



West Yorkshire Pension Fund



TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

TCFD Statement

January 2022

Introduction

As an active and responsible investor, West Yorkshire Pension Fund (WYPF) seeks to understand the broad variety of financial risks facing the portfolio. Historically, these typically included a host of political, regulatory and economic challenges, but more recently the fund has also started to consider the dangers of climate change.

Climate change has the potential to directly impact the value of the fund in two main ways: the physical impact that rising sea levels, the increasing frequency of extreme weather and higher temperatures may have on a company's assets, workforce or markets; secondly, the risk that the transition to a low carbon economy may "strand" certain assets or businesses by making them uneconomic.

The long term nature of Climate Change makes it a particularly insidious danger since the results of current behaviours will only become manifest when the damage is done. The unknowability of the timing, impact and severity of this systematic danger means we need to be both diligent and flexible in our approach.

This document uses the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) framework <https://www.fsb-tcdf.org/> to understand, identify, report, and mitigate those risks inherent in the portfolio.

The TCFD's approach contains four elements, see Chart 1 & Table 1, that form the basis of WYPF's climate change policy.

To learn more about WYPF's approach to Responsible Investment please review the report posted on the [website](#).



Chart 1: Stylised TCFD Framework

Table 1

TCFD REPORT STRUCTURE

GOVERNANCE

- a. Describe the board's oversight of climate-related risks and opportunities.
- b. Describe management's role in assessing and managing climate-related risks and opportunities.

STRATEGY

- a. Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.
- b. Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.
- c. Describe the resilience of the organisation's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.

RISK MANAGEMENT

- a. Describe the organisation's processes for identifying and assessing climate-related risks.
- b. Describe the organisation's processes for managing climate-related risks.
- c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.

METRICS AND TARGETS

- a. Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.

GOVERNANCE

a. Describe the board's oversight of climate-related risks and opportunities

As the administering authority for the WYPF, the City of Bradford Metropolitan District Council, through its Governance and Audit Committee, utilises the Investment Advisory Panel (IAP) to oversee the Fund's investment function. The IAP is responsible for establishing strategy, monitoring fund activity & performance and providing administrative oversight.

The IAP includes elected members from each of the five metropolitan authorities that comprise the county of West Yorkshire, plus three independent advisers, three trades union representatives, and representatives for both active and retired members, and (on a rotating basis) the Director of Finance from one of the five authorities of West Yorkshire. The IAP meets at least quarterly.

The Director of the WYPF has day to day control of all aspects of Fund activities, including the investment management function and is responsible for the design and implementation of the Investment Strategy

Statement (ISS) and the Responsible Investment strategy which includes the Fund's approach to Climate Change. The policy is reviewed and its implementation monitored regularly. The IAP approves the ISS and the Responsible Investment strategy.

Recognising the dangers posed by climate change the Council declared a climate emergency in January 2019 and made a commitment to a green economy including a specific focus on energy consumption, electric vehicles and the opportunities offered by hydrogen. The Council has since joined the Leeds City Region Climate Coalition aiming to cut net carbon emissions to zero by 2038. In July 2021, the West Yorkshire Combined Authority joined UK 100 <https://www.uk100.org/>, making a commitment to focus on climate and clean energy policy. As part of the Council, WYPF is party to such efforts.

The IAP has reviewed and approved this TCFD report prior to publication.

b. Describe management's role in assessing and managing climate-related risks and opportunities.

As an LGPS, WYPF is required to formulate and publish an ISS describing the Fund's investment beliefs and policies, this includes its attitude to Responsible Investment including climate change. The ISS is prepared by officers led by the Director and approved by the IAP. The ISS is reviewed triennially or whenever revisions are considered appropriate.

The WYPF's ISS adopts five overarching Investment Principles the first of which is: "WYPF recognises that Environmental, Social and Governance (ESG) factors can profoundly impact an individual company's long-term sustainability." The ISS describes its approach to climate change in the following way:

"WYPF believes that climate change represents an existentialist threat to the world. The dangers of climate change have been flagged by central bankers and an increasing amount of regulation is based on the idea that climate risk is financial risk ... We think carbon intensive companies must swiftly formulate and embrace strategies to aggressively and realistically cut green-house gas emissions."

Consistent with this approach WYPF made a 2050 Paris Aligned Net Zero carbon emission pledge in 2021 and is currently working on how to best implement this commitment.

In 2021 the WYPF hired a Responsible Investment Engagement Manager to assist in the creation, implementation and reporting of the Fund's Responsible Investment policy. The integration of ESG factors into stock selection and monitoring is undertaken by all members of the investment team.

STRATEGY

a. Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term.

In assessing the climate related risks the fund has relied on the expertise of a number of internationally recognised bodies. These include:

- The Transition Pathway Initiative (TPI) www.transitionpathwayinitiative.org/ is a tool that permits investors to assess how seriously companies are taking the threat of climate change and how realistic are individual companies' carbon reduction commitments.
- Institutional Investors Group on Climate Change (IIGCC) www.iigcc.org/. The IIGCC is a leading membership group enabling the European investment community to drive towards a net zero carbon future.
- Climate Action 100+ www.climateaction100.org/ is an investor initiative to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change.
- The CDP www.cdp.net/en is a shareholder group that runs a global disclosure system for investors, companies, cities, states and regions to manage

their environmental impacts.

In the short term, a period that we consider to run from 2022–25, we consider risks to be largely transitory, that is resulting from the shift toward a green economy. These are likely to include:

- As governments use their legislative power to decarbonise economies, companies will face growing regulatory risk. For example, EU automakers were required to deliver a 21% cut in CO2 emissions for the average car sold by 2021 or face significant fines. The roll-out of carbon pricing, a mechanism that we consider to be particularly effective, may force markets to reconsider the valuations for carbon intensive industries such as energy, transport, cement and steel. Obliging companies to pay a reasonable price for emissions will make many existing business models unviable.
- Technical advancement may permit a faster than anticipated decarbonisation of the economy. This would present a risk to some companies by



stranding some assets and technologies but an opportunity for those providing new solutions. For example, breakthrough technology allowing the commercial roll-out of green hydrogen would likely be lucrative for the manufacturer but detrimental to traditional energy providers.

- Shifts in consumer choice as a result of growing environmental awareness. There have already been significant shifts in consumer behaviour toward products such as renewable energy and electric vehicles. Companies that fail to take account of these new preferences may incur reputational, and consequential, financial damage compared to their more adaptable peers.

Even in the most optimistic climate change scenario, one in which the Paris Agreement goal of limiting global warming to 1.5 Celsius is achieved, the planet will still warm by a further 0.5 Celsius between 2021 to 2050. It is therefore probable that the physical dangers of climate change will become manifest in the medium (5-10 years) and long-term (10+ years scenarios). The main identifiable risks include:

- A continuation and intensification of the short-term

transitional risks identified above.

