

**THE
BRITISH STEEL
PENSION SCHEME**

**CLIMATE CHANGE REPORT
FOR THE YEAR TO 31 MARCH 2022**

OCTOBER 2022

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INTRODUCTION

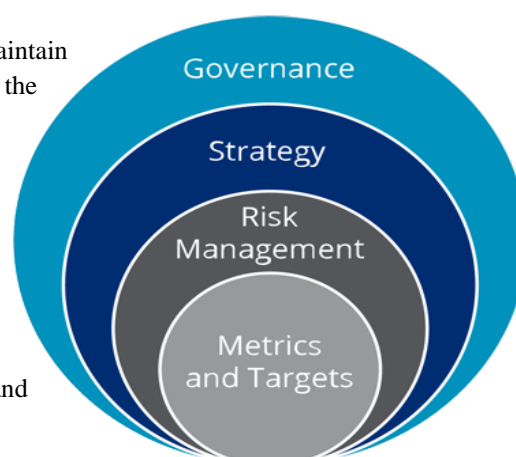
Climate change presents one of the biggest economic and political challenges of the 21st century. The Trustee believes that it is incumbent upon asset owners to take the necessary steps to ensure climate-related risks and opportunities are properly considered when investing the assets over which they provide stewardship. Not only will this lead to positive impacts for the planet and wider society, but it will drive better financial outcomes and enhance the ability of the Scheme to deliver the benefits promised to members.

The Trustee has devoted significant time and attention over the past 18 months to understanding this subject matter and the new obligations placed on it by pension scheme regulations.

This Climate Change Report provides information about how the Trustee has considered climate-related risks and opportunities and how these will be managed as part of delivering on its ultimate objective of securing member benefits.

The Trustee is required to produce formal Climate Change disclosures annually in line with the recommendations of the Task Force on Climate-related Financial Disclosures (*TCFD*). The Scheme is subject to these requirements with effect from 1 October 2021, and this is the Scheme's first Climate Change report covering the period to the Scheme year end date of 31 March 2022. This report follows the TCFD's framework to provide disclosures in four broad categories:

- **Governance:** the arrangements that have been put in place to maintain oversight of the climate-related risks and opportunities relevant to the Scheme
- **Strategy:** consideration of the potential impact of climate-related risks and opportunities on the Scheme's investment strategy and funding strategy
- **Risk management:** how the processes used to identify, assess and manage climate-related risks are integrated into the Scheme's overall risk management approach
- **Metrics and targets:** the metrics and targets used to assess and manage climate-related risks and opportunities.



GOVERNANCE

The Trustee is ultimately responsible for decisions on all investment matters, which includes ensuring climate-related risks and opportunities are properly integrated into the Scheme's risk management framework. The Audit and Risk Committee (*ARC*) led much of the preparatory work on the Trustee's behalf, to understand the requirements of new legislation and develop the Scheme's approach to climate risk management.

As described in section 3, the Scheme has a detailed Integrated Risk Management (*IRM*) Policy which sets out how the various risks to which the Scheme is exposed are assessed and managed. Climate risk has been explicitly incorporated into this framework as a key risk for the Scheme.

It is anticipated that the *ARC* will continue to lead consideration of this matter, reporting back to the Trustee as appropriate. This will include reviewing the results of the quantitative analysis of climate scenarios described in section 2, monitoring various climate risk metrics versus the agreed targets set out in section 4, and preparing this annual Climate Change Report. The Trustee will provide the necessary oversight of the responsibilities delegated to the *ARC* and will approve the Climate Change Report before its publication.

The Trustee, through the *ARC*, has considered how those parties to whom governance activities are delegated or who provide advice or assistance to the Trustee, take into account climate-related risks and opportunities. The Trustee expects its appointed investment managers to have integrated Sustainable Investment considerations (including climate risk) into their investment analysis and decision-making processes and, where relevant, when exercising voting rights.

The majority of the Scheme's assets are managed by Pension Services Limited (*PSL*), the Trustee's in-house investment manager. The Trustee meets regularly with *PSL* and as part of its ongoing engagement has explored how climate-related risks and opportunities are taken into account in the selection, retention and realisation of assets. *PSL* has also supported the Trustee in meeting its reporting obligations, by analysing the Scheme's exposure to the various climate risk metrics.

During the year, the Trustee outsourced the management of some of the Scheme's assets to Legal and General Investment Management (*LGIM*). *LGIM*'s Sustainable Investment practices, including climate risk management, as assessed by *WTW*, were taken into account when appointing *LGIM*. In addition, specific requirements to monitor and manage the carbon emissions from the assets under their management, are incorporated in the Investment Management Agreement in place with *LGIM*. The Trustee expects to follow a similar process if it decides to outsource the management of additional parts of the Scheme's portfolio.

The Trustee has been supported by *WTW* in developing its approach to climate risk management. The Trustee has reviewed *WTW*'s Sustainable Investment (*SI*) policy and annual report, which sets out in detail how *SI* considerations, including climate risk, are integrated into *WTW*'s investment process (which encompasses all elements of investment advice provided to clients). The Trustee has set investment objectives for *WTW* as its investment consultant, and it assesses *WTW* against these objectives on an annual basis. An objective has been added related to the support provided to the Trustee in relation to climate risk management.

The Trustee also receives advice or assistance on governance activities from a range of other providers including Steffan Francis (its independent Property Advisor), Penfida (Covenant advisor) and LCP (settlement transactions advisor). The Trustee, through engagement with these providers, is satisfied that they take account of climate-related risks and opportunities, where relevant to the advice or assistance being provided. The Trustee formally reviews the service it receives from all providers on an annual basis, and the providers' continued ability to take account of climate-related risks and opportunities will form part of these reviews.

The Trustee has also focused on embedding climate considerations within the Scheme's wider integrated risk management framework, which is aligned with the regulatory direction of travel set by The Pension Regulator.

The Scheme Actuary fed into the liability assumption used within the scenario analysis conducted by WTW and set out in the next section. The description of the scenarios was also shared with the Scheme's covenant advisor, to consider how these may impact on the sponsor covenant. This helps ensure that a coherent approach is being followed by the different Scheme advisors.

STRATEGY

The Scheme's investment strategy is primarily focused on delivering the cashflows needed to pay member benefits, in a low risk, secure manner. The Scheme has a significant exposure to longer dated assets, including credit and real assets, to provide these cashflows.

The Trustee believes that climate change is a financially material consideration that will have significant influence on the future success of companies and their ability to service debt, and consequently of the security of cashflows and asset values. As such, climate-related risks have the potential to impact all investment strategies and mandates, across both long- and short-time horizons.

The Trustee has considered the potential effects of climate change over a range of time horizons for the Scheme using 31 March 2021 as the baseline, being the start of the Scheme year during which the Climate Change Reporting requirements came into effect for the Scheme.

- **Short term** – While both transition and physical risks (described below) are expected to be borne out over longer time periods, it is possible that potential future outcomes get priced into markets over a shorter period. Part of the analysis undertaken considered the impact on the Scheme over a 1-year period of the market repricing in this way.
- **Medium term** – The period to 2030, over which the Trustee has defined its interim target for reducing its Carbon Intensity metric, as detailed in Section 4.
- **Long term** – The period to 2050, over which the Trustee has set a long-term net zero target for the Scheme, as set out in Section 4.

As part of its analysis around the climate-related risks faced by the Scheme, the Trustee has split out the following elements of risk:

- **Transition risks.** This relates to the risks and opportunities arising from efforts made to transition towards a net-zero economy (both domestically and globally) to limit climate change. These risks and opportunities are generally expected to occur in the medium term, with some perhaps occurring in the short term. Risks arising could include regulatory or societal changes making parts of the business of invested companies worthless – for example, fossil fuels 'in the ground' which become economically unviable to extract due to a lack of a suitable market or due to regulations preventing their extraction. Opportunities include early investment in assets which are likely to benefit from climate change adaptations, such as green energy providers.
- **Physical risks.** This relates to the direct effects of climate change on the Scheme and its members. These risks are expected to be longer-term in nature and limited in scope to the effects of climate change-related weather and other natural events on the businesses of invested companies, and the effect of changing temperatures on the mortality of Scheme members. These could have varying effects on the investment strategy of the Scheme, but the direction and size of the effects is unlikely to be clear for a considerable period of time.

