very specific thresholds on key performance and risk metrics due to its central role in our asset allocation and liability matching requirements. Our LDI asset manager participated in the DMO green gilt\* syndication in September 2022, when the UK gilt crisis caused an unprecedented pricing condition. As the green gilts offered a higher yield than we would have expected based on the nongreen gilt curve, and hence were 'cheaper' than a non-green equivalent, our LDI asset manager was able to participate in this syndication and purchased c.£300m nominal which was equivalent to c.£158m in present value terms.

#### Property

In addition to the Health & Safety and regulatory compliance assessment and review BP Investment Management (BPIM) regularly performs, during 2022 it instructed an external consultant to undertake a high level ESG review of one of the assets in our portfolio. This consisted of a large multi-let industrial estate, with a mixture of Energy Performance Certificates ("EPCs") ranging from D to B and a variety of lease expiry dates. These are characteristics typical of other industrial assets in our portfolio.

The aim of this exercise was to identify the type of improvements that could be undertaken to the units in order to reduce energy usage on site (improve efficiency), remove fossil fuel dependency and electrify the heating system, and generate renewable energy.

Results of this case study will be used to define a common set of guidelines to be applied across the portfolio, with some examples of improvements as follows:

- Removing gas boilers and replacing them with electric heating systems.
- Changing lighting to LED lighting Upgrading properties to EPC level 4 or 5.
- Installation of Photovoltaic panels (PV's).
- Installation of electric vehicles (EVs) charge points.

- Providing new insulation to "thermal boundaries"
- Introducing water savings appliances / leak detection meter.

The external consultant is also working to establish the flood risk assessment of our assets and applicable improvement plans. This work has identified an asset for which remediation actions would not fit the current risk-return profile set for the team and work will be undertaken to dispose of it.





\* The Green Apple Environment Awards is an annual international campaign to recognise, reward and promote environmental best practice around the world. The Green Apple Environment Awards were launched in 1994 by The Green Organisation and have become well established as one of the most popular environmental campaigns in the world.

On an annual basis, our property managing agent, submits an entry on BPIM's behalf to the Green Apple Environment Awards\* campaign, run by The Green Organisation, which is an independent, international, non-profit environment group dedicated to recognizing, rewarding, and promoting environmental best practice around the world. Following the 2022 entry, four properties in our portfolio received the Green Apple Awards – 2 golds, 1 silver and 1 bronze. This is an improvement from 2021 when we received 3 – 1 silver and 2 bronzes.

### Managing climate risk through an active ownership

Stewardship – is a key component of our IRM, as we see engagement, active ownership and industry involvement via trade associations and working groups being a crucial part of risk identification, management, and monitoring processes.

From the asset owner's perspective, engagement carried out by our asset managers is an important part of the climate risk management process and we encourage our asset managers to focus their efforts on engagements related to climate change risks and disclosure.

Voting – another key lever we use to influence investee companies is voting at annual general meetings and general meetings. By investing via segregated mandates across all our listed equity portfolios, we retain the right to directly exercise voting rights attached to our holdings. Where possible, we use voting rights to encourage responsible long-term behaviour and enhance reporting and management on climate change by the companies in which we invest.

We view voting as an important investor right which allows us to express our position on critical issues (e.g. topics related to our engagement stewardship priorities).



#### Collaborative engagement - the Fund has been a signatory to the United Nations Principles for Responsible Investment (UN PRI) since 2008. Additionally, to broaden our membership of responsible investment and climate-related focus groups, in 2022 we joined the DWP's Occupational Pensions Stewardship Council (OPSC) and the Institutional Investors Group on Climate Change (IIGCC). Our intention for 2023 is to increase our participation in working groups and collaborative engagements led by these two organisations.



## **Property – engagement with commercial tenants**

In 2022, we made progress with direct engagements via our property asset class, given this mandate is managed internally by BPIM. BPIM began engaging with the commercial tenants of the properties held within the portfolio, in relation to various ESG initiatives and potential physical improvements to the properties. The purpose of the engagement is to understand the current sustainability commitments the tenants have in place, to determine how best to work together to upgrade the properties and progress further towards achieving our net zero ambition. The engagement continues through 2023, and so far, the team have had a number of very positive conversations about ESG initiatives such as installation of solar panels on roofs and electrical vehicle charging points. The team also received utility data from two tenants, including from one of our largest retail tenants.

As the engagement with tenants progresses, the team will gain a much better understanding of the sustainability commitments the tenants have in place, which will allow for increased collaboration on upgrades to the properties, which is a key component to meeting our net zero ambition.

#### LDI – climate change regulations disclosure

Given the size of our exposure to the UK government bonds (gilts) and the scale of our LDI asset manager's participation in the overall gilt market, we expect our asset manager to both facilitate engagement opportunities and engage on our behalf with the industry and government bodies to increase the accountability of the UK government in relation to meeting its climate change commitments. The main institutions our asset manager currently directly engages with on topics related to climate policy development and implementation, are the Debt Management Office, the HMTreasury, and Department of Energy Security and Net Zero.

In 2022, when working on our first climate change report, we acknowledged that the DWP Climate Change regulations relating to pension schemes do not include specific guidelines for disclosures with respect to LDI mandates. Given the magnitude of exposure of UK defined benefit pension schemes to the gilt market we considered that climate risk assessment and emission metrics disclosure for LDI portfolios should be considered as a systemic risk factor.

We frequently question our LDI asset manager on the approach that other pension schemes are taking to address this topic and the advice they were able to source from the regulators through their engagements. To facilitate discussion on this topic, as well as more broadly on the consideration of LDI with respect to net zero, our LDI asset manager hosted a roundtable with representatives from other large DB pension schemes. The discussions led to realization that it was crucial to engage with regulators on this topic.

As such, DWP and TPR representatives were invited to join a follow-up roundtable discussion during which they offered some clarification with respect to climate-related disclosures for LDI mandates. Along with our peers, we have highlighted to the regulators the importance of their collaboration with DB pension schemes on a broader approach to net zero given the UK government's 2050 commitment. We will be looking to continue discussions and receive further feedback from regulators on concerns we raised.

### Examples of our managers' engagements related to climate change risk

We request our asset managers to lead meaningful engagements with companies we have exposure to in our portfolio, on matters related to our stewardship themes, one of which is climate change. Below we highlight examples of our asset managers' direct and collaborative engagements.

#### Financing the Just Transition

Engagement led by Royal London Asset Management (RLAM), our UK corporate bonds manager.

The transition to a greener economy requires changes that will impact communities and workers disproportionally. By banks establishing a Just Transition policy, the financial sector could better assist the wide range of industries, regions, and communities that they provide capital to. RLAM engaged with a global bank, HSBC, along with the UK charity Friends Provident Foundation\*, during 2021 and 2022 on the company's net zero commitment, climate transition plans and requested for explicit integration of JustTransition considerations into the bank's existing set of climate policies.

The bank partly incorporated the Just Transition considerations into its published climate transition plan draft. Following further feedback, the bank improved definitions for 'existing' and 'new' oil field and clarified the wording of the commitment. The notion of the Just Transition is incorporated as one of the three policy objectives ('support a Just and affordable Transition, recognising the local the realities in all the communities we serve').

Furthermore, the bank agreed to further review climate transition plans to assess oil and gas and energy utilities clients' failure to progress on climate plan disclosures and implementation. Failing to do so will mean losing access to finance from the bank. The bank also improved definitions around engagement, making it explicit what 'regular' or 'insufficient' engagement meant. However, the bank did not act on requests to include climate lobbying and limited use of offsets in the assessment of climate transition plans.

#### **Climate Action 100+**

Engagement led by M&G, our UK corporate bonds manager.

Climate change is a global systemic challenge, and the private sector investors have a key role to play, alongside the regulators, to support achievement of the Paris Agreement goals. As such, around 700 investors who share the same concerns on the lack of concrete action from corporates to align their strategies and capital allocation towards achieving the goal of the Paris Agreement, work together

through Climate Action 100+ (CA100+). They have engaged with over 160 companies, who as some of the largest GHG emitters, are responsible for over 80% of the world's emissions.

The investors involved in this initiative created a unique channel of communication with corporates, which allowed them to achieve a critical level of assets that boards, and executives cannot ignore and helped corporates to understand better investors' expectations.

M&G has been co-leading a CA100+ engagement with a German chemical's producer. They met with the company on several occasions throughout 2022 to urge it to add scope 3 to its existing scope 1 and 2 GHG emissions reduction targets, and to commit to decarbonising its feedstock by 2050. One of the outcomes of this engagement, was for this company to become part of the SBTi expert group, working on a sector-specific methodology for the chemicals industry, with ambition to be able to get good enough data to set a scope 3 target by the end of 2023. No promise was made on decarbonising feedstock and the company explained that the majority of its

\*Friends Provident Foundation - Fair Economy Better World An independent charity that makes grants and uses its endowment towards a fair and sustainable economic system that serves society.

products would always be carbon-based. However, in future, carbon from CCU (carbon capture and utilisation), recycling or bio-based feedstocks, such as biomethane, would increasingly replace fossilbased feedstocks.

## Engagement escalation – global energy company

Engagement led by Legal & General Investment Management (LGIM), our passive listed equity manager.

LGIM has been engaging regularly for many years with one of the largest public energy companies in the world, as part of their Climate Impact Pledge, which is a targeted engagement campaign, they began in 2016 to address the systemic issue of climate change. LGIM identified several areas for consideration, namely: lack of scope 3 emissions disclosures (embedded in sold products); lack of integration / a comprehensive net zero commitment; lack of ambition in operational reductions targets and lack of disclosure of climate lobbying activities.

Following many years of engagement, LGIM considered that the improvements made thus far by the company were still not sufficient and applied their escalation strategy. Their first step was to vote against the re-election of the Chair. Subsequently, in the absence of further improvements, in 2021 LGIM placed the energy firm on its "Climate Impact Pledge divestment list". To further escalate via voting, in 2022 LGIM supported two climaterelated shareholder resolutions (i.e. voted against management recommendation) at the AGM, reflecting the continued wish for the company to take sufficient action on climate change in line with minimum expectations. One resolution passed, obtaining 51% of votes in favour, while the other proposal saw a significant level of dissent against management with 27.1% votes in favour of it.