- The physical impact of climate change may be classified as acute, associated with sudden and short-term events, or chronic, those events developing more slowly but longer lasting. Examples may include:
 - The cost of rising sea levels will be considerable given the large number of people needing to be protected or relocated from impacted coastlines.
 - Extreme weather events including heatwaves, the rising frequency and severity of hurricanes, and prolonged droughts will likely exacerbate existing issues concerning resource security including the availability of food and potable water. In certain scenarios parts of the world may become uninhabitable.
 - Climate change is likely to compound other Megatrends in significant but as yet unpredictable ways. These massive, long-term shifts in human activity such as urbanization and migration will be profoundly shaped by climate change in ways it is too early to ascertain.
 - A systematic and prolonged slow-down in economic growth could occur as a consequence of climate change.

b. Describe the impact of climate-related risks and opportunities on the organisation's business, strategy and financial planning.

The Fund exists to provide a sufficiently robust investment return to fund the pensions of our members. We accept that climate change is scientific fact and we believe climate risk to be financial risk. We therefore understand the need to incorporate assessments of the potential of climate change onto our investments.

WYPF manages its equity, fixed income and some real estate assets directly, using external fund managers for additional real estate and private equity strategies while its infrastructure investments are managed by the Northern LGPS pool. WYPF's investment approach is defined in its ISS, previously described in the Governance section, that details our approach to climate change.

Where management is undertaken in-house, WYPF has developed a multi – stage strategy to incorporate ESG factors, including climate change, into its planning:

- **Integration** – ESG factors will be considered as part of the assessment process both before and after investment decisions are made. Analysing published data, research and proprietary work, the

investment team will attempt to understand how physical and transitional risks will impact the value of individual investments.

- **Diversification** – While we recognise Climate Change as a systematic risk we believe that it will impact investments differentially. We therefore believe that a degree of climate risk is mitigated through holding a well-diversified portfolio of uncorrelated assets.
- **Engagement** – Either individually or in conjunction with other investors, WYPF will engage with the managers of the companies it invests in to ensure businesses pivot toward the low carbon economy. While we recognise that most companies acknowledge and are attempting to manage ESG risks, where we believe companies are not being sufficiently ambitious in their response, the Fund will communicate such concerns to management. If we fail to receive a satisfactory explanation or evidence of behavioural improvement, we may choose to escalate our action and use our voting rights to enact positive change. We strongly hold the view that as owners of a company's capital, management are our agents and should act in the

long-term interests of the company.

- **Sustainable Investment** – WYPF has identified and invested in a number of companies that are engaged in a variety of activities likely to benefit from increased awareness or interest in sustainable activities. These include: renewable energy initiatives including windfarms, hydrogen, battery storage and other green energy, energy & water infrastructure. As of June 2021 the fund had £708m (with £262m committed awaiting drawdown) invested in these assets. Notwithstanding these investments, we believe that the energy companies of today will very likely be the energy companies of tomorrow. The major European oil companies are amongst the leading innovators of new energy

solutions and are investing tens of billions into wind & solar capacity, green hydrogen and sustainable airline fuel, plus infrastructure, such as charging stations, that will permit the adoption of electric vehicle technology.

- **Disclosure** – We pledge to report our responsible investment activities in a transparent and timely manner.

For external mandates, the selection process for investment managers includes a thorough review of the manager's approach to ESG. Risks are monitored over the entire life of the investment.

c. Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

A fundamental aspect of the management's fiduciary duty is to identify and assess the likelihood, severity and timing of potential financial risks to the Fund. Currently, we believe that climate change is the single greatest ESG challenge facing the Fund, a situation that is unlikely to change in the foreseeable future. Even in a "Green Skies" scenario where technological advancement coupled with policy actions drive a swift and smooth transition to low carbon economy we would need to remain vigilant.

We will continue to monitor and reassess the strategy in light of new developments. For example, a delayed response in tackling CO2 emissions from companies in which we invest could imperil our commitment to become net carbon neutral by 2050. If we believe this to be the case we would, via renewed engagement, seek to pressure managements to adopt ever stronger efforts in this regard. It is possible that technological developments will result in some companies and sectors decarbonizing more rapidly than others. This could in turn lead us to refocus our efforts on the laggards.

Given the enormous complexity of the phenomena there remains considerable uncertainty regarding the impact, magnitude and timing of climate change on the value of the portfolio. To attempt to understand the Fund's financial exposure to a variety of possibilities we hired Trucost S&P Global to provide us with a Climate Related Portfolio Risk Assessment. Trucost's report quantifies the fund's exposure to carbon emissions, fossil fuels, stranded assets and the energy transition. The data provided by Trucost forms the basis of this report and will help us make informed decisions regarding investment risks in the future.

RISK MANAGEMENT

a. Describe the organisation's process for identifying and assessing climate-related risks.

We recognise two broad pools of risk: one that endangers WYPF as an organisation, and secondly, factors that may impact the value of the investments made by the fund. At the fund level we have used both top-down and bottom-up approaches to identify and assess key climate risks.

At the aggregate portfolio level, we have used the services of Trucost to map the carbon intensity of the entire portfolio against its underlying benchmarks. This information serves:

- To provide a base-line level of carbon against which we will monitor our progress in our 2050 Paris Aligned Net Zero Commitment.
- Permits us an understanding where our current carbon exposure lies versus the prevailing benchmark.

On a bottom-up basis, building on the work of our external partners (including LAPFF, Climate Action +100, IIGCC & CDP) combined with the work of SASB Materiality Map, which maps the potential materiality

of ESG factors across sectors, we believe that we have a good understanding of where climate-related risk lies within the portfolio. This is particularly true in the case of carbon intensive businesses, a group we consider particularly vulnerable to the transitional risks associated with the anticipated shift to the low carbon economy. Our understanding of the climate risks on an individual company level will inform our engagement efforts.

External information is complimented by the investment manager's specific knowledge and understanding as well as other sources of data, including Bloomberg ESG scores. In this way Investment Managers are able to ascertain the inherent absolute and relative risks of our investments on a bottom-up basis to compliment the top-down approach taken by Trucost.

We understand the limitations of using backward looking data when considering risks. Focussing solely on absolute emission levels, rather than on the progression toward goals, may mean transitional climate change risks are overstated. Moreover, the indeterminate nature of climate change may punish the virtuous as well as the sinful.

b. Describe the organisation's process for managing climate-related risks

In attempting to reduce the carbon footprint of the fund consistent with our Paris Net Zero Commitment we seek to engage with companies to cut their carbon emissions, rather than to remove carbon intensive companies from our portfolio.

