Worcestershire Pension Fund

ESG Audit & SDG Mapping Exercise
Final Project Report

24th February 2021

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1 Introduction

In September 2020, Worcestershire County Council, as the administering authority of the Worcestershire Pension Fund ('the Fund'), appointed Minerva Analytics ('Minerva'), working with Discern Sustainability ('Discern'), to carry out an Environmental, Social and Governance (ESG) Audit and United Nations Sustainable Development Goals (SDGs) Mapping project for the Fund.

After our appointment in August 2020, the Minerva and Discern delivery team ('the Minerva team') followed the project delivery approach set out below to meet the Fund's requirements:

Step	Details	Status
Examine	Review the Fund's current ESG & SDG approach, collecting relevant policy documentation and portfolio data;	✓
Benchmark	Analyse and assess the policy and investment information for the Fund itself, and also the Fund's external investment managers, to establish a baseline ESG & SDG position;	✓
Inform	Hold a workshop where initial project findings are delivered, and engage with Members and Officers on the results;	✓
Deliver	Take on board feedback, refine reporting and any proposals, and deliver final report for Pensions Committee consideration; and	✓
Influence	Identify engagement activities for the Fund in terms of working with managers and investment consultants to better align stewardship	✓

In this final version of the project report, we begin with an Executive Summary before restating the Fund's full requirements and then detailing the approach we took to meet these requirements. We set out the steps taken in carrying out the ESG audit and mapping the Fund's investments to the SDGs, covering the equity, corporate bond, infrastructure and real estate investments.

We then present the findings of our ESG Audit and SDG mapping analysis, from both a qualitative and a quantitative perspective of the Fund's investments, and conclude our report with some suggestions as to how the Fund could use this analysis.

We look forward to answering any questions on any aspect of the ESG Audit and SDG Mapping exercise and this report, at the forthcoming Worcestershire Pensions Committee meeting in March 2021.

The Minerva Team

24th February 2021

2 Executive Summary

Having examined all of the Fund's investment arrangements for this ESG Audit and SDG Mapping project, we have prepared the following high-level summary. For the ESG Audit, we used our experience, knowledge and judgement in reviewing the Fund's overarching approach to sustainability issues. For the SDG Mapping, we used the World Benchmarking Alliance's SDG2000[1] as a proxy for the SDGs themselves. The high-level results were as follows:

Table 1: Key Facts

Key Facts	Outcome
Investment managers analysed	12
Overall assessment of the Fund's current position on ESG matters	Broadly Positive
WBA SDG2000 Overlap by Count of Companies | % of Assets Analysed	1,007 | 50.4%
WBA SDG2000 Overlap by Value of Companies | % of Assets Analysed	£1.33bn | 66.0%
Portfolio companies analysed referencing Taskforce for Climate-Related Financial Disclosures (TCFD) / % of Assets Analysed	46.8% by number (1,822) and 52.0% in £ invested (c£1.6bn)
Overall assessment of the Fund's Infrastructure & Real Estate investments	Broadly Positive
Greatest SDG Exposure	
Worcestershire's **initial greatest exposures** to the SDGs*	**£ Million**
SDG 12 Responsible Consumption & Production	1,440
SDG 8 Decent Work & Economic Growth	1,425
SDG 13 Climate Action	1,385
Least SDG Exposure	
Worcestershire's **initial smallest exposures** to the SDGs*	**£ Million**
SDG 15 Life on Land	312
SDG 14 Life Below Water	336
SDG 6 Clean Water and Sanitation	388
Prioritised SDG Exposure	
Worcestershire's initial exposures to the Fund's **prioritised SDGs****	**£ Million**
SDG 7 Clean Energy	1,190
SDG 8 Decent Work & Economic Growth	1,425
SDG 9 Industry, Innovation & Infrastructure	945
SDG 13 Climate Action	1,385

**as defined by the SDG2000 benchmark*
*** as defined by the Pensions Committee in a Pensions for Purpose workshop in May 2020*

[1] The WBA SDG2000 is a list of 2,000 global companies and organisations that are deemed to have the greatest potential to help deliver the SDGs if they are managed in a sustainable manner.

Key Facts – Qualitative Assessment Results

- Based on our analysis, we can broadly conclude that most of the Fund's external asset managers have made some attempt to incorporate ESG factors into their respective investment processes. However, the SDGs remain relatively uncharted territory, although some managers are experimenting with SDG mapping and even SDG-based impact measurement.

- Of the Fund's managers, a small number stand out as being relatively unsophisticated when it comes to ESG factor incorporation and alignment with the Fund's prioritised SDGs. While the two portfolios are relatively low risk in terms of held assets, one is high risk because of the prevalence of US shale oil and gas investments.

Key Facts – Quantitative Assessment Results

- Using the WBA SDG2000 to measure the Fund's current starting position with respect to its listed equity and corporate bond assets and the SDGs, we found that:
  - At the end of September 2020, the Fund's investment managers collectively held 1,007 **(50.4%) of the 2,000 constituents of the SDG2000**;
  - The Fund had a total of **£1.33bn invested** in these 1,007 companies' equities and corporate bonds, **representing 66% of the total value of the in-scope assets** as at end September 2020. Note: Despite the high overlap, **this is not by design**. None of the managers surveyed are employing an SDG selection or alignment strategy, either generally, or specifically for the portfolio(s) they manage for the Fund. Exposure to companies in the SDG2000 is not a measure of positive impact or alignment already booked: it is an indication of their **SDG impact potential**;
  - The Fund's starting in-scope holdings and value of economic exposure **to each of the 17 SDGs have been calculated,** with the top three greatest and least exposures summarised. Using Minerva's Sustainability Governance Rating to measure the quality of governance of investee companies against a range of recommended good practices, including the TCFD's climate change standards, most of the Fund's underlying investments can be classified as being, on average, either **'Developing'** or **'Basic'** in their approach;
  - At the end of September 2020, **approximately 47% of the Fund's listed equities covered by Minerva's analysis had made some material reference to TCFD** in their latest public disclosures such as annual reports and accounts, or sustainability report. By material reference, we mean an investee company's explicit or implicit alignment with the recommendations of the TCFD;
  - This equated to **approximately 52% in £ invested (£1.05 billion) in investee company securities that made reference to TCFD** in their public disclosures; and
  - A **number of investment risks and opportunities to the Fund were identified** within its assets, in relation to the transition to sustainability and a low carbon economy.

3 Our Approach

An increasing number of institutional investors, such as Worcestershire, are seeking to explore whether their investment strategies are in line with the SDGs, or can be flexed or adjusted to allow for alignment. We believe that there are a number of connected steps to carrying out such an 'SDG mapping exercise', each with associated inputs and outputs. We also believe our approach represents a logical and methodical solution to both carrying out any SDG mapping exercise, and helping clients understand and consider the results in the context of their current position from an ESG perspective.

Based on the project specification we have approached the SDG mapping and ESG Audit as follows:

Step	Details
1. Examine	Investigate the Fund's current position in terms of its investment strategy and individual investment manager mandates from a 'sustainability' perspective, reviewing relevant Fund policy documentation, stewardship reporting, IMAs, Pensions Committee reports and minutes, and any associated 'sustainability' reporting.
2. Benchmark	Take historic positions of the Fund's investment managers' holdings data for benchmarking against the SDGs as defined by an appropriate mapping framework.
3. Inform	Deliver a report with our initial project findings, and hold a workshop with the Fund to allow for explanation, exploration, discussion and challenge of the exercise findings and recommendations.
4. Deliver	Take on board feedback from the workshop, refine the reporting and any proposals, and return to deliver the final project report at a formal Pensions Committee meeting.
5. Influence	Where appropriate, work with the Fund and the Fund's external agents to better align stewardship with the asset owner's preferences, within the strategic approach of existing mandates, and/or help inform new ones.

Reviewing all of the Fund's Assets

The Fund has exposure to four main asset classes in its investment strategy: Equities, Corporate Bonds, Infrastructure and Real Estate. Our approach to the ESG Audit and SDG Mapping aspects of the project were broadly the same for each asset class, although there was one important difference when it came to SDG Mapping:

- For equities and corporate bonds, information is generally publicly available relating to the Fund's investee companies, and with the existence of the SDG2000 index providing a good proxy for the SDGs themselves, a quantitative approach was possible; and

- For Infrastructure and Real Estate, publicly available information of sufficient detail and quality is scarcer, due mainly to the nature of the vehicles used by investors to gain access to these assets. As a result, the SDG2000 could not be used to map these assets to the SDGs; instead we used our experience and judgment to look at each portfolio's underlying assets, to gauge whether they were likely to help or hinder in the delivery of the SDGs.

4 Step 1: Examine - Initial Findings – Qualitative

4.1 Summary of Qualitative Analysis of the Fund

We reviewed the following documents provided to us by the Fund and others available on its website to allow us to assess how Worcestershire has framed its approach to ESG and the SDGs, so we can better direct our research and recommendations:

- Strategic Asset Allocation Review - 2019;
- The Investment Strategy Statement 2020 (March 2020), including the 2020 Statement of Investment Beliefs;
- Briefing Note on Outcome of the Investment Beliefs Workshop (22nd May 2020);
- 'The latest on our investments and funding position' (9th October 2020);
- Two seminar decks delivered by Pensions for Purpose and subsequent Committee minutes

Compared to similar documents that we have reviewed for other public pension funds of the Fund's size, the approach outlined is:

- **Modern:** in the sense of identifying the rights and responsibilities and opportunities that attach to an asset owner with respect to ESG and sustainable investment; and

- **Concise:** for the most part it is tightly drafted and certainly coherent. It has obviously benefited from a timely update, given that it has all been produced in the last twelve months. Above all, the Statement of Investment Beliefs and Principles expressed elsewhere are consistent with modern interpretations of fiduciary duty.

We believe that, collectively, the documents give Scheme members and other stakeholders **a good level of insight** into the thinking of the Fund on ESG. This includes options and uncertainties facing it in terms of further and future allocations to specific ESG strategies, such as climate-focussed and SDG investment, respectively. It also gives a sense of the interactions between the Fund and LGPS Central, such as the new opportunities for asset allocation and training and analysis on climate change.

Opportunities for improvement or refinement would be the gating and accountability process for incumbent managers not already within LGPS Central, and how this can be improved as the Fund continues to invest in alternatives/real asset managers independently of pooling for the present time. This forms part of the high-level recommendations in the conclusion of this report.

The Fund's statements rightly do not focus excessively on divestment and exclusion (as tends to be the more defensive approach of many peers). However, its framing of divestment/exclusion fails to recognise that this may, at times, be the only valid fiduciary response in cases where the ESG risks of an investment outweigh any opportunities. It follows from the Fund's acceptance of the need to incorporate material ESG risks that its appointed managers should be permitted - perhaps even encouraged - to avoid or seek alternatives to holdings that are excessively risky, and which cannot otherwise be mitigated, where the investment approach (e.g. an active strategy) permits. This is merely a way of saying that every case for divestment, avoidance or exclusion deserves also to be assessed on its merits on financial grounds, regardless of the origin of that petition. This includes

where those financial grounds are driven by ESG factors. The determination is primarily owned by the managers, and so being satisfied with their competence and willingness to enact this principle is a core duty of any pension fund.

4.2 Summary of Qualitative Analysis of the Fund's Managers

During the 'Examine' step of the project, Discern reviewed policies and documentation that relate to the Fund's external asset managers, including LGPS Central. The following table provides a high-level summary of the outcome of the qualitative assessment process, with each manager's assessments translated into numeric scores out of 100, for ease of comparison:

Table 2: Qualitative Assessment

Manager	Asset Class	A	B	C	D	E	F	G
LGPS Central	Equities/Corp Bonds	76	-	33	-	-	-	89
Manager A	Equities	81	37	41	-	-	-	-
Manager B	Equities	65	57	61	-	-	-	-
Manager C	Infrastructure	85	74	-	75	70	61	-
Manager D	Infrastructure	79	80	-	70	21	72	-
Manager E	Infrastructure	86	78	-	86	90	67	-
Manager F	Infrastructure	13	8	-	18	0	10	-
Manager G	Private Debt	73	58	68	56	-	-	-
Manager H	Real Estate	46	43	-	48	44	36	-
Manager I	Real Estate	61	79	-	59	62	90	-
Manager J	Real Estate	56	65	-	71	70	44	-
Manager K	Real Estate	0	15	15	0	0	-	-
Manager L	Real Estate	0	21	15	5	-	-	-

Table Key:

A	Strength of house-level ESG governance and orientation
B	Portfolio disposition or potential for high ESG achievement
C	Portfolio disposition or potential for contribution to the Fund's chosen SDGs
D	Quality of ESG management using best practice in real assets (private debt for Manager G)
E	Participation in and performance in benchmarking and standards
F	A high-level qualitative assessment on individual assets held in infrastructure funds for their potential to contribute to the Fund's chosen SDGs
G	Assess the pool's policy on investment manager Selection, Appointment and Monitoring (SAM)

As shown in the preceding table, our analysis identified ESG states of development that range from virtually non-existent in the case of a few, to highly sophisticated and mature in the case of many. This is not an unsurprising result in the context of a large number of managers spread over a number of asset classes, whose appointments span a number of years (or even decades). The Fund's manager bench is for the most part a strong one, and we have made some specific observations about strengths, weaknesses, notable aspects and recommendations for improvement in the individual manager profiles that have been provided to the Fund in a separate report.