Since 2021, the company has started to be more engaged with shareholders as it disclosed its scope 3 emissions (estimated), a 'net zero by 2050' commitment (for scopes 1 and 2 emissions), set interim operational emissions reduction targets and improved disclosure of its lobbying activities. Despite these changes, this progress has been deemed insufficient for an energy company of this scale and LGIM decided to retain the company in its Climate Impact Pledge divestment list, which is expected to result in a gradual reduction in the size of their holding and no further investment where this is consistent with their mandates.



## Metrics and targets

### Data quality and availability

We continued engaging with our external managers through the year to understand how they approach GHG emissions data limitations and improve their climate-risk management and reporting. Out of 17 asset managers, 15 have reported to us some level of GHG emissions data for their respective portfolios. The nine managers for public asset classes used a mixture of estimations and reported based on the provider they selected. The remaining six partnered with external providers that get estimates based on the Partnership of Carbon Accounting Financials' (PCAF) models and methodologies (see Appendix 2 for details). The two managers outstanding confirmed they are working with external providers also on PCAFbased solutions.

As per Climate Change regulations, this year, in addition to GHG emissions Scopes 1 and 2, we added GHG emissions data for Scope 3, which represents other indirect GHG emissions that occur in the value chain of the reporting entity (both upstream- suppliers, and downstream- clients/end consumers\*). Disclosure of Scope 3 emission is currently quite limited with very few issuers reporting it regularly. This means most of Scope 3 GHG emissions are based on estimation models and assumptions linked to sectoral and geographical information. Some of the issuers revert to estimation themselves, rather than relying on factual monitoring of emissions in their value chains. Also, this is the first year we will be reporting on this metric and, therefore we won't be able to compare to previous year results.

We continue to use MSCI as our GHG emissions data provider and utilise the following two methods:

- We use MSCI ESG CarbonMetrics tool to calculate emissions for listed equities and corporate bonds, both developed and emerging markets (the latter added to this year's disclosure).
- For illiquid and/or private asset classes we worked with MSCI to estimate GHG emissions based on their Total Portfolio Footprinting service, which provides PCAF model-based estimates.

\* The Kyoto protocol – and its Doha amendments – lists all the greenhouse gasses with different warming potentials and carbon dioxide (CO2) is one of them. When measuring GHG emissions in this report all values are reported in terms of carbon dioxide equivalents (CO2e) which rebase warming potential of all GHGs to that of CO2. MSCI classifies carbon emissions according to the GHG Protocol – see **Appendix 3** – and uses the following terms interchangeably: greenhouse gas emissions, GHG emissions and carbon emissions. In this Report, we have primarily used 'GHG emissions' or simply 'emissions' to denote greenhouse gas emissions.





### Our efforts towards improving the data quality

We remain conscious of limitations in both the availability and quality of data necessary for accurate GHG emissions calculations. As such we continue engaging with our asset managers on this topic, requesting them to increase their efforts in urging more investee companies and issuers to track and disclose their GHG emissions data across all three scopes.

We believe however, that data providers have an enormous role to play in improving the quality and availability of not only GHG emissions, but broader ESG related data. We maintain an active dialogue with MSCI as our data provider, on ways they can help in this area, and through our own research and analysis seek ways in which we can challenge MSCI on their approach and progress, and ultimately play a part in improving the overall data quality.

## **2022 Engagement case study: portfolio carbon footprinting**

In 2022 we undertook a project to estimate the GHG emissions at the individual holdings level, in line with MSCI's methodology with the following aims:

- Achieve better understanding of the methodology and equations of the portfolio carbon footprint calculator developed by MSCI
- Have ability to compare a selection of companies for their GHG emission metrics between two providers
- Confirm the list of high emitting companies which we hold in our portfolio, and with which we expect our asset managers to continuously engage.

MSCI have assisted us in this process, by providing additional information and helping us to understand details behind their methodology. Through these discussions we gained better clarity of their assumptions and as such were able to challenge them on their approach. 1. First outcome was gaining clarity on how portfolio holdings data, which is a key input into MSCI carbon footprint calculator, should be prepared. This aspect of data input is especially important if there are holdings with no associated emissions. Typically, if a company does not report GHG emissions, MSCI can use their own methodology to estimate or proxy emissions based on the company's other attributes (e.g. sector). However, in some instances, for example due to data limitations, this is not possible. In this case such holdings should be removed from the portfolio data input, and weights for remaining holdings should be rebalanced. This additional step in the data input part of the carbon footprinting, can help to obtain more accurate output results for the total portfolio carbon footprint.

2. Second outcome was related to the sample comparison of GHG emissions data from MSCI with data made available from other providers. Through our research, we concluded that one of the drivers of the potential difference in emissions data between providers can be related to new publicly available company disclosures. We observed that in a considerable number of instances (over 100 in an investment universe of around 3,000 companies or issuers) the new publicly available information was missing. This was resulting from the frequency of the MSCI data update cycle, which we questioned them about. Following discussions we held with MSCI, they updated their data refresh cycle, moving from annual to quarterly which will allow for newly published information to be captured in a timelier manner. We believe that by having shared our findings and feedback to the data provider, we contributed to this outcome.

#### **Financed GHG emission metrics**

#### **Listed equities**

As of 31 December 2022, listed equities made up 5.4% of our total portfolio. The level of absolute financed GHG emissions for listed equities have dropped significantly between 2021 and 2022, decreasing from 147 thousand of CO2e tons at the end of 2021 to 56 thousand of CO2e at the end of 2022 (the value for 2022 is a result of a simple sum of active and passive strategies).

A slight improvement is also noticeable in the portfolio GHG emissions intensity metric, which is assessed per million invested, reducing from 47 tons of CO2e per million invested at the end of 2021 to 44 tons of CO2e per million invested at the end of 2022 (the value for 2022 is a result of a weighted average of active and passive strategies, it is not a simple sum). This positive result is driven by the decreased allocation in this asset class compared to the previous year, as discussed earlier in the report, alongside the enhancement to the passive portion of our listed equities.

However, we are cautious drawing comparisons between 2021 and 2022 emission metric given the benchmark enhancement for the passive strategy which was implemented in 2022. For this reason, starting from this year's report, we have split the GHG emission metrics for listed equities across the active and passive strategy, given they are managed to different benchmarks.

#### Financed GHG emission metrics for listed equities based on investor allocation

Listed		Scopes 1 and 2		Scope 3 upstream		Scope 3 do	wnstream		
Listed equities	Portfolio		Benchmark MSCI ACWI	Portfolio	Benchmark MSCI ACWI	Portfolio	Benchmark MSCI ACWI		
strategy	31 Dec 2021	31 Dec 2022	31 Dec 2022	31 Dec 2022	31 Dec 2022	31 Dec 2022	31 Dec 2022		
<b>Absolute GHG emissions metric</b> Total financed GHG emissions in thousands of tons CO2e associated with investee companies in the portfolio. Based on an equal portfolio and benchmark investment.									
Active	1 4 7	32	39	68	71	207	203		
Passive	147	24	34	69	62	148	176		
	<b>sions intensity</b> HG emissions i	<b>metric</b> n tons CO2e pe	r US\$ million in	vested.					
Active	47	46	56	99	103	301	294		
Passive	47	41	56	115	103	247	294		
GHG emissions data coverage Includes emissions data which is reported by company or estimated by MSCI.									
Active	0.00/	100%	99%	98%	99%	98%	99%		
Passive	98%	100%	99%	99%	99%	99%	99%		

Visual 6: Listed equities emission metrics.

Source: MSCI Carbon Footprint Calculator.

**Note 1**: For comparison purposes we used MSCI ACWI benchmark for both active and passive listed equity mandates.

Note 2: GHG emissions are apportioned across all outstanding shares and bonds (% Enterprise Value including cash).

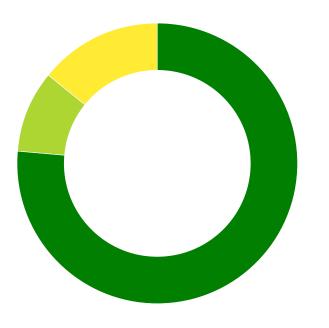
Within the GHG emissions calculations the Enterprise Value Including Cash (EVIC) is used to normalise our level of investment and obtain a fair share of emissions associated with them. Based on MSCI methodology GHG emission are either reported or estimated (based on PCAF-aligned models) using either company-specific data or sectoral-geographical ones when the previous are not sufficient. The data quality metric below represents the MSCI GHG emission data only.

Compared to 2021, the coverage of MSCI data guality for scope 1+2 emissions improved marginally from 99% to 100%, with a larger share of reported emissions (70% vs 77%). Including Scope 3 data coverage decreased only very marginally (by less than 1%), the estimation proportion increased from 23% to 88%. The estimates were done either using models based on prior reported data or based on sector trends.

Dynamics of sector impacts on the listed equity portfolio's carbon footprint also see substantial differences when we look at Scopes 1 and 2 vs Scopes 1, 2 and 3. For the former, the top three sectors – utilities, energy, and materials – account for over 83% of the GHG emissions, compared to 68% when all three scopes are assessed. This is due to the carbon footprint of the sector with very complex supply chains like industrials and consumer staples. We also note that, the energy sector alone is estimated to account for over 50% of all Scope 3 GHG emissions. However, considering the significant input the energy sector has to the other sectors, there is a high risk of double counting when estimating GHG emissions for big conglomerates.

