

*Reviewing your  
approach to UK  
fossil fuel investment*

**A report for the West  
Yorkshire Pension Fund**

**December 2024**

# Reviewing your approach to UK fossil fuel investment

## West Yorkshire Pension Fund (WYPF)

6 December 2024

### Contents

<b>Foreword</b> .....	<b>4</b>
<b>Executive summary</b> .....	<b>5</b>
<b>Introduction</b> .....	<b>8</b>
Section summary .....	8
About the West Yorkshire Pension Fund.....	8
The climate context.....	9
The role of fossil fuels.....	10
WYPF’s influence .....	12
What are other investors doing?.....	14
<b>Question 1: What are the opportunities and challenges associated with revisiting WYPF’s approach to setting strategic asset allocation and benchmarks?</b> .....	<b>16</b>
Section summary .....	16
Traditional approaches to strategic asset allocation .....	16
Alternative approaches to strategic asset allocation .....	19
Focus of the remainder of this paper.....	21
<b>Question 2: What frameworks and escalation pathway should WYPF adopt for assessing when open-ended engagement should end and divestment begin at sector and/or company level?</b> .....	<b>23</b>
Section summary .....	23
Benefits and limitations of engagement.....	23
Effective engagement – evidence of what works .....	25
Benefits and limitations of divestment .....	30
WYPF’s approach to engagement with fossil fuel companies.....	34
Agreeing a sensible way forward for WYPF .....	35
Setting a clear escalation process.....	36
Step one: Identifying appropriate targets for engagement .....	37
Step two: Analysing “top priority stewardship” companies .....	41
Step three: Influencing top priority companies .....	42
Illustration: applying the engagement assessment framework and escalation pathway to BP and Shell.....	43
Steps two and three: Analysing and influencing “high priority stewardship” companies.....	45
Steps two and three: Analysing and influencing “proportionate stewardship” companies .....	45
<b>Question 3: Should WYPF’s fund benchmark for UK listed equities change from FTSE All Share?</b> .....	<b>46</b>
Section summary .....	46
Current investment arrangements: .....	46

Implementing a disinvestment from a stock .....	47
Backward looking analysis .....	49
Forward looking analysis .....	51
A. How much could stranded asset risk impact the UK Oil, Gas and Coal sector? A case study considering Shell plc .....	52
B. To what extent is stranded asset risk already priced into valuations? .....	53
C. What is the potential impact of stranded asset risk on the overall funding position?.....	54
Selected Bibliography .....	55
Full bibliography .....	57
Appendix 1: Possible assessment criteria for escalation framework, with illustrative results for BP and Shell .....	62

## Foreword

As one of the United Kingdom's largest asset owners, West Yorkshire Pension Fund (WYPF) is entrusted with not only safeguarding the pensions of its 320,000 members but also addressing the systemic risks that increasingly threaten global financial stability, such as climate change. The growing realisation that climate risks are not only environmental but also financial, has prompted WYPF to reassess its investment strategy, including its approaches to asset allocation, engagement and benchmarking.

Earlier this year, WYPF reset its investment beliefs, with a focus on climate change being a key priority. How to incorporate this belief into WYPF's investment strategy is complicated and multi-faceted, but one key lever is our existing engagement with publicly listed companies, which form the majority of WYPF's assets. Earlier this year, we chose to work with the consultant LCP to provide us an independent expert view.

This paper explores the challenges and opportunities WYPF faces in integrating climate-related considerations into its strategic asset allocation, engagement strategies and investment benchmarks – specifically in relation to UK fossil fuel investment. The Fund's efforts to lead by example in the responsible management of capital are particularly timely, as system-level risks like climate change cannot be addressed by individual investors alone. Collaboration and alignment with other investors are essential for driving meaningful change in the corporate world and influencing global markets.

The paper is structured around three key questions that we set for LCP: (1) what are the opportunities and challenges associated with revisiting WYPF's approach to setting strategic asset allocation and benchmarks; (2) what frameworks and escalation pathway should WYPF adopt for assessing when open-ended engagement should end and divestment begin at sector and/or company level, and (3) should WYPF's fund benchmark for UK-listed equities change from FTSE All Share.

Through engagement with these questions, the paper aims to offer practical guidance for WYPF as it navigates the complexities of climate change within its investment strategy.

We think the LCP paper is also relevant to a wider audience, given that WYPF is the largest in-house managed LGPS fund, and we hope that some of what is contained will be useful for some of the debates taking place within asset owners around the UK and beyond.

Councillor Andrew Thornton,

Chair of the West Yorkshire Pension Fund

## Executive summary

As one of the UK's largest asset owners, entrusted with around £20bn of assets under management and providing pensions benefits for 320,000 members<sup>1</sup>, the West Yorkshire Pension Fund (WYPF) has a critical role to play in the responsible allocation, management and oversight of capital. Increasingly, that role requires it to take account of the challenges posed by global, system-level risks such as climate change, which if unaddressed will affect not just individual companies or sectors but the economic and financial system as a whole.

The WYPF is at the forefront of asset owners' efforts to address climate change. It has recognised that to deliver for its members requires challenging some traditional assumptions about risk and thinking carefully about how best to use its influence.

Approaching risk in this way is a new and rapidly developing area, where best practice is still being shaped. Some promising strides have been taken already – and we highlight some prominent examples of this in this paper – but collectively, we are still far from a perfect answer. This paper aims to build on all the excellent work that has already been done, to help WYPF develop a practical approach. We have tried to clearly indicate how other investors might do the same.

This is important because what is clear from the literature is that no single investor has the capacity to address climate change by itself. Coalitions of investors – whether formal or informal – provide the critical mass which is necessary to influence large companies to change their behaviour.

LCP has been asked by WYPF to provide an independent view to help it develop its approach to UK fossil fuel investment, and this report documents our guidance in response to the specific brief that we were given by WYPF. Our findings are based on our unique combination of expertise as a leading energy transition consultancy, combined with investment, actuarial and covenant advisory services.

We note that the extent and speed at which fossil fuel companies align their business strategy with a transition to a low carbon economy will be heavily influenced by the demand for fossil fuel products and the regulatory environment within which they operate. You can seek to mitigate the climate-related risks to the WYPF from the fossil fuel sector through your approach to three complementary areas:

- investing in and engaging with fossil fuel companies;
- investing in and engaging with companies that are significant sources of demand for fossil fuel products; and
- engaging with policy makers and regulators, either directly or through collaboration with others, to seek policy measures that support the achievement of internationally-agreed climate goals, including the phase-down of fossil fuels.

The latter two areas are outside the scope of this report.

### Limitations

**This work is only appropriate for the purposes described and should not be used for anything else. It is subject to any stated limitations (eg regarding accuracy or completeness). For the avoidance of doubt, it does not include any stock recommendations and is intended to give guidance to WYPF to enable you to make decisions around UK fossil fuel investment. We accept no liability to anyone who is not WYPF.**

---

<sup>1</sup> WYPF, 'Stewardship Code 2024' (West Yorkshire Pension Fund, 2024), 3, [https://media.frc.org.uk/documents/stewardship\\_report\\_2024\\_final.pdf](https://media.frc.org.uk/documents/stewardship_report_2024_final.pdf).

The paper addresses three questions posed by WYPF:

**Question 1: What are the opportunities and challenges associated with revisiting WYPF’s approach to setting strategic asset allocation and benchmarks? (p16)**

Strategic asset allocation – the process the WYPF uses to decide how much to invest in different asset classes – is an important way for it to manage risks in its investments. But traditional approaches to strategic asset allocation have important shortcomings in the context of escalating system-level risks.

Typically, investors use models for strategic asset allocation which are based on historical data, sometimes overlaid with some qualitative assessment or outlook for the future. While this approach has served well for much of the last 70 years since the development of the original theory on which it is based, it breaks down when the future doesn’t look like the past and where the risk from losses is much larger than the expected upside from potential gains – where expected returns are ‘asymmetric’. System-level risks such as climate change threaten to destabilise the foundations of traditional strategic asset allocation approaches for exactly this reason.

New models for considering strategic asset allocation are therefore critical for investors like WYPF to address system-level risks and protect members’ benefits. However, adoption of even the most promising models has been slow. Most commonly, some more progressive investors, including the WYPF, have taken an approach of allocating a proportion of their assets to ‘solutions’ – specific asset classes or opportunities which seek to contribute to addressing the underlying causes of climate change.

It is increasingly clear that the simple allocation of capital cannot by itself resolve system-level issues such as climate change – instead, asset owners must use their influence to change the behaviour of the companies they own. Ensuring that this type of engagement is effective is covered by Question 2.

**Question 2: What frameworks and escalation pathway should WYPF adopt for assessing when open-ended engagement should end and divestment begin at sector and/or company level? (p23)**

A review of the academic and practitioner literatures on engagement indicates that specificity, scale and strength of relationships are the most important drivers of engagement success. For WYPF’s engagement efforts to have a credible chance of success, they need to be aligned with other investors. This can be achieved by two main means: either through explicit collaboration, or through a ‘chain reaction’ model, where the actions of one investor encourage others to take similar actions.

We believe that divestment (eg from fossil fuel companies) is likely to be ineffective in isolation. But, combined with robust engagement, and in concert with other investors making aligned demands, divestment may be an appropriate final escalation step, especially where the business’s activity poses specific risks to the WYPF. We note that such action in respect of fossil fuel companies has little precedent to date and as such its effectiveness is largely theoretical. However, in the WYPF’s circumstances, we view this theoretical basis as providing sufficiently strong justification for taking action, particularly where all other options have been exhausted.

We have set out a possible engagement process, including an assessment framework and potential escalation pathway that integrates these findings. It seeks to maximise the WYPF’s potential influence by establishing alignment with other investors, in line with WYPF’s objectives. We suggest setting minimum and ongoing expectations for companies in the fossil fuel sector and agreeing a pathway to divestment where these are not met.