LGPS Central is first among equals in terms of its future importance for the delivery of the Fund's Responsible Investment ('RI') objectives. We were impressed by the quality of the pool's ESG policy, especially in terms of manager Selection, Appointment and Monitoring (SAM). More importantly, even though we did not formally analyse its appointed managers (this was out of scope), from our existing knowledge of their respective practices we know that they would score in the top quartile, in terms of commitment to RI if they were analysed in the same manner as the Fund's other managers.

The most notable negative finding of our analysis relates to Manager F. It has only just last month released its first ESG report, and it is lacking, compared to its peers. It picked up almost no points in our audit in which it is only possible to perform well for practices and promises the manager can demonstrate are systematic. Although there are two other managers who barely scored any points in our assessment, Manager F's portfolio is highlighted because it also has the potential to detract from one of the Fund's highlighted SDGs, in terms of climate. This is explained in the Table 3 later in this report. At the other end of the spectrum, Managers I and J make strong, clear, intentional and additional contributions to the Fund's prioritised SDGs.

Since the start of this ESG Audit and SDG Mapping exercise, Manager G's private debt portfolio was sold off to a US active equity investor. We have analysed Manager G in broadly the same manner as the Fund's other managers – although we would like to highlight the fact that they are one of a kind, being the only private debt manager in the Fund's investment arrangements. As a result, we had to create separate questions in places for certain parts of the qualitative analysis.

4.3 LGPS Central's Approach to Stewardship

As gatekeepers and day-to-day stewards for the funds in which Worcestershire will invest, we believe it is appropriate to focus on the pool that the Fund belongs to: LGPS Central (Central). We have classed Central's approach in the Excellent category, as demonstrated by their RI and Engagement Framework, Voting Policy and TCFD statement. Our observations made in carrying out the qualitative assessment include:

LGPS Central: Selection, Appointment and Monitoring (SAM) of External Managers

Activity	Comments
Selection	All managers are gated for their ESG practices and need to meet a defined Responsible Investment Integrated Status (RIIS) approval status from the pool's Investment Committee.
Appointment	Central discloses that 20% of marks available overall in the RFP process for each manager relate to ESG factors. Central shows a considered approach in the following: *"The RIIS status criteria are bespoke to the product and asset class in question, but will always reflect LGPS Central's RI & Engagement framework and beliefs set forth there (see p3 of RI&E Framework); reference relevant RI/ESG integration documentation that supports the decision to invest, e.g. policies and procedures at external managers or co-investment companies; monitoring structure for assessing external managers' ESG integration and engagement with investee companies/assets; stewardship responsibilities such as engagement and voting; reporting structures that allow appropriate reporting to Partner Funds and the public of processes and outcomes."*
Monitoring	*"Once managers are appointed, we monitor RI and ESG integration on an ongoing basis through quarterly disclosure questionnaires covering ESG integration, stewardship and climate risk. We are currently initiating a 12-month RI review of managers selected last year for the Global Active Equity Fund and the Emerging Market Active Equity Fund."*

Fund creation, ESG integration and collaboration/outreach

- A Sustainable Equities Framework has been instigated by West Midlands Pensions Fund with support from Central and five different funds are available for future investment (we understand the Worcestershire, Cheshire and Derbyshire were involved in the due diligence process, along with West Midlands and Central);
- In October 2019, Central launched a £2.1bn All World Equity Climate Multi Factor Fund with Russell Group; and
- The Partner Fund Responsible Investment Working Group and Central are developing a Climate Risk Monitoring Service. Options available to Partner Funds will include:
    - Assistance drawing up a climate change framework and strategy;
    - An annual climate change risk report per fund, including Climate Scenario Analysis;
    - Fund-wide carbon metrics scorecard covering all asset classes.

Central's approach to Stewardship

- A four-person RI&E team has grown from one person at foundation in 2018, and recently grew further with the arrival of Patrick O'Hara from USS in January 2020. This is a simple and strong sign of commitment.
- In its first year of PRI reporting, 2019, Central received the highest score across all key segments (we are generally vigilant about PRI grade inflation, but the outcome here is better deserved than for many).

- The pool's Voting Policy is detailed, thoughtful and clear in its red lines in terms of voting outcomes.
- The voting stances from Hermes EOS, Central's delegated voting and engagement service provider, are very robust with up to half of meetings in some regions resulting in Hermes recommending a vote against a management proposal.
- Central has a good quality TCFD statement when compared to some of its peers. It answers all aspects of the TCFD reporting recommendations succinctly and relevantly, including the provision of some quantitative data, while acknowledging the uncertainties that attach to it and to scenario analysis. The TCFD statement is also consistent with SAM activity, in that no manager will be selected that cannot demonstrate a strong grasp of climate risk management.
- Nevertheless, their approach relies heavily on the outsourcing of voting and stewardship activities, including collective engagement, to Hermes EOS, which itself relies in turn on outsourcing through its proxy advisor, ISS. We believe that this approach has been taken as a functional efficiency. Hermes EOS is a credible partner with a long-standing reputation in RI and ESG and their reporting is of high quality. However, what is not clear is the transmission and oversight process between Hermes EOS' recommendations, Central's voting intentions, and whether they are reconciled with how their managers actually voted, where there is no segregated mandate.

4.4 Qualitative Assessment Summary

We must stress that the above conclusions (for all managers) have been reached within the limitations of a desktop exercise without being able to audit the actual performance of the policy – for example through interviews, or examining internal documentation etc. Overall, though, we are very satisfied with the RI/ESG/Sustainability information that relates to Central and its RI agents. Given the discussions held at the Workshop around our findings, we support any move by the Fund to look more closely at its current managers on their RI, ESG, sustainability and SDG-alignment approaches. Certainly, more could, and should, be demanded of the poorer performing managers to close the gap, and some mandates may be appropriate for formal review.

One area that the Fund could usefully explore is to learn more about how Central is approaching the forthcoming review of its managers in terms of service levels and compliance with policies. It is common in the industry that once managers are appointed, the initial attention to ESG factors is assumed to be 'taken care of' or that subsequent interactions are of a box-ticking nature. We doubt this will be true of Central, but this latter point is of particular importance, given that Central's present and future influence in this area is so highly consequential for the Fund, overall.

Table 3: Infrastructure & Fund-Specific SDGs Alignment – Summary (individual asset-level commentary available in forthcoming manager profiles)

Fund-Specific SDGs Likely Contribution	Manager	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	13 CLIMATE ACTION
Very strongly contributing	Manager I	The manager has projected that the portfolio will avoid over the assets' lifetimes, 1,971 kilotonnes of C02e. Off-shore wind energy's economics and affordability has improved dramatically in recent years.	Though employment in the construction and maintenance phases of off-shore wind does not come with the same levels of pollution exposure as in coal, for example, there are still significant health and safety risks. However, on balance, the fact that the sector represents clean economic growth, it is obvious that it meets this criterion at least moderately.	Off-shore wind may reduce resilience in the short-term if intermittency is not adequately planned for. However, problems of this nature have not been a serious problem as sceptics predicted, with the National Grid only very rarely reporting balancing problems, so far. In the long-term, being able to source electricity from a variety of sources that are both economic, clean and inter-operable is a good demonstration of resilience and innovation in infrastructure.	The six windfarms are a strategically significant part of the UK's low carbon generation fleet and so make a contribution toward fulfilling the climate action mandates that the UK has undertaken e.g. a legal requirement to achieve net zero emissions by 2050.
Very strongly contributing	Manager D	The Infrastructure fund makes a very strong contribution to cleaner, more affordable and more resilient energy: through a combination of renewables, circular economy waste diversions and storage.	Overall, the fund tends to describe the Impact dimension on people as 'neutral' and labelling the social dimension impact of investments as 'positive'; but does not elaborate. While we accept that the portfolio as a whole does support new employment opportunities in underserved needs and emerging sectors, we would expect more detail on the social impact in relation to the SDGs it has adopted (including SDG8) in future, as it develops its reporting.	The Infrastructure Fund makes a strong contribution to 9.1 and 9.4: in particular its diversification beyond conventional renewables into investments in the circular economy and helping address stubborn industrial or agricultural problems and practices that hinder achievement of the SDGs, for example, Fischer Farms and Waste Knot Energy.	The Climate Action SDG is predicated mostly on government policy, however activities by the private sectors that help support resilience are included. Other managers have scored more highly where they have used their platform to advocate for better climate action policy.

Fund-Specific SDGs Likely Contribution	Manager	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	13 CLIMATE ACTION
Moderately contributing	Manager C	The fund is positioned more 'in the middle' i.e. assets in transition than those that are 100% green or brown, without a means of transition.	All assets are required to have Health and Safety zero accident policies and training and upskilling as a priority ESG goals. Assets are in different stages of development.	Most assets, even where still reliant on fossil fuels, show evidence of pursuing the target of "infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes."	Several district heating and gas network companies have set out transition plans.
Weakly contributing	Manager E	The contribution of the portfolio is probably in line with other Diversified funds without a specific green mandate, which is to say a meaningful if not dominant proportion is in renewables.	Credit should be given to the manager for making the compassionate, fair and flexible treatment of its assets' employees and workers a board-level priority during the COVID crisis. This is an example of how achievement of the SDGs is not only determined by the nature of the asset but to some extent how they are stewarded.	The fund is spread over long-established infrastructure asset types and newer ones, though the absence of digital is notable.	The risk of Anglian Water is the sea level rises and extreme weather affecting service delivery and water quality (which the company has planned and advocated on). The risk to Cadent comes from the Government's recent announcement to cut emissions by 68% by 2030 - this, by most estimates, means that the fossil gas systems for housing and industry will have to transition to low-carbon sources at an accelerated pace, or be replaced by low-carbon electricity via the grid and distributed generation.

Fund-Specific SDGs Likely Contribution	Manager	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	13 CLIMATE ACTION
Detracting	Manager F	Half of the assets in the portfolio are North American oil and gas (mostly gas) players with an eye to export. While natural gas is much cleaner than burning coal for energy and is affordable, its role as a proportion of final energy demand has to decline in order to meet national and global climate commitments. A portfolio so dominated by fossil fuels could not be considered compatible with SDG7 or 13.	Some years ago, the number of people employed in the US in renewables surpassed that of fossil fuels. There is a risk of future stranding of jobs similar to what which has happened with coal if a significant portion of existing planned capacity is underutilised or not built. Jobs in renewable energy, for example, are generally less likely to be hazardous than in natural gas, though health and safety is still a significant risk for both.	Cold storage and data centres make important contributions to resilient infrastructure. Cold storage prevents food waste and preserves medicines; data centres support more efficient, less resource-consumptive activities. However, data centres are energy and water intensive, and already account for as much emission as aviation, globally; so must be managed according to sound environmental principles e.g. Power Use Efficiency and Water Use Efficiency	The oil and gas investments are potentially in conflict with SDG13, especially if 'locked in' effects by developing countries switching from coal to gas are to be avoided by leapfrogging to a renewables/ storage-based system.

4.5 Practical Application of Infrastructure Exercise Findings

In carrying out this ESG Audit & SDG Mapping exercise, a significant amount of analysis was undertaken on the Fund's real assets, including the infrastructure and real estate investments. The findings have been mixed, with some managers such as Manager E and Manager D having well-developed approaches to ESG factor integration, and being well positioned to help contribute positively towards the Fund's prioritised SDGs. However, managers such as Manager F, Manager K and Manager L scored less well in terms of their existing approach to identifying and managing ESG factors, and the relevance or potential of their investments to contribute positively towards the SDGs, prioritised or otherwise.

There are two main sources of information that we delivered to the Fund that we believe will be useful in helping discuss both ESG factor management and SDG alignment with the Fund's managers:

1) The table on page 8 which summarises the results of the Qualitative assessment of each manager's sustainability policies, portfolio documentation and (where possible) the assessment of each manager's real asset portfolio investments; and

2) The Manager Sustainability Profiles, which were delivered to Officers as a separate report, and provide the supporting information that sits behind the table scores.

We believe that this information can be used when Fund representatives meet with the external managers, to help frame any discussion about the findings of the exercise, and what that means for the future from a sustainable investment perspective.

Engaging the Managers

Two main approaches towards ESG considerations became apparent when we carried out our assessment of the Fund's infrastructure and real estate managers:

a) ex-post – where managers such as Manager E had carefully considered ESG factors in setting up the portfolio, and these beliefs were evident in the investments made; and

b) ex-ante – where managers such as Manager F have attempted (poorly) to 'retrofit' ESG considerations into a portfolio of investments that was not created with sustainability issues in mind.

To help the Fund in taking the 'academic' work done in this exercise and turning into something of practical use, we suggest that when Fund representatives next formally meet with each of the real asset managers they ask the following questions:

1) Please explain your approach to ESG factor integration into the investment process (to confirm - or dispute - what we found in our analysis)

2) Please demonstrate:

i) how your specific ESG factor integration approach informed the investments made; and
ii) how they are monitored and managed in the portfolio (to see if they can explain how they 'walk the talk')

3) Please share your current thinking (if any) on the relevance of the UN SDGs to the portfolio.

i) Do you use an ex-ante framework for assessing whether potential and existing investments are net contributors to certain SDGs, and if any are net detractors to others?
ii) How do you establish some impartial basis for this determination?

iii) *If you do not use an SDG-informed approach, what challenges and opportunities would you see in adopting an SDG approach to this fund or a future version of it?*

It may well be the case that the Fund may need to have specific meetings with each manager, to allow them sufficient time to address each of these questions. The results should help clarify which of the Fund's real assets and real asset managers are taking ESG factors seriously, and are positively disposed towards the SDGs, and which are not.