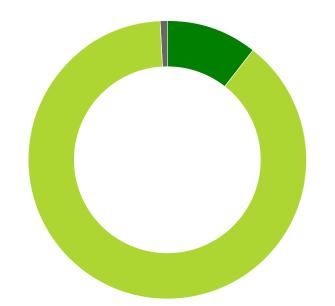
#### Quality of GHG emissions data for listed equities

#### Scopes 1 and 2 GHG emissions - data quality by issuers



Visual 7: Listed equities - data quality for Scope 1 and 2. Source: MSCI

#### Scopes 1, 2 and 3 GHG emissions - data quality by issuers



- Issuers with reported data 77%
- Issuers with estimated data (company specific models) - 9%
- Issuers with estimated data (industry specific models/proxy) - 14%
- Data not available 0%

- Issuers with reported data 11%
- Issuers with estimated data (company specific models) - 88%
- Issuers with estimated data (industry specific models/proxy)-0%
- Data not available 1%

### Corporate Bonds – developed markets

As at 31 December 2022, developed markets (DM) corporate bonds accounted for around 20% of the total Fund's assets under management (AuM). In terms of financed GHG emissions, as with listed equities, we observed a reduction compared to last year. This reduction can be mainly attributed to the sectoral rotation done by most of our corporate bonds' asset managers, which exited carbon-intensive sectors - such as energy and utilities - to move into financials - banking and insurance. Also, the market turmoil and raising interest rates impacted the valuation of fixed income assets more than equities, which further drove down the emissions associated with our holdings in this asset class.

## Financed GHG emission metrics for developed markets corporate bonds based on investor allocation and inclusive of subsidiary mapping

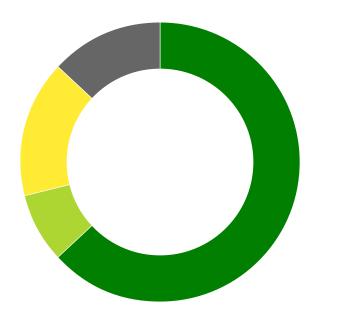
DM Corporate	Ş	Scopes 1 and 2	2	Scope 3 u	upstream	Scope 3 downstrean		
Bonds	Portfolio		Benchmark Portfolio		Benchmark	Portfolio	Benchmark	
strategy	31-Dec-21	31-Dec-22	31-Dec-22	31-Dec-22	31-Dec-22	31-Dec-22	31-Dec-22	
Absolute GHG emissions metric Total financed carbon emissions in thousands of tons CO2e associated with investee companies in the portfolio. Based on an equal portfolio and benchmark investment.								
Global	256	74	117	147	208	580	532	
GBP	256	49	56	110	133	298	326	
<b>GHG emissions</b> Financed carbon	-		JS\$ million inve	sted.				
Global	31	40	63	80	113	313	288	
GBP	31	35	41	80	96	216	236	
GHG emissions data coverage Includes emissions data which is reported by company or estimated by MSCI.								
Global	40%	89%	87%	89%	87%	89%	87%	
GBP		56%	49%	56%	47%	56%	47%	

Visual 9: Developed markets corporate bonds emission metrics.

**Source:** MSCI Carbon Footprint Calculator.

**Note 1:** Global Corporate Bonds Benchmark: BBG Barclays Global corporate bond, GBP Corporate Bonds Benchmark: iBoxx GBP non gilts. **Note 2:** GHG emissions are apportioned across all outstanding shares and bonds (% Enterprise Value including cash).

#### Quality of GHG emissions data for developed markets corporate bonds

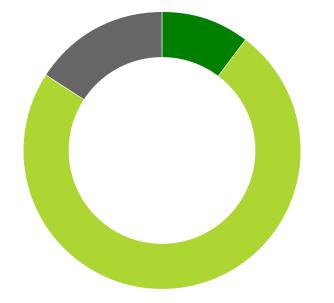


#### Scopes 1 and 2 GHG emissions - data quality by issuers

- Issuers with reported data 63%
- Issuers with estimated data (company specific models) - 8%
- Issuers with estimated data (industry specific models/proxy) - 16%
- Data not available 13%

Visual 10: Developed markets corporate bonds - data quality for Scope 1 and 2. Source: MSCI

#### Scopes 1, 2 and 3 GHG emissions - data quality by issuers



- Issuers with reported data 10%
- Issuers with estimated data (company specific models) - 74%
- Issuers with estimated data (industry specific models/proxy)-0%
- Data not available 16%

It is important to note the following points when assessing the quality of data underlying corporate bonds GHG emissions metrics.

#### Subsidiary mapping

The quantum of the corporate bonds data coverage highly depends on the mapping approach taken when considering GHG emissions of specific smaller private issuers, which are subsidiaries of larger firms. This in turn affects the associated level of financed GHG emission metrics for the portfolio.

• Magnitude of issuers' count and size emissions data increases from 8% to 74%.

As observed, the data quality for corporate bonds is lagging compared to listed equities which for us is a clear signal that there should be more effort put into engagement with debt issuers. We continue to address this as part of our asset manager monitoring process, as described above in the risk management pillar.

Visual 11: Developed markets corporate bonds- data guality for Scope 1, 2 and 3. Source: MSCI

With a significantly higher number of issuers compared to listed equity (over 600 vs less than 400) and more companies of a smaller size, it is not surprising that over 10% of companies across our corporate bond mandates do not report GHG emissions and are not covered yet by the MSCI estimation model. The quality of data further decreases when including Scope 3 GHG emissions, as the portion of the estimated GHG

#### Corporate bonds – emerging markets

In an effort to increase the coverage and disclosure of our Fund's financed GHG emissions, we have decided to include in this year's report, the GHG emission metrics for the emerging markets (EM) corporate bonds we hold in our portfolio.

As at the end of December 2022, 1.3% of the Fund's AuM was invested in fixed income bonds from emerging markets issuers. Around 30% of exposure. by market value, comes from corporate issuers (61 in total), with the remaining 70% market value allocated to sovereign, supranational and local authority issuers (43 in total).

Given the challenges that emerge when trying to evaluate the carbon footprint of a sovereign issuer and potential issues of double counting when looking at corporate issuers in parallel, we decided to focus only on the emerging markets corporate issuers. This also impacts the benchmark analysis which we decided not to include due to its scarce significance linked to sovereign exclusions.

The number of issuers in the emerging markets corporate bonds issuers is significantly smaller than in the developed markets corporate bonds portfolio. However, given their size and significance for investors, they can be taken as a reasonable proxy of the level of disclosure one may expect from emerging markets more broadly. Companies operating in these markets are significantly lagging behind those in developed markets when it comes to disclosure of GHG emissions and general ESG-related data.

As in the case of developed market corporate bonds, when assessing the carbon footprint, we have the opportunity to include or exclude the attribution of emissions from the parent company. Below metrics are inclusive of subsidiary mapping.

Financed GHG emission metrics for emerging markets corporate bonds based on investor allocation and inclusive of subsidiary mapping

Emerging Markets	Portfolio (Scopes 1 and 2)			
Corporate Bonds	31-Dec-21	31-Dec-22		
Absolute GHG emissions metric Total financed carbon emissions in thousands of tons CO2e associated with investee companies in the portfolio.	NA	17		
<b>GHG emissions</b> <b>intensity metric</b> Financed carbon emissions in tons CO2e per US\$ million invested.	NA	319		
GHG emissions data coverage Includes emissions data which is reported by company or estimated by MSCI.	NA	53%		

Visual 12: Emerging markets corporate bonds emission metrics. Source: MSCI Carbon Footprint Calculator.

**Note 1:** GHG emissions are apportioned across all outstanding shares and bonds (% Enterprise Value including cash).

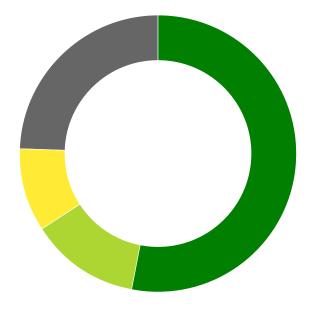
by issuers

When focusing on the GHG emissions data, bearing in mind the lower number of issuers assessed, we were encouraged to see that over 50% of emerging market issuers reported their Scopes 1 and 2 emissions.

Visual 13: Emerging markets corporate bonds- data quality for Scope 1 and 2. Source: MSCI

#### Quality of GHG emissions data for emerging markets corporate bonds

Scopes 1 and 2 GHG emissions - data quality



- Issuers with reported data 53%
- Issuers with estimated data (company specific models) - 13%
- Issuers with estimated data (industry specific models/proxy) - 10%
- Data not available 24%

### **Liability Driven Investments**

LDI continues to be the core component of the Fund's investment strategy and its protection mechanism against key risks such as interest rates and inflation. The primary instruments used within our LDI portfolio are UK conventional and indexlinked gilts, which aim to hedge the interest rate and inflation sensitivities of the Fund's liabilities. As seen under the Strategy and Risk management pillars, the size of this allocation has fallen below the 50% of the Fund's investments by asset value and we intend to focus on restoring this at the intended level.

#### During 2022, we continued to work with our LDI manager to understand the requirements and challenges around this asset class from the climate-risk metrics perspective. The key limitations recognised last year when assessing emissions associated with gilts still stand:

- a. gilts are held for liability-matching purposes and therefore asset-only measures of gilt emissions may provide a misleading picture of the Fund's climate-related risks.
- b. total UK emissions data includes corporate and household as well as government's emissions, making it difficult to isolate government emissions only.

C.	proc
	emi
	carb
	aoo

The following metrics have been calculated by our LDI manager based on the total gilt exposure in the LDI portfolio as of 31 December 2022. As consistent methodology is not yet available, it is important to take notice of the sources, assumptions and approach used by our LDI manager based on their understanding and interpretation. In light of the limitations mentioned above, these emissions should not be aggregated with emissions data for other asset classes.

It is important to reiterate the risk of doublecounting emissions (i.e. corporate emissions might be recorded for gilt holdings as well as corporate bond holdings, due to the broad coverage of total UK emissions data mentioned previously) and the potential exclusion of 'imported' emissions. Additionally, with most asset classes, emissions data is released with a time lag; therefore, while our gilt exposure is as of 31 December 2022 the emissions are for 31 December 2021.