WTW conducted scenario analysis for the Trustee, to quantify the potential effects of climate change on the Scheme's assets and liabilities. Input was also received from the covenant advisor on the potential impact of these same scenarios on the Scheme's sponsor.

Four separate scenarios were considered which are in part defined through their success, or otherwise, in meeting the Paris Agreement target of a sub-2.0°C temperature rise.

These scenarios are summarised below.

	Least Common Denominator (LCD)	Global Coordinated Action (GCA)	Inevitable Policy Response (IPR)	Climate Emergency (CE)
Description	A “business as usual” outcome where current policies continue with no further attempt to incentivise further emissions reductions. Socioeconomic and technological trends do not shift markedly from historical patterns.	Policy makers agree on and immediately implement policies to reduce emissions in a globally co-ordinated manner. Companies and consumers take the majority of actions available to capture opportunities to reduce emissions.	Delays in taking meaningful policy action result in a rapid policy shift in the mid/late 2020s. Policies are implemented in a somewhat but not completely co-ordinated manner resulting in a more disorderly, but still just, transition to a low carbon economy.	A more ambitious version of the Global Coordinated Action scenario where more aggressive policy is pursued and more extensive technology shifts are achieved, in particular the deployment of Negative Emissions Technologies at scale.
Temperature rise	~3.5°C	~2.0°C	~2.0°C	~1.5°C
Renewable energy by 2050	30-40%	65-70%	80-85%	80-85%
Physical risk level	High	Low	Low	Low
Transition risk level	Low	Low	High	Low

These scenarios have been considered as they cover a plausible and sufficiently broad range of climate outcomes over the long term. The approach taken in constructing the scenarios involved the following components:

- A clear transition narrative that describes the socioeconomic pathway, both globally and regionally, from climate policies implemented and resulting in technological and societal shifts that occur.
- Modelled emissions pathways, (typically communicated using the Representative Concentration Pathways developed by the IPCC) resulting from the implementation of public policies and technologies resulting in the level of temperature rise.
- A set of economic costs and benefits resulting from physical and transition risks and opportunities.
- The impact on financial returns at the asset class level.
- The scenarios differ in the size of the physical risks, based on the resulting temperature impacts, but also in the size of the transition risks. For example, the Climate Emergency scenario, where decisive action is taken, and the Inevitable Policy Response scenario, where transition is more disorderly due to delays in meaningful action, represent bigger transition risks than the Global Coordinated Action scenario, which reflects a more managed response to tackling climate change.

Whilst there were no issues with the data or its analysis which have limited the comprehensiveness of the assessment of the scenarios, the Trustee recognises that (as with any longer-term modelling) there is significant uncertainty around the assumptions used, and the expected outcome, under each of the scenarios.

Summary of the results of the climate risk scenario analysis for the Scheme

In the base case projection, it would take the Scheme approximately 11 years to achieve its financial objective of reaching a funding level of 103% on a buy-out basis (i.e., the equivalent basis used by an insurer to secure the liabilities of the Scheme).

The analysis identified that three of the four scenarios considered are expected to have a negative effect on the expected timeframe for achieving the Scheme's financial objectives.

The most pronounced impact was in the "Global Coordinated Action" scenario – extending the expected timeframe by more than 4 years.

By contrast, it was identified that the "Lowest Common Denominator" scenario is favourable for the funding level (with longevity improving significantly less than current expectations), however this scenario is most harmful to the climate in the long term.

The severity of the impact depends, to a large extent, on whether climate risk manifests gradually over time, or through a short-term repricing of markets. If the former occurs, the impact on the Scheme is considered to be a relatively modest extension in the expected timeframe to reaching the target level of funding. A more sudden market repricing however, could lead to a fall in the funding level by around 8% in some scenarios, from which it could take much longer to recover.

Potential covenant impact

Given the nature of the sponsor's business, climate risks are likely skewed to the downside. However, the sponsor covenant is already regarded as an important risk by the Trustee under the IRM Policy, and the Trustee actively seeks ways of reducing the Scheme's longer-term reliance on the continued support from the Sponsor. While climate risk is an additional factor which feeds into the assessment of the covenant, it does not fundamentally change the Trustee's approach to considering and managing this risk.

Funding strategy

The Scheme is not in receipt of contributions from the sponsor and its low risk, cashflow focused investment strategy is designed to minimise the risk that any funding will be required in the future.

Overall Scheme resilience

Ultimately, the Trustee considers that the Scheme's investment strategy is resilient to the potential impacts of the climate scenarios based on the analysis undertaken. The Scheme's funding level is strong and the relatively low risk investment strategy mitigates the potential impacts.

While a sudden repricing of climate risks would have a more meaningful impact on the Scheme's financial position, the magnitude of the impact is not expected to prevent the Scheme from achieving its financial goals in the medium term (albeit that it would extend the time period by a number of years).

RISK MANAGEMENT

The Trustee operates a robust IRM framework which identifies the key risks to which the Scheme is exposed and for the most important risks, set out how the risks are defined, measured, mitigated and monitored.

Climate risk has been explicitly added to the framework (having previously been a component of a broader Sustainability and ESG risk) and identified as one of the most significant risks for the Scheme. The processes used to identify and manage these risks include:

- Calculation and reporting of a range of climate risk metrics, and the adoption of a Carbon Journey Plan which seeks to reduce the Scheme's 'Carbon Intensity' metric over time, as described further in section 4.
- Provision of scenario testing and stochastic modelling, as described in section 2.
- Consideration of the impact of climate risk on the sponsor
- Over time, reducing the Scheme's exposure to assets likely to be more affected by climate risk, and increasing exposure to assets which might benefit from the transition to a lower carbon economy. For example, there is a planned reduction in the exposure to the Scheme's Global Listed Infrastructure Equities allocation, which is an area of the portfolio which contributes significantly to the Scheme's carbon metrics.
- Engaging with the Scheme's managers on a regular basis to explore their approach to climate risk management and seek to increase the pace of decarbonising, either through their portfolio management decisions or their engagement at the underlying security level.

The Trustee reviews its IRM Policy on an annual basis and will consider whether any changes to how climate-related risks and opportunities are identified, assessed and managed are warranted as part of these annual reviews.

METRICS AND TARGETS

Carbon emissions are classified per the Greenhouse Gas Protocol (*the GHG Protocol*) and include:

- i.) Carbon Dioxide (CO₂)
- ii.) Methane (CH₄)
- iii.) Nitrous Oxide (N₂O)
- iv.) Hydrofluorocarbons (HFCs)
- v.) Perfluorocarbons (PFCs)
- vi.) Sulphur Hexafluoride (SF₆)
- vii.) Nitrogen Trifluoride (NF₃)

A carbon dioxide equivalent or CO₂ equivalent, abbreviated as CO₂e, is a metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (*GWP*), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

As per the GHG Protocol, emissions of these gases are grouped in three categories known as Scope 1, Scope 2 and Scope 3:

- Scope 1 carbon emissions are those directly occurring from sources that are owned or controlled by the institution.
- Scope 2 carbon emissions are "indirect emissions generated in the production of electricity consumed by the institution".
- Scope 3 carbon emissions encompass all other indirect emissions that are "a consequence of the activities of the institution, but occur from sources not owned or controlled by the institution" such as commuting; waste disposal; embodied emissions from extraction, production, and transportation of purchased goods; outsourced activities; contractor-owned vehicles; and line loss from electricity transmission and distribution".

As per the GHG Protocol, Scope 3 carbon emissions can be classified into two broad categories:

- Upstream Scope 3 emissions: defined as indirect carbon emissions related to purchased or acquired goods and services; and
- Downstream Scope 3 emissions: defined as indirect carbon emissions related to sold goods and services.

The Trustee has elected to calculate the various emissions metrics, as far as it is able, allowing for scope 1, 2 and 3 emissions.

The Trustee is required to report on a minimum of 3 metrics:

- i.) An absolute measure of emissions.
- ii.) An emissions intensity metric that normalises the portfolio emissions per revenue, sales or million invested.
- iii.) An additional metric that assesses climate-related risks.