5 Step 2: Benchmark Initial Findings – Quantitative

The **'Benchmark'** step analysed the Fund's existing equity and corporate bond investments based on the individual portfolio holding level, as provided by the in-scope managers. Out of a total of **£2.8 billion** of the Fund's assets at 30th September 2020 (after the removal of cash, derivative and currency transactions from each portfolio, and the removal of the Fund's Infrastructure and Real Estate assets), approximately **£2.2 billion** of remaining assets was then available for detailed quantitative analysis. We achieved a subsequent 90% match between the Fund's equity and corporate bond holdings and the companies held in Minerva's research database, which resulted in **c£2 billion** of the Fund's assets being included in the subsequent quantitative analysis.

5.1 Fund Starting Position vs the SDGs

Fund Exposure by Individual SDG2000 Company

The Fund's holdings were aggregated into a single portfolio and then matched against the SDG2000, resulting in **an overlap of 50.4%**.

This means that, at 30th September 2020, of the 2,000 companies deemed by the WBA as having the greatest potential to help deliver the SDGs by 2030, **the Worcestershire Pension Fund had economic exposure to 1,007 of them** across its equity and corporate bond managers.

N.B. It is important to note that ***this overlap is not intentional***; neither the Fund nor its external asset managers have in place any specific instructions that would have resulted in a conscious alignment with either the SDGs or the SDG2000 (which itself only came into being at the end of 2019).

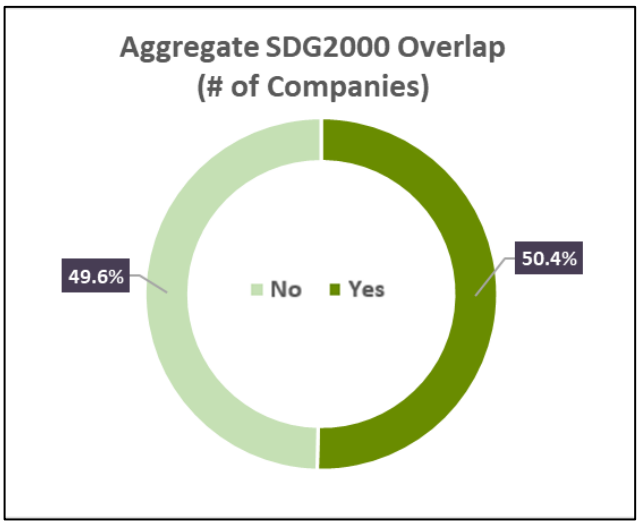


Figure 1: SDG Overlap by Company

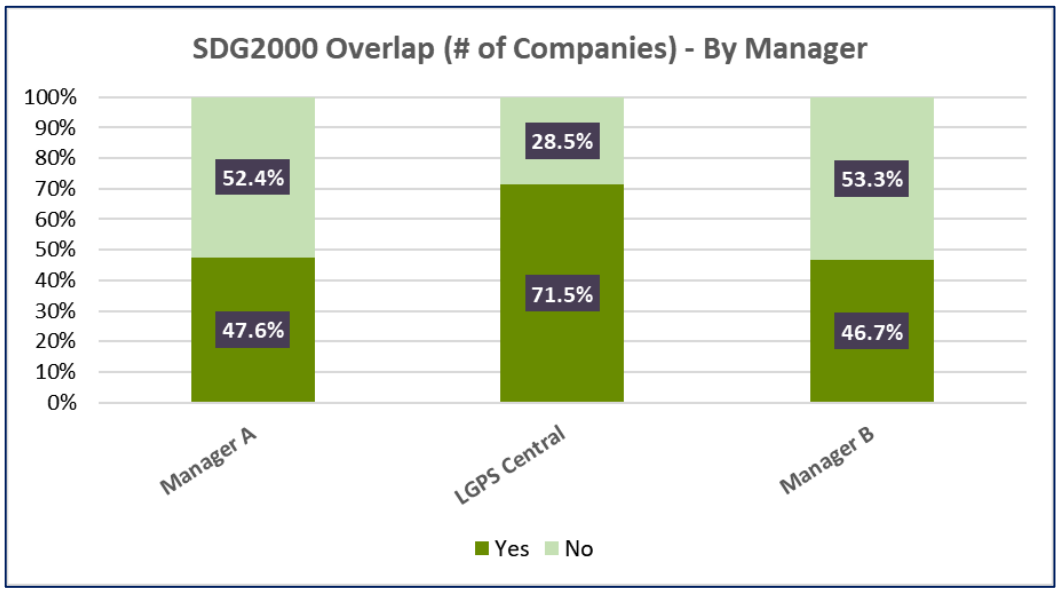


Figure 2: SDG2000 Overlap by Manager

The next piece of analysis shows the distribution of this overall exposure to the SDG2000 across the in-scope managers. The previous chart shows the overlap between the holdings in the total of each manager's portfolios and the SDG2000, again at 30th September 2020.

The marked difference between the managers can be attributed to the makeup of their total mandates. For example, Manager A manage six different portfolios for the Fund, with a total of 3,629 individual holdings. By contrast, Manager B manages one portfolio which has 163 individual holdings, a significant proportion of which can be described as small capitalisation (small cap) companies, which as a group are only modestly represented in the SDG2000, due to its construction methodology.

LGPS Central manages two pooled products for the Fund – Equities and Corporate Bonds – which contain five different asset managers. There are 514 individual companies held across both pools of assets, and given the size of investment made by the Fund, they are in predominantly large capitalisation (large cap) companies, of which the SDG2000 is almost entirely comprised.

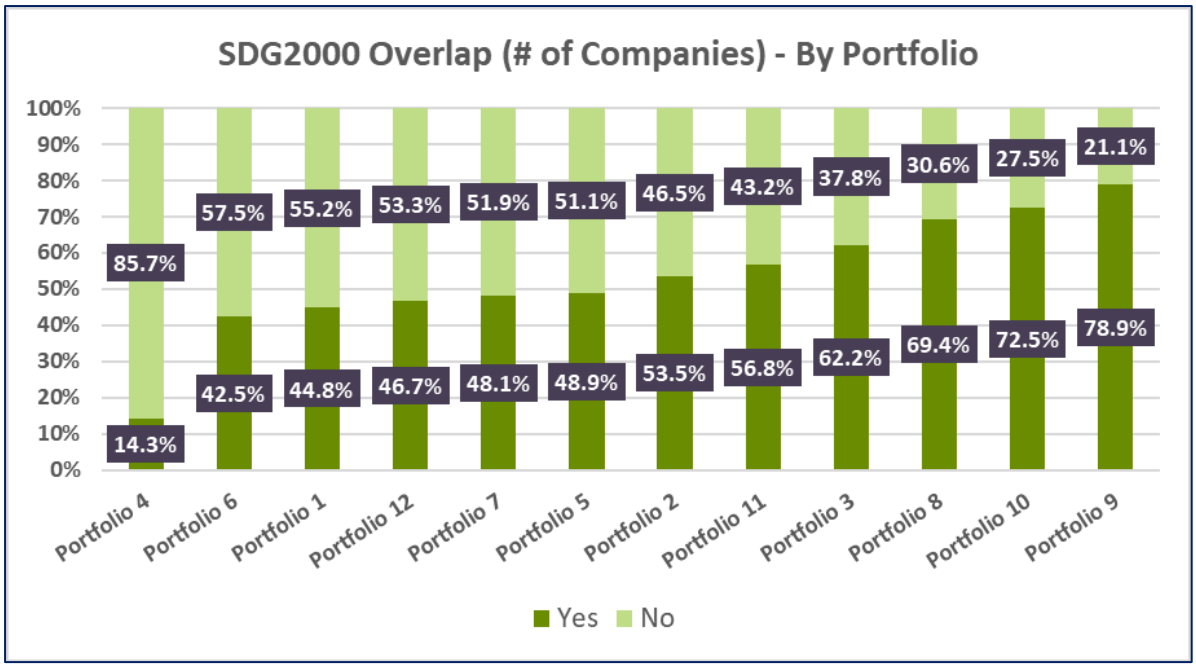


Figure 3: SDG2000 Overlap by Portfolio

The next step of the analysis was to show the distribution of this overall exposure to the SDG2000 within the portfolios of the in-scope managers. The previous chart shows the overlap between the holdings in each manager's individual portfolios and the SDG2000 companies, again at 30th September 2020.

The marked differences of the previous chart have been smoothed out, to show a gradual increase in exposure to the SDGs as represented by exposure to the SDG2000 constituents. Manager A's UK equity portfolio has a relatively modest exposure to SDG2000 constituents, mainly due to the relatively small number of UK companies in the SDG2000. The number is also small when seen in the context of the large number of holdings in the portfolio – 491 companies are held, as the passive portfolio seeks to replicate the FTSE All Share Index. The three LGPS Central manager portfolios benefit in this piece of analysis, given that each portfolio holds a smaller number of securities, and more of these holdings are invested in large cap companies that are represented in the SDG2000.

The final piece of analysis looked at the constituents of the SDG2000 against the Industry Classification Benchmark ('ICB') sectors. This allows us to move beyond just the 2,000 companies in the SDG2000 and to extrapolate which of all of the Fund's listed assets could be associated with each specific SDG, according to the WBA methodology. This allows for a clear link between each of the Fund's assets and the number of different SDGs to which they can relate – since any given company's operations can influence (negatively or positively) a number of different SDGs.

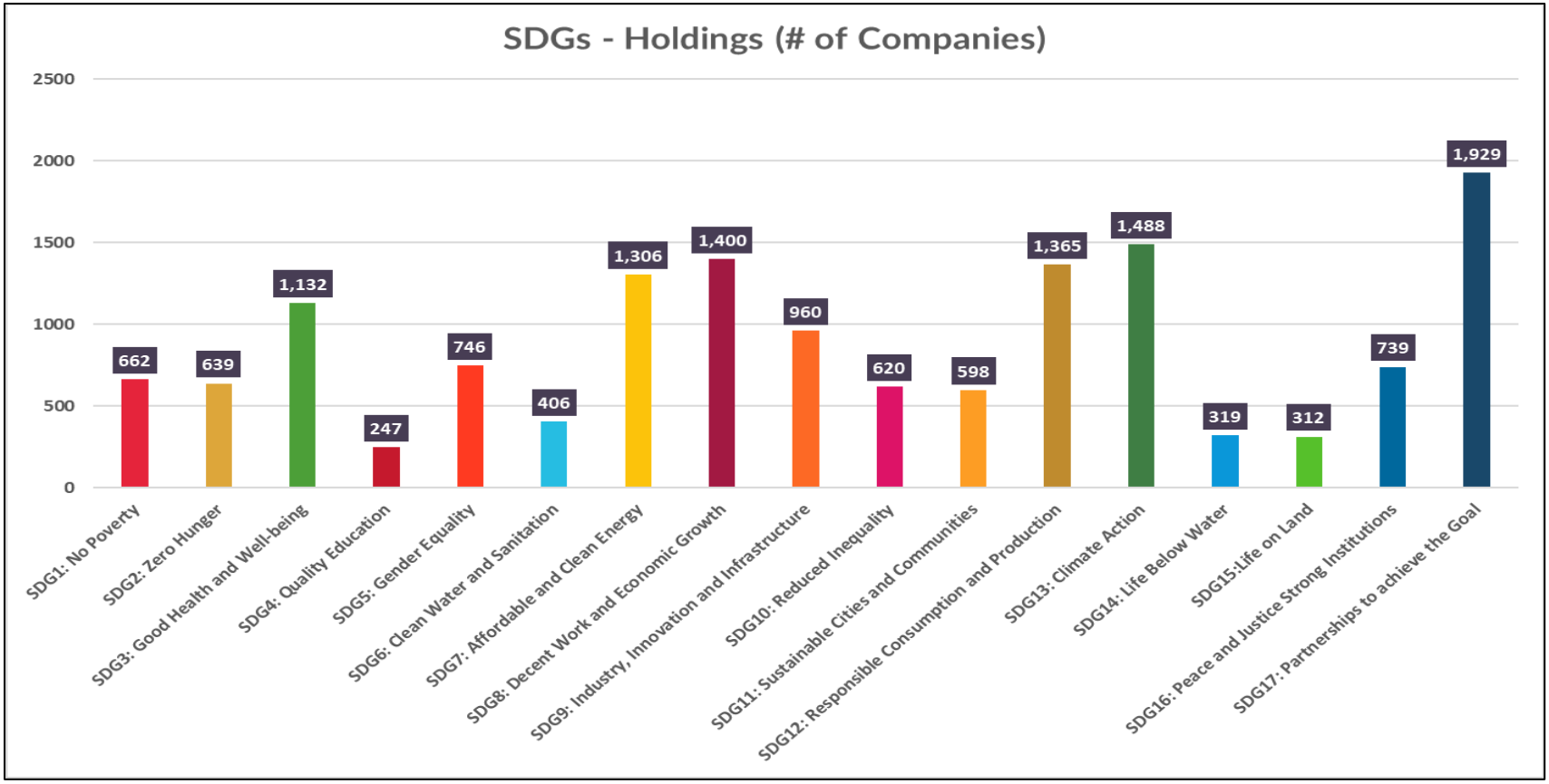


Figure 4: SDGs Alignment by

As can be seen from the previous chart, all of the Fund's listed assets have a part to play in delivering the SDGs. Whilst every investment can contribute towards SDG17: Partnership to achieve the Goal, each company can also contribute towards a number of different SDGs. By way of an example of an individual portfolio's company exposure to the SDGs, the following chart shows the breakdown of Manager B's portfolio against individual SGSs:

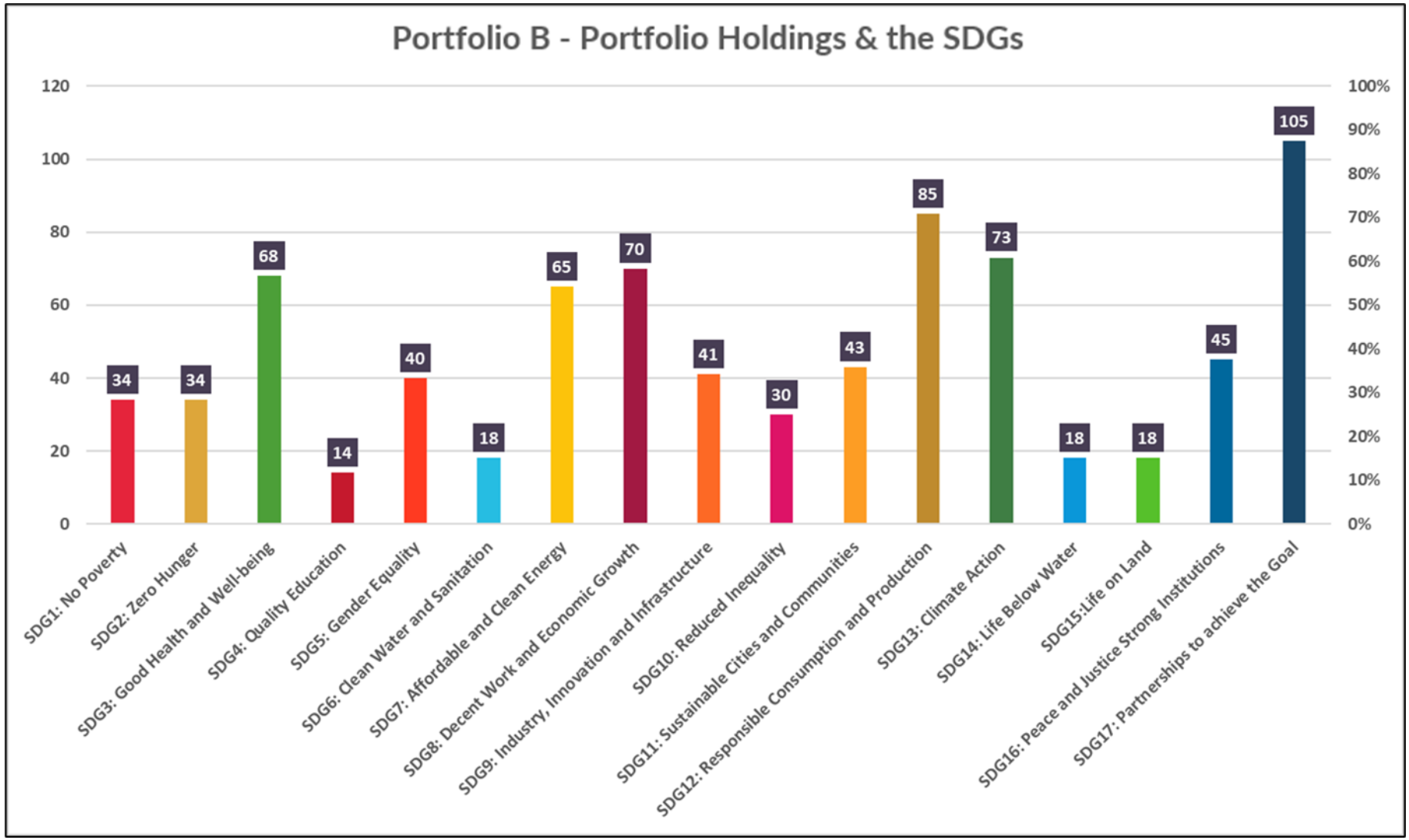


Figure 5: Manager B's Portfolio Holdings & the SDGs

Fund Exposure by £ Invested in SDG2000 Companies

Whilst the overlap of the number of companies between those held in the Fund and those in the SDG2000 is of interest, the Fund's true economic exposure to the SDG2000 companies makes for more interesting reading.

Having analysed the Fund portfolio holding valuation data for 30th September 2020, we saw that of the c.£2bn ingested from in-scope managers and assets, **£1.32bn – or 66.0% -** of the total 'in-scope' value **was invested in SDG2000 holdings**. This presents a much more meaningful picture in terms of the Fund's economic exposure to the companies most likely to deliver the SDGs, should they be governed and managed on a sustainable basis.

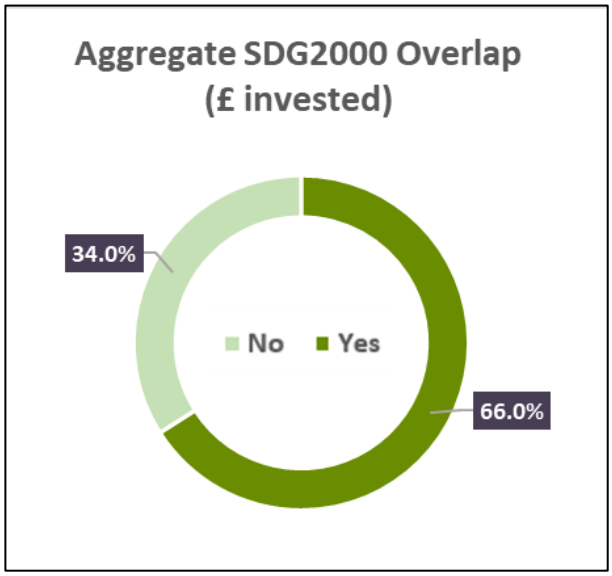


Figure 6: SDG2000 Overlap by £ invested

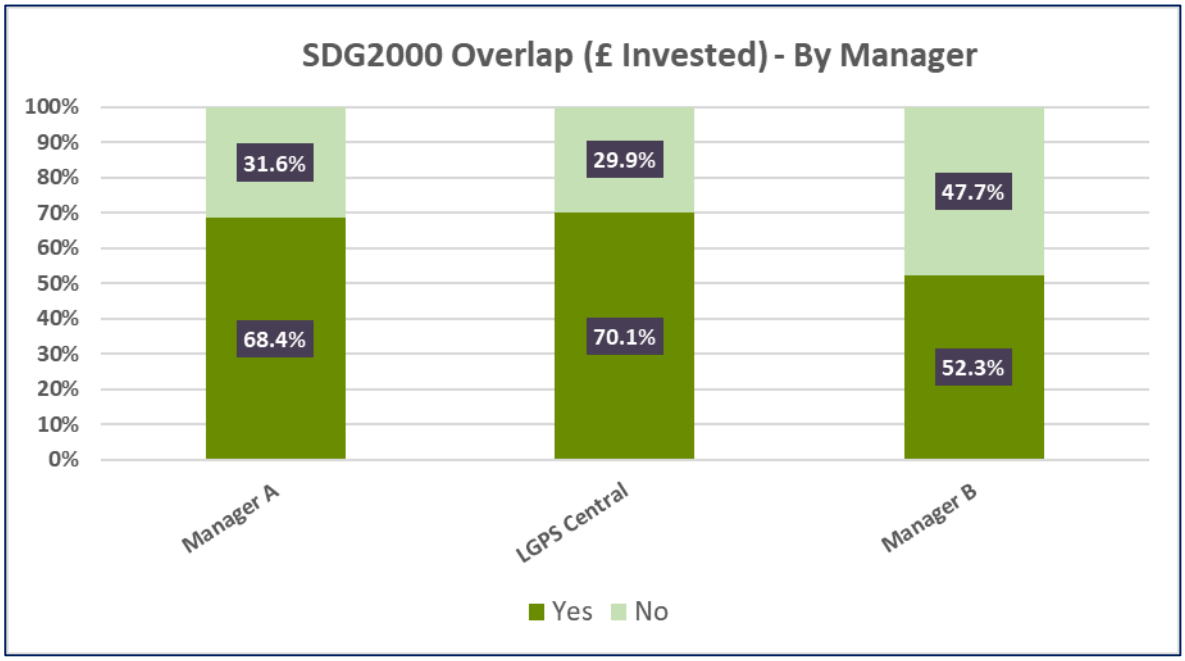


Figure 7: SDG2000 Overlap by £ invested by Manager

The previous chart shows the value invested in SDG2000 companies for each of the in-scope managers, again showing the overlap between the aggregated holdings for each manager and the companies listed in the SDG2000 as at end September 2020, but this time from a £ invested perspective. This information is perhaps more in line with what would be expected when considering the overlap between the Fund's listed investments (which are predominantly large cap in nature), and the large cap orientation of the SDG2000.

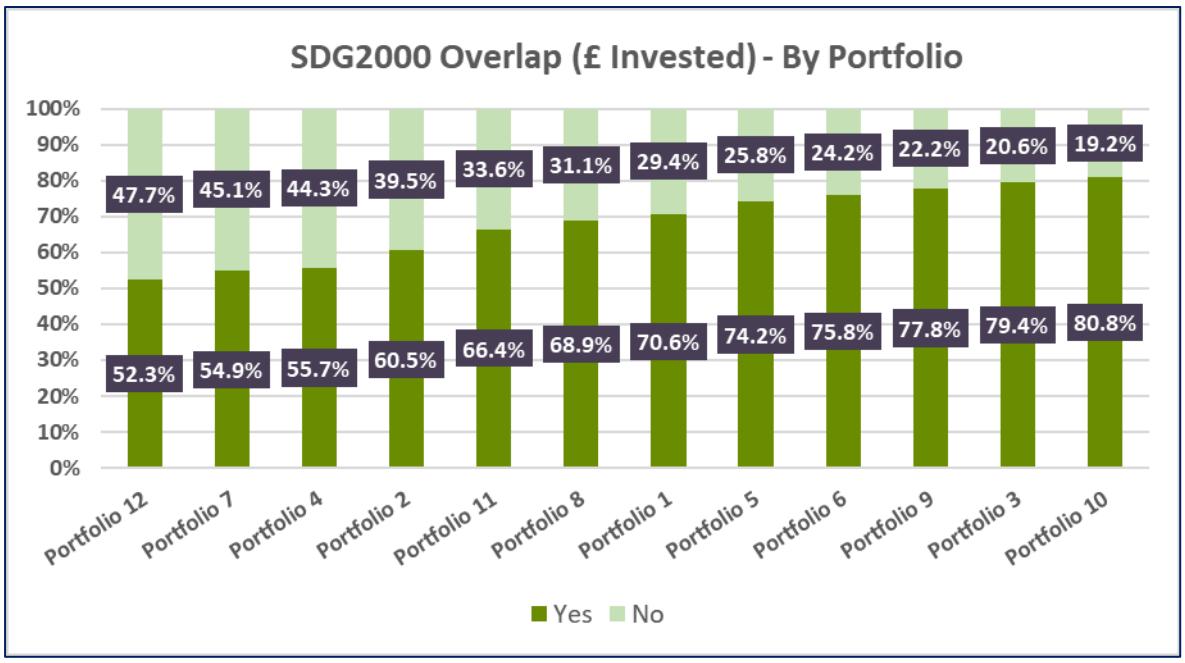
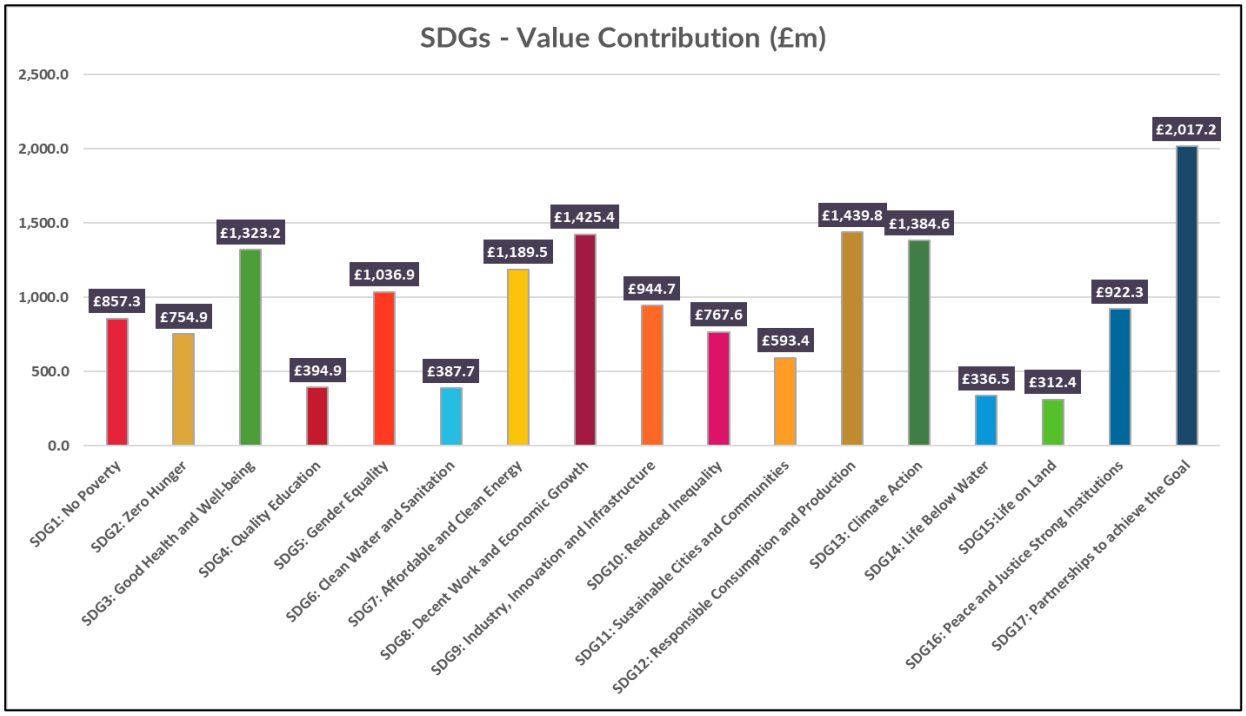


Figure 8: SDG2000 Overlap £ Invested by Portfolio

The chart above displays the Fund's economic exposure of £ invested in SDG2000 companies for each of the in-scope managers, showing the overlap between each individual portfolio and the companies listed in the SDG2000 as at end September 2020. The increasing exposure to SDG2000 companies as we move from Portfolio 12 to Portfolio 10 is clear to see and is mainly a factor of having a smaller number of holdings in larger cap companies. However, this analysis also demonstrates that the Fund has a good starting position when it comes to the SDGs in each of its listed equity and corporate bond portfolios.