As requested by WYPF, we have assessed the WYPF’s two most material holdings in the fossil fuel sector – BP and Shell – against an illustrative set of assessment criteria. We find that, based on the latest third-party assessments available at 25 November 2024, both BP and Shell fall short of the illustrative minimum expectations. Under the escalation pathway we have set out, this would put both companies on a potential pathway to divestment by WYPF if they did not take action to meet those minimum expectations following substantive engagement.

A range of approaches is possible and we would be pleased to discuss alternatives with you.

**Question 3: Should WYPF’s fund benchmark for UK listed equities change from FTSE All Share? (p46)**

The fossil fuel sector poses specific risks to investors which may not be fully reflected in the market’s assessment. A failure to properly assess the long-term risks and costs to which companies in the sector are exposed could mean that these considerations are not fully reflected in their share performance.

Given the specific risks associated with fossil fuel firms, it is sensible for the WYPF to be open to divesting from firms that are making insufficient progress to transition. Analysis from LCP's Covenant and Financial Advisory specialists highlights the potential financial risks to WYPF of these firms' fossil fuel reserves becoming 'stranded'.

If in future WYPF does choose to divest from one or more fossil fuel firms, for example as a result of implementing an agreed escalation pathway, we recommend that you change your benchmark to remove the divested stocks. This will help align the objectives of your in-house investment management team with your decision to divest. We have not considered the potential for adopting a 'climate-tilted' benchmark, which would reduce the weight of the fossil fuel sector, since we believe that an approach which combines robust engagement with divestment as a possible final escalation step is more likely to lead to real-world change.

As your assets are managed by an in-house team, WYPF can implement divestment with lower costs than would be incurred by an otherwise similar asset owner which had outsourced the management of its assets.

## Introduction

This report was prepared for the City of Bradford Metropolitan District Council as Administering Authority for the West Yorkshire Pension Fund and discussed at the Investment Advisory Panel meeting on 7 November 2024. It was updated following that meeting to include the 2024 Climate Action 100+ Net Zero Benchmark assessments in the analysis.

### Section summary

WYPF is one of the largest asset owners in the UK. Like all long-term investors, it must navigate the potential for climate change to generate major, system-wide risks which cannot be managed effectively by typical portfolio management tools such as diversification.

The fossil fuel sector is particularly problematic with regard to addressing climate change, because its products are so important to the global economy now, but their role is expected to be significantly diminished in future scenarios where climate change is addressed successfully. This requires a significant transition.

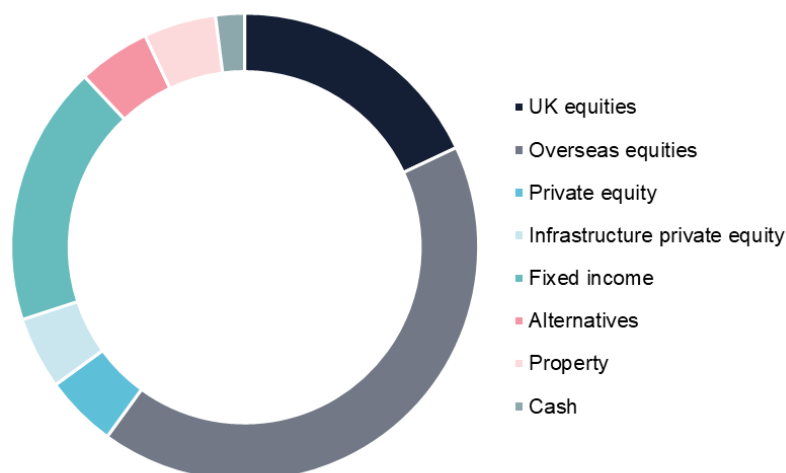
While companies in the sector, especially Oil & Gas businesses, are potentially well positioned to diversify into areas which will drive the transition to a low carbon economy, they have so far only done so to a limited extent. To manage the risks that this creates for the WYPF, it must influence these companies to change their behaviour.

### About the West Yorkshire Pension Fund

WYPF is one of the largest Local Government Pension Schemes (LGPS), and as such is one of the largest investors in the UK, with around £19.2bn in assets<sup>2</sup>. As at 31 December 2023 it had around 320,000 members<sup>3</sup>. It is also a member of the Northern LGPS Pool, which is an arrangement with two other LGPS intended to create efficiencies in administration and investment management.

The WYPF has a significant allocation in UK equities, which make up a total of 18% of its strategic allocation to equities<sup>4</sup>, versus a global market capitalisation weighting of around 3.5%<sup>5</sup>. This means that it owns a relatively large proportion of many UK companies.

**Figure 0.1: WYPF’s strategic asset allocation<sup>6</sup>**



<sup>2</sup> WYPF, 4.

<sup>3</sup> WYPF, 3.

<sup>4</sup> WYPF, 13.

<sup>5</sup> FTSE Russell, 'Index Factsheet: FTSE All-World Index (31 October 2024)

<sup>6</sup> WYPF, 'Investment Strategy Statement', February 2024, <https://www.wypf.org.uk/media/3595/wypf-investment-strategy-statement-2024-draft.pdf>.



The WYPF is unusual among UK pension schemes in running a large proportion of its assets internally, which has delivered good investment performance at lower cost. This makes it easier for WYPF to make changes to its portfolio than would be the case when investing through externally-managed funds. All stock-level investment decisions are taken by the investment team, within the parameters set by the Investment Advisory Panel's policies.

As an open defined benefit pension scheme, the WYPF could be paying a pension to a member joining today in over 80 years' time. Therefore, its investment horizon stretches far into the future. This very long-term investment horizon means that it must pay particular attention to problems which might manifest in the future, but which will be affected by the actions taken by society now<sup>7</sup>. Climate change is a major example of such a problem<sup>8</sup>.

The risks from such 'tragedies of the horizon' multiply where their impacts are felt on not just a single firm or industry, but the whole economy, ie they are 'system-level' risks<sup>9</sup>. When a risk stands to impact the whole system, asset owners cannot avoid it by selectively investing only in certain stocks or industries. Instead, they must use their powers to invest or influence to resolve the underlying problem.

## The climate context

Since 1850, the Earth's surface has warmed at a faster rate than at any time in at least 2,000 years<sup>10</sup>, threatening to radically alter the lives of billions of people, and destroy animal and plant life the world over<sup>11</sup>. This warming has been driven almost entirely by the release, by humans, of so-called "greenhouse gases" (GHGs) such as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and other compounds, which accumulate in the atmosphere and prevent heat from leaving into space<sup>12</sup>. Radical reductions in emissions of all these gases, and especially carbon dioxide, are therefore essential to limit the extent of future warming<sup>13</sup>.

Under the Paris Agreement, 196 countries have agreed an aim of keeping global average temperatures this century well below 2°C above pre-industrial levels, and to pursue efforts to limit it to 1.5°C<sup>14</sup>. The Intergovernmental Panel on Climate Change (IPCC) has advised that, to achieve the 1.5°C goal with 50% probability, global carbon dioxide emissions need to be net zero by around 2050<sup>15</sup>.

However, current projections tell us that we are not on track to achieve net zero by 2050 – indeed, we are currently on track for about 1.9°C – 3.8°C of warming (with 66% probability)<sup>16</sup>. As the global economy progresses along this non-aligned pathway, two major climate risks increase: the potential for a shock from effective climate policies, rapidly introduced to address the problem; and longer-term disruption from the physical impacts associated with a

---

<sup>7</sup> Mark Carney, *Value(s): Building a Better World for All* (London: William Collins, 2021).

<sup>8</sup> Carney.

<sup>9</sup> PRI Association, 'A Legal Framework for Impact' (Principles for Responsible Investment; UN Environment Programme; Generation Foundation), accessed 7 August 2024, <https://www.unpri.org/download?ac=17214>.

<sup>10</sup> IPCC, 'Summary for Policymakers', in *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, ed. V. Masson-Delmotte et al. (In Press, 2021), 6, [https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC\\_AR6\\_WGI\\_SPM\\_Stand\\_Alone.pdf](https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM_Stand_Alone.pdf).

<sup>11</sup> IPCC, 'Summary for Policymakers', in *Climate Change 2022: Impacts, Adaptation and Vulnerability* (Cambridge University Press, 2022), [https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC\\_AR6\\_WGII\\_SummaryForPolicymakers.pdf](https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf).

<sup>12</sup> IPCC, 'Summary for Policymakers', in *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, ed. V. Masson-Delmotte et al. (In Press, 2021).

<sup>13</sup> Joeri Rogelj et al., 'Scenarios towards Limiting Global Mean Temperature Increase below 1.5 °C', *Nature Climate Change* 8, no. 4 (April 2018): 325–32, <https://doi.org/10.1038/s41558-018-0091-3>; IPCC, 'Summary for Policymakers', 2021.