In order to comply with the recommendations, the Trustee is committed to monitoring and reporting on the following metrics:

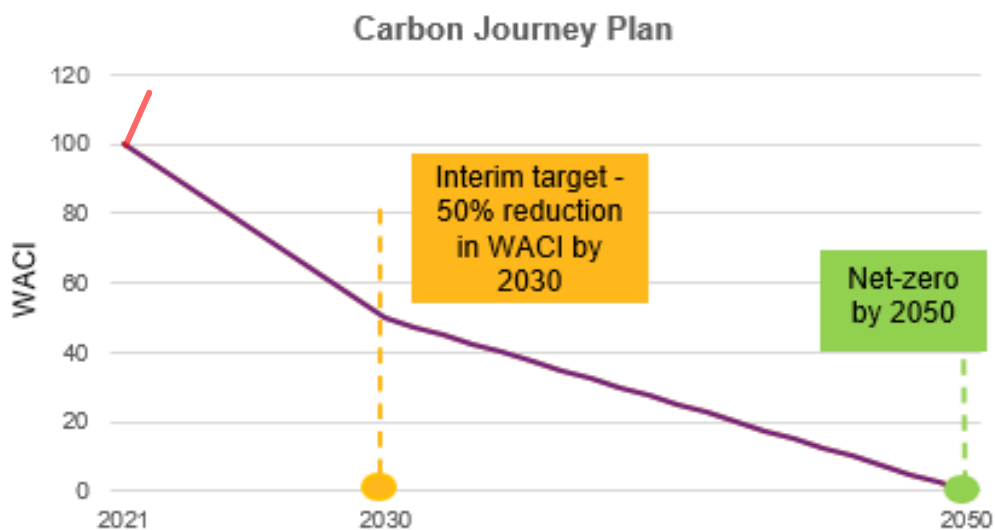
- **Absolute GHG emissions** (including Scope 1, Scope 2 and Scope 3) of the Scheme's assets: The absolute metric is the total carbon emissions associated with the portfolio expressed in tonnes of CO₂e. For this metric, an investor with 5% ownership of a company's enterprise value will also be attributed 5% of the company's carbon emissions. The enterprise value is defined as enterprise value including cash (EVIC).
- **Weighted Average Carbon Intensity (WACI)**: The weighted average carbon intensity metric normalises the total carbon emissions per million of sales at the portfolio level.
- **Climate Value-at-Risk (CVaR)**: The Climate VaR metric helps investors to better assess potential future costs and/or profits relating to their portfolio's exposure to future climate change. Expressed in percentage change of market valuation, this metric is the aggregate of projections to 2100 of transition cost, physical cost and profit.
- **Warming Potential**: Alongside the CVaR, this MSCI proprietary metric translates the carbon intensity into an implied temperature increase. The Warming Potential metric establishes a forward-looking contribution to global warming.
- **Exposure to Green Bonds**: A green bond is a bond specifically earmarked to be used for climate and environmental projects. These bonds are typically asset-linked and backed by the issuer's balance sheet and are also referred to as climate bonds.

An open consultation requiring a 'portfolio alignment' metric as a fourth metric to be measured has recently been concluded. The CVaR and Warming Potential are portfolio alignment metrics that would ensure compliance with the revised requirements. The Trustee will review the suitability of the climate metrics it monitors on an ongoing basis, in light of emerging regulation, data improvements and as the industry evolves.

The Trustee's chosen data provider for calculating these metrics is MSCI due to the high coverage, multi-asset class, market leader status and availability of Scenario Analysis within its solutions.

As part of integrating climate risk into the Scheme's IRM framework, the Trustee has agreed to establish a Carbon Journey Plan (*CJP*) as a means of monitoring and managing the carbon exposure of the Scheme's assets over time. The CJP, which is illustrated in the chart below, is constructed as follows:

- It uses the WACI as the metric against which a target has been set
- It starts the measurement from a baseline date of 31 March 2021 (being the start of the Scheme year in which the new requirements first apply)
- It has a longer-term target of reducing the WACI to zero by 2050.
- It has a medium-term, interim target of reducing the WACI by 50% by 2030.



■ Actual observed WACI for the last year from March 2021 to March 2022

Summary of calculated metrics

Metric	31 March 2022	31 March 2021	Change
Absolute GHG emissions (metric tonnes of CO ₂ e)	50.7m	47.7m	+3m
WACI (tonnes/million \$ of sales)	979	836	+143
CVaR (% of investment value)	-8.94%	-8.58%	+0.36%
Warming Potential	3.24 degrees C	3.25 degrees C	-0.01 degrees C
Exposure to Green & Sustainable bonds (% of Fixed Credit portfolio)	5.3%	2.3%	+3%

In calculating the metrics above, the following asset classes have been considered:

- Global Listed Infrastructure Equities
- Credit (fixed & index-linked)
- Outsourced Credit mandates (for Warming Potential and WACI)

Whilst the analysis undertaken is intended to cover the level of emissions associated with the Scheme's asset portfolio as accurately as possible, this is a developing area, which currently gives rise to several limitations:

- The industry is yet to formalise an approach for calculating the carbon emissions associated with gilts. For this analysis, we have disregarded the proportion of the portfolio that is invested in gilts and the LGAS buy-in insurance policy – this approach is aligned with the industry practice. The quality and breadth of data is lower for private companies and the coverage across different asset classes varies significantly, particularly within less liquid mandates. As such, we have excluded the property exposure from the calculation of these metrics.

As data and methodologies improve, and regulations evolve, the Trustee will further reflect developments within the calculation of the reported carbon metrics.

The increase in the value of GHG emissions in absolute terms is reflective of the increased data coverage across the portfolio. This is not unusual within the industry, particularly as data and methodologies further improve. The increased data coverage is expected to result in fluctuations within the calculation of the WACI – namely, the value of this metric increased from 2021 to 2022. The Trustee will keep monitoring the trends arising from the calculation of these climate metrics, particularly as data improves and new industry standards emerge.

Further detail on the metrics that have been calculated, including the basis of the calculations, is provided in the Appendices to this report.

The primary reason for the increased Weighted Average Carbon intensity over this 1 year period from March 2021 to March 2022 is due to the fact that our allocation to some of the risk assets (which contribute to the Carbon emissions & WACI) has actually gone up from the end of March 2021 to the end March 2022 as per the table below. For example, allocation to Credit is up by 2.5%, equity 0.6% and outsourced Credit 4.9%.

	Adjusted WACI (tons/m)	31-Mar-22	31-Mar-21	2021->2022	
		Allocation(%)	Adjusted WACI (tons/m)	Allocation(%)	Drift
Investment Grade Non-Gilts		53.4	50.9	2.5	
- Fixed	687	39.9	623	38	1.9
- Index-linked	1,311	13.5	942	12.9	0.6
Property		12.1	11.7	0.4	
Gilts		16.5	31.5	-15	
- Fixed		25.2	29.2	-4	
- Index-linked		17.5	15.9	1.6	
- Repo & Swaps		-16.5	-13.6	-2.9	
Equity (Global Listed Infrastructure)	3274	4.5	2584	3.9	0.6
Outsourced Credit		4.9	0	0	4.9
- US Dollar Credit	308	3.9	0	0	3.9
- Global Sub-Investment Grade Credit	419	1	0	0	1
LGAS Insurance		5	0	5	
Other (including Cash)		3.6	2	1.6	
TOTAL FUND VALUE	979	100	836	100	
FUND VALUE (Carbon contribution)	615	62.8	458	54.8	

Achieving the CJP objectives

There are several levers available to the Trustee in order to seek to reduce the level of carbon emissions from the Scheme's portfolio, as described in the table below. The expectation is that a combination of all levers will ultimately be required to deliver on the CJP objectives.

Divestment	Engagement	Impact	Free rider
<ul style="list-style-type: none"> • Sell assets that are most exposed to climate risk • Review mandate guidelines, restrictions and benchmarks and implement policies to reduce carbon emissions • Review the investment strategy to understand any disproportionately emitting strategies/asset classes 	<ul style="list-style-type: none"> • Reduce emissions by changing behaviour of existing corporates • Manager engagement with individual portfolio companies • Overlay level engagement – use of a third party voting and engagement manager to gain leverage • Asset owner engagement – participation in collaborative initiatives 	<ul style="list-style-type: none"> • Reduce net emissions through providing capital to new entrants offering new technology and/or solutions • Review current and future investment strategy to understand opportunities to add impact investments 	<ul style="list-style-type: none"> • Takes advantage of actions taken by other market participants, such as the UK Government (3.3% pa reduction required to meet 2050 target) • Financial markets may move quicker than this as portfolio companies look to meet their own targets and high carbon industries fall in value or are taken private

While progress versus the CJP will be assessed annually, it is important to recognise that the WACI is not expected to reduce in a linear manner year by year, and indeed there may be periods where the metric does not reduce or even increases. This is particularly likely over the next few years, as data quality improves and the proportion of the portfolio that can be included in the analysis increases.