Figure 9: £ Invested Exposure to SDGs



The final piece of analysis we carried out in terms of looking at the value of the Fund's listed investments was again to use the SDG2000/ICB sector mapping, to show all of the Fund's listed assets associated with each specific SDG. The previous chart mirrors the individual holdings chart, but this time shows the Fund's economic exposure to the SDGs.

Tables 4 and 5 of this report on the following pages, provide a full breakdown of sector vs SDG by number of companies and £ invested.

Table 4: SDG Alignment by Holdings

SDGs – Alignment by Number of Companies

# Holdings	SDG1	SDG2	SDG3	SDG4	SDG5	SDG6	SDG7	SDG8	SDG9
Auto & Components			58				58		
Banks	187				187		187	187	187
Capital Goods							235	235	235
Commercial & Professional Service								19	
Consumer Durables/Apparel					1	1		1	
Consumers Service				7	7			7	
Diversified financials							128	128	128
Energy			66			66	66		
Food & Beverages & tobacco	82	82	82		82	82		82	
Healthcare equipment & services			62		62				
Household & personal products			116						
Information & Comms Tech	145	145	145	145	145		145	145	145
Insurance	100	100	100					100	
Materials		164	164			164	164	164	
Media & Entertainment				40	40				
Pharma, biotech & life science			74		74				
Real estate							113		
Retailing								67	
Telecoms Services	55	55	55	55	55			55	55
Transportation			117				117	117	117
Utilities	93	93	93		93	93	93	93	93
Total (Holdings)	662	639	1,132	247	746	406	1,306	1,400	960
Total (%)	34.3%	33.1%	58.7%	12.8%	38.7%	21.0%	67.7%	72.6%	49.8%

Table 4: SDG Alignment by Holdings - Continued

SDGs – Alignment by Number of Companies (continued)

# Holdings	SDG10	SDG11	SDG12	SDG13	SDG14	SDG15	SDG16	SDG17
Auto & components		58	58	58				58
Banks	187		187	187			187	187
Capital goods			235	235				235
Commercial & professional service								19
Consumer durables/apparel		1	1					1
Consumer services			7		7			7
Diversified financials			128	128				128
Energy				66	66	66	66	66
Food & beverages & tobacco			82	82	82	82	82	82
Healthcare equipment & services			62					62
Household & personal products			116					116
Information & comms Tech	145	145	145	145			145	145
Insurance	100			100				100
Materials		164	164	164	164	164	164	164
Media & entertainment	40						40	40
Pharma, biotech & life science								74
Real estate		113	113	113				113
Retailing			67					67
Telecoms services	55						55	55
Transportation		117		117				117
Utilities	93			93				93
Total (Holdings)	620	598	1,365	1,488	319	312	739	1,929
Total (%)	32.1%	31.0%	70.8%	77.1%	16.5%	16.2%	38.3%	100.0%

Table 5: SDG Alignment by Value Invested

SDGs – Alignment by Value Invested

Currency GBP as at 31/12/2019	SDG1	SDG2	SDG3	SDG4	SDG5	SDG6	SDG7	SDG8
Auto & components			60,301,615				60,301,615	
Banks	239,103,022				239,103,022		239,103,022	239,103,022
Capital goods							197,594,855	197,594,855
Commercial & professional								30,891,935
Consumer durables/apparel					70,524	70,524		70,524
Consumer services				24,080,192	24,080,192			24,080,192
Diversified financials							21,339,084	21,339,084
Energy			62,957,559			62,957,559	62,957,559	
Food & beverages & tobacco	112,708,704	112,708,704	112,708,704		112,708,704	112,708,704		112,708,704
Healthcare equipment & services			55,054,234					
Household & personal products			166,459,231					
Information & comms tech	268,453,037	268,453,037	268,453,037	268,453,037	268,453,037		268,453,037	268,453,037
Insurance	82,409,316	82,409,316	82,409,316					82,409,316
Materials		136,739,347	136,739,347			136,739,347	136,739,347	136,739,347
Media & entertainment				22,985,241	22,985,241			
Pharma, biotech & life science			159,876,964		159,876,964			
Real estate							64,160,235	
Retailing								93,758,873
Telecoms services	79,365,180	79,365,180	79,365,180	79,365,180	79,365,180			79,365,180
Transportation			63,625,772				63,625,772	63,625,772
Utilities	75,242,245	75,242,245	75,242,245		75,242,245	75,242,245	75,242,245	75,242,245
Total (GBP)	857,281,503	754,917,829	1,323,193,205	394,883,650	1,036,939,343	387,718,380	1,189,516,771	1,425,382,086
Total (%)	42.5%	37.4%	65.6%	19.6%	51.4%	19.2%	59.0%	70.7%

SDGs – Alignment by Value Invested (continued)

MINERVA ANALYTICS

Currency GBP as at 31/12/2019	SDG9	SDG10	SDG11	SDG12	SDG13	SDG14	SDG15	SDG16	SDG17
Auto & components			60,301,615	60,301,615	60,301,615				60,301,615
Banks	239,103,022	239,103,022		239,103,022	239,103,022			239,103,022	239,103,022
Capital goods	197,594,855			197,594,855	197,594,855				197,594,855
Commercial & professional service									30,891,935
Consumer durables/apparel			70,524	70,524					70,524
Consumer services				24,080,192		24,080,192			24,080,192
Diversified financials	21,339,084			21,339,084	21,339,084				21,339,084
Energy					62,957,559	62,957,559	62,957,559	62,957,559	62,957,559
Food & beverages & tobacco				112,708,704	112,708,704	112,708,704	112,708,704	112,708,704	112,708,704
Healthcare equipment & services				55,054,234					55,054,234
Household & personal products				166,459,231					166,459,231
Information & comms tech	268,453,037	268,453,037	268,453,037	268,453,037	268,453,037			268,453,037	268,453,037
Insurance		82,409,316			82,409,316				82,409,316
Materials			136,739,347	136,739,347	136,739,347	136,739,347	136,739,347	136,739,347	136,739,347
Media & entertainment		22,985,241						22,985,241	22,985,241
Pharma, biotech & life science									159,876,964
Real estate			64,160,235	64,160,235	64,160,235				64,160,235
Retailing				93,758,873					93,758,873
Telecoms services	79,365,180	79,365,180						79,365,180	79,365,180
Transportation	63,625,772		63,625,772		63,625,772				63,625,772
Utilities	75,242,245	75,242,245			75,242,245				75,242,245
Total (GBP)	944,723,193	767,558,040	593,350,530	1,439,822,954	1,384,634,791	336,485,803	312,405,611	922,312,090	2,017,177,166
Total (%)	46.8%	38.1%	29.4%	71.4%	68.6%	16.7%	15.5%	45.7%	100.0%

5.2 Portfolio Sustainability Governance Ratings

To determine the **strength of stewardship and engagement momentum** needed to drive the SDG potential in each company, the second part of the '**Examine**' review analysed the Fund and individual portfolios from a 'Governance of Sustainability' perspective.

In almost every global market, securities regulators and industry codes of best practice identify ESG and stewardship as a fiduciary responsibility. Key regulatory initiatives are driving stewardship responsibilities, requiring more transparency and public reporting. Understanding how a fund is impacted by these developments is an important first step to meeting fiduciary objectives.

Minerva's Sustainability Governance Rating (SGR) measures the alignment of the Fund against global corporate governance and sustainability good practices. The rating works not only at portfolio level, but also cascades down to individual holdings (equities and fixed income).

Minerva's philosophy is to understand how investee company boards are approaching the governance of sustainability, with emphasis on their disclosure of sustainability risks, management processes, and accountability.

The SGR therefore assesses a company across seven pillars of good practice which are fully aligned with TCFD, Transition Pathway Initiative (TPI), UN Global Compact, Organisation for Economic Co-operation and Development (OECD) and International Corporate Governance Network (ICGN) governance principles. In this way the score offers a consistent measure of a company's governance and sustainability maturity rather than measuring performance against any specific ESG topics.

Each portfolio constituent is attributed an overall score ranging from A to F (where A stands for best-in-class) representing its cumulative assessment of the governance standards. These scores are then aggregated to provide a single letter score perspective of the Sustainability Governance for the portfolio as a whole.

Figure 10: Minerva Sustainable Governance Rating (SGR) Range

Grade	A	B	C	D	E	F
Score Range %	85-100	65-84	46-64	30-45	1-29	<0
Rating	Superior	Good	Developing	Basic	Poor	Cause for Concern

Minerva Sustainable Governance Rating

Using the Fund's external asset managers' portfolio information at 30th September 2020, we analysed the holdings to create a Sustainable Governance Rating for each portfolio:

Table 6: Portfolio Sustainable Governance Rating

	Pillar 1	Pillar 2	Pillar 3	Pillar 4	Pillar 5	Pillar 6	Pillar 7	Overall Rating
Portfolio	Board and Committees	Financial Reporting	Capital Stewardship	Audit and Reporting	Remuneration	Shareholder Support	Sustainability Governance	
Portfolio 1	51%	100%	64%	60%	36%	94%	61%	Developing
Portfolio 2	53%	100%	68%	73%	39%	97%	49%	Developing
Portfolio 3	53%	100%	65%	72%	40%	95%	51%	Developing
Portfolio 4	58%	100%	62%	78%	65%	97%	41%	Developing
Portfolio 5	53%	100%	64%	78%	37%	95%	34%	Basic
Portfolio 6	53%	100%	67%	80%	39%	95%	44%	Developing
Portfolio 7	44%	100%	68%	44%	37%	97%	45%	Basic
Portfolio 8	55%	100%	38%	68%	47%	92%	46%	Basic
Portfolio 9	55%	100%	40%	58%	48%	97%	39%	Basic
Portfolio 10	42%	100%	61%	46%	37%	95%	48%	Basic
Portfolio 11	43%	100%	60%	51%	35%	94%	50%	Basic
Portfolio 12	46%	100%	73%	51%	41%	95%	46%	Basic

Key Takeaway: Achieving a high degree of symmetry between stock selection, good governance and ongoing stewardship is essential to help the Fund to achieve its objectives. From this analysis we can see **significant degrees of variance** across a number of dimensions of good governance practice – **notably in respect of sustainability governance factors which are aligned with TCFD and TPI**.

A comprehensive analysis of each portfolio's rating was provided separately to the Fund. However, the summarised SGR results offer an insight which will help frame future discussions relating to setting and/or assessing external investment managers' approaches to stewardship and sustainability issues which can be addressed in the immediate near term.

5.3 Fund Top 20 Holdings

In collecting and aggregating all of the equity and corporate bond holding information from each of the Fund's managers, we were able to calculate the Fund's total investment in each individual listed company. Shown below are the Fund's 20 largest listed holdings, at 30th September 2020, along with their respective Minerva ratings for Governance, Remuneration[2] and Sustainability:

Table 7: Fund Top 20 Holdings

					Minerva Rating		
Company Name	**Country of Incorporation**	**Sector**	**Total Fund Value £m**	**SDG2000 Constituent?**	**Governance**	**Remuneration**	**Sustainability**
Taiwan Semiconductor Manufacturing Co.	Taiwan	Technology Hardware & Equipment	29.6	Yes	C	-	B
Microsoft Corp	USA	Software & Computer Services	29.3	Yes	B	F	B
Tencent Holdings Ltd	Cayman Islands	Software & Computer Services	27.7	Yes	D	F	E
Alibaba Group Holding Ltd	Cayman Islands	Consumer Services	23.0	Yes	E	F	E
AstraZeneca plc	United Kingdom	Pharmaceuticals, Biotechnology & Marijuana Producers	20.0	Yes	B	D	B
Alphabet Inc	USA	Software & Computer Services	19.3	Yes	D	F	D
Samsung Electronics Co.	South Korea	Leisure Goods	19.3	Yes	C	-	B
Amazon.com Inc	USA	Retailers	16.7	Yes	C	B	D
GlaxoSmithKline plc	United Kingdom	Pharmaceuticals, Biotechnology & Marijuana Producers	16.2	Yes	B	E	B
Nestlé SA	Switzerland	Food Producers	15.4	Yes	B	E	B

[2] Not all companies provide sufficient information to create a remuneration rating or do not offer "Say on Pay" resolutions.