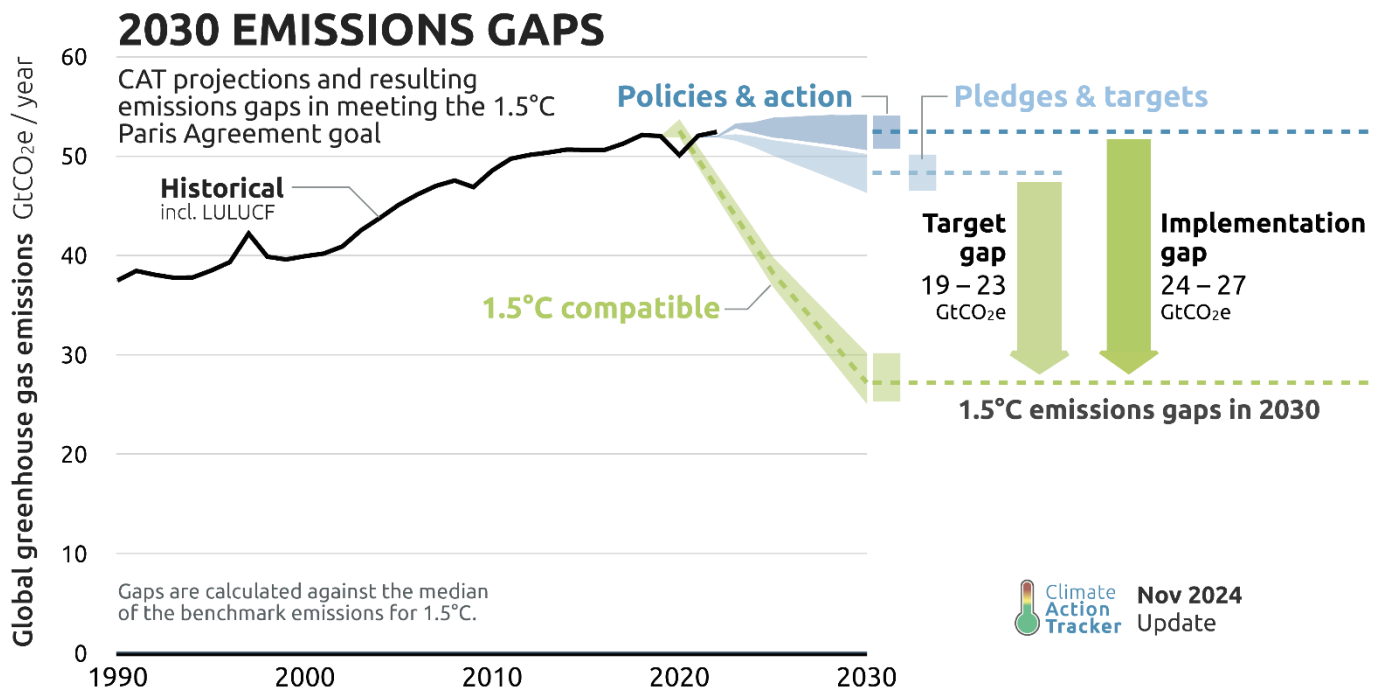
<sup>14</sup> UNFCCC, 'The Paris Agreement | UNFCCC', UNFCCC, 2021, <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.

<sup>15</sup> IPCC, 'Summary for Policymakers', in *Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*, ed. V. Masson-Delmotte et al., 2018, 13, [https://www.ipcc.ch/site/assets/uploads/sites/2/2022/06/SPM\\_version\\_report\\_LR.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2022/06/SPM_version_report_LR.pdf).

<sup>16</sup> United Nations Environment Programme, 'Emissions Gap Report 2024: No More Hot Air ... Please! With a Massive Gap between Rhetoric and Reality, Countries Draft New Climate Commitments' (Nairobi, 24 October 2024), XVII, <https://doi.org/10.59117/20.500.11822/46404>.

failure to adequately address climate change<sup>17</sup>. Both outcomes are expected to generate substantial costs throughout the financial system, to the extent that they might pose a risk to the system itself<sup>18</sup>.

**Figure 0.2: The gap between emissions policies, targets and a 1.5°C pathway<sup>19</sup>**



### The role of fossil fuels

The IPCC has found that emissions from fossil fuels are the dominant cause of climate change, with about 78% of human-caused carbon dioxide emissions coming from fossil fuel combustion and industrial processes<sup>20</sup>. Evidence synthesised by the IPCC indicates that fossil fuel emissions must be halved by 2030 (41%-58% reduction vs 2010 levels) if global warming is to be limited to 1.5°C above pre-industrial levels with no or limited overshoot<sup>21</sup>.

The Oil & Gas Sector is also a large source of emissions of methane, a greenhouse gas whose potency in inducing climate change is much greater than carbon dioxide over short periods<sup>22</sup>. Therefore, while the focus of much climate-related commentary relates to carbon dioxide, reducing methane emissions is also a critical issue to limit

<sup>17</sup> Daniel Gros et al., 'Too Late, Too Sudden: Transition to a Low-Carbon Economy and Systemic Risk', Reports of the Advisory Scientific Committee (European Systemic Risk Board, 2016).

<sup>18</sup> Patrick Bolton et al., *The Green Swan: Central Banking and Financial Stability in the Age of Climate Change* (Bank for International Settlements, 2020).

<sup>19</sup> Climate Analytics and NewClimate Institute, 'Climate Action Tracker Emissions Gap', November 2024, <https://climateactiontracker.org/global/cat-emissions-gaps/>.

<sup>20</sup> G Blanco et al., 'Drivers, Trends and Mitigation', in *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, ed. O Edenhofer et al. (Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press, 2014), 354, <https://doi.org/10.1017/CBO9781107415416>.

<sup>21</sup> IPCC, 'Summary for Policymakers', in *Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*, ed. V. Masson-Delmotte et al., 2018, 14, [https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15\\_SPM\\_version\\_report\\_LR.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_SPM_version_report_LR.pdf).

<sup>22</sup> S Dhakal et al., 'Emissions Trends and Drivers', in *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, by IPCC, ed. P.R. Shukla et al., 1st ed. (Cambridge University Press, 2023), <https://doi.org/10.1017/9781009157926.004>.

the Oil & Gas sector's climate impact. Importantly, a substantial portion of methane emissions in the sector arise from activities under the companies' direct control<sup>23</sup>.

Fossil fuels continue to play a critical role in the global economy today. Over half of the energy consumed worldwide in 2023 was generated from oil and gas<sup>24</sup>. And even in the International Energy Agency's (IEA) Net Zero Emissions by 2050 (NZE) Scenario, where global average temperature rise is successfully limited to 1.5°C, it is expected that there will still be 24 million barrels per day of oil<sup>25</sup> and 920 billion cubic metres of natural gas<sup>26</sup> being produced in 2050. But that represents a 75% reduction compared to 2022 levels, as well as a significant shift in use, away from combustion<sup>27</sup>. For companies which produce fossil fuels, the transition to a low carbon economy may represent an existential threat.

Yet Oil & Gas Sector companies have also generated significant revenues in recent years, and many of their capabilities are transferrable to clean energy, meaning such firms could play an important role in a low carbon economy and also have the resources to invest in making that transition happen<sup>28</sup>. Despite this potential, less than 1% of global clean energy currently comes from Oil and Gas companies<sup>29</sup>.

Diversifying into clean energy is not the only feasible, and potentially desirable, option for fossil fuel firms. Carbon Tracker argues, for example, that a 'cash-out' strategy should be considered favourably by investors as a strategy for Oil & Gas companies with upstream businesses<sup>30</sup>. This means that the business's fossil fuel activity would be more or less gradually wound down, and cash returned to shareholders rather than reinvested either in new fossil fuel exploration or production, or in diversified business lines. This has been the preferred approach for the Local Authority Pension Fund Forum (LAPFF) in its engagements with Oil & Gas Sector companies<sup>31</sup>. The diagram below, which has been produced by Carbon Tracker, illustrates the range of possible transition strategies available to Oil & Gas companies.

---

<sup>23</sup> IEA, 'Strategies to Reduce Emissions from Oil and Gas Operations – Global Methane Tracker 2023 – Analysis', IEA, accessed 24 June 2024, <https://www.iea.org/reports/global-methane-tracker-2023/strategies-to-reduce-emissions-from-oil-and-gas-operations>.

<sup>24</sup> Hannah Ritchie, Pablo Rosado, and Max Roser, 'Energy Mix', *Our World in Data*, 25 March 2024, <https://ourworldindata.org/energy-mix>.

<sup>25</sup> IEA, 'The Oil and Gas Industry in Net Zero Transitions', in *World Energy Outlook Special Report* (International Energy Agency, 2023), 29, <https://doi.org/10.1787/fd522f59-en>.

<sup>26</sup> IEA, 32.

<sup>27</sup> IEA, 29.

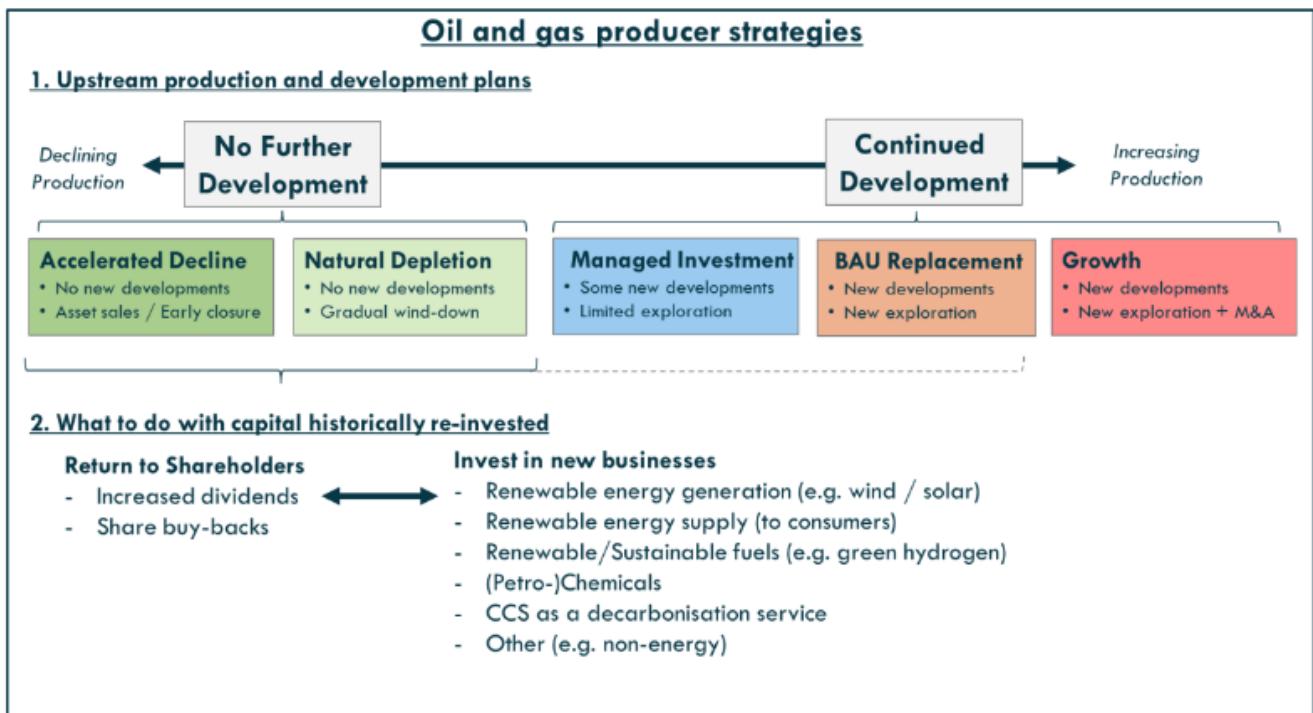
<sup>28</sup> McKinsey, 'How Oil and Gas Companies Can Lead in the Energy Transition', 27 February 2023, <https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/how-oil-and-gas-companies-can-be-successful-in-renewable-power>.