The Trustee will take these matters into account when assessing the progress that is being made and when considering any potential actions as a result.

APPENDIX – ASSET ALLOCATION

As of March 2022, the fund was valued at £9.93 billion. Mainly dominated by bonds, this asset class is formed of investment grade (IG) corporate bonds and UK government bonds (Gilts), as well as fixed bonds and index-linked bonds. Respectively, Investment Grade Non-Gilts represents 53.4% of the fund net asset value and Gilts 16.5%.

	31-Mar-22	
	£m	%
Investment Grade Non-Gilts	5299	53.4
- Fixed	3958	39.9
- Index-linked	1341	13.5
Property	1,202	12.1
Gilts	1,637	16.5
- Fixed	2,624	25.2
- Index-linked	1,828	17.5
- Repo & Swaps	-1,638	-16.5
Equity (Global Listed Infrastructure)	448	4.5
Outsourced Credit	486	4.9
- US Dollar Credit	390	3.9
- Global Sub-Investment Grade Credit	96	1.0
LGAS Insurance	498	5.0
Other (including Cash)	360	3.6
TOTAL FUND VALUE	9,929	100

With a net asset value of £1.2 billion, properties are the next largest allocation. Properties are made up of commercial real estate, all invested in the UK.

Finally, the equity share accounted for 4.9% of the fund net asset value, mainly driven by the LGIM Global Listed Infrastructure portfolio, 4.5% or £448 million.

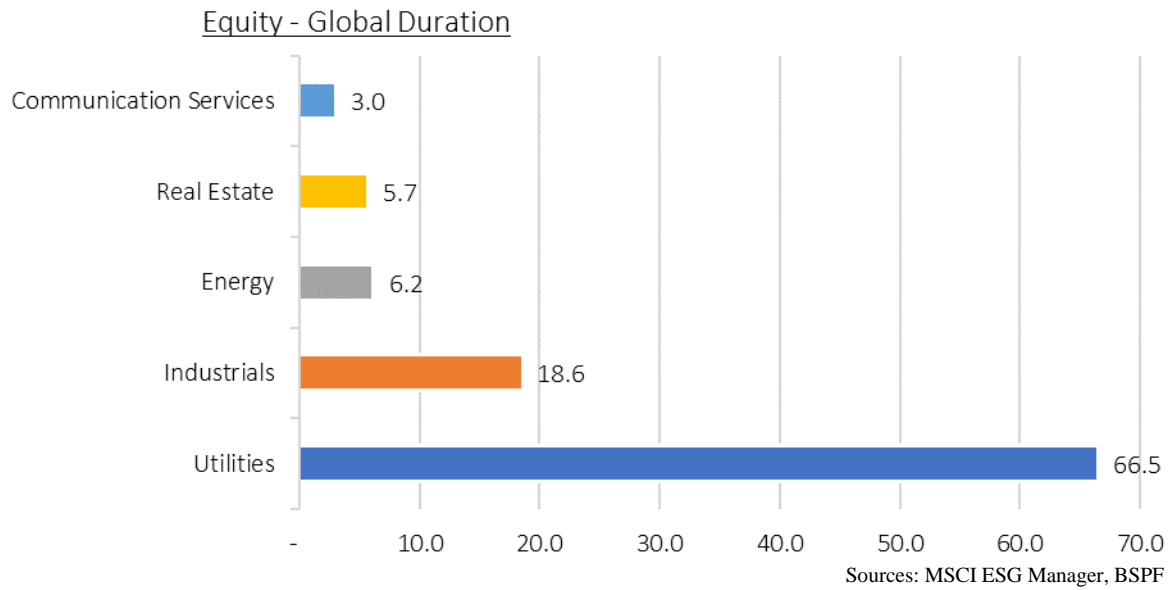
For the purpose of the analysis in this report, the various metrics have been calculated encompassing the Global Listed Infrastructure Equities as well as Fixed and Index-Linked Investment Grade Non-Gilts.

Maturity Property has been excluded from the analysis as it is not yet possible to obtain the relevant data on the Scheme's actual property holdings. The Trustee will look to include these assets in future reports, as and when data becomes available.

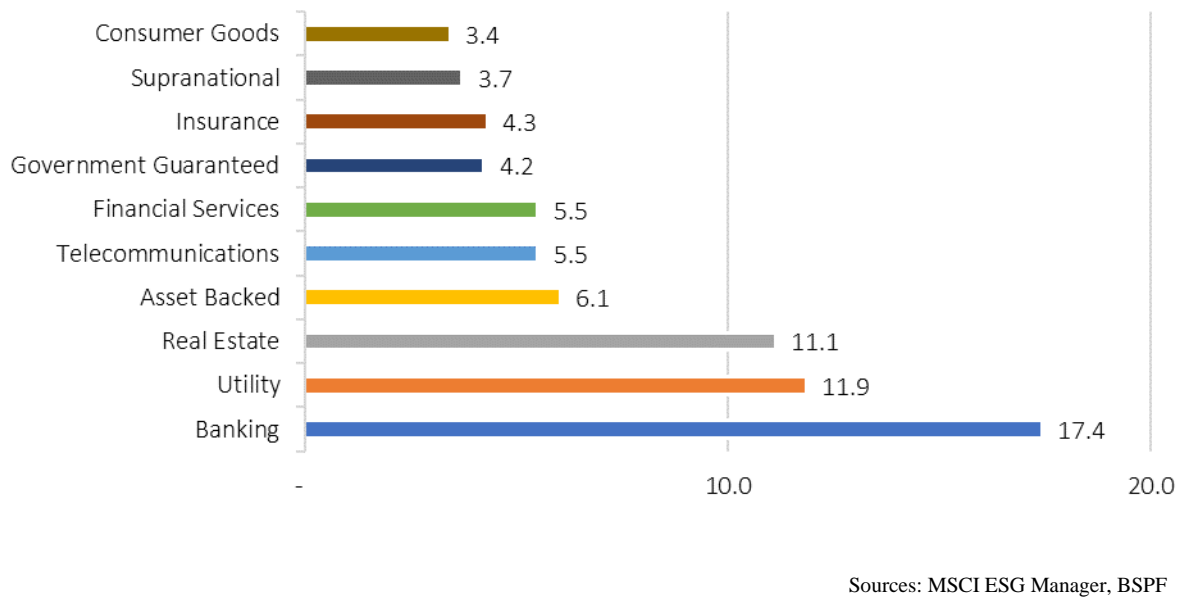
The Outsourced Credit mandates were invested towards the end of the reporting period, and have therefore been excluded from this year's analysis but will be included in the 2023 report.

Gilts have been excluded from the analysis, in accordance with the guidance from the IIGCC NZIF for sovereign bonds held for liability hedging purposes. The LGAS buy-in insurance policy has also been excluded, using a similar rationale. The Trustee recognises that different schemes are adopting different approaches with regards to calculating metrics on liability hedging assets, and will review its approach when preparing future reports.