Having identified those investments that we consider material to our carbon footprint we then seek to understand the individual carbon commitments made by those companies concerned and whether their public statements were consistent with other financial data & guidance. We then cross-check the depth and rigour of such commitments using third party resources, most notably the TPI.

Where the actions of management were vague, ill-considered or not sufficiently ambitious we seek to engage with management to push for remedial action. This may be undertaken directly either by a member of the investment team, or by the Responsible Investment Engagement Manager, or in conjunction with other investors or investor groups.

WYPF is a member of the Local Authority Pension Fund Forum (LAPFF) <https://lapfforum.org/>. This is an association of 84 of the 89 LGPS funds, plus eight LGPS pools, which carries out the majority of engagement work on the Fund's behalf. This approach was chosen as a more efficient method of engagement given the lack of dedicated resources and the onerous time constraints placed on our investment team. Our experience with LAPFF has been a positive one: we share a similar investment outlook and challenges to other LGPS that LAPFF represents, believe their scale (at £300bn, at 14x our own) is a considerable benefit and have a successful and close experience in working together (both the Director and the Chair of WYPF sit on the Executive Committee of LAPFF.)

We have chosen to align our stewardship initiatives with a small number of like-minded investors when we consider it will be beneficial to our members. We review such partnerships frequently to ensure efficacy, efficiency and focus is maintained. Engagements regarding climate change form the basis of a significant part of our engagement work, see chart 2.

We further recognise that engagement is a process rather than a one-off action and improved behaviours may take months or even years to achieve. We do, however, expect management to embark in dialogue and act in good faith. We set ourselves realistic time frames and short, medium and long-term objectives for our engagements. If we are met with intransigence or are unable to secure an improvement in behaviour over a reasonable time frame, we may choose to escalate our activity. This could occur in a variety of ways:

- If management proves unresponsive we may decide to approach the Board Chair or Non-Executive Directors.
- We may choose to vote against or abstain from supporting management proposals or vote against the re-election of specific directors. We believe in holding individual directors to account in areas for which we they have lead responsibility.
- Ordinarily, the majority of engagements are

conducted privately but on occasion it may make sense to release a press statement to air an issue we believe to be in the public interest.

- We can join collaborative actions with other shareholders.
- We can submit or support shareholder resolutions at company meetings.
- We may want to undertake legal action including participating in class actions.
- We can consider divesting our shares. We view this very much as a last resort as we consider our power to influence companies is derived from our economic interest.

We will report our efforts to decarbonize on an annual basis through our TCFD statement, Responsible Investment and Stewardship documents. We also report on our voting and stewardship activities.

c. Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management.

WYPF's Risk Management Plan establishes the processes for implementing proactive risk management at the corporate level as part of the overall management of the pension fund. Risk management is a continuous, forward-looking process that addresses issues that could endanger the achievement of critical objectives and includes the early risk identification through the collaboration and involvement of relevant stakeholders.

We consider climate risk to be investment risk meaning that its monitoring and control is conducted primarily by the IAP in its normal course of business. The risks to the portfolio are recognised in both the Fund's ISS and Responsible Investment document. Our Investment managers seek to integrate Environmental, Social & Governance (ESG) considerations, including climate change, into our investment decision and monitoring process.

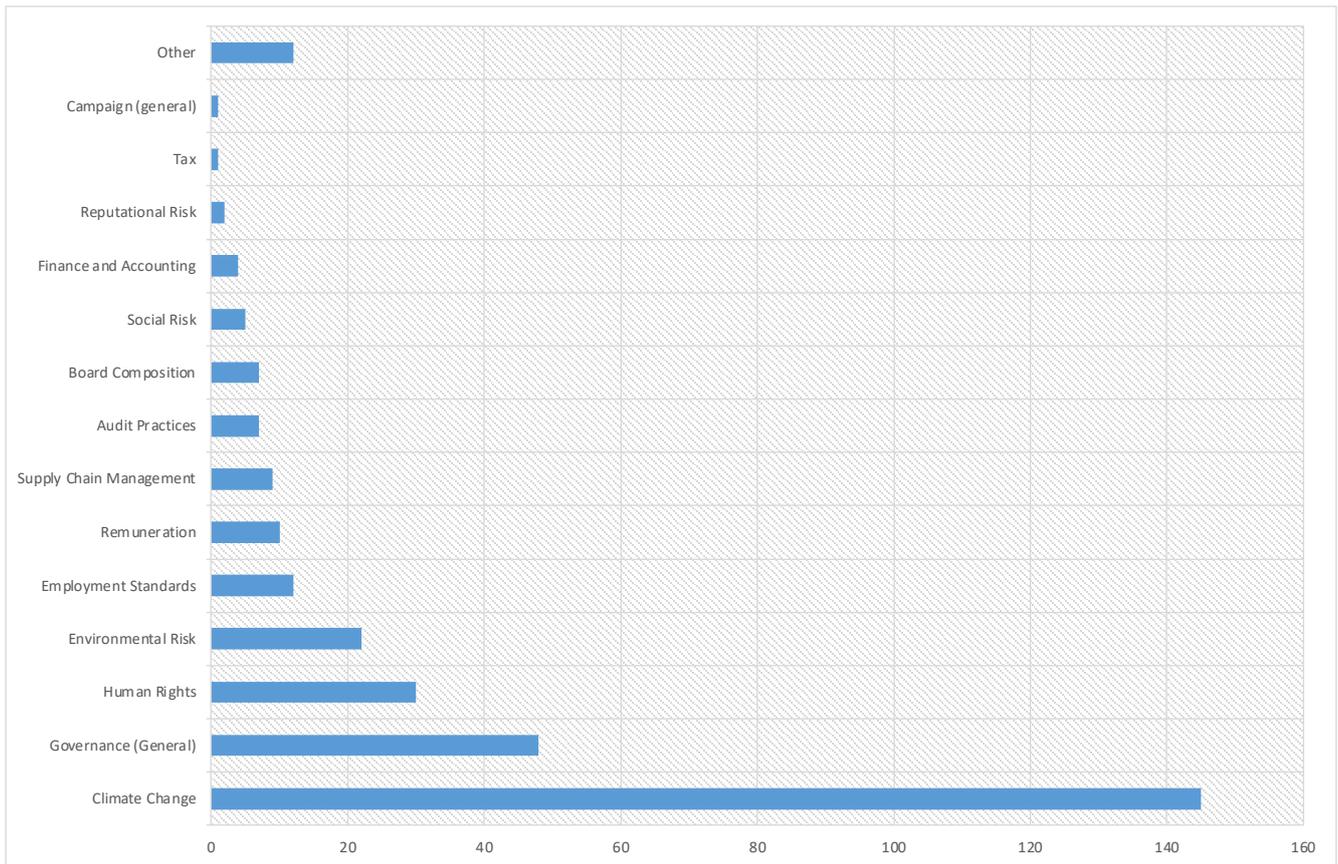


Chart 2: LAPFF Engagements by type

We are in the process of implementing our 2050 Net Zero commitment and envisage that this will crystallise more fully our approach to climate risk management.