<sup>29</sup> IEA, 'The Oil and Gas Industry in Net Zero Transitions', 3.

<sup>30</sup> Mike Coffin and Guy Prince, 'Navigating Peak Demand' (Carbon Tracker Initiative, November 2023).

<sup>31</sup> Local Authority Pension Fund Forum, 'Responsible Investment Policy Guide', September 2022, [https://lapfforum.org/wp-content/uploads/2022/09/LAPFF\\_Policies\\_Full\\_Version.pdf](https://lapfforum.org/wp-content/uploads/2022/09/LAPFF_Policies_Full_Version.pdf).

Figure 0.3. Oil & gas company transition strategies. Carbon Tracker<sup>32</sup>.



This wide range of potential transition strategies means that investors' consideration of an Oil & Gas firm's progress toward a low carbon transition must be flexible to accommodate a number of valid approaches. What the strategies have in common is a reduction in capital expenditure on oil and gas exploration and production through time.

However, the role of the sector in the transition is complicated by the ownership of the largest organisations in the industry. 56% of the book value of global Oil & Gas equity is state-owned, with only 34% being held by listed companies which might feature in WYPF's equity portfolio<sup>33</sup>. Less than 13% of global oil & gas production and reserves are owned by large, international oil companies (IOCs)<sup>34</sup>. State-owned companies are driven by different imperatives to investor-owned ones, and generally much less amenable to influence<sup>35</sup>.

## WYPF's influence

WYPF, as part of the LGPS Northern Pool, is a signatory to the Paris Aligned Asset Owners Commitment<sup>36</sup>, under which it has committed to transition its investments to achieve net zero portfolio GHG emissions by 2050 or sooner, with interim decarbonisation targets, as well as engaging with the issuers it invests in and other important actors in the investment value chain. To structure its investment and engagement efforts under this initiative, it has developed an approach in line with the Net Zero Investment Framework 2.0<sup>37</sup> - the gold standard for such commitments. We consider how this is reflected in WYPF's engagement in more detail in response to Question 2.

WYPF is also a signatory to the UK Stewardship Code 2020, which means that it is under obligations to meet a set of principles for good stewardship set out by the Financial Reporting Council (FRC). Among these principles are

<sup>32</sup> Coffin and Prince, 'Navigating Peak Demand'.

<sup>33</sup> IEA, 'The Oil and Gas Industry in Net Zero Transitions', 115.

<sup>34</sup> IEA, 19.

<sup>35</sup> Philippe Benoit, 'Engaging State-Owned Enterprises in Climate Action' (New York: Columbia Centre on Global Energy Policy, September 2019).

<sup>36</sup> Paris Aligned Asset Owners, 'Commitment – Paris Aligned Asset Owners', accessed 1 October 2024, <https://www.parisalignedassetowners.org/commitment/>.

<sup>37</sup> Paris Aligned Investors Initiative, 'NZIF 2.0: The Net Zero Investment Framework', June 2024, [https://www.parisalignedassetowners.org/media/2024/06/PAII\\_NZIF-2.0\\_240624\\_Final.pdf](https://www.parisalignedassetowners.org/media/2024/06/PAII_NZIF-2.0_240624_Final.pdf).

“Engagement”, “Collaboration”, and “Escalation”, which means that the WYPF is expected to engage with issuers to maintain or enhance the value of assets; participate in collaborative engagement to influence issuers; and escalate stewardship activities to influence issuers<sup>38</sup>.

WYPF undertakes engagement with portfolio companies, either directly or through organisations of which it is a member or subscriber. The bulk of this engagement is done on its behalf through the LAPFF or Pensions Investment Research Company (PIRC)<sup>39</sup>.

LAPFF is an association of 87 LGPS funds plus seven LGPS pools<sup>40</sup>, representing a total of around £350bn in assets under management<sup>41</sup>. LAPFF undertakes engagement on behalf of its members, including the WYPF, on a broad range of topics<sup>42</sup>. The size of the assets represented helps to give LAPFF improved access to company management, and a stronger influence in its engagements with companies.

Both LAPFF and the Northern LGPS Pool are supported by PIRC, which has for over thirty years carried out research on behalf of LAPFF, as well as designing LAPFF’s programme of engagement and supporting engagement activities, including meetings and filing shareholder proposals<sup>43</sup>. Though PIRC collects information to aid its clients make decisions around engagement and disinvestment, it does not advise or state a view on whether its clients should disinvest from particular holdings.

Further, companies that meet the WYPF’s ‘watch-list’ criteria are subject to direct engagement by the WYPF’s ESG<sup>44</sup> manager, in addition to that carried out by third parties<sup>45</sup>. These criteria are that WYPF holds at least £75mn of the company’s equity, or at least £25mn of the company’s equity if the company is also a Climate Action 100+ (CA100+) target company<sup>46</sup>. During the year to 31 March 2024, the ESG manager met with around 25 companies on the watch-list<sup>47</sup>.

As a shareholder, exercising its voting rights is an important way for WYPF to exercise influence across its equity holdings. To support this, PIRC also acts as proxy voting adviser to the WYPF, implementing a policy which takes strong voting actions to incentivise changes in company behaviour<sup>48</sup>. Where WYPF disagrees with a recommendation from PIRC, it has discretion to instruct the vote differently, although we understand that this rarely happens in practice.

WYPF also engages in investor collaborations, for example CA100+ and the Institutional Investors Group on Climate Change (IIGCC)<sup>49</sup>. CA100+ is an investor-led initiative to engage with the world’s largest corporate greenhouse gas emitters about taking appropriate action on climate change<sup>50</sup> and the IIGCC supports investors in a variety of ways to work towards a net zero and climate resilient future<sup>51</sup>. While we understand that WYPF’s engagement with these initiatives is typically focussed on information gathering, there have also been clear examples of more active involvement, for example the co-filing of a climate resolution at Equinor, a CA100+

---

<sup>38</sup> Financial Reporting Council, ‘The UK Stewardship Code 2020’ (Financial Reporting Council, 23 October 2019), [https://media.frc.org.uk/documents/The\\_UK\\_Stewardship\\_Code\\_2020.pdf](https://media.frc.org.uk/documents/The_UK_Stewardship_Code_2020.pdf).

<sup>39</sup> WYPF, ‘Stewardship Code 2024’.

<sup>40</sup> LAPFF, ‘About | Fund & Pool Members | LAPFF’, Local Authority Pension Fund Forum, accessed 9 August 2024, <https://lapfforum.org/about/fund-pool-members/>.

<sup>41</sup> LAPFF, ‘About | Mission | LAPFF’, LAPFF Forum, accessed 8 August 2024, <https://lapfforum.org/about/>.

<sup>42</sup> LAPFF.

<sup>43</sup> PIRC, ‘What We Do | Engagement’, PIRC, 2024, <https://www.pirc.co.uk/what-we-do/engagement/>.

<sup>44</sup> ESG stands for Environmental, Social and Governance – a common way of summarising the issues that arise in sustainable investing.

<sup>45</sup> WYPF, ‘Stewardship Code 2024’, 18.

<sup>46</sup> WYPF, ‘Stewardship Code 2024’.

<sup>47</sup> WYPF, 24.

<sup>48</sup> WYPF, ‘Stewardship Code 2024’.

<sup>49</sup> WYPF.

<sup>50</sup> ‘About Climate Action 100+’, Climate Action 100+, accessed 9 August 2024, <https://www.climateaction100.org/about/>.

<sup>51</sup> ‘About Us’, IIGCC, accessed 9 August 2024, <https://www.iigcc.org/about-us>.

company<sup>52</sup>. Further, IIGCC led the initial development of the Net Zero Investment Framework that the WYPF uses for tracking its progress toward net zero<sup>53</sup>. An important part of this Framework is measuring the alignment of each holding in its portfolio with net zero by 2050 emissions pathways.

Other examples of the engagements that WYPF has undertaken include<sup>54</sup>:

- an engagement with an external fund manager to investigate if it was diluting its ESG standards, after it announced its intention to leave the Climate Action 100+;
- joint legal action against the managers of a real estate investment trust which had the objective of investing in social housing, but much of its portfolio was found to be uninhabitable;
- participation in a FAIRR<sup>55</sup> engagement around manure pollution and biodiversity risk; and
- co-signing letters urging banks to curtail lending to fund new fossil fuel investments.

More detail on WYPF's engagement can be found in its [stewardship reporting](#).

As noted above, the WYPF allocates around 18% to UK companies within its equity portfolio<sup>56</sup>. The market capitalisation share for fossil fuel firms in the UK is relatively high, at approximately 12% of the FTSE All-Share index (as at 30 April 2024)<sup>57</sup>, which is the benchmark used by WYPF to monitor the performance for its UK equity allocation. As the benchmark index includes fossil fuel companies, the portfolio managers are likely to hold such companies at a similar weight to the benchmark index to help meet their risk and return objectives. For this reason, two UK-based fossil fuel firms make up a large proportion of the WYPF's exposure to the sector: BP and Shell<sup>58</sup>.