					Minerva Rating		
Company Name	Country of Incorporation	Sector	Total Fund Value £m	SDG2000 Constituent?	Governance	Remuneration	Sustainability
British American Tobacco plc	United Kingdom	Tobacco	14.9	No	B	D	B
HSBC Holdings plc	United Kingdom	Banks	14.8	Yes	B	D	C
Royal Dutch Shell plc	United Kingdom	Non-Renewable Energy	14.7	Yes	B	E	B
HDFC Bank Ltd	India	Banks	12.8	Yes	D	-	D
Sony Group Corp	Japan	Leisure Goods	12.4	Yes	C	-	C
Diageo plc	United Kingdom	Beverages	12.3	Yes	B	D	B
Roche Holding AG	Switzerland	Pharmaceuticals, Biotechnology & Marijuana Producers	12.0	Yes	C	F	B
Johnson & Johnson Inc	USA	Pharmaceuticals, Biotechnology & Marijuana Producers	11.8	Yes	B	F	B
Hong Kong Exchange & Clearing Ltd	Hong Kong	Investment Banking & Brokerage Services	11.7	No	C	-	B
BP plc	United Kingdom	Non-Renewable Energy	11.4	Yes	B	E	B

(Grey cells in the table relate to companies where an assessment cannot be made due to lack of detailed disclosures)

The previous table shows 4 additional pieces of information for the Fund's top 20 holdings:

- **SDG2000 Ranking:** as can be seen, 18 of the Fund's 20 largest listed investments are members of the SDG2000; and

- **Minerva Ratings:** Minerva prepares annual profiles for companies in our research universe based on public disclosures made by the companies themselves. Despite highly variable local market standards, Minerva's research enables transparent, evidence-based and highly comparable assessment of client investee companies across three principal pillars: **Governance, Remuneration and Sustainability.**

We look closely at how companies are run by their boards, the executive remuneration arrangements that are in place, and companies' approaches towards sustainability issues, including climate change and TCFD (see next section). We then rate each area from A – F.

Whilst standards vary according to market and region, the Minerva ratings form a good guide in terms of the level of sophistication of a company's board when it comes to how they operate, and what they deem to be important. As can be seen from the table, the Fund's top 20 holdings have varying standards.

This analysis sits well in the Fund's ESG Audit and SDG Mapping exercise – since **it shows where the Fund's top 20 investments currently stand** in terms of their current approaches to ESG factors, and identifies areas **where improvement is needed** to align with the aims and objectives of the SDGs more closely.

5.4 TCFD

Financial markets need clear, comprehensive, high-quality information on the impacts of climate change. This includes the risks and opportunities presented by rising temperatures, climate-related policy, and emerging technologies in our changing world. The Financial Stability Board created the Task Force on Climate-related Financial Disclosures (TCFD) in December 2015 to improve and increase reporting of climate-related financial information.

TCFD has become the de-facto climate governance framework for global regulators, with TCFD reporting recommendations enabling organisations to identify and disclose decision-useful information about material climate-related financial risks and opportunities. The recommendations are applicable to asset owners and asset managers, and as of February 2020, 1,027 organisations globally had declared their support for the TCFD, representing a market capitalisation of over $12 trillion.

The UK Government recently indicated its commitment to TCFD when in November 2020 the Chancellor of the Exchequer announced that the UK will require certain companies to improve their climate-risk reporting for reporting periods that begin in January 2021. The UK's Financial Conduct Authority (FCA) plans to develop and finalize additional rules by the end of 2021 that will take effect in 2022 that will apply to more entities and increase mandatory reporting[3]. Broad, economy-wide, mandatory climate-risk disclosure rules are expected to be in place by 2025, and reporting rules are likely to be aligned with TCFD recommendations.

[3] For further information see FCA publishes climate disclosure rules for UK-listed companies | Minerva-Manifest

This TCFD 'tailwind' means that the TCFD reporting recommendations are going to be of increasing importance to institutional investors such as Worcestershire. As a result, part of our ESG Audit focussed on the current state of play in terms of the Fund, its underlying investments and links to TCFD.

TCFD Alignment by Individual Fund Equity Holding

The third, and final, part of the '**Benchmark**' step looks at the TCFD disclosures made by the Fund's underlying investee companies.

Minerva's analysts examined the Fund's holdings as provided by the Fund's managers – not just the SDG2000 constituents - and found that **almost 47% of the Fund's in-scope equities under coverage have made some material reference to TCFD** in their latest Annual Report and Accounts.

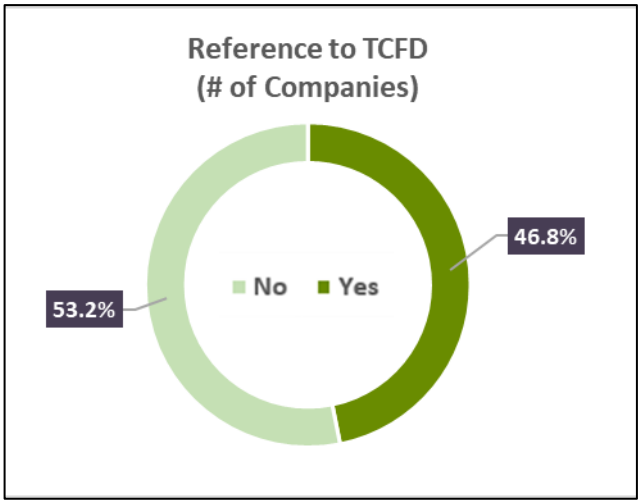


Figure 12: TCFD References by Companies

This means that rather than a generalised "greenwashing" statement about climate, the company has made specific reference to and shows alignment with the TCFD's four core pillars of good practice: Governance; Strategy, Risk Management and Metrics/Targets.

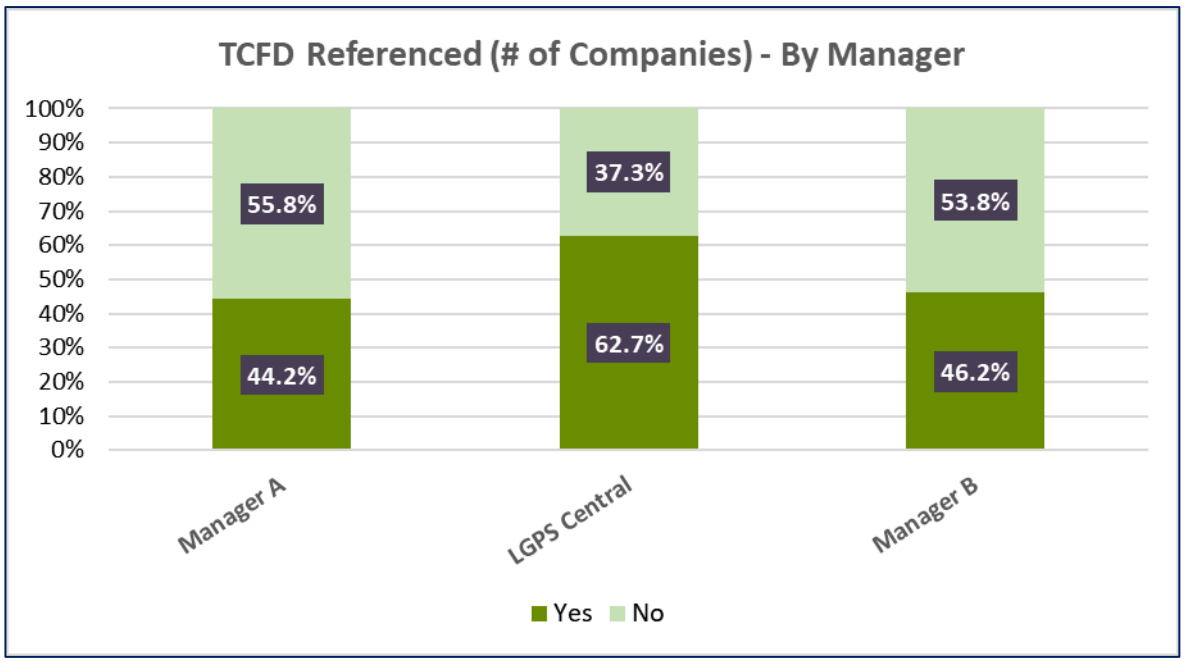


Figure 11: Company TCFD References – Manager Level

The chart above shows the number of companies held by each manager that make some form of reference to TCFD, as at end September 2020. Central's managers' investee companies have fared better than both Manager B's single portfolio, and Manager A's six portfolios, in terms of making some reference to TCFD in their public disclosures, most likely as a result of the nature of their domicile markets when compared to the other two managers' results.

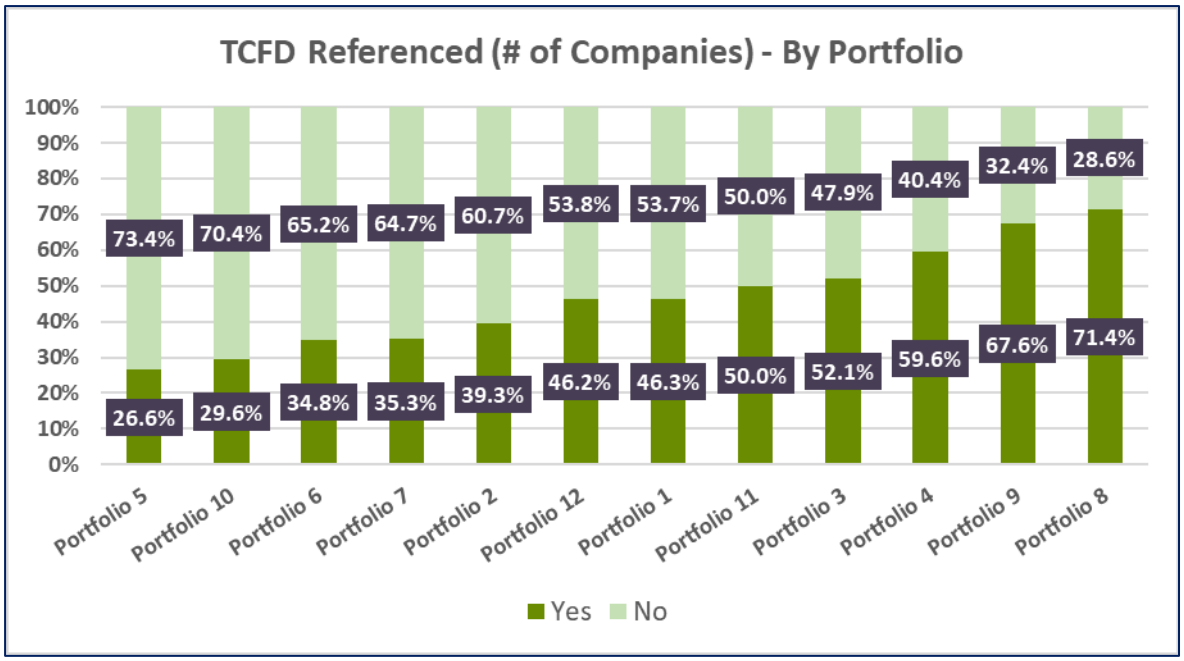


Figure 13: Company TCFD References - By Portfolio

The previous chart splits out the TCFD data into individual portfolios, and the distribution hints at the relative developed thinking on climate change matters across markets. The Fund's passive US portfolio managed by Manager A is at the bottom of the pile, as US companies are (generally speaking) notorious laggards when it comes to making climate-related disclosure and commitments, for a development market. The UK, on the other hand, is closer to the top end of what institutional investors should be expecting from their investee companies in terms of climate risk-related disclosures.

TCFD Alignment by £ Invested in Individual Fund Equity Holding

Whilst the number of companies held by the Fund making TCFD disclosures is of course of interest, again the Fund's economic exposure to such companies is likely to be more telling, given that it represents the money effectively at risk in terms of climate-related risks, and how underlying investee companies treat these risks.

The analysis showed that of the c£2bn analysed from in-scope managers and assets, **£1.05bn – or 52% - of the total in-scope value was invested in companies covered by Minerva that make meaningful reference to TCFD**.

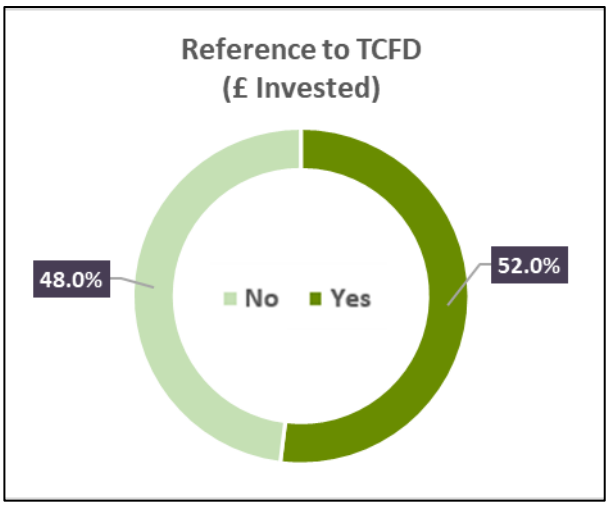


Figure 14: Company TCFD Reference by £ Invested

Again, this presents a more helpful picture in terms of the Fund's economic exposure to the companies that do – and do not – seem to have identified climate change as a specific risk to their business model, and have begun making disclosures that are helpful to institutional investors, in terms of starting to assess which companies are taking the risk of climate change seriously. As TFCD has been around for the same time as the SDGs, having 52% of the Fund's investee companies by economic value use it already as the charting process for climate strategy is a promising result.