METRICS AND TARGETS

a. Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.

We use the services of Trucost, part of S&P, to calculate the carbon emissions and intensity of the Fund and those of the underlying benchmarks. In addition to carbon, Trucost's report provides data on three further metrics: exposure to fossil fuels, potential stranded assets and progress toward low carbon energy goals. This data is detailed in section b.

Data availability remains a problem in carbon mapping. While we were able to source the data for the majority of our public equity and fixed income holdings (see Table 2), we could not obtain reliable data for our publicly and privately held investments in private equity, hedge funds, real estate or infrastructure. In all, data was available for 72% of our assets by value. Given the lack of availability of data for our alternatives portfolio we have chosen to present the carbon data for eight of our separate portfolios rather than on the aggregate fund level. We believe that this approach will be more useful as we compare data over time and improve the availability of data in future years.

Portfolio	AuM as of March 31st	Benchmark	Carbon Footprint	% of Portfolio included
UK Equity	£4,700mn	FTSE All Share	Yes	91%
US Equity	£2,034mn	FTSE World North America Index	Yes	98%
Europe Equity	£1,800mn	FTSE Developed Europe Ex. UK	Yes	89%
Asia ex Japan Equity	£566mn	FTSE Developed Asia Pacific Ex. Japan	Yes	100%
Japan Equity	£799mn	FTSE All World Japan	Yes	95%
Emerging Markets Equity	£978mn	FTSE All World Emerging Market	Yes	66%
Sovereign Debt	£1,482mn	S&P Global Developed Sovereign Bond	Yes	88%
Corporate Debt	£624mn	S&P Global Developed Corporate Bond	Yes	90%
Alternatives	£2,157mn	n/a	No	n/a
Real Estate	£633mn	n/a	No	n/a
Cash	£468mn	n/a	No	n/a
Total	£16,244mn			

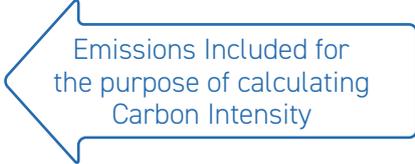
Table 2: WYPF assets by class and coverage of Carbon Footprint

To evaluate the fund's carbon intensity, we have chosen to focus on Scope 1, 2 and those Scope 3 emissions attributable to first tier suppliers, see Table 3. We believe that this approach strikes an appropriate balance between capturing an accurate assessment of the intensity of a business without potentially double-counting emissions.

While the prevailing level of carbon emissions is a useful starting point for our analysis we consider it less important than the trend of emissions and the ability and willingness of company management to align and achieve Net Zero pledges. This is particularly the case as many companies have only recently made pledges and are starting on their GHG reduction journeys. Other important considerations include the extent, if any, of a given company's fossil fuel reserves, the amount of board level carbon expertise and exposure to green technology.



Table 3: Scopes captured in Carbon Intensity Measures

Scope	Definition	EQ – UK portfolio CO2e	
1	Direct CO2e based on Kyoto protocol derived from company's activities	343,371	
	Other direct CO2e emissions not covered by Kyoto criteria	50,917	
2	Indirect CO2e emissions based on purchased electricity	93,717	
3	Indirect, Non-Electrical, First Tier Supply chain	256,605	
3	Indirect Other supply chain	278,522	
3	CO2e generated by the distribution, processing and use of products produced by a company		

We find the work of Climate Action 100+ and the TPI of great use in making these assessments. We are able to assess the quality of individual company approaches to climate change through the TPI that marks management on a variety of topics to produce an aggregate score, from a lowly 0 indicating no awareness of climate risk to a commendable 4 where a company is implementing a realistic and viable migration strategy.

As of August '21, we were invested in 119 companies that appeared in the TPIs universe of 415 high emitters. On average these companies received a rating of 3.2, substantially ahead of the 2.7 average rating across the TPI universe.

While we endeavour to measure our carbon footprint accurately we understand that the data we use is imperfect. The discipline of carbon foot printing is relatively new and continues to evolve. Specifically, we acknowledge problems with:

- We are reliant on companies to produce accurate emissions data. The data are static and backward looking and need to be considered in conjunction with the stated ambitions of the individual companies.
- We acknowledge that data availability is good for developed market equities but less well advanced in other geographies and asset classes.
- The nature of the data is to measure a single negative economic externality i.e. carbon emissions. It should not be viewed in isolation from other factors. For example, an oil company which may currently have a high level of emissions but is pivoting its business toward renewables could be considered as having a positive climate impact.
- We recognise that methodological differences exist between data providers and standardised scores are not available.

b. Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

The estimated absolute levels of CO₂ emissions for each of the seven portfolios considered, along with the benchmarks for each, are given in Chart 3. Of the eight funds seven reported lower than their respective index. The differences ranged from – 1% to – 69% but averaged an impressive – 25%. The exception was the European equity fund that had emissions 12% higher than its benchmark.