We note that the WYPF also has exposure to fossil fuel companies via its overseas equity holdings and illiquid holdings. We have been asked to focus in this report on the holdings within its UK equity portfolio, given that this makes up a relatively large portion of its overall assets and provides the greatest potential for influence. The approach discussed in Question 2 also encompasses overseas equity holdings, but identifies UK-listed firms as highest priority for engagement.

## What are other investors doing?

Deciding on the most effective theory of change to influence climate outcomes is difficult. Other large investors have taken a full spectrum of approaches, all of which are intellectually coherent with a particular theory of change. We explain the spectrum of these approaches below, and then in Question 2 consider a range of academic and practitioner literature to identify what can be done, what is being done, what is most effective and how WYPF might apply this in practice.

**'Activist owner'** - Taking a larger share in a company in order to exercise greater influence has long been a tactic of investors seeking to change company strategy<sup>59</sup>. Increasingly, climate-aware investors are looking to use a similar approach for climate-related issues. For example, the Swedish pension fund AP7 has collaborated with Legal & General Investment Management on a Climate Action Fund, which overweights to climate laggards and

---

<sup>52</sup> WYPF, 'Stewardship Code 2024'.

<sup>53</sup> WYPF.

<sup>54</sup> All engagement examples taken from WYPF, 'Stewardship Code 2024'.

<sup>55</sup> FAIRR is a collaborative investor network, formerly known as Farm Animal Investment Risk & Return.

<sup>56</sup> WYPF, 'Stewardship Code 2024'.

<sup>57</sup> FTSE, 'FTSE All Share Index' (Datastream, 30 April 2024).

<sup>58</sup> LCP, 'LCP Analysis', 2024.

<sup>59</sup> Marco Becht et al., 'Returns to Hedge Fund Activism: An International Study', *The Review of Financial Studies* 30, no. 9 (1 September 2017): 2933–71, <https://doi.org/10.1093/rfs/hhx048>.

endeavours to use best practice engagement techniques to encourage them to align with net zero pathways<sup>60</sup> (see Case Study 2 below).

**‘Own to influence’** – The most common approach – and that taken by the large US pension fund CalPERS<sup>61</sup>, as well as the WYPF<sup>62</sup> – is to continue to hold a company’s shares. This is driven by the view that this allows the investor more options to influence management, for example through shareholder voting and access to senior representatives at the company. Investors taking this approach often take the view that not to hold a company creates an unacceptable risk of underperformance<sup>63</sup>.

Other large UK pension scheme investors such as Railpen, Brunel Pension Partnership and USS also take this approach, noting that they can have more influence over companies if they maintain ownership. However, these investors will consider using divestment as the final step of an escalation process. Railpen describes how the final stage in its escalation may be “in extreme circumstances, advising our internal or external managers to consider selling our shares in the company”<sup>64</sup>. Similarly, Brunel Pensions Partnership considers selective divestment as the final step of an engagement process explaining that “Brunel will apply a selective divestment process on those most climate impactful companies who are failing to meet alignment expectations”<sup>65</sup>. It notes that “we strongly believe in engaging with perseverance, but selective divestment does and will continue to be part of the tool kit”<sup>66</sup>. USS also describes divestment as an engagement tool, explaining that “we reserve the right to divest where engagement has been ineffective, has not achieved the desired outcome, and the investment continues to face significant ESG issues that remain unresolved”<sup>67</sup>. This is very much a final step, with USS highlighting that “society cannot divest its way to net zero and neither can we”<sup>68</sup>.

**‘Sell to influence’** – In some cases, investors take the view that a company or sector represents an unrewarded risk to their investments, or investors will try to influence management by creating downward pressure on the company share price<sup>69</sup>. In such cases, the investor sells the company’s shares. This is most effective in influencing companies where a large volume of shares is sold at the same time, and where the concerns and intention is clearly expressed in advance<sup>70</sup>. In other cases, investors aim to influence management, either directly or indirectly, through a stigmatisation effect as a result of the negative publicity from them divesting the company’s shares<sup>71</sup>. Such an approach may be motivated more by moral considerations than financial ones.

---

<sup>60</sup> AP7, ‘AP7 and LGIM establish partnership to launch climate transition strategy’, ap7.se, 30 May 2023, <https://www.ap7.se/aktuell/ap7-and-lgim-establish-partnership-to-launch-climate-transition-strategy/>.

<sup>61</sup> CalPERS, ‘CalPERS and Divestment’, 30 March 2017, <https://calpers.ca.gov/docs/forms-publications/calpers-and-divestment.pdf>.

<sup>62</sup> WYPF, ‘Stewardship Code 2024’.

<sup>63</sup> CalPERS, ‘CalPERS and Divestment’.

<sup>64</sup> Railpen, ‘Stewardship Report 2023’, 2023, 56, <https://cdn-suk-railpencom-live-001.azureedge.net/media/media/ivqnhsse/stewardship-report-2023.pdf>.

<sup>65</sup> Brunel Pension Partnership, ‘Brunel Climate Change Policy 2023-2030’, 2023, 5, <https://www.brunelpensionpartnership.org/wp-content/uploads/2024/06/Brunel-Climate-Change-Policy-2024.pdf>.

<sup>66</sup> Brunel Pension Partnership, 13.

<sup>67</sup> USS, ‘The Universities Superannuation Scheme (USS) Stewardship Code Report 2024’, 2024, 48, <https://www.uss.co.uk/-/media/project/ussmainsite/files/how-we-invest/uss-stewardship-code-report-2024.pdf?rev=eaabff7d2058488280f2550a624297b0>.

<sup>68</sup> USS, 26.

<sup>69</sup> Ben Caldecott et al., ‘How Sustainable Finance Creates Impact: Transmission Mechanisms to the Real Economy’, *Review of World Economics*, 23 May 2024, <https://doi.org/10.1007/s10290-024-00541-9>.

<sup>70</sup> Kevin Chuah et al., ‘Shareholder Activism Research: A System-Level View’, *Academy of Management Annals* 18, no. 1 (January 2024): 82–120, <https://doi.org/10.5465/annals.2022.0069>.

<sup>71</sup> Atif Ansar, Ben Caldecott, and James Tilbury, ‘Stranded Assets and the Fossil Fuel Divestment Campaign: What Does Divestment Mean for the Valuation of Fossil Fuel Assets?’ (Stranded Assets Programme, Smith School of Enterprise and the Environment, University of Oxford, October 2013), <https://ora.ox.ac.uk/objects/uuid:f04181bc-8c4f-4cc1-8f01-cafce57975ae>.

## Question 1: What are the opportunities and challenges associated with revisiting WYPF's approach to setting strategic asset allocation and benchmarks?

### Section summary

Strategic asset allocation – the process the WYPF uses to decide how much to invest in different asset classes – is an important way for it to manage risks in its investments. But traditional approaches to strategic asset allocation have important shortcomings in the context of escalating system-level risks.

Typically, investors use models for strategic asset allocation which are based on historical data, sometimes overlaid with some qualitative assessment or outlook for the future. While this approach has served well for much of the last 70 years since the development of the original theory on which it is based, it breaks down when the future doesn't look like the past and where the risk from losses is much larger than the expected upside from potential gains – where expected returns are 'asymmetric'. System-level risks such as climate change threaten to destabilise the foundations of traditional strategic asset allocation approaches for exactly this reason.

New models for considering strategic asset allocation are therefore critical for investors like WYPF to address system-level risks and protect members' benefits. However, adoption of even the most promising models has been slow. Most commonly, some more progressive investors, including the WYPF, have taken an approach of allocating a proportion of their assets to 'solutions' – specific asset classes or opportunities which seek to contribute to addressing the underlying causes of climate change.

It is increasingly clear that the simple allocation of capital cannot by itself resolve system-level issues such as climate change – instead, asset owners must use their influence to change the behaviour of the companies they own. Ensuring that this type of engagement is effective is covered by Question 2.

### Traditional approaches to strategic asset allocation

All investors require a framework for putting their money to work. A useful framework for this purpose is one that helps them to consider explicitly what reward they want or expect; the level of risk they are prepared to accept in order to get it; and how much to invest in one asset class rather than another. The investment portfolio arrived at under this framework is known as the investor's strategic asset allocation.

The WYPF's strategic asset allocation is set by the Investment Advisory Panel, supported by the in-house investment team. It has been designed to take into account the WYPF's risk tolerance, time horizons, liquidity requirements and other investment objectives. It has also been designed so that it is expected to generate the returns required to meet the WYPF's funding target – these are the returns that are implicitly factored into the actuarial valuation.

Over time, conventional wisdom for asset allocation, such as 'don't put all your eggs in one basket', has been refined and formalised by financiers and finance researchers into sets of mathematically-defined principles, by far the most popular of which is known as Modern Portfolio Theory (MPT)<sup>72</sup>.

Developed by Harry Markowitz in the 1950s, MPT introduced the idea that by investing in a mix of assets that do not perfectly correlate with each other, investors can reduce the overall risk of their portfolio<sup>73</sup>. This diversification reduces the impact of individual asset volatility on the overall portfolio, thus theoretically achieving a more stable return. This logic leads in turn to the concept of an 'efficient frontier' – the set of optimal portfolios offering the highest expected return for a given level of risk. According to MPT, each portfolio on this frontier provides the most efficient balance of risk and return, making them preferable to any other combination of assets<sup>74</sup>.