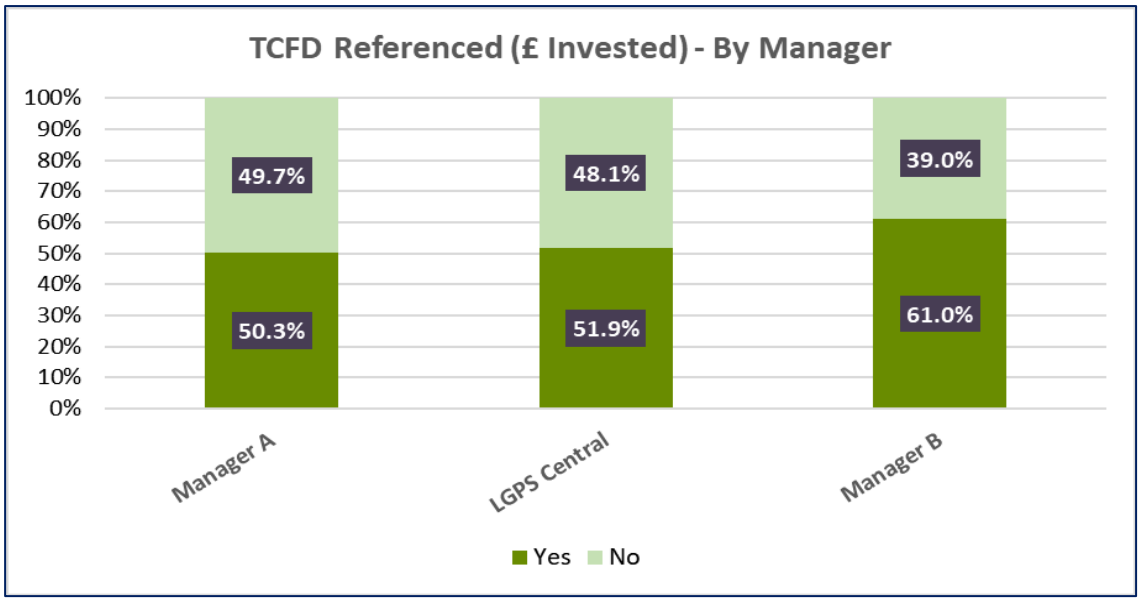


Figure 15: Company TCFD Reference by £ Invested – Manager level

The previous chart shows the value invested in companies held by each manager that make some form of reference to TCFD, as at end September 2020. The previous picture where Central's managers were ahead has changed and we can see that Manager B's portfolio have a greater exposure to companies that make TCFD disclosures. The smaller number of holdings versus both LGPS Central and Manager A is the driving factor here.

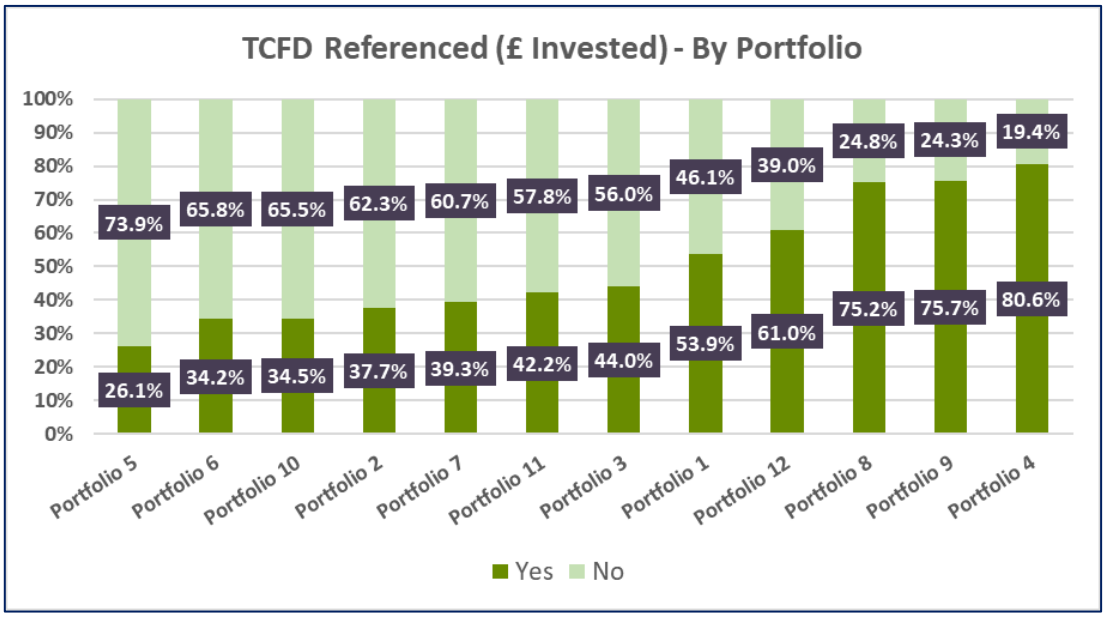


Figure 16: Company TCFD Reference by £ Invested

The last chart shows the economic exposure in TCFD-referencing companies in each manager's portfolio. Again, the Fund's passive US portfolio managed by Manager A is at the bottom of the pile, clearly signifying that US companies have a lot of work to do in terms of embracing the TCFD reporting requirement, and giving their investors more information relating to how each company is addressing climate-related risk. This result is not surprising given the US regulatory antipathy towards ESG in recent years[4].

[4] For further information see US senator aims to reverse pension proxy voting rules | Minerva-Manifest

6 Investment Risks & Opportunities

When thinking about the Fund's investments in the context of sustainability and the low carbon economy, there are four levels where these issues can be addressed:

Table 8: Investment Risks & Opportunities

Fund	Setting an overarching policy, generated from Core Investment Beliefs, that shapes the direction of travel;
Allocation	Directing capital at deliberate strategies to maximise sustainable outcomes;
Mandate	Setting explicit expectations at the investment manager mandate level; and
Integration	Understanding whether an investment manager has the competence to incorporate these twin issues into their everyday investment selection, monitoring and engagement processes.

This ESG Audit and SDG mapping exercise has revealed a number of investment risk and opportunity issues, on which Officers and Elected Members may wish to reflect.

It is perhaps not accidental in the key project objectives that Worcestershire wanted to know *"Where there is an Investment risk/opportunity to the Fund, within its assets…"* using a joined risk/opportunity phrase, since – from an investment perspective – one tends to be closely associated with the other.

Therefore, in Table 9 on the following page we have summarised several key issues emerging from our analysis, together with what we believe to be their associated investment risks and opportunities in relation to the transition to sustainability and a low carbon economy.

Table 9: Investment Risks & Opportunities

Issue	Analysis Source	Why Investment Risk?	Why Investment Opportunity?
Potential insufficient detail/rigour in the Selection, Appointment and Monitoring process on RI/ESG by the Fund	Qualitative	The market is rife with greenwash and grade inflation, while there is still a large spread in the quality and sincerity of approaches by asset managers. Failure to uphold a high standard could encourage lacklustre approaches by managers and expose the Fund to the investment and reputational risk of being 'absentee'.	Having a well-considered process for assessing asset managers' approaches to sustainability has the potential to result in more risk aware managers being appointed, investing in better run companies who should deliver better long-term investment returns.
Incorrect or missing application of the stated process in the Selection, Appointment and Monitoring process on RI/ESG by LGPS Central	Qualitative	Whilst our rating of LGPS Central is very good, there remains a risk that their stated process for assessing potential investment managers in terms of how they approach ESG factors is not applied, or not consistently applied.	By using – and demonstrating the use of – the stated policy, Central stand a good chance of ensuring any investment managers appointed will be ESG factor cognisant.
Voice versus Exit. Omission of the option of divestment from an existing investment on ESG grounds.	Qualitative	Not having the option of divesting from companies that are unwilling or unable to mitigate highly material ESG risks or who are unwilling to address similar governance failings reduces the Fund's choices.	Having the option to divest provides the opportunity to reallocate capital to other, more sustainably-managed – and therefore more risk-aware – investment opportunities.
Analysis has identified the current overlap between the Fund's existing investments and the SDG2000 companies	Quantitative	Analysis has identified the lowest sustainability-rated holdings of the Fund's SDG2000 holdings, which represent a potential investment risk if company management are not identifying and addressing all known risks and issues.	Taking a proactive identification and engagement approach with the lowest sustainability rated of the Fund's SDG2000 holdings, the Fund has the potential of improving these investee companies' governance of sustainability issues, to potentially improve long-term returns; and opportunities for SDG alignment and risk outperformance may also exist in identifying over time those companies with the greatest **positive** momentum on sustainability, as well as those high potential SDG impact companies that are fulfilling their potential.

Issue	Analysis Source	Why Investment Risk?	Why Investment Opportunity?
Analysis has identified the current overlap between the Fund's existing investments and companies that publicly state some appreciation of TCFD reporting requirements	Quantitative	A significant proportion of the Fund's existing investee companies have made no disclosures relating to TCFD, and so they may not be taking full account of the risks posed by climate change.	By seeking out companies that make TCFD-related disclosures, the potential exists that such better-run companies – in terms of being more climate risk aware – have the potential to deliver better returns over the longer term.
Historic drivers of equity performance, at the asset class level, may no longer be relevant	Known External Issue	Any investment strategy modelling based on historic performance drivers is, by construction, unlikely to address recently emerging risks such as climate change.	By incorporating sustainability and climate change factors into the investment strategy modelling process, the potential outcomes are more likely to reflect more closely the actual reality.
Opportunity to implement new benchmarks aligned to SDGs	New Issue	Limited experience with SDG investing due to relative youth of concept.	Incorporating SDGs into investment strategy can help to overcome "ethical subjectivity" often associated with ESG investing; new investment opportunities becoming available with pivot towards SDGs/Low Carbon transition.

7 Integrating the SDGs

Whilst neither Minerva nor Discern is in the position of giving regulated investment advice, we were – and are – of the view that, in carrying out the project, certain possible options would become apparent as to how the Fund could move forward with its desire to align its investment approach more closely with the SDGs, and to integrate them into its investment strategy.

Having carried out both the qualitative and quantitative analysis on the Fund's investments, we see three main possibilities when it comes to incorporating the SDGs more formally into the Fund's overall investment approach:

1. **Close Monitoring of SDG Alignment**

The Fund could, with the help of managers and advisers, agree to closely monitor its exposure to any underlying investee company in any manager portfolio that is also in the SDG2000, and their respective performance on the metrics that best reflect a positive or negative contribution to the most relevant SDGs. Given the close working relationship with LGPS Central, the Fund could specify to Central that Worcestershire wishes for them to pay particular attention to any such company, and to create a monitoring and engagement policy for them that ensured SDG laggards were identified and contacted, and that SDG leaders were supported and encouraged to strive towards helping deliver the SDGs. There is also logic in asking for those companies who are strong performers on more conventional ESG measures to consider and act on the implications of the WBA analysis. The WBA approach, on its own terms, only has merit if all companies in a benchmark, regardless of their stage of evolution, take the necessary steps to close the 'SDG gap'. Given that the Fund is in a state of transition as regards pooling, such an approach would have the benefit of not actually requiring any specific short-term changes to the Fund's managers, mandates or indeed overarching investment strategy. It would allow the Fund to act on the SDGs now, while keeping more root-and-branch options under review, as manager approaches develop. Its weakness is that, even assuming managers will be willing to advocate the Fund's position, a positive outcome for engagement can never be assured and is difficult to attribute. It may appear merely as relying on the fallback of more engagement, buying time for a position of 'no change'.

2. **Formal inclusion of an SDG alignment standard**

The Fund could instruct its managers that in considering investee companies for the Fund to own, they must also include an agreed definition or standard in relation to the SDGs as part of the investment screening process. This may or may not include a formal link to the SDG2000 - but may have associated consequences for asset managers, portfolio benchmarks and even potentially fund investment strategy modelling, since certain sectors with SDG laggards (e.g. oil & gas) might effectively be excluded from the Fund's investible universe. A counter-intuitive aspect of the SDG2000 is that it does contain sectors with high, negative impacts - but is more concerned by what could be achieved by these and other companies in transformative activities pivoting to the SDGs. This is our least preferred option because there is likely to be no consensus among managers what an SDG definition or alignment means, and so may just generate confusion. The PRI has launched a consultation with a future agreed definition in mind, so it may be better to allow that process to play out (we note that the Fund is not a member of the PRI or would otherwise recommend responding to the consultation).

3. Committing Fund capital to a specific SDG-focussed product

The Fund could take the option of creating a passive or active SDG-focussed fund, with the option of incorporating the SDG2000 or an alternative index (many are being developed by index providers and asset managers) either as the portfolio's benchmark or as a reference point for any mandate. The only equity manager on the Fund's bench whom we found had an SDG fund launched that might substitute for an existing mandate is Manager B's Sustainable Global Equity Fund. It was only €6m at the time of writing, however, but in theory a segregated mandate could replicate the approach. The relationship with Manager B is a direct one with the Fund and we are not recommending the Manager B SDG strategy but merely refer to it as an example of where transition of existing approaches to more SDG-friendly ones will be increasingly possible, as the market manufactures more such products and their risks and opportunities (financial as well as purely SDG matters) are better understood.