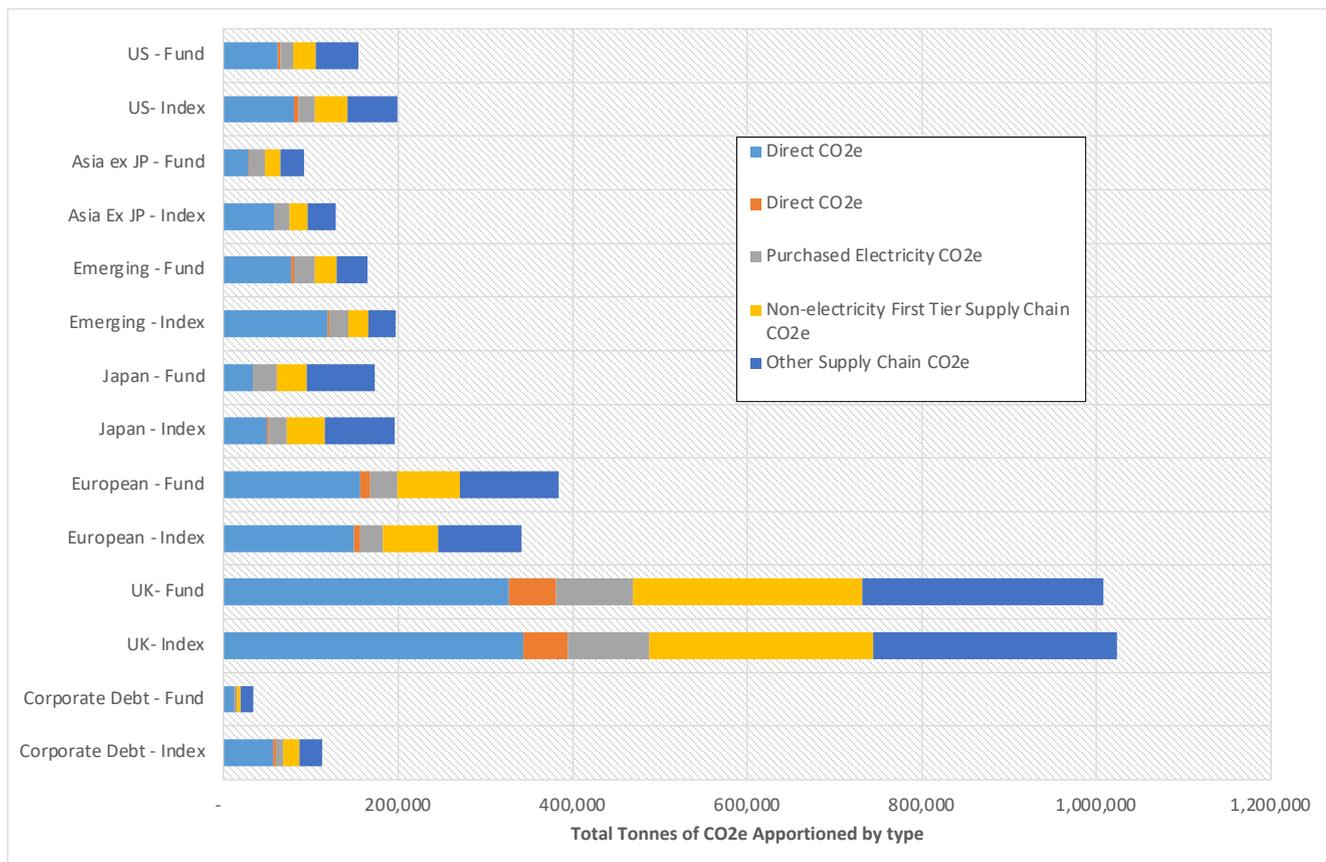


Chart 3: CO₂ Portfolio emissions type

While we recognise that net zero is an absolute target, we also track three normalised measures of the Carbon Intensities of our portfolios which will allow us to better track our progress made toward net zero. The three measures are:

- **Carbon / Revenue (C/R)** expresses the volume of carbon emitted per dollar of sales generated by portfolio companies. It is considered to be a valuable measure of the “carbon efficiency” of the portfolio and is calculated by dividing the appropriated CO₂e by the apportioned revenues. This metric is not applicable to Sovereign Debt portfolios.
- **Carbon / Value Invested (C/V)** indicates the amount of carbon emissions per million dollars of portfolio value permitting different size portfolios to be compared. The metric is calculated by dividing the appropriated CO₂e by the value invested.
- **Weighted Average Carbon Intensity (WACI)** captures a portfolio's exposure to carbon intensive companies. It is calculated by summing the product of each holding's weight in the portfolio with company level C/R intensity (there is no apportioning by investors' ownership.)

Chart 4 displays the different Carbon intensity by method for each of the portfolio and benchmark.

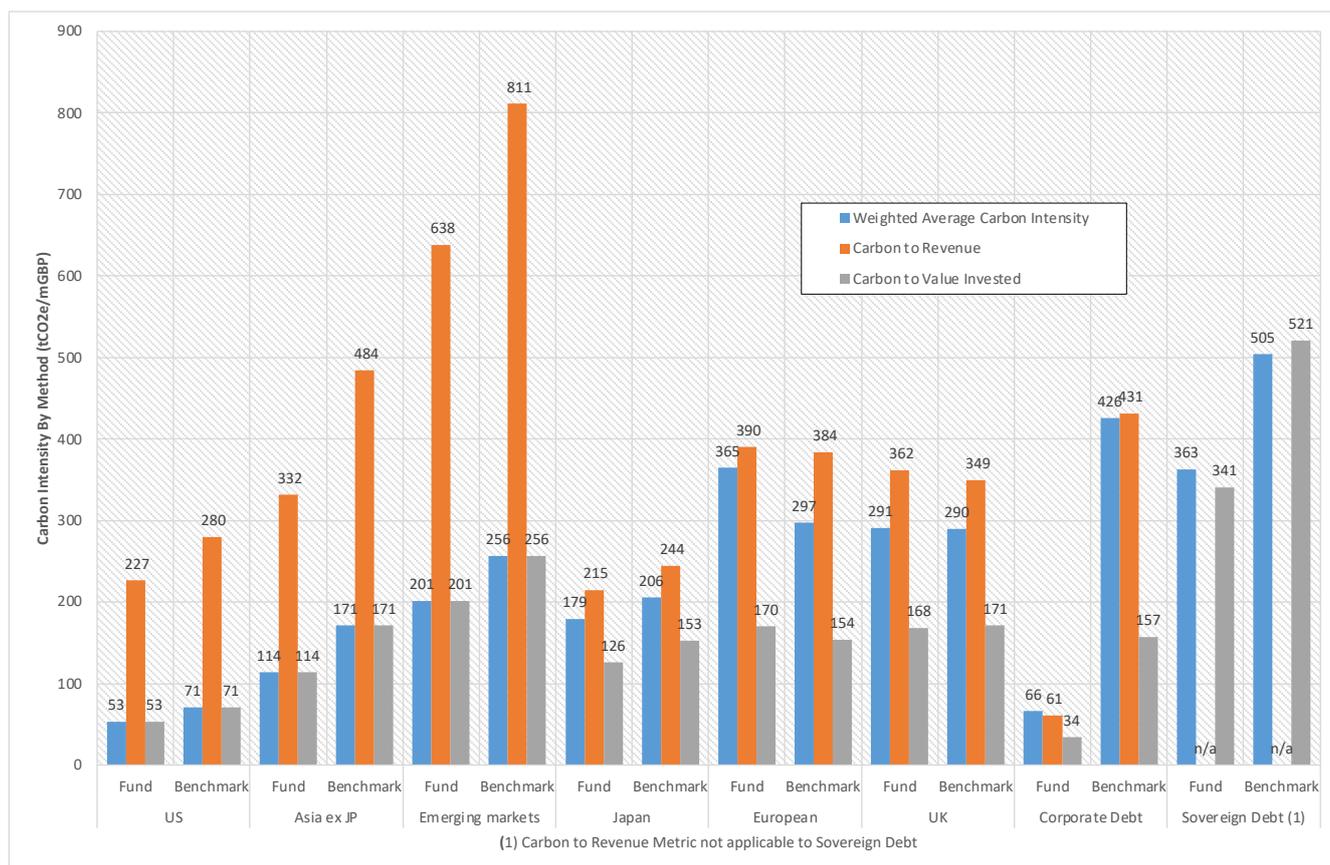


Chart 4: Carbon Intensity by Fund under three different measures

As with the absolute levels of carbon, the Fund's carbon intensity scored well: of the twenty-three measures, eighteen were lower than the relevant benchmark. While this represents an encouraging start we consider this inaugural measurement only the start of our decarbonisation ambitions.