---

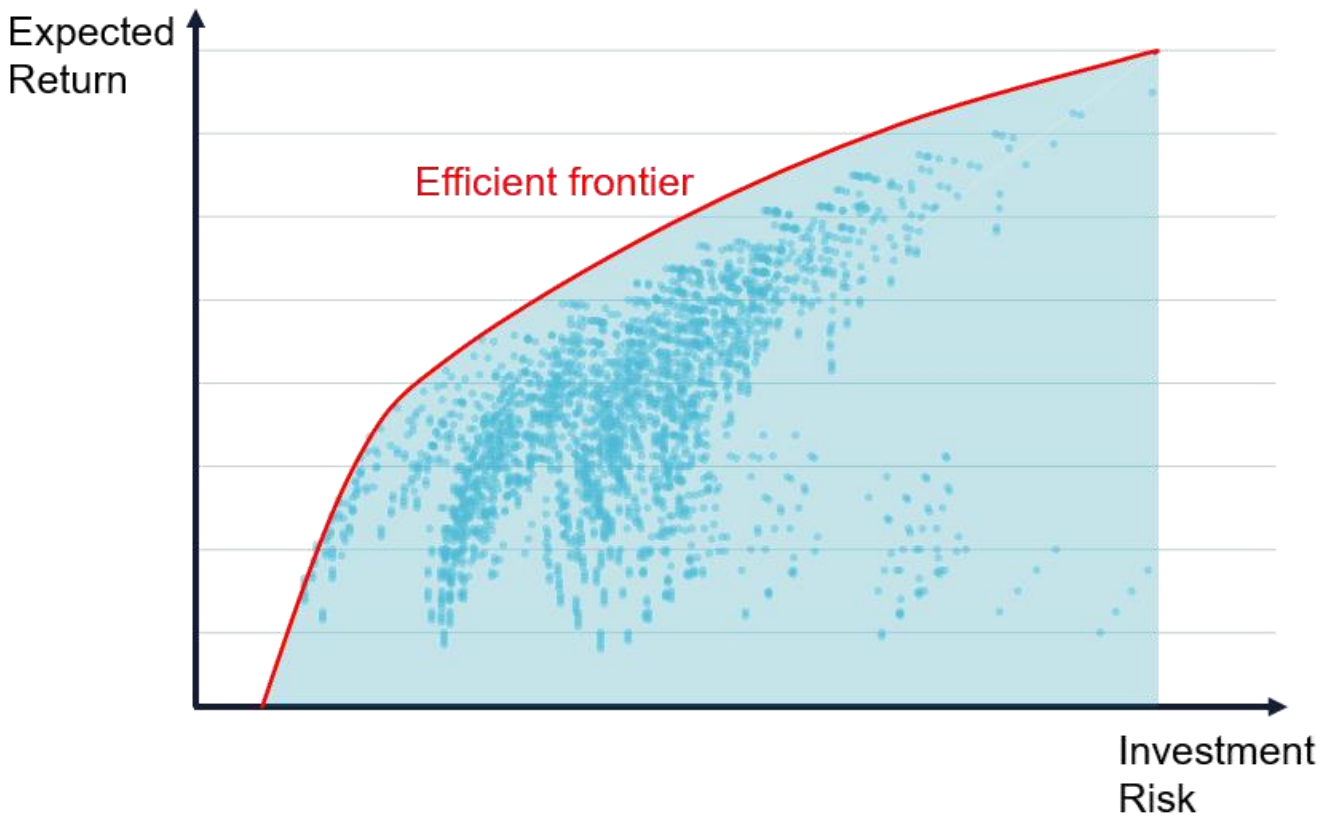
<sup>72</sup> Petter N. Kolm, Reha Tütüncü, and Frank J. Fabozzi, '60 Years of Portfolio Optimization: Practical Challenges and Current Trends', *European Journal of Operational Research*, 60 years following Harry Markowitz's contribution to portfolio theory and operations research, 234, no. 2 (16 April 2014): 356–71, <https://doi.org/10.1016/j.ejor.2013.10.060>.

<sup>73</sup> Harry Markowitz, 'Portfolio Selection', *The Journal of Finance* 7, no. 1 (1952): 77–91, <https://doi.org/10.2307/2975974>.

<sup>74</sup> Markowitz.



Figure 1.1: Illustrating the efficient frontier<sup>75</sup>



Additionally, MPT differentiates between systematic and unsystematic risk. Systematic risk, also known as market risk, is inherent to the entire market and cannot be diversified away; examples include economic recessions, changes in interest rates, and geopolitical events. In contrast, unsystematic or idiosyncratic risk is specific to individual companies or industries and can be mitigated through diversification. MPT theorises that by constructing a diversified portfolio, investors can eliminate unsystematic risk, leaving only the systematic risk that impacts the overall market.

MPT is underpinned by a number of explicit simplifying assumptions. The most important of these to highlight, in order to assess the challenges to it as a framework for asset allocation, are the following<sup>76</sup>:

- **Rational investors:** Investors are rational and risk-averse, meaning they prefer less risk to more risk for a given level of expected return. They aim to maximise their utility, which increases with higher returns and decreases with higher risk.
- **Efficient markets:** All investors have access to the same information at the same time, and securities are fairly priced, reflecting all available information. This implies that no investor can consistently achieve higher returns without taking on additional risk.
- **Normally distributed returns:** The returns of all assets are normally distributed. This means that returns can be fully described by their mean (expected return) and variance (risk).

<sup>75</sup> Output from LCP Visualise

<sup>76</sup> Todd E. Petzel, *Modern Portfolio Management: Moving Beyond Modern Portfolio Theory*, 1st ed. (Wiley, 2021).

Despite its widespread use (and usefulness), MPT and other mean-variance approaches have been subject to various criticisms, particularly in relation to their treatment of system-level risks<sup>77</sup>. We outline each of the main challenges below.

#### *(Ir)rationality*

MPT's assumption of rationality is particularly problematic in contexts where human behaviour is consistently irrational. An important example of this is hyperbolic discounting, where people disproportionately prefer smaller, immediate rewards over larger, delayed ones<sup>78</sup>. This preference contradicts the rational expectation of consistent discounting over time and ties directly to a broader short-termism that leads to a collective failure to address long-term issues such as climate change – the 'tragedy of the horizon'<sup>79</sup>. Whereas MPT assumes that all available information is reflected in asset prices, these findings in behavioural economics suggest this may not always be the case.

#### *Normally distributed returns*

A common criticism of MPT has been its oversimplification of market dynamics. MPT assumes that asset returns are normally distributed and that investors can make decisions based on the means and variances of historical returns<sup>80</sup>. However, financial markets frequently exhibit skewness and kurtosis, leading to the occurrence of extreme events far more often than a normal distribution would predict<sup>81</sup>. The normal distribution assumption therefore underestimates the true risk of so-called 'black swan' events, which are rare but highly consequential when they occur<sup>82</sup>.

#### *Reliance on historical data*

Relatedly, MPT depends heavily on historical returns, variances, and covariances to estimate the inputs for its optimisation process and generate forward-looking expected risk and return<sup>83</sup>. However, historical data may be a very poor guide to the future, especially against a background of developing system-level risks. For example, in industries which have profited strongly from fossil fuel intensive activities – not least Oil & Gas companies – action to address climate change could pose a fundamental threat to the companies' business models<sup>84</sup>. This means that historical data assumed to fit a normal distribution is likely to be much less useful for assessing the true level of risk associated with such firms.

#### *Constant correlations*

Further, MPT assumes constant correlations between asset returns, which again makes the model unsuited to a dynamic world where the behaviour of asset classes changes over time. While the idea that the correlations between different assets remain stable allows for effective diversification in the model,<sup>85</sup> in reality, correlations can change dramatically, especially during periods of market stress. During financial crises, for instance, assets that are usually uncorrelated can become highly correlated, reducing the benefits of diversification and leaving portfolios more vulnerable than anticipated.

---

<sup>77</sup> Jon Lukomnik and James P. Hawley, *Moving Beyond Modern Portfolio Theory: Investing That Matters*, 1st ed. (Routledge, 2021).

<sup>78</sup> Keith Marzilli Ericson and David Laibson, 'Intertemporal Choice', in *Handbook of Behavioral Economics: Applications and Foundations 1*, ed. B. Douglas Bernheim, Stefano DellaVigna, and David Laibson, vol. 2, *Handbook of Behavioral Economics - Foundations and Applications 2* (North-Holland, 2019), 1–67, <https://doi.org/10.1016/bs.hesbe.2018.12.001>.

<sup>79</sup> Carney, *Value(s)*.

<sup>80</sup> Petzel, *Modern Portfolio Management*.

<sup>81</sup> Petzel.

<sup>82</sup> Nassim Nicholas Taleb, *The Black Swan: The Impact of the Highly Improbable* (London: Penguin, 2008).

<sup>83</sup> Edwin J. Elton et al., *Modern Portfolio Theory and Investment Analysis*, Ninth edition (Hoboken, NJ: Wiley, 2014).

<sup>84</sup> ShareAction, 'Undermining Transition, Risking Capital: RISE Guidance Paper #3 - the Need for a New Investor Blueprint for the Fossil Fuel Sector' (ShareAction, June 2024), [https://cdn2.assets-servd.host/shareaction-api/production/resources/reports/RISE-Paper-3\\_Undermining-transition-risking-capital.pdf](https://cdn2.assets-servd.host/shareaction-api/production/resources/reports/RISE-Paper-3_Undermining-transition-risking-capital.pdf).

<sup>85</sup> Elton et al., *Modern Portfolio Theory and Investment Analysis*.

### *Single measure of risk*

The use of variance as the sole measure of risk neglects other important risk factors such as liquidity risk, credit risk, and tail risk, all of which may be exacerbated either by steps taken to address climate change or by climate impacts themselves. In practice, investors are not only concerned with volatility, but also with the potential for extreme losses and their ability to liquidate assets when needed. By ignoring these aspects, MPT fails to capture the full spectrum of risks that investors face, leading to potential underestimation of the true risk in their portfolios.

### *The roles of the market and the system*

MPT envisages a market in a vacuum, when in reality markets exist within a system. It does not account for the actual interaction that entities whose shares are traded on that market have with the real world. This reveals that at least two types of risk cannot be diversified away: systematic risk, as is explicit within MPT; but also system-level risks<sup>86</sup>. System-level risks are risks that do not just affect the financial performance of one company, or asset class, but can instead impact the performance of a whole economy and even undermine the stability of financial markets<sup>87</sup>. They cannot be mitigated through diversification and extreme outcomes are possible, which makes them very difficult to model.