Sector breakdown of Global Listed Infrastructure and Fixed Credit – as at 31 March 2022



Investment Grade Non-Gilts - Fixed Credit



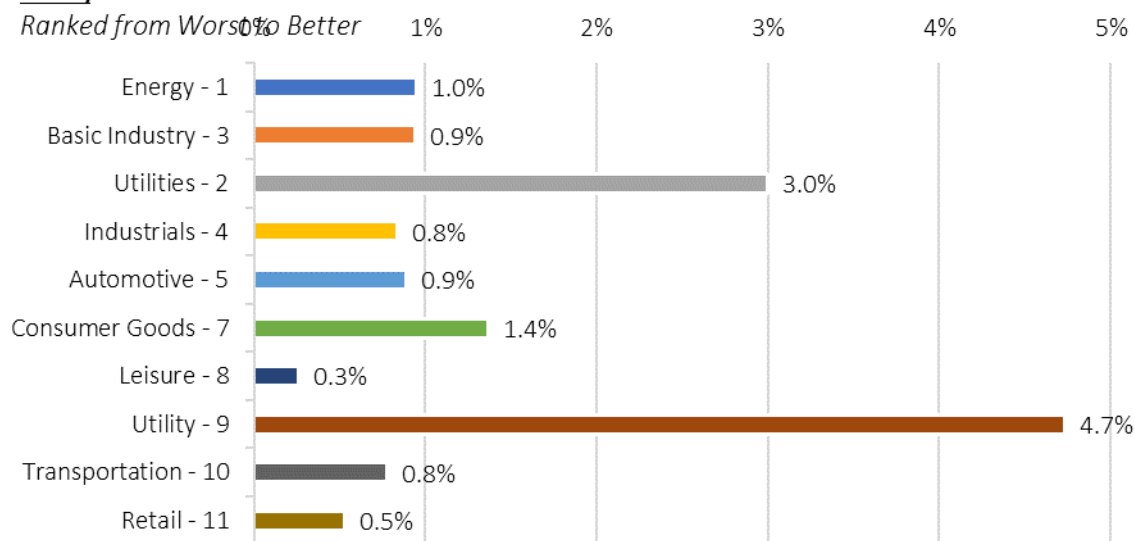
ASSET ALLOCATION – POLLUTING SECTORS

We have been able to identify the top 10 worst polluting sectors, using the average total carbon emissions (Scope 1, 2 and 3) of each sector. The sector attribution is based on the parent company, and not on the issuer name.

Total carbon emissions are absolute metrics, as required by the TFCF recommendations, expressed in tonnes of CO₂e. As shown by the chart below, Energy, Automotive & Basic Industry are the most polluting sectors.

The chart below shows the BSPS's aggregate exposure to these most polluting sectors.

BSPF Aggregated - TOP 10 Least Carbon Efficient Sectors (tCO₂e/USD Millions Sales)



Sources: MSCI ESG Manager, BSPF

ASSET ALLOCATION – CARBON INEFFICIENT SECTORS

A similar analysis was undertaken in order to isolate the top 10 least carbon-efficient sectors, in terms of the average total carbon intensity (Scope 1, 2 and 3) of each sector.

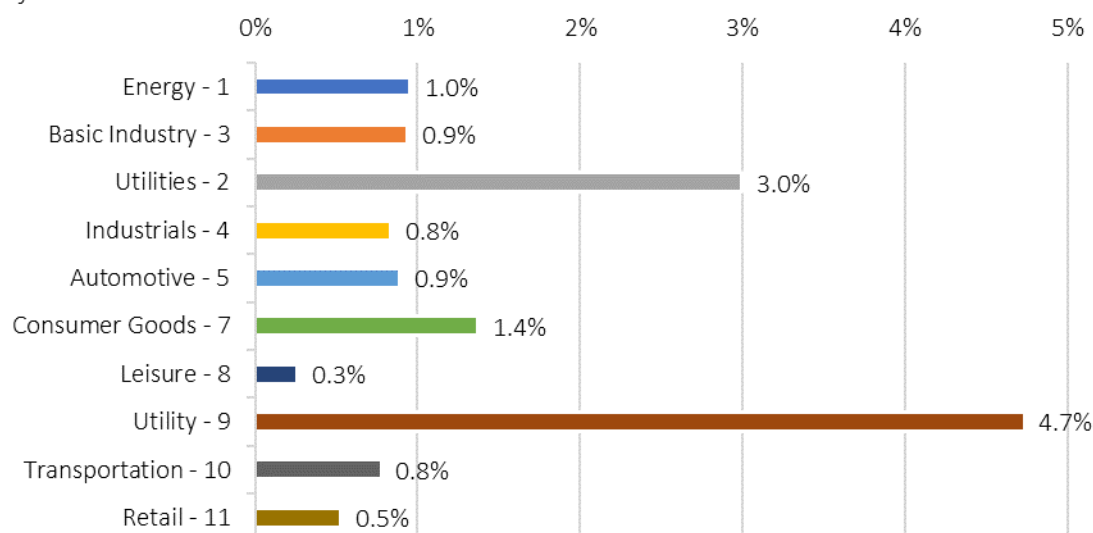
Carbon intensity normalises the company’s total carbon emissions as expressed per million of sales, revenue or £ invested. In this analysis, carbon intensity is expressed as carbon emissions per million of sales. This measure allows us to capture the business carbon efficiency and enable comparison between companies.

As shown by the chart, Mining, Pipelines, some Diversified Holdings and Electric came out as the least carbon-efficient sectors.

The Scheme’s exposure to these sectors is shown below.

BSPF Aggregated - TOP 10 Least Carbon Efficient Sectors (tCO2e/USD Millions Sales)

Ranked from Worst to Better

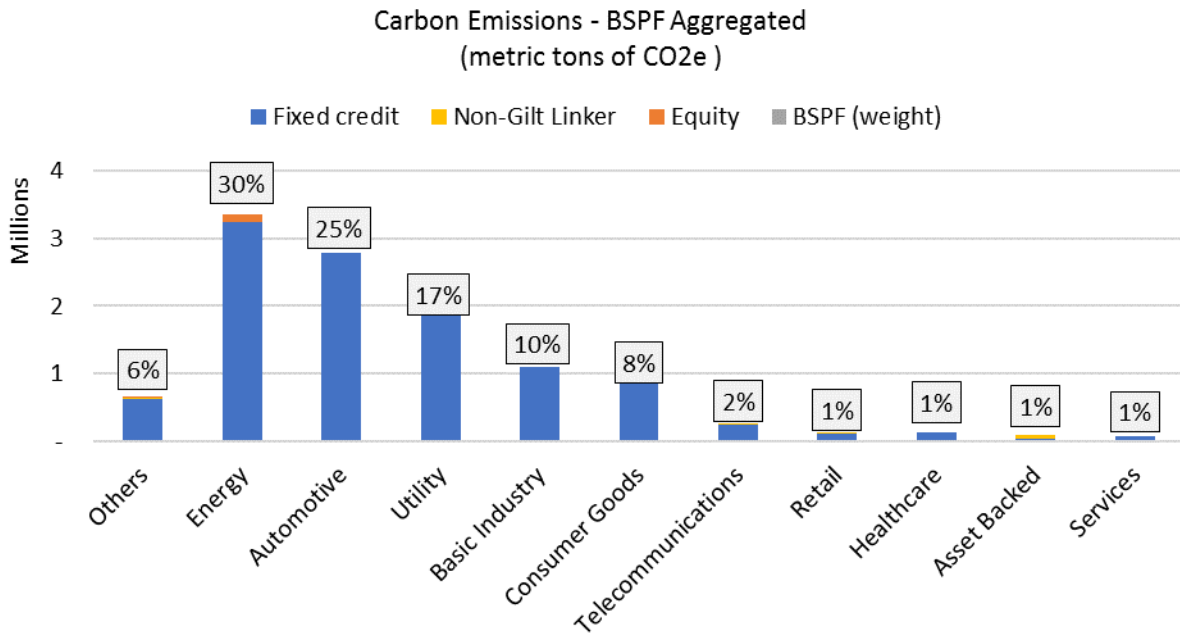


Sources: MSCI ESG Manager, BSPF

CARBON EMISSIONS – SECTOR ATTRIBUTION

As of March 2022, 50.7 million of tons of CO2e were attributed to the fund, based on our combined analysis.

Energy, Automotive and Utility sectors have respectively contributed to 30%, 25% and 17% of the total carbon emissions in 2021-2022, with over 8 million of tons of CO2e reported in 2020.