Although this would provide clear line of sight to the Fund's commitment to the SDGs, it could also be viewed as not fully aligning with the Fund's Core Investment Beliefs. For example – if the Elected Members believe that ESG factors, including climate change and the SDGs, should be considered by **all companies as holistic risk and stewardship factors**, then there would be no need for individual mandates specifically set up to address the SDG alignment issue, as all investments should aim to do that. From a practical perspective, the fewer managers that have to adopt aligned approaches to SDGs, the greater chance of agreement and ability to assess results.

The final decision of course rests with the Pensions Committee, but we hoped that by setting out three possible approaches that they will help stimulate discussion.

8 Covid-19 and the Fund's Prioritised SDGs

At the time of the initial Committee discussions on carrying out the ESG Audit & SDG Mapping exercise (at the end of 2019 and the beginning of 2020), the full impact of Covid-19 was not known. In the intervening period, it has become clear that Covid-19 has had far reaching consequences – both human and financial – for the world. Whilst some of the Fund's underlying investments have done well in the Covid-19 environment (such as digital infrastructure and remote working service providers), others have not (such as airlines and the hospitality sector).

With Covid-19 vaccines now slowly beginning to be rolled out, the future is starting to look somewhat brighter – although there are no doubt many challenges lying ahead before the world is back to normal, if indeed it will ever be the same kind of 'normal' again.

Working with Pensions for Purpose, the Committee previously identified 4 SDGs that are of particular importance to them, and for which specific attention was to be paid in this exercise. These prioritised SDGs are:

- *SDG 9. Industry, Innovation & Infrastructure (covers off 11 sustainable cities)*
- *SDG 7. Clean Energy (covers off 6 clean water and sanitation)*
- *SDG 8. Decent Work & Economic Growth*
- *SDG 13. Climate Action*

During the Workshop presentation of 5th January 2021, a question was asked as to whether the Committee might want to reflect on the impact of Covid-19, and to reconsider its previously prioritised SDGs, as SDG 3: Good Health & Wellbeing may now seem to be of increased importance. It is worth mentioning that Covid-19 will not just have an impact on SDG3 - the virus will have a significant impact on a number of the SDGs, including SDG1: No Poverty (increasing the level of poverty in the world) and consequently SDG2: Zero Hunger for example.

From the analysis we have undertaken on the alignment of the Fund's investments with the SDGs, we believe that it would be a relatively straightforward matter to substitute one of the existing prioritised SDGs for SDG 3, should the Committee so wish – or indeed, it could merely be added as an additional priority SDG.

Tables 4 and 5 shown earlier in this report (pages 23-26) set out the exposure of the Fund's listed equity investments with each of the SDGs, in terms of number of discreet holdings, and total value invested. By looking at SDG 3 in these tables, it can be seen which industry sectors will be most relevant to the delivery of this SDG, should the companies therein be managed in a sustainable and ESG factor cognizant manner.

The underlying data, in terms of the specific names of each company, remains stored in Minerva's database, and the Fund can of course have this detailed analysis, which can be used in having discussions with the Fund's external managers on prioritising any specific SDGs by reviewing their past, and shaping their future, engagements with any SDG2000 constituents.

9 Monitoring and Reporting

Part of the Fund's original project brief (as set out in the initial Invitation to Tender) asked for the final report to cover how the Fund could meet the project aims, in the context of monitoring and reporting:

"Delivery –How can the Fund meet its aims?

- *Annual Reporting*
- *Performance Monitoring over 3 to 5 years and longer term*
- *Risk Management"*

By way of a recap, the project aims (as set out by the Fund in the same document), are as follows:

"Examine the existing Investment Portfolio holdings of WPF and their relationship (positive/ negative) to the 17 Sustainable Development Goals, specifically highlighting the SDGs detailed below and identify the risks and opportunities associated with the analysis:

- *SDG 9. Industry, Innovation & Infrastructure (covers off 11 sustainable cities)*
- *SDG 7. Clean Energy (covers off 6 clean water and sanitation)*
- *SDG 8. Decent Work & Economic Growth*
- *SDG 13. Climate Action*

"In particular to comment on:

- *The starting position of the Fund against the UN SDGs and specifically the SDGs identified above*
- *Where there is an Investment risk / opportunity to the Fund, within its assets, in relation to the transition to sustainability and a low carbon economy and in particular relating to the specific SDGs identified"*

Whilst we believe that this report delivers the point-in-time results required to meet the initial project brief, clearly any ongoing monitoring and reporting will depend on how the Fund subsequently choses to use the findings of the exercise.

In this report we set out three possible ways that the Fund could take the project results forward, to align the Fund's investment strategy with the SDGs. These three options were:

1. **Close Monitoring of SDG Alignment;**
2. **Formal inclusion of an SDG alignment standard(s); and**
3. **Committing Fund capital to a specific SDG-focussed product.**

Whilst there may very well be reporting changes required of the Fund due to revised LGPS Regulations in relation to sustainable stewardship and climate risk, the ongoing monitoring and reporting requirements for each of these three options are different. In the following table we have summarised our views on what that might entail, using the three 'Delivery' aspects listed previously:

	1. Close Monitoring of SDG Alignment	2. Formal inclusion of an SDG alignment standard	3. Committing Fund capital to a specific SDG-focussed product
Annual Reporting	▪ Summary of SDG2000 exposure by # holdings and £ invested (per Tables 4 and 5 in this report); or ▪ List of prioritised holdings, and any voting and engagement activity undertaken on them; or ▪ Narrative report detailing activity undertaken on SDG2000 holdings by the Fund's asset managers; ▪ Or all three	Statement of compliance with the Fund's approach from the Fund's asset managers. This might include a description of the SDG alignment approach they have taken, along with the details of specific SDG alignment -related activity undertaken on an investment-by-investment basis	Any SDG-focussed product is likely to have quarterly and annual reports on its operation and performance – and with it specifically aiming to help align to/deliver the SDGs themselves, it is likely that it will have useful commentary to allow investors to check that it is fulfilling its objectives
Performance Monitoring over 3 to 5 years and longer term	It will be possible to measure longer term overlap and activity in relation to the SDG2000 holdings by taking the shorter-term data over time to create longer time periods, in the same way that longer term reporting is created for traditional investment portfolios	Annual compliance reporting could be summarised into a table, showing which approaches were taken by which of the Fund's managers; highlighting any changes in approach made over time; providing pertinent statistics from each manager on how the standard had been applied to individual investments, ongoing engagements, and any positive (or negative) results that had been achieved	As with traditional investment products and portfolios, longer-term reporting for SDG-focussed products would follow the usual path, but again with an expected focus on ensuring the SDG-alignment/delivery aspect of the product is being clearly explained and demonstrated to product investors

Risk Management	Risk, in this instance, might be that the SDG2000 overlapping holdings were not being managed/engaged with in a manner that will result in improved company management 'sustainability' performance – or that, despite being subject to active engagement, were not improving their alignment with/helping to deliver the SDGs. As a result, any Risk Management report might focus on changes in SDG2000 constituent ESG ratings, using any noteworthy instances of engagement that had brough about positive change	Instances where the Fund's managers had not applied/complied with any specified SDG alignment standard would form the core of any risk management reporting. This might well need to be done in terms of self-reporting by the managers, with the alternative being some form of external audit of their approach in this area.	Again, as with traditional investment products and portfolios, risk management would form a core part of the investment process. We would expect any SDG-focussed product manager to clearly define: ▪ How it intends for the product to align with the SDGs; ▪ How alignment would be measured; ▪ Any risk management processes that are in place; and ▪ How risk management issues would be reported

10 Conclusion

We believe that the information contained in this report demonstrates that the Minerva team have met the original brief set by the Fund, in that:

- the ESG Audit aspect has found the Fund to be in a relatively good position, with a 'modern' approach towards sustainability issues;
- the Fund's key investment partner, LGPS Central, have been found to have a robust and comprehensive approach towards sustainability matters; and
- on the whole, the Fund's managers are relatively well aware of the importance of ESG issues, although there are one or two notable exceptions – and all could do with more focus being placed on the governance of sustainability of portfolio investments.

Using the SDG2000 to measure the Fund's current starting position with respect to its listed equity and corporate bond assets and the SDGs, we found that:

- The Fund had a total of **£1.33bn invested** in 1,007 SDG2000 companies' equities and corporate bonds, **representing 66% of the total value of the in-scope assets** as at end September 2020 – although it is important to note that exposure to companies in the SDG2000 is not a measure of positive impact or alignment already booked: it is an indication of their **SDG impact potential**;
- The Fund's starting in-scope holdings and value of economic exposure **to each of the 17 SDGs have been calculated**. We also measured the quality of governance of investee companies against a range of recommended good practices, including the TCFD's climate change standards, with most of the Fund's underlying investments subsequently classified as being, on average, either **'Developing'** or **'Basic'** in their approach;
- At the end of September 2020, **approximately 47% of the Fund's listed equities covered by Minerva's analysis had made some material reference to TCFD** in their latest public disclosures such as annual reports and accounts, or sustainability report, equating to **approximately 52% in £ invested (£1.05 billion) in investee company securities that made reference to TCFD** in their public disclosures;
- A **number of investment risks and opportunities to the Fund were identified** within its assets, in relation to the transition to sustainability and a low carbon economy; and
- Three possible ways of **more closely aligning the Fund's investment approach with the SDGs** were identified.

Whilst we have come to the end of the project, we believe that the Fund is now well placed to continue its 'sustainable stewardship' journey, moving forward from a well-informed position.

We would like to thank members of the Working Group for their assistance and participation throughout this exercise, and look forward to answering any questions on any aspect of this report and the wider project at the Pensions Committee meeting scheduled to take place in March 2021.

Minerva Analytics & Discern Sustainability
24th February 2021

11 Glossary

ESG	**Environmental, Social and Governance** – usually used in reference to ESG 'factors' or 'characteristics', in the content of a Fund's, portfolio's or investee company's approach to sustainability issues or risks
ICB	**Industry Classification Benchmark** - an industry classification taxonomy launched by Dow Jones and FTSE in 2005. It is used to segregate markets into sectors within the macroeconomy.
ICGN	**International Corporate Governance Network** - the ICGN is an independent membership organisation which co-ordinates global governance policy development amongst its members. In this report refers to the ICGN proxy voting & stewardship guidelines, which seek to define common standard of global good practice. For further information see: https://www.icgn.org/
OECD	**Organisation for Economic Co-operation and Development** - is an intergovernmental economic organisation with 37 member countries,] founded in 1961 to stimulate economic progress and world trade. The G20/OECD Principles of Corporate Governance help policy makers evaluate and improve the legal, regulatory, and institutional framework for corporate governance, with a view to supporting economic efficiency, sustainable growth and financial stability. First published in 1999, the Principles have since become an international benchmark for policy makers, investors, corporations and other stakeholders worldwide. They have also been adopted as one of the Financial Stability Board's Key Standards for Sound Financial Systems and form the basis for the World Bank Reports on the Observance of Standards and Codes (ROSC) in the area of corporate governance.
PRI	**Principles for Responsible Investment** – initially a United Nations-backed organisation, but is now a freestanding commercial entity. Asset owners and asset managers can subscribe to have their responsible investment approaches assessed and graded by PRI. For further information see: https://www.unpri.org/
RI	**Responsible Investment** – a broad term used to cover sustainability issues in investment management
RI&E	**Responsible Investment & Engagement** – used in this report in the context of describing an asset manager's internal staff resources dedicated to sustainability issues
SAM	**Selection, Appointment and Monitoring** – relates to the process of identifying, hiring and then assessing asset managers by an institutional investor such as Worcestershire
SDG	**Sustainable Development Goals** – refers to the United Nations Sustainable Development Goals, which recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth. For further information see: https://www.un.org/sustainabledevelopment/
SDG2000	**Created by the WBA** (see next page) - it is a benchmark that represents the 2,000 companies globally that will have a disproportionate influence on meeting the UN SDGs. For further information see: https://www.worldbenchmarkingalliance.org/research/sdg2000-methodology/

TCFD **Task Force on Climate-related Financial Disclosures** - created by the Financial Stability Board in 2015 to improve and increase reporting of climate-related financial information. For further information see: https://www.fsb-tcfd.org/

TPI **Transition Pathway Initiative (TPI)** - is a global, asset-owner led initiative which assesses companies' preparedness for the transition to a low carbon economy. For further information see: https://www.transitionpathwayinitiative.org/

WBA **World Benchmarking Alliance** – not-for-profit organisation launched in 2018 to develop transformative benchmarks, backed by the best available science while leveraging existing international norms and standards, to help compare companies' performance on the SDGs. For further information see: https://www.worldbenchmarkingalliance.org/

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Minerva Analytics helps investors and other stakeholders to overcome data disclosure complexity with robust, objective research and voting policy tools. Users can quickly and easily identify departures from good practice based on their own individual preferences, local market requirements or apply a universal good practice standard across all markets.

Discern Sustainability helps financial institutions excel in sustainable, responsible investment and ESG across three areas:

- Bespoke research and strategic advisory;
- Financial product design & ESG integration; and
- Thought leadership.

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