#### \* https://www.parisalignedassetowners.org/media/2021/03/PAII-Net-Zero-Investment-Framework\_Implementation-Guide.pdf (Page 14)

\*\* Provisional UK greenhouse gas emissions national statistics 2021-GOV.UK (**www.gov.uk**)

**Note:** Gilts posted out as collateral by the Fund are included in the gilt valuations, while gilts received as collateral are excluded. Interest rate swaps, inflation swaps, futures, cash, and money market/ fund holdings have all been excluded.

ype of posure	Gilts MV (£m)	Absolute emissions tCO2e (1,000)	
unded	9,797	1,913	
On repo 3,679 718			
Total	134,776	2,631	
Emi	ssions intensity	/ tCO2e/£m	
Dusands CO2e tonnesComposure(fm)tCO2e (1,000)VV gilts / MV gilts in e annual data for emissions d 2) as at 31 December oment**, of 424.5mFunded9,7971,913			
	djusted GDP		
<	posure unded in repo Total <b>Emi</b>	posure(£m)unded9,797n repo3,679Total134,776Emissions intensity185WACI tCO2e/GK\$m PPP-a	

#### **Estimated LDI GHG emission metrics**

cessing imported and exported carbon issions data (exporting countries retain bon responsibility for production, even if the goods are used elsewhere).

**Source:** Insight, gov.uk, Debt Management Office, IMF, Germanwatch CCPI, Climate Acton Tracker

#### Other asset classes

Calculating the carbon footprint and evaluating GHG emission metrics for asset classes other than listed equities and corporate bonds continues to be challenging since data disclosure across private companies remains particularly low. However, when discussing this with our external managers, we were provided reassuring messages as they all noticed a positive trend, especially among UK and European companies.

Having said this, the level of reporting remains low, and we will keep engaging with our managers on how to improve on this.

During 2022, we performed the carbon footprint analysis of all other asset classes via models and tools collaborating with our current provider (i.e., MSCI) to maintain consistency for estimation models.

Private equity, infrastructure debt, direct lending & leveraged finance During 2022, we worked with MSCI to obtain financed GHG emissions estimations for some of our private/illiquid portfolios. MSCI's estimations model follows the Partnership for Carbon Accounting Financials (PCAF) standards (details in Appendix 2).

We included in this analysis the following asset classes: private equity, infrastructure debt, direct lending, and global leveraged finance, which represented on aggregate 18.6% of the Fund AuM as of the end of 2022. This analysis was done as part of the broader exercise to understand the level of financed emissions for the Fund as of 31 December 2021 (the point in time we use as our baseline for our net zero ambition and overall climate metrics analysis) and in the second half of 2022.

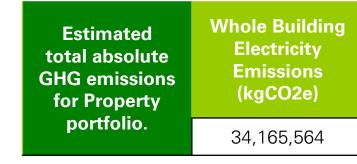
In performing this review across two different dates and running the models at different times we noticed, through our internal data quality review, that there was a substantial number of inconsistencies between results. We engaged with MSCI to understand this better and found that these inconsistencies were due to improvements made to the estimation model.

Although it was a very useful exercise, and we intend to run this on an annual basis, we believe reporting purely estimated GHG emissions metrics provides overall limited insight and can be misleading, given these metrics depend so much on the underlying models. This highlights a clear need for asset managers operating in private markets to push companies for better disclosure, and for data providers to provide timely and clear communications about any changes in the underlying methodologies. For us, this finding was a clear signal to refrain from disclosing GHG emission data based solely on estimations.

#### **Property**

Our property portfolio is managed internally by BPIM and combines the return-seeking (RSA) and liability-matching (LMA) properties portfolios. In our combined portfolio we have approximately 85 assets which are split between RSA and LMA funds, developments, and joint ventures. At the request of BPIM, in 2020 our property managing agent Jones Lang LaSalle (JLL) undertook the exercise to calculate the total emissions from the portfolio. Due to general market challenges in the data collection process, emissions were based on established market estimates based on the size and type of properties within the portfolio. JLL converted assumed kilowatt hour (kWh) usage into tons CO2 using the UK grid average, which gives an estimate of total portfolio emissions.

The table below summarises Scope 1, 2 and 3 emissions. Scope 3 emissions are shown under "Tenant Emissions" and represent c. 99% of all portfolio emissions.



Visual 14: JLL estimates of the property portfolio emissions

Whole Building Gas Emissions (kgCO2e)	Emissions	
23,507,945	33,933,185	23,396,050

### Additional climate change metric

#### **Data quality process metric**

Our third climate metric and last year's target concerned extending the preparatory work for the alignment metric to cover a higher proportion of our assets, which partly consists of evaluating the climate data quality process metric for more asset classes. During 2022, in addition to listed equities and developed market corporate bonds, we also assessed the climate change data quality process metric for emerging market bonds, private equity, infrastructure debt, direct lending and global leveraged finance portfolios. This has brought the coverage of this analysis from 27% to 42% of the Fund's investment on a like-for-like asset allocation basis when the target was set.

The table shows asset classes we covered as part of this analysis, which was done in the third quarter of 2022.

In 2022, Ortec Finance partnered with a new GHG emissions data provider to broaden the coverage of issuers and increase frequency of data updates among other reasons. This meant the underlying emissions data assumptions and methodologies we relied on for the preparatory portfolio alignment analysis were different between 2021 and 2022.

		Data quality SAA*			SAA*	Data quality process metric			
		Data		mission cope	as at	as at 31-Dec-21		as at 31-Dec-22	
Asset Class	Holdings as at	quality	1 & 2	1, 2 & 3	31-Dec-21	Covered	SAA %	Coverage	SAA %
Listed	05-Aug-22	Total coverage	100%	100%	7.0%	Yes	7.00%	Yes	7.0%
Equity		Estimated	23%	38%					
Corporate	05-Aug-22	Total coverage	80%	80%	20.0%	Yes	20.00%	Yes	20.0%
bonds DM		Estimated	58%	62%	20.070 103		20.0070		
Corporate	05-Aug-22	Total coverage	63%	63%	2.5%	No	-	Yes	2.5%
bonds EM		Estimated	55%	61%					
Private	30-Jun-22	Total coverage	97%	97%	5.0%	5.0% No -	No -	Yes	5.0%
Equity	00 0011 22	Estimated	97%	97%				100	
Leveraged	05-Aug-22	Total coverage	35%	35%	2.5%	No	_	Yes	2.5%
Finance		Estimated	35%	35%				100	
Infrastructure	30-Jun-22	Total coverage	100%	100%	2.5%	No	_	Yes	2.5%
Debt		Estimated	100%	100%					2.070
Direct	30-Jun-22	Total coverage	100%	100%	2.5%	No	_	Yes	2.5%
lending		Estimated	100%	100%				100	2.070
							27.0%		42.0%

**Visual 15:** Climate data quality process – Internal re-elaboration of Ortec Finance data. \* SAA – Strategic asset allocation Due to licensing restrictions of data, Ortec Finance is unable to share with us issuer level details on the quality of underlying data- i.e., whether it was reported, estimated or proxied. At a portfolio level however, the level of estimated data increased given a more stringent categorization of company data employed by the new provider who requires a minimum of three years of Scopes 1 and 2 disclosures for the data to be considered as reported.

As seen initially with MSCI data at the beginning of the Metrics pillar, listed equity remains the asset class with the best data quality. For all the other asset classes the need to estimate emissions and reduction pathways is substantial and signals the challenges the industry face when starting to consider forward looking metrics. Indeed, when compared to last year's results, it is surprising to note that use of estimations for both Scopes 1 and 2 and Scopes 1, 2 and 3 for listed equity and corporate bond has increased. This could potentially be due to Ortec's new emissions data provider requiring a longer time series to qualify data to be included within its reports.

The coverage of listed corporate bonds – both DM and EM – was also impacted by the change in emissions data provider, as we observed a change in approach to map certain bond issuers, sector classification (as seen above) and challenges in reconciling existing data to the Statistical Classification of Economic Activities in the European Community (NACE\*). More details of these differences can be found in the **Appendix 5**. The same issue applied to our global leveraged finance holdings.

We were particularly pleased to achieve a coverage well above 90% for our private equity holdings. Credit for this must be given to our data and analytics solution provider for this asset class, which provides sector details for almost all holdings and regularly reviews them to ensure changes in business operations – not infrequent for smaller companies – are captured.

What emerges from this review is that taking any investment decisions based on any individual climate metrics needs to be exercised with an utmost caution given the lack of quality in the underlying data. Nonetheless, we take the result of this analysis at its core value: there is a clear need of companies to invest more in programmes and tools to facilitate and enhance monitoring and reporting of GHG emissions which underpin many climate-related metrics. While the private sector clearly has a major role to play, regulators across jurisdictions need to set a clear and standardised framework for reporting emissions and support this with appropriate incentives. We will continue to work with our managers via engagement and raising awareness on this issue.

\*From the French term Nomenclature statistique des Activités économiques dans la Communauté Européenne, is the industry standard classification system used in the European Union.



#### **Alignment metrics**

While we appreciate the use of alignment metrics could help us understand the direction of travel regarding our net zero ambition and help us identify action points for engagement at issuer level, we are aware of the current limitations these indicators have and will be cautious on how to interpret their results.

The criteria on which the alignment metrics are derived are affected by a significant level of uncertainty\*. First and foremost, the very quantification of the carbon budget\*\* needed to establish the future emission pathways, so important for these metrics, is itself a challenging exercise. Its levels vary substantially\* and its estimations will evolve in the future as emission data becomes more widely available and the understanding of certain geophysical variables improves. Secondly, forecasting of impacts on emission level of future regulatory and technological developments and their implementations based on today's knowledge and expectations, is an even more complex and potentially guite unreliable.

#### **Binary alignment metric**

To maintain a simpler and more meaningful like-for-like comparison over time, we decided to report the binary alignment metric. This metric estimates the share of our holdings aligned with the different temperature thresholds, including those set forth in the Paris agreement based on whether their existing decarbonisation commitments have been externally verified and if the emission trend is aligned with those commitments. More details on the methodology are available in Appendix 4.

The lack of a standard way to quantify the carbon budget and define the decarbonisation pathways means that the results may vary substantially according to the provider/consultant one may partner with and how models will evolve over time. In future disclosures of this metric we will aim to provide details on methodological changes that may have driven the change in the result of this metric.

Our selected partner for this metric is Ortec Finance, with whom we have been working in preparation of this for over two years. The tool they developed to perform forward looking metric analysis is called ClimateALIGN.