Sources: MSCI ESG Manager, BSPF

The largest contributors at the company level are:

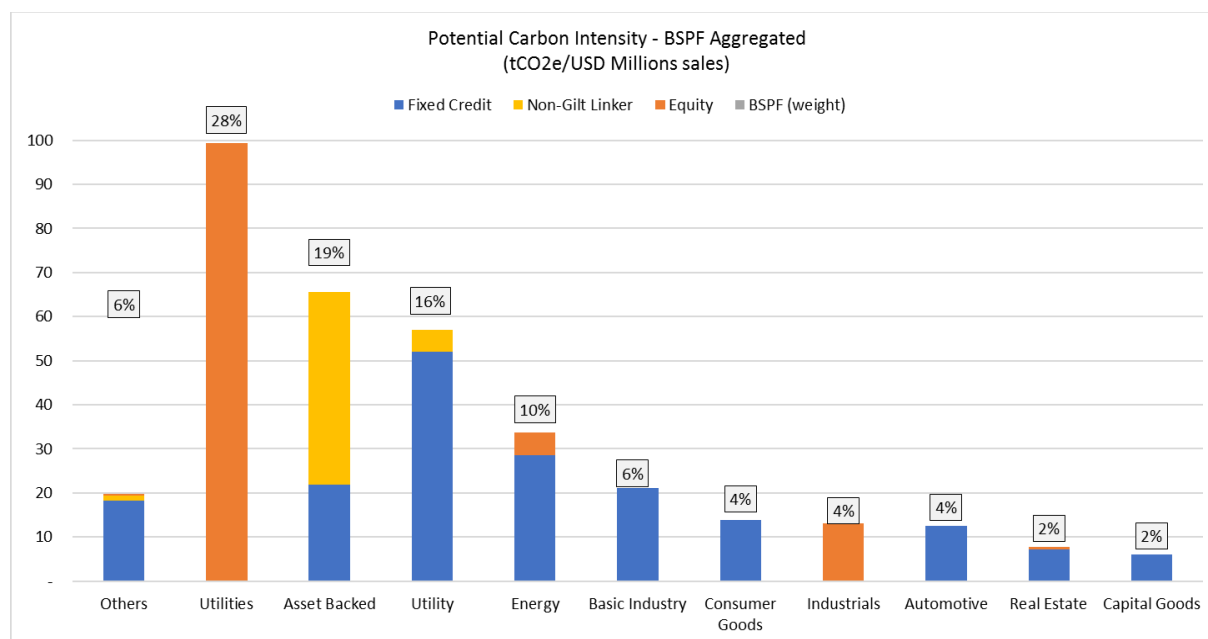
- i.) Energy: BG Energy Capital Plc (Fixed Credit- NGFI)
- ii.) Basic Industry: Rio Tinto Finance Plc (Fixed Credit- NGFI)
- iii.) Capital Goods: Siemens Financieringsmaatschappij N.V. (Fixed Credit- NGFI)

CARBON INTENSITY – SECTOR ATTRIBUTION

Carbon intensity expresses the total carbon emissions in tons of CO₂ equivalent per million \$ of sales.

As at 31 March 2022, the WACI for the asset classes considered within the calculation of this metric was estimated to be 979 tons of CO₂/million \$ of sales. This compares to 836 tons of CO₂/ million \$ of sales as at 31 March 2021.

Utility sector accounts for around 44% of the total weighted average carbon intensity. Note for Equity, the sector Utilities is how our data provided classifies it.



Sources: MSCI ESG Manager, BSPF

The largest contributors at the company level are:

- i.) Industrials: Atlas Arteria Group (Equity- MAGELLAN)
- ii.) Utilities: Fortis Inc (Equity- MAGELLAN)
- iii.) Basic Industry: Rio Tinto Finance Plc (Fixed Credit- NGFI)

CLIMATE VaR – SECTOR ATTRIBUTION

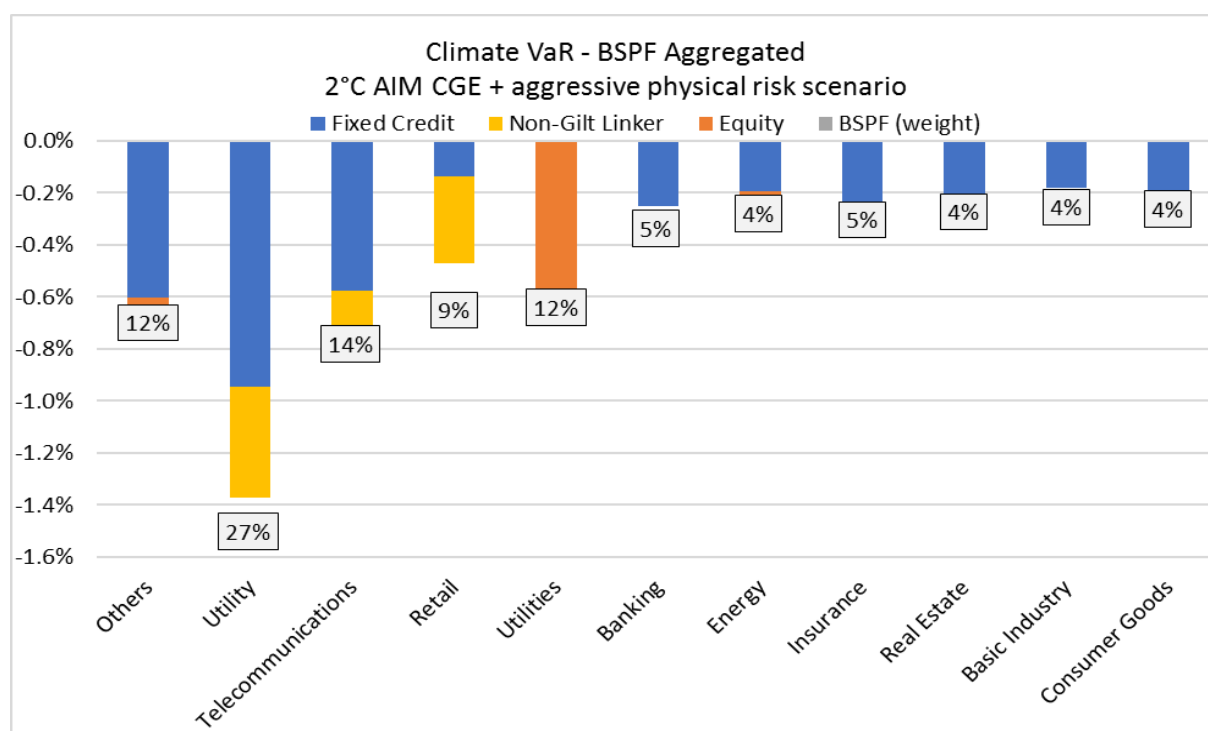
The scenario analysis described earlier in section 2 was undertaken based on broad asset class assumptions, in order to provide an assessment at the total Scheme level from a ‘macro’ perspective. It is also possible to consider the potential impact of climate scenarios from a ‘micro’ perspective, through analysis at an individual security level.

To do so, the Trustee uses a forward-looking metric named the Climate Value-at-Risk (CVaR), developed by MSCI.

The Climate VaR (CVaR) metric helps investors to better assess potential future costs and/or profits relating to their portfolio’s exposure to future climate change. Expressed in percentage change of market valuation, this metric combines projections to 2100 of transition costs, physical costs, and profits.

Therefore, the cost associated with adverse climate-related events (increase in natural disasters, stricter regulations or new demands) at the fund level is estimated at 8.9% of the aggregate portfolio.

The largest costs are attributed to Utility, Telecommunications and Retail sectors that account for 62% of the total Climate VaR (CVaR).



Sources: MSCI ESG Manager, BSPF

The largest contributors at the company level are within the LGIM Global Listed Infra Equity:

- i.) Utilities: UNITED UTILITIES GROUP PLC
- ii.) Utilities: EMERA INCORPORATED
- iii.) Utilities: ENTERGY CORPORATION

WARMING POTENTIAL – SECTOR ATTRIBUTION

Alongside the Climate VaR (**CVaR**), MSCI has also created a concept that translates the carbon intensity into an implied future temperature increase. The weighting methodology applied to the different scopes is adjusted for each sector. The Warming Potential metric establishes a forward-looking contribution to global warming. As a result, unlike the CVaR, the contribution to global warming is expressed in temperature can be directly compared to the 2 degrees Celsius pledge.

Consequently, the Warming Potential of the aggregate fund as of March 2022 is estimated at 3.24 degrees Celsius. Therefore, the fund needs to diminish its global warming impact by at least 1.24 degrees Celsius in order to comply with the Paris Agreement – to limit the temperature increase to 2 degrees Celsius above pre-industrial levels by 2100.