Table 4: Carbon Intensity (C/R) of portfolios and benchmarks by GICS sector

Geography	Fund/ Benchmark	Comms Services	Consumer Disc	Consumer Staples	Energy	Financials	Health Care	Industrials	IT	Materials	Real Estate	Utilities
US	Fund	50	78	111	884	10	41	341	61	1,210	321	3,418
	Benchmark	49	105	230	885	87	36	258	62	1,220	202	3,564
Asia ex JP	Fund	87	140	481	715	56	64	220	194	913	356	2,410
	Benchmark	65	148	342	1,227	10	90	376	189	1,310	260	4,403
Emerging	Fund	135	158	639	751	24	190	964	290	2,298	97	2,923
	Benchmark	68	241	668	1,014	32	155	467	189	3,220	93	4,464
Japan	Fund	93	138	157	-	5	52	248	106	1,154	74	455
	Benchmark	46	114	274	536	10	60	205	129	1,102	86	1,537
European	Fund	55	114	281	580	32	71	220	57	1,533	192	1,458
	Benchmark	50	102	315	649	17	81	180	59	1,679	186	1,550
UK	Fund	49	105	238	652	6	63	176	53	856	70	1,227
	Benchmark	47	90	222	663	6	66	176	40	779	56	976
Corporate Debt	Fund	51	75	127	1,060	19	-	45	40	-	92	241
	Benchmark	53	94	274	762	32	40	230	65	1,249	198	2,481

Darker shading indicates greater carbon intensity

The difference between the scores of our different strategies is explained by the combination of our sector and stock decisions. Table 4 indicates the wide dispersal of carbon emission intensity over the variety of sectors and geographies considered. Table 5 demonstrates how the chosen combination of sector and stock weighting within sectors explains the difference in carbon intensity between our portfolio and in benchmark. In the case of Japan, for example, the 11.9% lower carbon intensity of the portfolio (215 vs. 244) reflects an underweight position in relatively high intensity sectors (accounting for 4.5 pp of difference) and being underweight high intensity companies within those sectors (accounting for the other 7.4 pp of difference.)

Table 5: Attribution Analysis of Carbon Intensities Portfolios vs Benchmarks using Carbon /Revenue methodology

Geography	C/R Intensity Carbon (tCO2e/mGBP)		Variation Attributable to		Total
	Portfolio	Benchmark	Sector weighting	Stock selection	
EQ - US	227	280	9.7%	9.0%	18.7%
EQ - Asia ex JP	332	484	10.6%	20.8%	31.4%
EQ - Emerging	638	811	4.1%	17.2%	21.3%
EQ - Japan	215	244	4.5%	7.4%	11.9%
EQ - European	390	384	-5.6%	4.2%	-1.5%
EQ - UK	362	349	1.6%	-5.2%	-3.7%
Corporate Debt	61	431	77.0%	8.8%	85.8%

In addition to measuring carbon emissions and intensities we disclose two further measures: exposure to fossil fuels and the vulnerability of reserves to stranding.

In May 2021 the International Energy Agency (IEA) published a report (Net Zero by 2050 – Analysis – IEA) describing how the global energy sector needs to adapt to reach net-zero CO2 emissions by 2050 consistent with the 2 degree scenario. The report envisaged that fossil fuel derived electricity, starting with coal and oil but later followed by natural gas, would be steadily displaced by renewables in the energy matrix.

The portfolios' progress toward IEA 2025 energy source goals is indicated in Table 6. The table paints a decidedly mixed picture, our Asia ex JP portfolio, appears unlikely to hit required reductions in Coal & Natural gas, at 53% & 34% respectively vs targets of 25% & 23%. Indeed, gas and coal targets across the board appeared challenging, with solar & other renewables being one of the only areas for optimism.

Table 6: Portfolio's progress toward IEA 2025 energy source goals

Source	Direction of travel	US	Asia ex JP	Emerging	Japan	European	UK	Corporate Debt	IEA 2025	IEA 2030	IEA 2050
Coal	↓	26%	53%	36%	0%	12%	6%	29%	25%	15%	0%
Oil	↓	0%	3%	0%	0%	1%	1%	0%	2%	1%	0%
Natural gas	↓	41%	34%	21%	98%	34%	33%	21%	23%	21%	6%
Other Sources		0%	0%	0%	0%	0%	3%	0%	0%	0%	0%
Biomass	↑	0%	0%	4%	0%	2%	25%	0%	5%	6%	8%
Fossil energy with CCS	↑	0%	0%	0%	0%	0%	0%	0%	0%	2%	9%
Nuclear	↑	16%	6%	1%	0%	20%	9%	30%	13%	15%	16%
Hydroelectric	↑	1%	1%	13%	2%	15%	7%	2%	18%	18%	18%
Solar & other renewables	↑	15%	4%	25%	0%	16%	15%	18%	15%	22%	43%

IEA targets
 Portfolio ahead
 Portfolio behind
 At or near target

The pivot to the low carbon economy consistent with Net Zero means that existing fossil fuels reserves now exceed the remaining “carbon budget” and therefore could be considered stranded assets subject to write-down. Stranded assets may include extraction related activities pertaining to fossil fuels and energy-related activities including coal power generation, petroleum or natural gas. Chart 5 indicates the revenue exposure of the portfolios and benchmarks, as well as the portfolio's exposure to companies that derive any revenue from fossil fuel. For example, the EQ-US portfolio derives 1% of its apportioned revenues from fossil fuel extraction, 1% from energy-related activity with 4.5% of the value of the fund invested in companies involved in these activities.