Ortec's proposition focuses on the underlying decarbonization pathways developed using the renowned macro-econometric model E3ME from Cambridge Econometrics. Unlike the International Energy Agency's (IEA) scenarios, ClimateALIGN gives both broad and granular sector and geographic coverage and covers most asset classes. In addition to this, the scenarios used for this metric are consistent with what we used to report for the scenario analysis, which helps keep consistency when analysing results. We retain a positive view of Ortec's methodology.

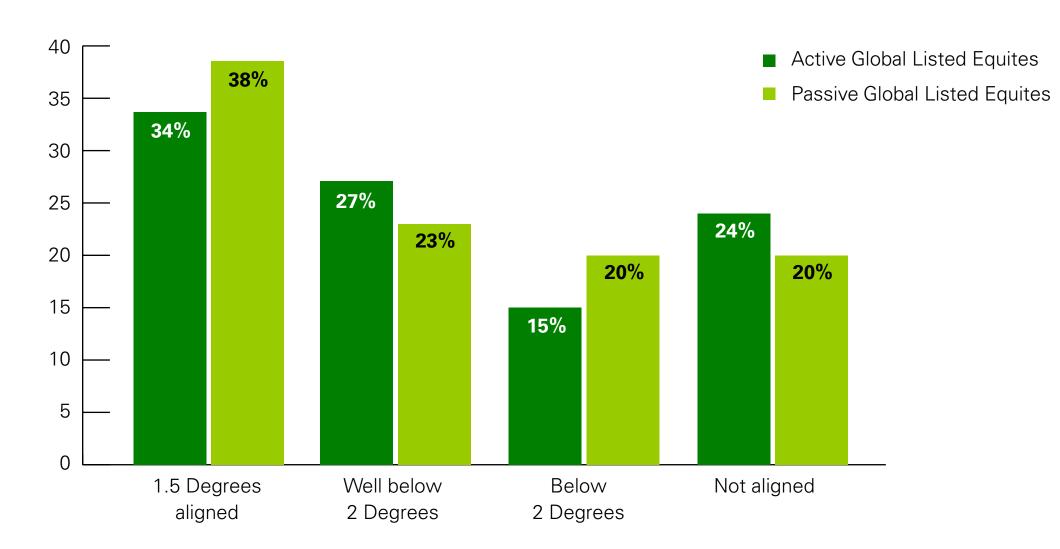
\* https://www.institutlouisbachelier.org/wp-content/uploads/2021/03/the-alignment-cookbook-a-technical-review-of-methodologies-assessing-a-portfolios-alignment-with-low-carbontrajectories-or-temperature-goal.pdf and Measuring Portfolio Alignment: Technical Report (2021)-TCFD Knowledge Hub (tcfdhub.org)

\*\*There is a near-linear relationship between cumulative CO2 emissions and the increase in global mean surface air temperature (GSAT) caused by CO2 over the course of this century for global warming levels up to at least 2°C relative to pre-industrial. Mitigation requirements over this century for limiting maximum warming to specific levels can be quantified using a carbon budget that relates cumulative CO2 emissions to global mean temperature increase. Several factors affect the precise value of remaining carbon budgets, including estimates of historical warming, future emissions from thawing permafrost, and variations in projected non-CO2 warming. IPCC Sixth Assessment Report, Chapter 5: Global Carbon and other Biogeochemical Cycles and Feedbacks | Climate Change 2021: The Physical Science Basis (ipcc.ch)

The level of issuers' alignment to the Paris Agreement goals is represented by two of the categories on the horizontal axis: well below 2 degrees and 1.5 degrees aligned.

- For active listed equities the estimates show that 61% of issuers are aligned to the goals of the Paris Agreement (34% are 1.5 degrees aligned, and 27% are well below 2 degrees aligned).
- For passive listed equities the estimates show that 62% of issuers are aligned to the goals of the Paris Agreement (38% are 1.5 degrees aligned, and 23% are well below 2 degrees aligned).

### Binary alignment metrics representing the level of alignment of listed equities issuers with the qoals of the Paris agreement



For the purpose of this report, considering the result of the data quality process analysis, we decided to limit the presentation of the binary target alignment metric to the listed equities asset class, as it is the only one with a sufficient level of reported data, which we believe helps to mitigate the uncertainties of this complex metric. As such, the chart below presents the binary metrics based on the ClimateALIGN methodology and underlying assumptions for both passive and active strategies within listed equities given they are managed to different benchmarks.

Visual 16: Binary alignment metrics for Listed Equities

Source: Ortec Finance based on their portfolio alignment methodology ClimateALIGN.

At present, we are not making any investments decisions on the basis of alignment metrics, given the uncertainties and limitations highlighted above. We have however started to use the binary alignment metric and its underlying data to identify companies and issuers which appear to be misaligned with the goals of the Paris Agreement and requesting our asset managers to initiate or strengthen relevant engagement strategies with those companies.

## Target

In line with the regulatory requirement, we are mandated to set at least one Fund-specific target in relation to at least one of the reported metrics, which does not conflict with our fiduciary duty, or the investment policies stated in the SIP.

Target for 2021 Climate Change report			
Climate data quality process metric	Metric as at 31 Dec 2021	Target for 31 Dec 2022	Metric as at 31 Dec 2022
The proportion of the Fund's investments by market value for which we carried out preparatory portfolio alignment analysis	27%	42%	42%

Visual 17: Climate data quality process metric – 2021 target

We believe that it is important to complete the preparatory alignment analysis of the climate data quality process metric we initiated last year and as such we target to cover this by analysis of all asset classes within the Fund. In practice this means covering two remaining asset classes, namely Property and LDI.

Target for 2022 Climate Change report		
Climate data quality process metric	Metric as at 31 Dec 2022	Target for 31 Dec 2023
The proportion of the Fund's investments by market value for which we carried out preparatory portfolio alignment analysis	42%	100%

As discussed in the Metrics pillar, we are aware of the intrinsic uncertainties around calculation of GHG emissions for more complex asset classes, and the same concern applies to a greater extent to the alignment metrics and underlying modelling assumptions. However, we recognise that this limitation should not prevent us from trying to understand better the underlying quality of data available across our entire portfolio and exploring methodologies currently available for property assets and sovereign bonds.

We think a thorough yet cautious analysis of our investments' alignment with the goals of the Paris Agreement is a necessary step towards meeting our net zero ambition. We believe having appropriate short, medium, and long-term targets can help to keep us on track in delivering our objectives. On the other hand, we believe disclosing values of alignment metrics that are highly volatile due to the development in modelling could be misleading, as they might be substantially different from real world values. Therefore, we will reconsider expanding the disclosure of this metric in the future when the quality of the underlying data will give us enough confidence to do so.

We will continue working closely with our asset managers to understand more about the implications of establishing any such targets, and consequences of doing so at both an individual asset class level as well as at the total Fund level and we are engaging closely with our managers, data providers and advisers to monitor any developments. Ultimately, a lot depends on the progress of individual investee companies in disclosing their emissions data and the robustness of their climate transition plan, as well as on the availability of credible alignment methodologies.

We review the selected metrics and related target on an annual basis. If they are deemed not fit for purpose, we will consider appropriate replacements.

Visual 18: Climate data quality process metric – 2022 target

## Looking ahead

Events during 2022 will likely continue to have ramifications on the world economy for the foreseeable future, also due to the changes to the geopolitical landscape and supply chain they introduced.

Nonetheless, the world's need to address the climate change challenges will become even more critical and strengthen as we get closer to 2030. The Sustainable Development Goals, adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure all people enjoy peace and prosperity, are to be achieved by 2030.

The Fund will continue to play its part in helping to achieve the goals of the Paris Agreement and will seek to enlarge the scope of its Net Zero Ambition to a broader set of asset classes. As anticipated through this report, in 2023 we will seek to expand our portfolio alignment analysis, consider additional climate stress scenario analysis, and seek to gain better understanding of the relationship between climate change and longevity.

In addition to this, we will strive to become a more active member of the associations and initiatives we joined while working with our managers to push for a much-needed improvement on the quality and availability of GHG emission data.

As a long-term investor, we will continue to put in our best efforts to balance the need to act on climate change related issues while recognising uncertainties of the current economic environment, inflation, longevity, and other crucial factors which may impact the transition pathway and our ability to pay member's benefits.

The ongoing dialogue with our advisers, asset managers, data providers, industry bodies and regulators, allows us to keep abreast of any relevant best practices, and ensure that the content of our climate change reports is reflective of our commitment and actions we take to contribute to real economy decarbonisation, while effectively managing the Fund's climate-related risks and opportunities.

We look forward to keeping you informed in future reports on the progress we made towards fulfilling our climate-related ambitions.



## **Climate Scenario Analysis**

In our last year's climate change report, we provided a detailed description and outcomes observed from the climate scenario analysis we performed in partnership with Ortec Finance. Below we include key information and observations from this exercise, and details of the three scenarios we used in our analysis.

We used different scenarios to explore probable futures temperature outcomes (even though they do not and cannot represent all potential futures) and identify investment risks and opportunities associated with the climate change impacts. This helped us strategically plan how to mitigate risks and capture opportunities.

Initial modelling results pointed to the overall climate resilience of the Fund's asset allocation, given its large allocation to gilts. However, we remain cognisant of the limits this long-term modelling has and will continue to develop and evolve our understanding with industry experts and in partnership with our advisers.

To assess the impact of climate change on the Fund's investment strategy, we looked at the results from the scenario analysis across three different time horizon, determined by the Fund's liabilities and its obligations to pay benefits.