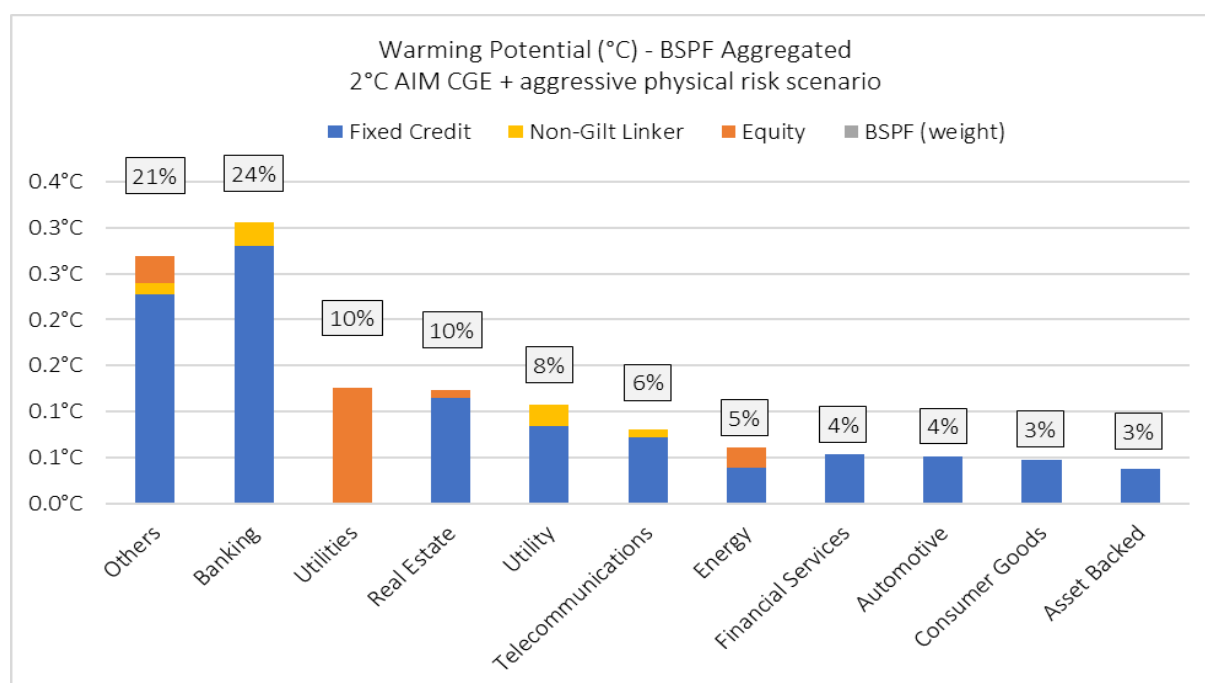
Since the end of the reporting period, the Trustee has used its Index-Linked Credit assets to part-fund a further buy-in transaction. The Trustee has also completely liquidated the LGIM Global Listed Infrastructure assets.

Although these were carbon intensive asset classes, these changes have resulted in a slight increase in the Warming Potential to 3.28 degrees Celsius.

Based on the analysis, the largest contributors to global warming are Banks, Real Estate and Electric sectors that account respectively for 0.6 °C, 0.2 °C and 0.2 °C of the total Warming Potential.

The largest company level contributors are all within the Global Listed Infrastructure Equity:

- iv.) Telecommunications: TC Energy Corporation
- v.) Utilities: Enagas, S.A.
- vi.) Utilities: Spire Inc.



Sources: MSCI ESG Manager, BSPF

RISK METRICS SUMMARY REPORT – CLIMATE VAR

Asset Class (Portfolio)	31/03/2022	NGFI	NGIL	EQUITY	BSPF
Weight*		39.9%	13.5%	4.5%	
Metric					
Physical Risks cost (% of total revenues)					
Aggressive Scenario		-0.32	-0.35	-0.55	-0.20
Transition cost (% of total revenues)					
Scenario 2°C AIM CGE		-0.10	-0.08	-0.58	-0.08
Green revenues (% of total revenues)					
Scenario 2°C AIM CGE		0.06	0.05	0.18	0.04
Company cost and opportunity of climate (% of total revenues)					
Scenario 2°C AIM CGE		-0.36	-0.39	-0.95	-0.24
Physical Risks cost (CVaR)					
Aggressive Scenario		-7.72	-5.96	-10.65	-4.36
Transition cost (CVaR)					
Scenario 2°C AIM CGE		-3.15	-1.33	-8.91	-1.84
Green revenues (CVaR)					
Scenario 2°C AIM CGE		1.96	0.65	3.46	1.03
Portfolio cost and opportunity of climate (% of investment value)					
Scenario 2°C AIM CGE		-8.91	-6.63	-16.10	-8.94

* Insurance, Gilts and cash account for around 25.1% of the aggregate BSPF and are attributed a null carbon impact.

* Maturity Property (12.1% of Fund) is also excluded from this analysis. We are looking to incorporate these in the future

RISK METRICS – CARBON EMISSIONS/INTENSITY & WARMING POTENTIAL

Asset Class (Portfolio)		NGFI	UNOW	NGIL	USD CREDIT	EQUITY	SUB-INV	BSPF
Weight*	31/03/2022	39.9%		13.5%	3.9%	4.5%	1%	
Metric								
Weighted Average Carbon Intensity (tons/millions of sales - Scope 1, 2)		92	88	370	298	1,109	270	151
Weighted Average Carbon Intensity (tons/millions of sales - Scope 3)		363		264.5		1,516		
<i>Carbon Intensity Optimal to 2°C (Scope 1, 2, 3)</i>		128	109	49		239		118
Total Carbon Emission (metric tons of CO2e - Scope 1,2,3)		27,824,332	27,858,790	824,356		22,022,897		50,671,586
Warming Potential (°C)		2.5	2.0	0.5	2.7	4.1	3.3	-
Green bonds (% of portfolio value)		2.9	2.7	-		-		1.8
Sustainability bonds (% of portfolio value)		2.4	3.6	-		-		1.5
Green Revenues (%)					4.1	13.2	0.5	1.2
<i>Coverage (% of portfolio value) - Warming Potential</i>		75	60	19	97	100	65	67
<i>Coverage (% of portfolio value) - Carbon Emissions (Scope 1, 2 or 3)</i>		88	85	77	96	100	64	50
<i>Coverage (% of portfolio value) - Carbon Emissions (Scope 3)</i>		62	55	32	-	70	-	32
Adjusted Weighted Average Carbon Intensity (tons/millions of sales - Scope 1, 2, 3) **		687	103	1,311	309	3,274	419	979
Adjusted Warming Potential (°C) **		3.4	3.3	2.7	2.7	4.1	3.3	3.24
Projected Warming Potential (°C) ***		3.4	3.3	2.7	2.7	4.1	3.3	3.28

** Adjusted to cater for insufficient coverage.

*** Adjusted per above and Projected to take into account divestments since year end (i.e. Index Linked Credit & LGIM Global Infrastructure Equity tracking Magellan)

NGFI- PSL Fixed Credit

UNOW- Fixed Credit Benchmark

NGIL- Credit Linkers

EQUITY- LGIM Global Listed Infrastructure Equities tracking Magellan Index

USD CREDIT – LGIM US Dollar Credit Mandate

SUB-INV: LGIM Global Sub-investment Grade Credit

GREEN INVESTMENTS

Over the course of the financial year to 31 March 2022 the exposure to green and sustainable bonds within the credit portfolio was increased, taking advantage of a significant increase in market issuance of bonds in these formats.

Green bonds purchased during the year included commercial real estate names such as Realty Income, Derwent London and Lendlease, and banks such as Swedbank, ICBC and NatWest. In these cases the money raised by the bond issues is earmarked funding for eligible green projects, or loan portfolios, such as green buildings, energy efficiency, renewable energy and other categories that tie in with UN Sustainable Development Goals.

Sustainable bonds purchased over the last financial year were mainly housing association bonds, together with Yorkshire Water, Severn Trent Water and UCL. Housing associations have found sustainability bonds particularly suitable as they combine both social and green criteria, and fit well with their aims to improve the quality of the existing housing stock, build sustainable dwellings for the future, and fulfil their social purpose. These bonds are a good fit for the portfolio as they benefit from long term inflation linked cash flows from rents, a strong regulatory environment and the expectation of ongoing government support as the main provider of social housing.