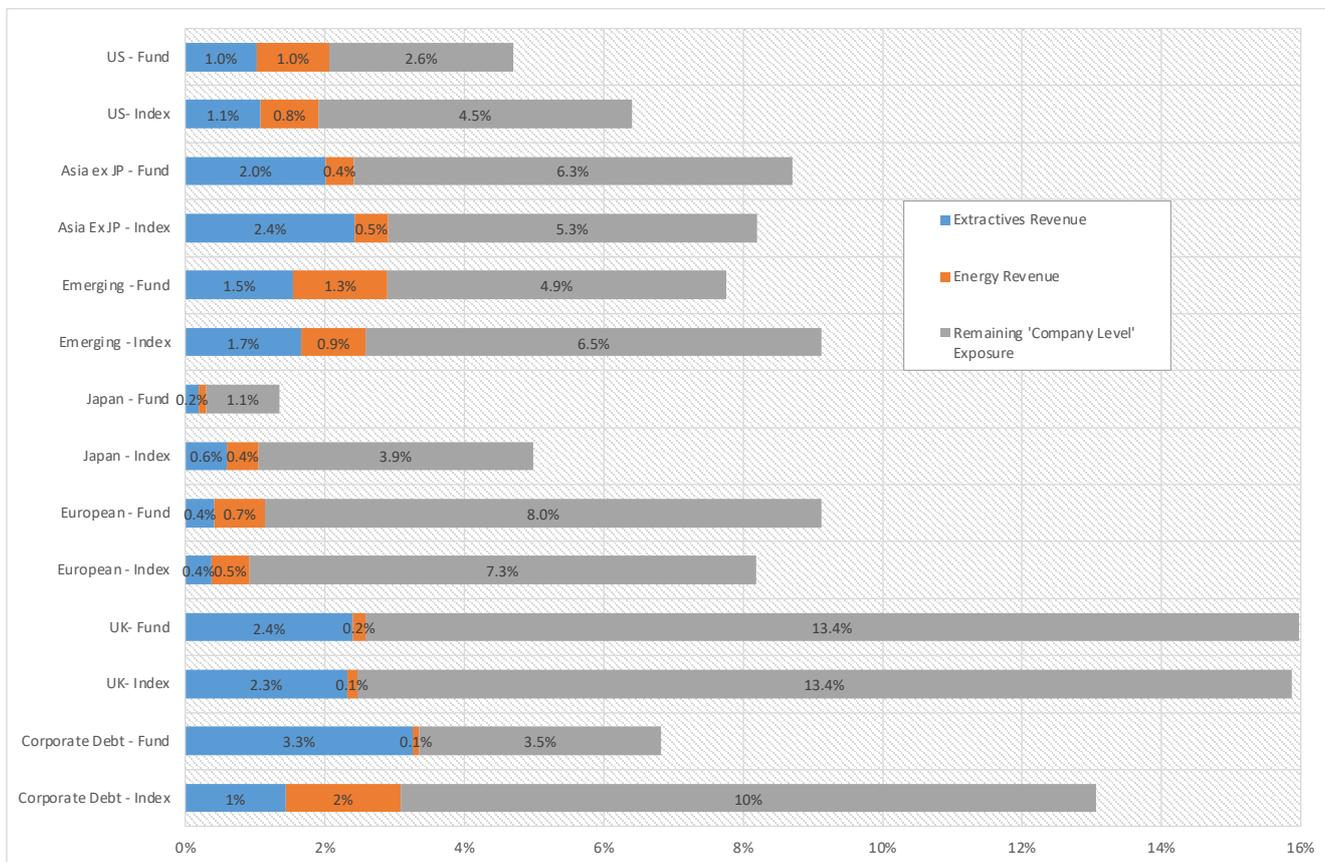


Chart 5: Portfolio exposure to fossil fuels

Further developing this theme, the revenues indicated in Chart 5, are broken out by fossil fuel type in Chart 6.