Further, this model of a market in isolation neglects the potential for investors to engage to reduce both systematic and system-level risk. Such risks are often more difficult to influence companies on, compared to those risks which are identifiably company-specific. This is because they often result from the behaviour of a large number of actors, who need to change their collective behaviour as a group in order to fully address the underlying risk. While government and regulators will play an important role in driving these changes, investors can and should influence companies to address them too.

## **Alternative approaches to strategic asset allocation**

The shortcomings in MPT as a model for strategic asset allocation, outlined above, have been identified by many different parties since its inception. This has given rise to a number of alternative approaches which seek to address those shortcomings to a greater or lesser extent<sup>88</sup>. In the following section, we have outlined some of the major alternatives to MPT along with a summary of the advantages and disadvantages which have been identified for each.

### *Factor risk allocation*

A factor risk allocation approach takes a similar approach to MPT, but in place of asset classes, it seeks to delineate specific risk factors and then construct a portfolio which is diversified across those risk factors<sup>89</sup>.

In principle, diversifying by “risk factor” rather than asset class allows for the construction of more efficient portfolios than MPT, ie portfolios which are less risky for the same expected return. This is because the risk factors identified should be more closely related to the underlying risks than asset class ‘buckets’<sup>90</sup>.

Flexibility around what risk factors to use in portfolio construction makes it possible to explicitly include custom factors related to risks such as climate shocks, to the extent that such risks can be estimated<sup>91</sup>. Some investment managers have designed solutions which are intended to deliver this. For example, Robeco has implemented a

---

<sup>86</sup> Lukomnik and Hawley, *Moving Beyond Modern Portfolio Theory*.

<sup>87</sup> PRI Association, ‘A Legal Framework for Impact’.

<sup>88</sup> Adam Goehner et al., ‘Embedding ESG Issues Into Strategic Asset Allocation Frameworks: A Discussion Paper’ (Principles for Responsible Investment, 5 September 2019).

<sup>89</sup> Giuseppe A. Paleologo, *Advanced Portfolio Management: A Quant’s Guide for Fundamental Investors*, First Edition (Hoboken, NJ: Wiley, 2021).

<sup>90</sup> Paleologo.

<sup>91</sup> Emmanuel Jurczenko, ed., *Risk-Based and Factor Investing*, Quantitative Finance Set (London: ISTE Press, 2015).

proprietary 'climate beta' metric into some of its products, and claims that this reduces investors' exposure to climate risk<sup>92</sup>.

However, like MPT, factor risk allocation is heavily reliant on historical data, with factors typically being identified through statistical analysis of large sets of past performance data<sup>93</sup>. Given the expectation that escalating climate risk will change the investment environment, the risks associated with climate-related events that are likely to occur in the future may be poorly estimated.

### *Total Portfolio Approach*

A Total Portfolio Approach (TPA) builds on the risk factor allocation model, with portfolios being constructed based on risk factors rather than asset classes<sup>94</sup>. However, TPA takes a different approach to other attributes associated with the setting and monitoring of a strategic asset allocation<sup>95</sup>.

As described by the Thinking Ahead Institute, several features of TPA appear to be significant improvements on traditional strategic asset allocation – in particular, the assessment of performance vs fund goals rather than against a benchmark index.

Where other market actors are focused on short-term gains as a result of the propensity to discount hyperbolically (described earlier) this can drive up the value of assets that may be profitable in the short term but whose long-term impacts may be (very) negative. Fossil fuels are a clear example of this. Where an investor must be benchmark aware, they are compelled to hold those assets or risk underperforming their benchmark. An investor focused only on meeting their goals is not necessarily under the same pressure, and so potentially has greater latitude to invest in a way that acknowledges the total, long-term risks associated with such investments.

Other key features of TPA are that opportunities for investment are defined by their contribution to total portfolio outcome, with diversification achieved principally by risk factors, whereas traditional strategic asset allocation approaches tend to focus on asset classes for both. TPA is implemented collaboratively by a single team, whereas traditional strategic asset allocation may be implemented by multiple investment teams, competing with each other for capital. The success of TPA is measured by total fund return, rather than the traditional approach of measuring value added relative to portfolio benchmarks<sup>96</sup>.

The Thinking Ahead Institute's 2019 survey of large asset owners indicated that 8 out of 17 evaluated themselves as taking an approach closer to the traditional strategic asset allocation approach, but 11 out of 18 indicated that they wanted to take an approach closer to the TPA in the future<sup>97</sup>.

### *Megatrends*

A further advantage of the TPA-style approach is the potential to set a strategic asset allocation based on so-called 'megatrends' – key themes that are expected to have significant system-level importance in the future, such as climate change, technology, demographics and health. In practice, this type of thematic approach is likely to be used as an overlay to a broad asset class allocation, at least in the short to medium term.

The metrics available to assess the real-world impact of portfolio companies are becoming increasingly sophisticated. For example, organisations such as Impact Cubed provide asset owners with assessments for both individual companies and aggregated portfolios for a host of ESG criteria including biodiversity, activities described as 'sustainable' under the EU's taxonomy, factors identified as violating a 'do no significant harm' principle, and

---

<sup>92</sup> Robeco, 'Introducing Climate Beta: A Complementary Climate Risk Metric', Indices Insights Summaries (Robeco, 31 March 2023), <https://assets.ctfassets.net/tl4x668xzide/5eHeDV71PxadUan6KWhlaw/312eddf3e12a60f826a585c5e95a551c/indices-insights-summaries-introducing-climate-beta-a-complementary-climate-risk-metric-march-2023.pdf>.

<sup>93</sup> Paleologo, *Advanced Portfolio Management*.

<sup>94</sup> Goehner et al., 'Embedding ESG Issues Into Strategic Asset Allocation Frameworks: A Discussion Paper'.

<sup>95</sup> Thinking Ahead Institute, 'Total Portfolio Approach: A Global Asset Owner Study Guide into Current and Future Asset Allocation Practices' (Willis Towers Watson, August 2019), [https://www.thinkingaheadinstitute.org/content/uploads/2020/11/Total\\_Portfolio\\_Approach-1.pdf](https://www.thinkingaheadinstitute.org/content/uploads/2020/11/Total_Portfolio_Approach-1.pdf).

<sup>96</sup> Thinking Ahead Institute.

<sup>97</sup> Thinking Ahead Institute.

alignment with the UN Sustainable Development Goals (SDG)<sup>98</sup>. Given WYPF has demonstrated an interest in both climate and UN SDG exposures and may be required to report on its exposure to nature loss in the future, we believe the fund may well benefit from adopting such an approach. The assessments provided can be integrated into portfolio allocations either directly by the portfolio managers or through an optimisation approach.

### Regime switching models

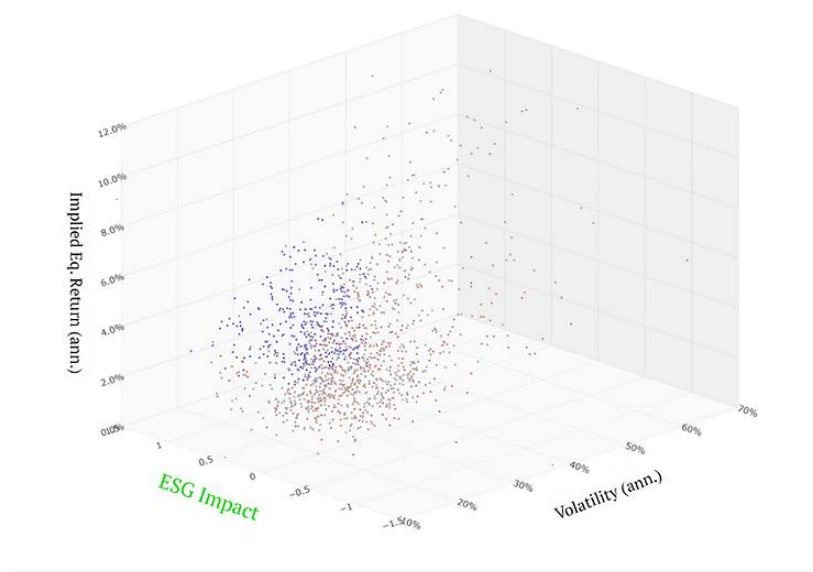
Regime switching models are advanced statistical methods used to identify and respond to different market conditions, or regimes, such as bull and bear markets<sup>99</sup>. Theoretically, investors can also introduce criteria into these models that would identify regime shifts in relation to events like a climate shock.

However, the complexity of regime switching models poses significant challenges. Developing and maintaining these models requires substantial resources and expertise, which can increase operational costs. Accurate identification of market regimes is crucial to outcomes but very difficult; incorrect predictions can lead to suboptimal investment decisions and increased volatility.

### Visualising new approaches to asset allocation

We note also that new approaches are being developed to help investors better understand dimensions beyond returns and volatility. These approaches may not lead directly to changes in strategic asset allocation but can better illustrate the balance of factors at play. For example, Impact Cubed has developed a tool to visualise portfolios, showing factors such as carbon emissions or other ‘ESG Impacts’ as a third dimension (see Figure 1.2, below). This allows investors to see more directly the trade-offs they are making between a traditional measure of risk (ie volatility) and risks that might have a longer-term, systemic impact.

**Figure 1.2: Impact Cubed visualisation tool output<sup>100</sup>**



### Focus of the remainder of this paper

Some of the alternative approaches to strategic asset allocation outlined above are promising, and in due course the WYPF may wish to consider adopting them in whole or in part, for example as part of the next actuarial

<sup>98</sup> Impact Cubed, ‘Investment Solutions’, Impact Cubed, 2024, <https://www.impactcubed.com/investmentsolutions>.