Short term	Medium term	Long term
1 to 5 years	5 to 10 years	10 to 40 years
(2021 – 2026)	(2026 – 2031)	(2031 – 2060)

<b>Paris transition pathway</b> The path for GHG emissions is equivalent to the representative concentration pathway (RCP) 2.6 which has been set by the Intergovernmental Panel on Climate Change (IPCC)		<b>Failed transition pathway</b> The path for CO2 emissions is equivalent to the RCP 8.6 set by the IPCC	
Scenario 1: Paris orderly transition (POT)	Scenario 2: Paris disorderly transition (PDT)	Scenario 3: Failed transition pathway (FTP)	
The rise in global temperature stabilises well below 2°C and limits the increase in physical impact and the frequency and severity of extreme weather events. Ambitious policy regimes are pursued across the world to encourage greater decarbonisation of the electricity sector and to reduce emissions across all sectors of the economy. Global primary fuel demand decreases by about 30% by 2050 compared with 2020. The share of coal reduces by approximately 50% in the fuel mix, while the share of biofuels more than triples. Fossil fuels are largely phased out from power generation, and electric vehicles make up to 99% of the vehicle fleet by 2050.	This includes the same policy assumptions and technology trends as the POT, but the pricing of the energy transition and physical risks until 2050 takes place in a single year in 2025. This abrupt repricing of the assets causes an additional sentiment shock to the financial system in the same year in line with the 'inevitable policy response' scenario described by the EnergyTransition Advisors (ETA) and the UN PRI. Our current view on the size of the sentiment shock is equivalent to 30% of the worst losses experienced during the global financial crisis in 2008.	Global temperature keeps rising due to increasing emissions. By 2050, the planet is approximately 1.9°C warmer than pre-industrial levels and by 2100, it approaches 4°C of global warming. Rising temperature leads to severe physical impact on infrastructures and increasing frequency and intensity of extreme weather events. Policies are assumed to be a continuation of the existing policy regime with the same level of ambition. Global primary fuel demand increases by around 50% over the period from 2020 to 2050, while the share of different primary fuels remains relatively stable. Fossil fuel technologies remain responsible for the majority of electricity production. Coal comprises around 46% of total electricity generation and electric vehicles approximately 14% of the total vehicle fleet by 2050. Physical risks are priced in two successive shocks: for risk up to 2050, the physical priced-in shock occurs between 2026 and 2030, for risk between 2050 to 2100, the physical priced-in shock occurs between 2036 and 2040.	

### Financial impact at an asset class level

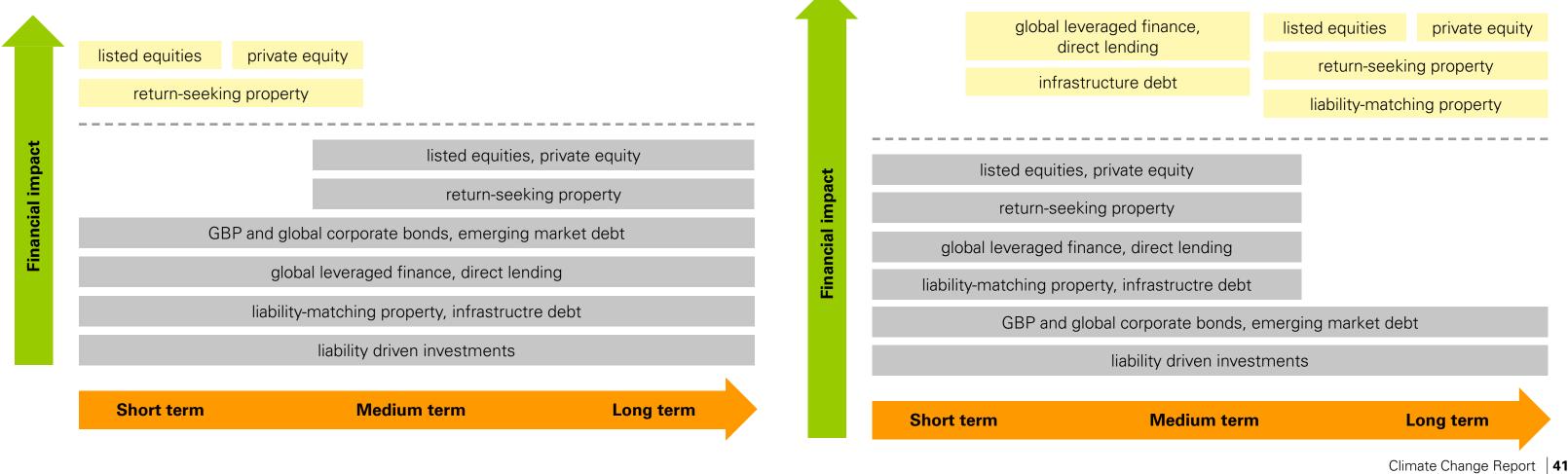
In general, the investment opportunities associated to climate change are driven by the transition to a low carbon economy. The impact of the energy transition on GDP is highly uncertain. There is a possibility that the energy transition could initially create a positive impact on GDP, driven by investments stimulus in low-carbon electricity generation.

Over the medium term, the combined effects of continued investment in energy-efficiency improvements and changes in real consumer incomes could also lead to a positive GDP impact.

We did not notice any clear benefits between asst classes, with opportunity associated with the energy transition lying more at country and sector allocation levels within the individual asset classes.

Overall, we found that in the short term, under a Paris disorderly transition (PDT) scenario, the impact from transition risks appears to be significantly more material for private equity, listed equities, and return-seeking property.

In the long term under a failed transition scenario (FTP) the financial impact from physical risk appears to be most material for private equity, listed equities, and return-seeking property as well as global leveraged finance, direct lending, liability-matching property and infrastructure debt.

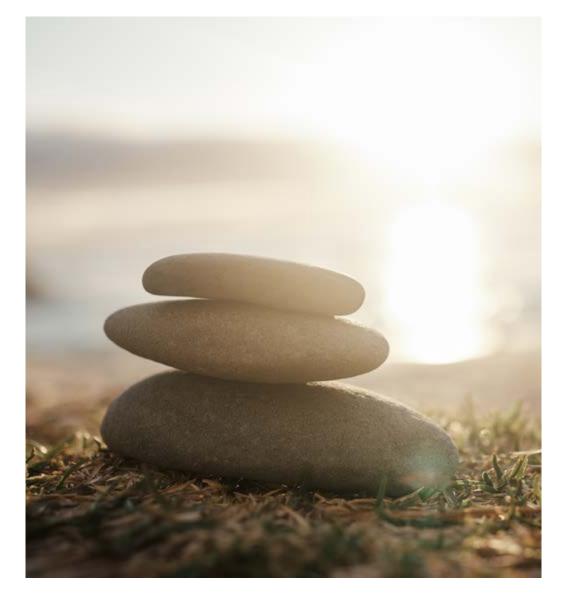


### Financial impact from transition risk

## Financial impact from physical risk

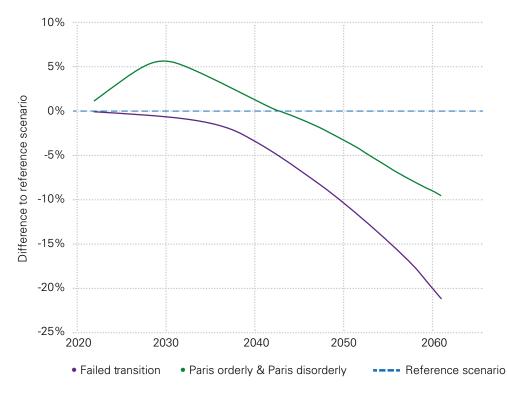
### **GDP** growth and global equity performance

To better understand the impact and resilience of our investment and funding strategy, we looked at the impact of climate change in isolation by representing results from each of the three scenarios in relative terms compared to a reference climate agnostic scenario\*.



### Difference in GDP level versus reference scenario

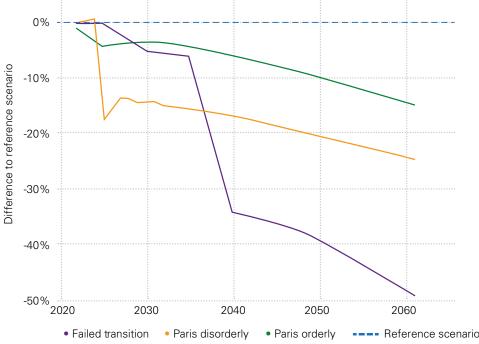
Over the long-term, the impact of climate change on the world's GDP is expected to be negative compared with the reference scenario under both the Paris and failed transition pathways, as shown in the chart. Please note that the world GDP growth paths under the Paris orderly and disorderly scenarios are the same.



**Source:** Ortec Finance. Cumulative impact, non-annualised versus baseline GDP scenario projection.

## **Difference in global equity performance versus** reference scenario

Although the energy transition could have a positive impact on GDP over the short to mediumterm, this is not expected to translate into a superior return for global equities compared with a climate agnostic scenario.



\*A climate agnostic reference scenario does not contain GDP and inflation shocks resulting from climate change. It is essentially not a plausible scenario, but it serves as a benchmark allowing to quantify the incremental impact of climate change in each of the modelled scenarios.

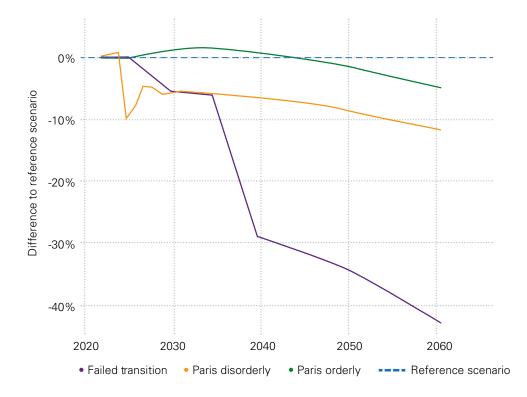
The following chart shows that the projected cumulated return for global listed equities is lower across all scenarios compared to the reference scenario, and the annualised return is lower by approximately-2.7% under the PDT scenario during the 2021 to 2026 period and by approximately-2.1% under the FTP scenario during the 2031 to 2041 period.

Source: Ortec Finance. Based on MSCI World Equity index cumulated return projections versus reference scenario.

## Notable impacts on the performances of other asset classes

The performance of return-seeking property is expected to be negatively impacted by climate change under the PDT and FTP scenarios, as shown in the chart. The annualised return is expected to be lower by approximately-1.6% under the PDT during the 2021 to 2026 period, and by approximately-2.8% under the FTP scenario during the 2031 to 2041 period.