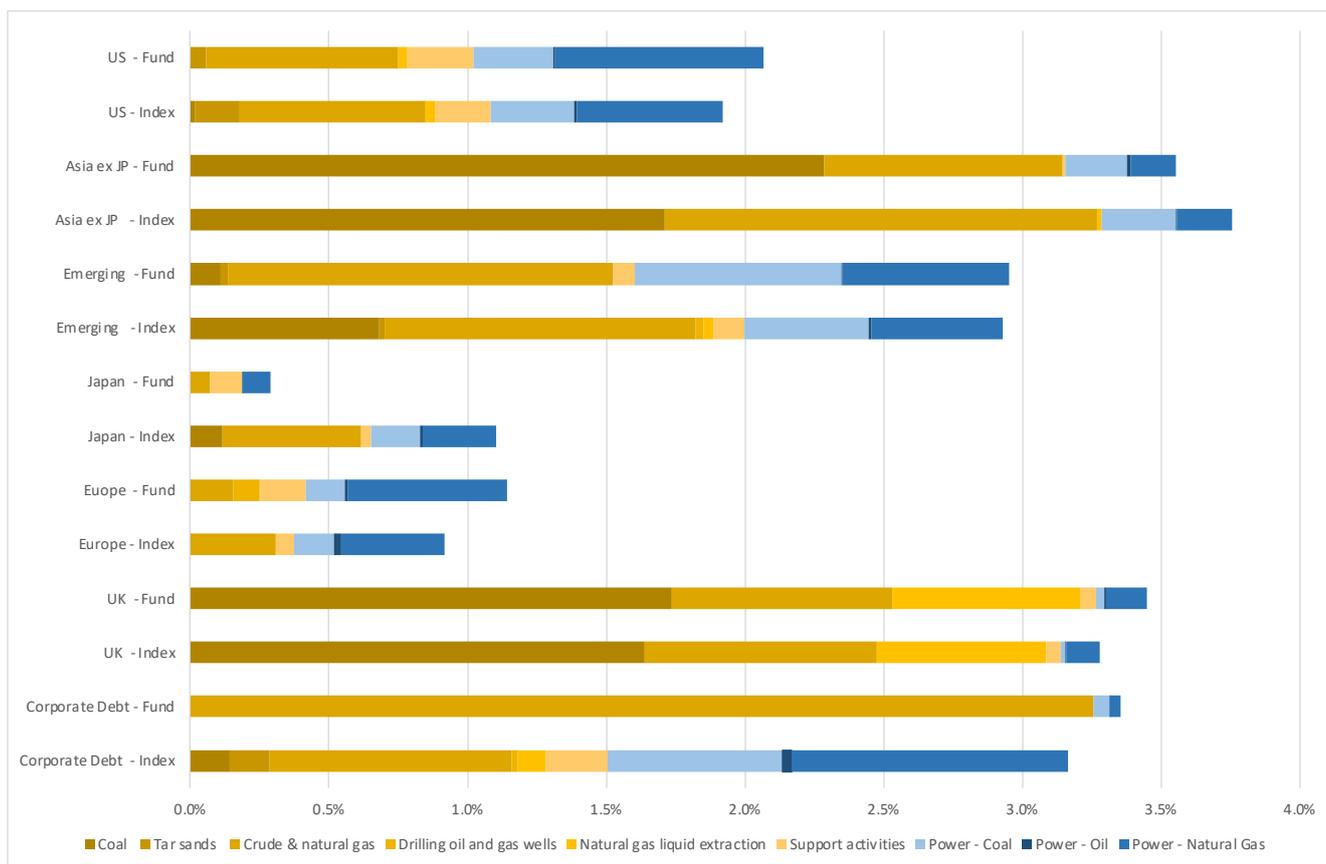


Chart 6: Fossil Fuel-Related Revenue by type

Another metric for assessing the likely financial impact of stranded assets is to consider the fossil fuel reserves of investee companies. For a 2/3 chance of limiting global warming to 1.5c, the Intergovernmental Panel on Climate Change estimated that the total remaining carbon budget is 420 GtCO₂ (or 580 GtCO₂ for an even chance). On current annual usage of c35Gt suggests that the budget will be exhausted by 2030. Moreover, achieving the lower budget implies that 89% of coal reserves, 58% of oil reserves, and 59% of the gas reserves identified have to stay in the ground. This calculation suggests the value of fossil fuel reserves will be impaired and need to be written-down or off before they can be utilised. Chart 7 indicates the potential CO₂ emissions of the fossil fuel reserves owned by investee companies by geography. In 2018, the Intergovernmental Panel on Climate Change estimated that the total remaining carbon budget was 420 GtCO₂ (or 580 GtCO₂ for an even chance). On current annual usage of c35Gt suggests that the budget will be exhausted by 2030.



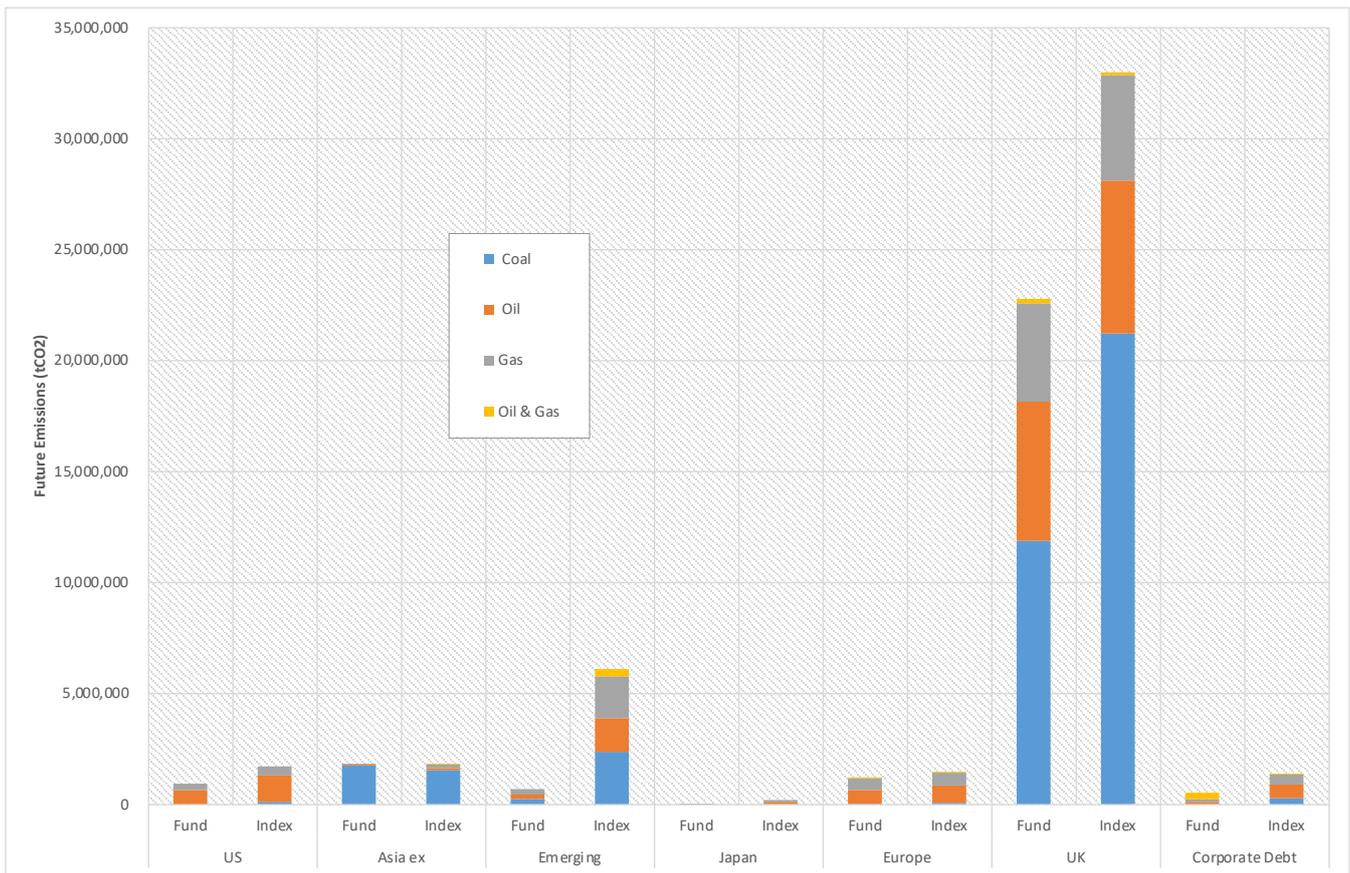


Chart 7: Projected CO2 emissions from fossil fuel reserves in portfolios

c. Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.

We remain committed to meeting our responsibilities as asset owners. In early 2021, WYPF made a Paris Aligned Net Zero 2050 pledge to cut net carbon emissions to zero by that date. We are currently in the process of formulating an implementation plan and will be establishing interim targets in due course.

It should be reiterated that we seek to achieve our Net Zero target by engaging with our investee companies to cut their emissions. While the achievement of specific goals is a vital part of our pledge we will consider our 2050 commitment as successful only if we are able to curb the CO2 emissions of the companies that we invested in. Reducing the carbon footprint of the fund via divestment, while allowing us to achieve our net zero target, would be a pyrrhic victory if it meant that systemic carbon emitters were not forced into behavioural change. The key metrics in measuring our progress toward this goal will be an ongoing improvement in:

- A consistent and meaningful reduction in the carbon intensity of the fund in our annual carbon foot printing exercise.
- A significant cut in the carbon intensity of the systematic emitters within the portfolio. Of the 167 companies that Climate Action 100+ identified as being systematically significant, WYPF was invested in 72 with a total value invested of £1.6bn, 10% of the whole fund. These holdings were highly concentrated: the top ten holdings amounting to 43% of the total value invested. We will use our power as significant shareholders to engage with management to secure behavioural improvements.
- Improving TPI scores assigned to these systematic emitters. Rather than focussing solely on the carbon data of big emitters, consistent annual improvements in TPI assessment will demonstrate that individual companies are serious in their approach to climate change.
- Clear progress to achieving milestones in our company engagements.