APPENDIX - GLOSSARY

Net Zero target

Firm's targets to make Net Zero carbon emissions by a specific date, at which point having sought to reduce the emissions as much as possible, any carbon dioxide which continues to be released into the atmosphere is balanced by an equivalent amount being removed by offsetting through carbon removals.

Scope 1, 2 and 3 emissions

Greenhouse gas emissions are categorised into three groups or 'Scopes'.

- Scope 1 covers direct emissions e.g. use of natural gas, company car vehicle emissions.
- Scope 2 covers indirect emissions from the generation of purchased electricity, steam and heating.
- Scope 3 includes 15 other categories of indirect emissions in a company's value chain e.g. business travel and investments.

If a company does not report its scope 1+2 carbon emissions data, we estimate it using our proprietary scope 1+2 carbon emissions estimation model described below. Under MSCI ESG Research's scope 1+2 carbon emissions estimation approach, data disclosed by the companies (current and historical) is used to estimate carbon intensity at the company level and at the industry segment level.

Carbon Emissions - Scope 1+2+3 Intensity (t/USD million sales)

This figure represents the company's most recently reported or estimated Scope 1 + Scope 2 + Scope 3 greenhouse gas emissions normalised by sales in USD, which allows for comparison between companies of different sizes. The carbon intensity figures for each holding in the portfolio are averaged using the portfolio weights.

- More easily applied across asset classes since it does not require an understanding of the full capital structure and is not impacted by changes in the market capitalisation of individual companies (unless these are mirrored in the portfolio weights).
- Sensitive to many outside factors, including asset class performance, currency movements and active manager positioning.
- TCFD recommended metrics are expected to become industry standard, enhancing comparability between peers.

Green Bonds

A green bond is a bond specifically earmarked to be used for climate and environmental projects. These bonds are typically asset-linked and backed by the issuer's balance sheet, and are also referred to as climate bonds.

Sustainability

All activities can be considered as taking account of profit, people and the planet (also known as the 'triple bottom line'). A more formal definition is "meeting the needs of the present without compromising the ability of future generations to meet their needs".

Task Force on Climate-related Financial Disclosures

The Financial Stability Board created the TCFD to improve and increase reporting of climate-related financial decision useful information. Governments are encouraging firms to make disclosures aligned to the TCFD framework to enable investors to compare them and allocate capital accordingly. The UK Government is making TCFD reporting mandatory for all listed companies and large asset owners in 2022.

The **Climate VaR** metric provides investors with an estimation of how the value of their investment portfolios could be impacted (up or down) by climate policy risk, technology transition opportunities and extreme weather (physical climate risks). A company's Climate VaR, expressed as a percentage change from its current market valuation, is derived from financial modelling of potential future costs and profits associated with climate-related risks and opportunities. TCFD requires that asset owners run climate scenario analyses in accordance with Paris Agreement.

- Base case: holding the increase in the global average temperature to 2°C above pre-industrial levels by 2100.
- Worst case: using a greater than 2°C scenario to account for physical effects due to extreme weather change.
- Best case: pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, with net zero by 2050.

The **Warming Potential** metric provides investors with an indication of how the projected business activities undertaken by companies in their investment portfolios align to pathways corresponding to global temperature targets. Given the same business activities, the Warming Potential of two companies, expressed in degrees Celsius (°C), should be similar regardless of other factors that may affect their exposure to climate-related risks such as differences in their policy environment, exposure to weather hazards or market valuations.

Carbon Delta (recently acquired by MSCI) developed the “Warming Potential” concept to evaluate the robustness of “carbon neutral” strategies developed by companies while facing similar sector-level constraints and opportunities. “Warming Potential” (**WP**) metric, expressed in temperature, combines top-down data and bottom-up economic and company data to establish a forward-looking contribution to global warming. Top down approach based on:

- country-level “Paris Agreement” commitments projecting carbon intensities to 2100 (NDCs targets).
- gaps between national determinant contributions (NDCs) and carbon emissions budget associated to various temperature scenarios.
- company-level business mix structures by sectors and countries.
- This “temperature” concept provides a measure of the gap between future carbon pledges and science-based emissions budget still available before global warming increases.

MSCI ESG Research's Climate VaR metric is composed of four metrics:

- **Transition Risk**
 - **Policy Risk Climate VaR** analyzes the impact of regulations coming from countries' Nationally Determined Contributions (**NDCs**) on a company and its activities due to direct (Scope 1) and indirect (Scope 2 & 3) greenhouse gas (**GHG**) emissions.
 - **Technology Opportunity Climate VaR** analyzes a company's low carbon patents and current low carbon revenue to forecast potential future revenues.

- **Physical Risk Climate VaR** analyzes the impact of changes to the physical climate on a company's locations around the globe.
- **Aggregate Climate VaR** is the sum of the three metrics above and gives a company's total net climate risk or opportunity under any given set of scenarios.

Aggregate Warming Potential [$^{\circ}$ C]

The security's alignment temperature when referencing a combined approach which takes into account Scopes 1, 2, 3 and "cooling" potential (including emission reduction targets set by the firm). This metric could be used to assess a company's intersector alignment to a global stabilization goal, based on the entire emission profile of the company.

The newly enhanced **Warming Potential** metric now comprises five metrics in total:

- **Scope 1 Warming Potential** (enhanced) analyses a company's Scope 1 greenhouse gas (GHG) emissions intensity and compares it to sector specific carbon intensities commensurate with temperature targets.
- **Scope 2 Warming Potential** (new addition) analyses a company's Scope 2 GHG emissions intensity and compares it to sector-agnostic carbon intensities commensurate with temperature targets.
- **Scope 3 Warming Potential** (new addition) analyses a company's Scope 3 GHG emissions intensity and compares it to sector-agnostic carbon intensities commensurate with temperature targets.
- **Cooling Potential** (new addition) analyses the potential avoided GHG emissions intensity of a company based on its low carbon patents and revenues and compares it to sector-agnostic carbon intensities commensurate with temperature points.
- **Aggregate Warming Potential** (new aggregation methodology) is the weighted sum of the four metrics above with sector-specific weights.

APPENDIX - DISCLAIMERS

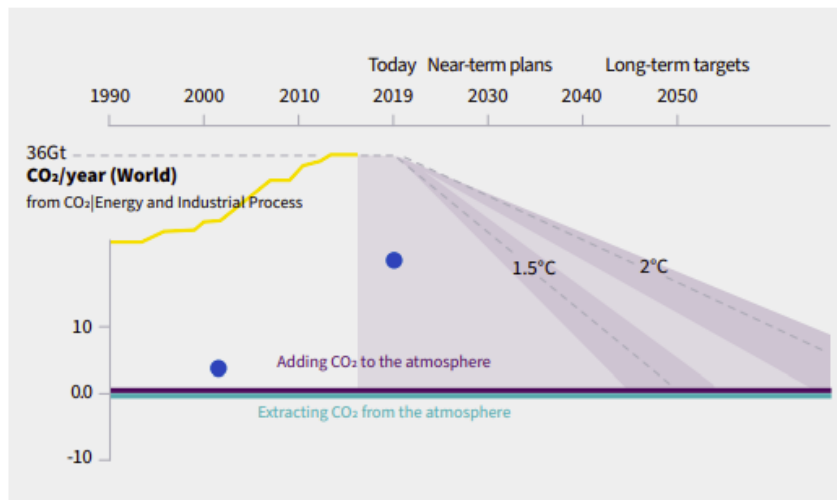
MSCI

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APPENDIX - STRATEGY

The Intergovernmental Panel on Climate Change's (IPCC) 1.5°C report highlights that, if the Paris 1.5°C target is to be met, then “global net anthropogenic CO₂ emissions must decline by about 45% from 2010 levels by 2030, reaching Net Zero by around 2050”.

This report also indicates that the 2°C target implies that CO₂ emissions will need to reduce to Net Zero by around 2075.



The Paris Agreement set the long-term target of keeping a global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C.

From climate physics, we know that reaching these targets implies limiting the cumulative CO₂ emissions to a very tight carbon budget. The latest IPCC report has shown that therefore the 2°C target implies that CO₂ emissions have to be reduced to zero around 2075. For limiting warming to 1.5°C, CO₂ emissions have to be reduced to zero around 2050.

Source: Aviva Report: Global net anthropogenic CO₂ emissions Source: Based on IPCC.

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