## Difference in UK direct property performance versus reference scenario



**Source:** Ortec Finance. Based on MSCI UK property index cumulated return projections versus reference scenario.

Liability-matching property is expected to be more resilient than return-seeking property under the PDT scenario as the long-term nature of the rental contracts are expected to dampen the financial shock. Under the FTP scenario, we expect the physical risk to impact both the return-seeking and the liability-matching property portfolios in a similar way.

The private equity performance is expected to be severely impacted by the energy transition, particularly under the PDT scenario. The annualised return is expected to be lower by approximately -1.9% and-3.7% during the 2021-2026 period under the POT and PDT pathways respectively compared with the reference scenario. Over the long term, the private equity performance is expected to be severely impacted under the failed transition scenario with annualised returns expected to be down by around-4.9% during the 2031-2041 period.

As part of the investment strategy de-risking journey plan, the private equity allocation is expected to be reduced over the next two years, which is expected to further reduce the Fund's sensitivity to climate change risks.

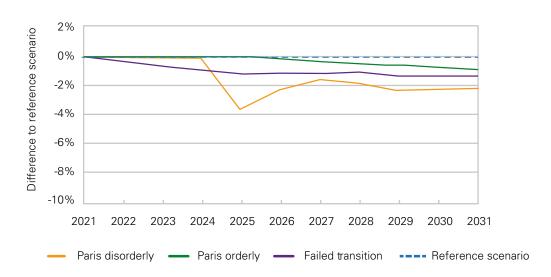
## Impact on funding level projections over the short and medium-term

Our findings from scenario analysis indicate that during the early phase of the energy transition, the Fund's expected return is lower by approximately 20 basis points (bps) and 30bps under the POT and PDT pathways respectively compared to a climate agnostic reference scenario. Afterwards, the negative impact on investment returns due to transition risk reduces as the Fund will have continued to de-risk its investment strategy.

Under the FTP scenario, the impact on the Fund's expected return is lower by approximately 10bps over the next 10 years, as physical risks increase only gradually over the period.

# Difference in funding level performance versus reference scenario over the short and medium-term period (2021 to 2031)

The chart shows the progression of the funding level under the three scenarios compared with the reference scenario over the medium term. The underlying funding levels are themselves projected to increase over time.



**Source:** Ortec Finance. Based on cumulated funding level projections versus reference scenario. Assuming a de-risking strategy targeting an approximate-40bps expected return by 2031.

Under both POT and PDT scenarios, the Fund's funding level progresses at a slower pace compared with the reference scenario funding level projections.

- Under POT scenario: the funding level is lower by 1% to 2% compared to the reference scenario by 2031.
- Under PDT scenario: the funding level impact is more pronounced when the assumed sentiment shock takes place in 2025 at approximately 4% lower versus the reference scenario and subsequently lower by approximately 2% to 3% by 2031.
- Under FTP scenario: the funding level is only approximately 1% below the reference scenario projected level by 2031.

### Impact on funding level projection over the long-term

Considering the impact of climate change on the Fund over the next 40 years, the Fund's average expected return is likely to be lower by around 10bps and 20bps under the POT and PDT scenarios respectively, compared with a climate agnostic reference scenario. The funding level impact compared to the reference scenario is expected to be lower by approximately 4% and 6% by 2060 under the Paris scenarios.

Under the FTP scenario, the Fund's average expected return is around -30bps lower with

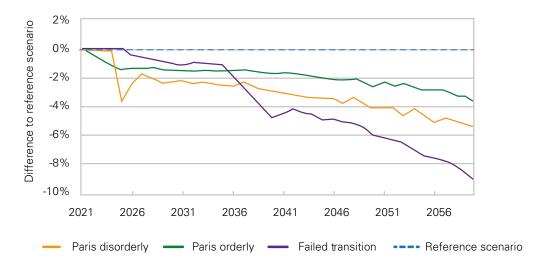
large priced-in shocks expected to occur over the medium term, leading to material differences in expected return versus the reference scenario. The funding level impact compared with the reference scenario is expected to be lower by approximately 9% by 2060.

The results of the funding level scenario analysis show that in the short term, the most severe potential impact on the funding level is a reduction of around 4% under the PDT scenario. By comparison, the funding level at the end of 2021 was 123% on the ongoing basis. While the results of any such analysis must be treated with caution, they support our expectation that the Fund would be sufficiently funded to sustain a potential disorderly transition shock similar to that envisaged in the PDT scenario.

Over the longer term, the projected funding level reduction of around 9% under the failed transition scenario appears to be limited in comparison to the funding level progression we can reasonably expect given our starting surplus position. Taking a pessimistic view of the funding level progression under the FTP the funding level is still expected to increase compared to the current position to 2031 and beyond.

In summary, our view is that the funding level appears to be resilient to the impacts of the three scenarios modelled while noting that there are inherent uncertainties involved in any long-term modelling.

## **Difference in funding level performance versus** reference scenario over the long-term period (2021 to 2060)



**Source:** Ortec Finance. Based on cumulated funding level projections versus reference scenario. Assumes a de-risking strategy targeting an approximate-40bps expected return reduction by 2031.

## Partnership for Carbon Accounting Financials (PCAF)

PCAF is a global partnership of financial institutions that work together to develop and implement a harmonized approach to assess and disclose the greenhouse gas (GHG) emissions associated with their loans and investments.

The Global GHG Accounting and Reporting Standard, developed by the PCAF Global Core Team, is comprised of three parts, A, B and C.

Part A – Financed Emissions provides detailed methodological guidance to measure and disclose GHG emissions associated with seven asset classes as well as guidance on emission removals: listed equity and corporate bonds, business loans and unlisted equity, project finance, commercial real estate, mortgages, motor vehicle loans and sovereign debt.

Part B – Facilitated Emissions provides methodological guidance for measuring and reporting the GHG emissions associated with the capital markets transactions; and

Part C – Insurance-Associated Emissions provides methodological guidance for measuring and reporting the GHG emissions associated to re/insurance underwriting. The first edition of the Financed Emissions Standard has been reviewed by the GHG Protocol and is in conformance with the requirements set forth in the Corporate Value Chain (Scope 3) Accounting and Reporting Standard, for Category 15 investment activities.

Notable collaborations with other initiatives include:

- United Nations Environment Programme Finance Initiative (UNEP FI) Principles for Responsible Banking and its Collective Commitment to Climate Action
- United Nations-convened Net-Zero Asset
   Owner Alliance
- Task Force on Climate-related Financial Disclosures (TCFD)
- Science BasedTargets initiative for Financial Institutions (SBTi-Fis)
- RMI's Center for Climate-Aligned Finance
- CDP
- European Commission Technical Expert Group on Sustainable Finance (EUTEG)
- The Institutional Investors Group on Climate Change (IIGCC)
- Paris Aligned Investment Initiative (PAII)



## **Greenhouse Gas Protocol**

GHG Protocol establishes comprehensive global standardized frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions.

The Protocol set forth three different classifications of GHG emissions:

- Scope 1: cover emissions from sources owned or controlled by a company/organisation – for example, emissions caused by direct combustion of fuel by the company in a manufacturing process.
- Scope 2: emissions caused by the generation of the energy, principally electricity, that a company uses. For example, emissions associated with the electricity used in cooling processes.
- Scope 3: all indirect emissions that occur in the value chain of the reporting company/entity, including both upstream (providers of goods and services) and downstream (users of the company's products and services).



Ortec Finance ClimateALIGN methodology was developed using open-source networks (OS-Climate\*).

It uses one consistent net-zero scenario across all alignment and risk-return analytics. ClimateALIGN generates an Implied Temperature Rise (ITR) score as a forward-looking portfolio net-zero alignment metric, which can be generated at portfolio, asset class, sector, country/region, and security levels.

Based on the ITR scores, Ortec also provides a TPI-style categorisation based on the following classification which allow us to maintain the Binary Alignment Measurement metric approach that we prefer with the increased coverage that we need.

- Net-Zero Aligned (<=1.5 degrees increase scenario).
- Well below 2 degrees (>1.5 and <=1.7 degrees increase scenario).
- Below 2 degrees (>1.7 and <=2 degrees increase scenario);
- Above 2 degrees scenario; and
- Not covered.

In line with TCFD recommendations, it uses a hybrid approach that both takes into account

historical emissions data and emissions reduction targets for the most holistic view of the company's alignment. As one of the inputs, Ortec Finance uses the SBTi's metric complementing it with historical data emission trends. When companyspecific emission data isn't available, ITRs are estimated based on companies in the same sector-region. We provide a brief overview of SBTi methodology further below.

At a high level, ClimateALIGN methodology follows five steps:

- 1. Allocate a company carbon budget based on net zero decarbonisation assumptions.
- 2. Project company emissions forward.
- 3. Compare company and sector-specific budget with projected company emissions to calculate overshoot/undershoot (%).
- 4. Converts emissions overshoot to implied temperature rise (ITR) in °C using aTCRE multiplier.
- 5. Aggregate company scores to a portfolio level.

The decarbonization pathways used in ClimateALIGN are based on the outputs of the Cambridge Econometrics E3ME model. The E3ME scenarios provide decarbonization benchmarks

for all relevant sectors, which enables us to use the convergence-based approach suggested by the Portfolio Alignment Team (PAT) in its TCFD considerations.

Uncertainties around the decarbonization pathways are not modelled explicitly at the moment, which is a feature shared with other alignment models in the market today. One key advantage is that ClimateALIGN shares the decarbonization pathways used in ClimateMAPS (used for our climate scenario analysis in the previous report). Under ClimateMAPS, uncertainty around the decarbonization pathways is addressed by exploring a range of different scenarios and sensitivity analyses. Explicit modelling of decarbonization pathway uncertainty is part of the product development roadmap.

To calculate the cumulative benchmark emissions for the company to be aligned to, and provide a convergence benchmark, ClimateALIGN applies a sectoral decarbonization approach (SDA) based on the sector, which is also used by the SBTi but using a different set of scenarios. Both the initial company-specific emission-intensity ratio and the projected trend in emission intensity ratios affects the calculated ITR. In this way, the ITR methodology allows for the progress a company

\*OS-Climate has 18+ members including Goldman Sachs, Allianz, BNP Paribas, EY, RedHat- a subsidiary of IBM, Net-Zero Asset Owner Alliance, AWS and Microsoft

is making (up to the present day) in decoupling economic value and emissions, and for the magnitude of decarbonization the company needs to make to meet the Net-Zero benchmark. This results in underperforming companies needing to reduce faster than average to be aligned (as the difference between the current emission intensity and the 2050 benchmark emission intensity), while high-performing companies can be aligned with a lower rate of reduction.

In the Net-Zero pathway, Ortec Finance models EU-style emissions trading scheme covering all world regions and most sectors (excluding passenger transport and households). The model uses many types of carbon policies in addition to the carbon price as a lever for the transition. Passenger transport and households sectors are assumed to have their own fuel tax which is equivalent to carbon pricing in other sectors. The model also assumes steeply growing carbon prices for all regions covering all fuel users. In the Net-Zero pathway, carbon prices grow steeply for all regions covering all fuel users, yet the modelled carbon price differs by region.

### Science Based Targets initiative (SBTi)

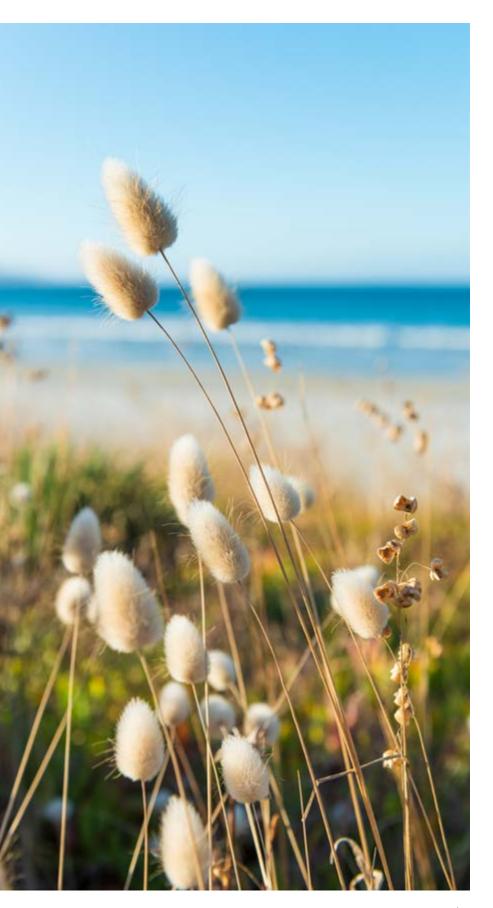
The Science BasedTargets initiative (SBTi) defines and promotes best practice in emissions reductions and net-zero targets in line with climate science, offers technical assistance and resources to companies who set science-based targets in line with the latest climate science, and provides companies with independent assessment and validation of targets.

It is a voluntary initiative and, at the moment, around 4000 corporate and non-corporate issuers worldwide have SBTi verified targets.

SBTi's validation process looks at both qualitative and quantitative metrics; the former group includes factors such as organisational boundaries, targets' scope coverage and timeframe. The later one is based on three pillars: carbon budget, emissions scenario, and allocation approach.

SBTi scenarios are drawn primarily from the Integrated Assessment Modelling Consortium (IAMC) and the International Energy Agency (IEA). The chosen GHG budget is secondary to emissions scenarios themselves, which provide more relevant information such as reduction rates over time. However, the two elements are closely related, as most emissions scenarios rely either directly or indirectly on a GHG budget. The SBTi incorporates the concept of a GHG budget into its assessment criteria for different emissions scenarios and allocation approaches.

With regard to the Allocation Approach, the SBTi endorses issuers to use the Sectoral Decarbonization Approach (SDA), which employs the International Energy Agency Energy Technology Perspectives (IEA ETP) sector budgets, for physical intensity targets and the absolute contraction approach for absolute targets.



## Data quality process metric

The following points aim to explain the reasons behind reduction in data coverage with respect to developed markets corporate bonds which we covered as part of the preparatory portfolio alignment analysis.

## 1. Use Parent company ITR – coverage reaches 84%

Using parent company ITR scores is a common approach in the industry, especially for modelling financing arms.

### 2. Estimate ITR based on NACE Class codes provided – coverage reaches 85%

This affects 7 instruments in the portfolio. With the recent model updates these instruments can be estimated by sector/region average ITR score.

## 3. Mapping IVA Industry data to NACE/GICS codes – coverage reaches 93%

Our portfolio data includes IVA industry column. In the absence of NACE/GICS codes, IVA industry is a good secondary source of sector information. If mapped to NACE/GICS codes, these instruments will display the sector/region average ITR score.

## 4. Mapping Sector Data to NACE/GICS codes – coverage reaches 100%

Achieving the last 7% requires manually mapping 62 issuers to corresponding NACE codes.

This step would require more involved mapping and expert judgment.

Once mapped to NACE/GICS codes, these instruments will display the sector/region average ITR score.



## Glossary

We have tried to limit the use of technical terms as much as possible in this climate change report, produced by the BP Pension Fund, providing explanations where appropriate. However, here is a list of some of the terms you might need to know.

Asset Managers	our external asset managers and our internal asset manager, BPIM	Emerging Market	list of market
Board	Board of directors of the Trustee		of a develope
BP Investment	our internal asset manager	ESG	environment,
Management Limited		ETA	EnergyTransi
(BPIM)			Enterprise Va
CDP	CDP (formerly Carbon Disclosure Project) is a not-for-profit	EVIC	Capitalization
	charity that runs the global disclosure system for investors,		and the book
	companies, cities, states, and regions to manage their		deductions of
	environmental impacts	Executive management	the Trustee m
Climate change	our internal framework implementing climate change governance	team	
governance framework	in line with the Climate Change Regulations	FTP	failed transitio
Climate change policy	our climate change policy adopted by the board	Fund	BP Pension F
<b>Climate Change</b> the Occupational Pension Schemes Climate Change Governance		GBP	British pound
Regulations	and Reporting Regulations 2021	GDP	gross domes
	the supreme governing body of the United Nations Framework	GHG	greenhouse g
Conference of Parties	Convention on Climate Change (UNFCCC) composed of		
(COP)	representatives of the member states of the convention and accredited observers	GtCO2	gigatons of C
	a type of pension scheme under which an employer or Sponsor		metric tons, e
	promises employees a specified pension payment, lump-sum, or	GVA	gross value a
Defined benefit (DB)	a combination of these on retirement. The benefit is calculated	ICSWG	Investment C
	by a formula based on the employee's earnings history, tenure of	IGCC	The Institutio
	employment and age	Intergovernmental	the intergove
Developed markets	list of high-income markets linked to countries with most	Panel on Climate Change	advance scier
	advanced regulations and capital markets structures. List differs	(IPCC)	human activit
	slightly according to each index providers methodology		a committee
DWP	Department for Work and Pensions	Investment Committee	matters
EBITDA	earnings before interest, taxes, depreciation, and amortisation	IRM	integrated ris

ets associated countries that has some characteristics ped market, but does not fully meet the standards

nt, social and governance

sition Advisors

Value Including Cash is the sum of the Market on of ordinary and preferred shares at fiscal year end ok values of total debt and minorities' interests. No of cash or cash equivalents are made

management team delegated duties by the board

ition pathway as described further in Appendix 1

Fund

nd sterling

estic product

gas emissions

CO2; one gigaton is equal to 1,000,000,000 (1 billion) each metric ton is equal to 1,000 kilograms (kg)

added

Consultants Sustainability Working Group

ional Investors Group on Climate Change

vernmental body of the United Nations tasked to ientific knowledge about climate change caused by vities

e delegated by the board to focus on investment

risk management

LDI	liability driven investment
Members	the members of the BP Pension Fund
MSCI ACWI Index	selection of large- and mid-cap stocks across 23 developed and 24 emerging markets
Paris Agreement	the international treaty on climate change, adopted in 2015 during the 21st Conference of Parties (COP 21)
PDT	Paris disorderly transition pathway as described further in <b>Appendix 1</b>
РОТ	Paris orderly transition pathway as described further in <b>Appendix 1</b>
Radiative forcing	energy flux in the atmosphere measured by watts / meter <sup>2</sup> . Positive radiative forcing means Earth receives more incoming energy than it radiates to space
Report	this climate change report
Representative Concentration Pathway (RCP)	atmospheric greenhouse gas concentration (not emissions) trajectories adopted by the IPCC. They are labelled after a possible range of radiative forcing values in the year 2100 (2.6, 4.5, 6, and 8.5 W/m2)
<b>RI Policy</b>	our responsible investment policy adopted by the board
Science Based Target Initiative	initiative was established to help companies set emission reduction targets in line with climate science and Paris Agreement goals
Statement of Investment Principles (SIP)	A legally required document for pension schemes that comprises a written statement of the investment principles governing decisions about investments.
Sponsor	BP p.l.c.
TCFD	Task Force on Climate-related Financial Disclosures
TPR	the Pensions Regulator
Trustees	BP Pension Trustees Limited, corporate trustee of the BP Pension Fund
United Nations Framework Convention on Climate Change (UNFCCC)	international environmental treaty to combat human interference with the climate system
UN PRI	UN Principles for Responsible Investment
Volatility (vol)	variation of a security's trading price series over time

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## Important information

The information contained in this report may cover general activity on stewardship, investments, voting, responsible investment, climate, ESG, including opinions, prospects, results, forward-looking statements. Use of forward-looking terminology using words such as 'may,' 'believe', 'aim', 'will,' 'should,' 'expect,' 'anticipate', 'seek', 'intend', or the negatives thereof or other variations (together, 'forward-looking statements') are not a reliable indicator of performance of the Fund. There can be no assurance that any of the matters set out in these forward-looking statements are attainable, will actually occur or will be realised or are complete or accurate.

The Trustee has prepared this report for the Fund based on internally developed data, publicly available information, and third-party resources with whom it has contractual relationships. Although we believe the information obtained from third party sources to be reliable, it may not be independently verified, and we cannot guarantee its accuracy or completeness.

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