<sup>99</sup> Andrew Ang and Geert Bekaert, ‘International Asset Allocation With Regime Shifts’, *The Review of Financial Studies* 15, no. 4 (2002).

<sup>100</sup> Impact Cubed, ‘Investment Solutions’. A global universe of equities mapped to one of 300+ ESG factors, alongside risk and return. Disclaimer: Impact Cubed Ltd. All rights reserved, 2025. [www.impactcubed.com/investmentsolutions](https://www.impactcubed.com/investmentsolutions)

valuation process in 2025. However, what each has in common to varying degrees is a focus on mitigating unsystematic risks, with less attention paid to system-level risks.

To address climate change and other major issues will require large numbers of companies to change their behaviour. Ultimately, this will require action from investors as well as government and regulators. This has been labelled 'Third Stage Corporate Governance'<sup>101</sup>.

The following section of the paper concentrates on how WYPF could better execute its engagement with UK fossil fuel firms for this purpose.

---

<sup>101</sup> Lukomnik and Hawley, *Moving Beyond Modern Portfolio Theory*.

## Question 2: What frameworks and escalation pathway should WYPF adopt for assessing when open-ended engagement should end and divestment begin at sector and/or company level?

### Section summary

A review of the academic and practitioner literatures on engagement indicates that specificity, scale and strength of relationships are the most important drivers of engagement success. For WYPF's engagement efforts to have a credible chance of success, they need to be aligned with other investors. This can be achieved by two main means: either through explicit collaboration, or through a 'chain reaction' model, where the actions of one investor encourage others to take similar actions.

We believe that divestment (eg from fossil fuel companies) is likely to be ineffective in isolation. But, combined with robust engagement, and in concert with other investors making aligned demands, divestment may be an appropriate final escalation step, especially where the business's activity poses specific risks to the WYPF. We note that such action in respect of fossil fuel companies has little precedent to date and as such its effectiveness is largely theoretical. However, in the WYPF's circumstances, we view this theoretical basis as providing sufficiently strong justification for taking action, particularly where all other options have been exhausted.

We have set out a possible engagement process, including an assessment framework and potential escalation pathway that integrates these findings. It seeks to maximise the WYPF's potential influence by establishing alignment with other investors, in line with WYPF's objectives. We suggest setting minimum and ongoing expectations for companies in the fossil fuel sector and agreeing a pathway to divestment where these are not met.

As requested by WYPF, we have assessed the WYPF's two most material holdings in the fossil fuel sector – BP and Shell – against an illustrative set of assessment criteria. We find that, based on the latest third-party assessments available at 25 November 2024, both BP and Shell fall short of the illustrative minimum expectations. Under the escalation pathway we have set out, this would put both companies on a potential pathway to divestment by WYPF if they did not take action to meet those minimum expectations following substantive engagement.

A range of approaches is possible and we would be pleased to discuss alternatives with you.

### Benefits and limitations of engagement

#### *What is 'engagement'?*

Engagement for an asset owner encompasses a range of activities or 'tools' intended to influence (ie to change the behaviour of) a target company<sup>102</sup>. These can be seen on an escalating scale, from relatively informal requests for information, to exercising shareholder votes against directors or filing shareholder resolutions requesting a specified action, up to the point of a decision to divest. The responsible investment charity ShareAction highlights the full set of these tools in its guidance on the topic (see Figure 2.1, below)<sup>103</sup>. Under this framework, each time a company fails to make sufficient progress, engagement escalates to using a stronger tool. Different engagement strategies might use different combinations of tools or deploy them at a different speed.

It should be noted that different stakeholders take different views of what 'engagement' means. For example, the Investment Association has identified 'Engage' as one step in a pathway, preceded by 'Monitoring', and followed by 'Collaboration and escalation' and then 'Exercising rights and responsibilities' (eg voting to express dissatisfaction at a company AGM)<sup>104</sup>. For the purpose of this paper, we adopt an approach closer to that of ShareAction, and consider engagement to be the entire process from identifying firms to engage with, monitoring them, engaging in dialogue, using shareholder votes to express a view, right up to the point of a threat to divest.

---

<sup>102</sup> Note that such activities could also include encouraging other stakeholders including governments and regulators to take action that would promote change. This approach is not the focus of this paper.

<sup>103</sup> ShareAction, 'Introducing a Standardised Framework for Escalating Engagement with Companies: RISE Guidance Paper #2', December 2023, <https://cdn2.assets-servd.host/shareaction-api/production/resources/reports/RISE-paper-2.pdf>.

<sup>104</sup> Investment Association, 'Good Stewardship 2021', February 2021, <https://www.theia.org/sites/default/files/2021-03/GOOD%20STEWARDSHIP.pdf>.

Figure 2.1. Escalation toolkit. *ShareAction*<sup>105</sup>

	Listed equity	Corporate debt		
Business as usual dialogue and monitoring	Regular calls and meetings with the company Set clear and time-bound expectations on material responsible investment issues			
		Reiterate environmental and social expectations during bond syndication Request contractual protections of environmental and social factors in documentation		
	<b>Underpinned by broader systems engagement</b> (policy advocacy, sponsor academic research, contribute to investor forums, publish thought pieces etc)			
Private persuasion (STEP ONE)	Unilateral private calls/meetings with the company (non-routine, more frequent, with board members) Unilateral letter(s) to senior management and/or the board			
Broader challenge (STEP TWO)	Collaborative calls/meetings with the senior management and/or the board Collaborative private letters to senior management and/or the board Challenge management on earnings calls, corporate events or roadshows Unilateral public statements/letters to senior management and/or the board Collaborative public statements/letters to senior management and/or the board Be cited in the media challenging a company's position			
From talk to action (STEP THREE) Voting: 3.1	Vote against standing items incl. director (re)election, audited accounts, management compensation Vote for shareholder resolutions on ESG topics, against management recommendation Ask questions or making statements of intent at annual general meetings		STRENGTH	
	Pre-disclose voting intention (private/public) (Co)Filing shareholder resolutions	Reject documentation amendment request Convene bondholder meeting (subject to holding threshold) and represent to company		
Intensified actions: 3.2				
	Seek board seats Call an extraordinary general meeting			
Exceptional measures: 3.3	Legal processes			
Capital allocation decisions (STEP FOUR)	Divest/exclude from labelled funds* Reduce exposure/underweight in all funds* Engage index provider to exclude company at next rebalancing			
		Do not participate in primary issuance (new debt/refinancings) for labelled funds* Do not participate in primary issuance (new debt/refinancings) for all funds*		
Levers of last resort (STEP FIVE)	Divest and exclude (communicated privately to company)* Divest and exclude (communicated publicly)*			↓

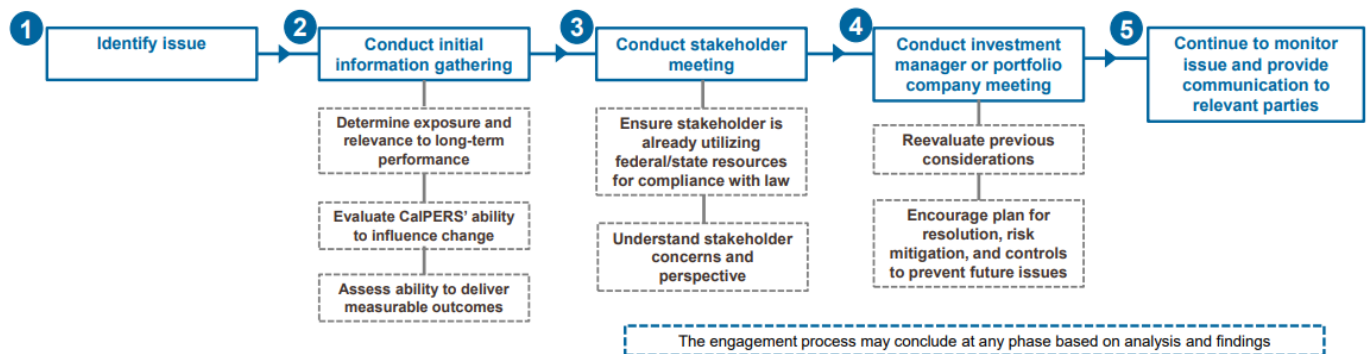
\*While the capital allocation levers are less dynamic for passive funds, levers still exist in the form of engaging with index providers, and providing clearly aligned products for clients and encouraging them to transfer to these.

<sup>105</sup> ShareAction, 'Introducing a Standardised Framework for Escalating Engagement with Companies: RISE Guidance Paper #2'.



### Case study 1: California Public Employees' Retirement System (CalPERS)

- CalPERS' approach is to engage with oil and gas companies, without divestment being part of its ultimate escalation plan.
- It has a clear process in place for its engagement, involving data gathering, stakeholder meetings and meetings with the relevant companies<sup>106</sup>.



- Divestment **does not** form part of this approach as it believes that this is likely to be unaligned with its fiduciary duty<sup>107</sup> and is an ineffective tool for driving forward change.
  - ‘...Fiduciary obligations generally preclude CalPERS from sacrificing investment performance for the purpose of achieving goals that do not directly relate to CalPERS’ operations or benefits. Divesting appears to almost invariably harm investment performance, such as by causing transaction costs and compromising investment strategies...’
  - ‘... There appears to be considerable evidence that Divesting is an ineffective strategy for achieving social or political goals, since the usual consequence is often a mere transfer of ownership of divested assets from one investor to another. Investors that divest lose their ability as shareowners to influence the company to act responsibly...’<sup>108</sup>
- Note that this specifically refers to divestment to help meet social or political goals, that are not clearly aligned with fiduciary duty. CalPERS takes a long-term approach to investing. It can disinvest from holdings that pose a long-term financial risk, as long as it is clear that this decision is investment-related.
  - ‘CalPERS will sell Targeted Company investments or refrain from making them to the extent investment in the Targeted Company is imprudent and inconsistent with fiduciary duties. CalPERS recognises that the prudence of an investment may depend on its purpose.’

### Effective engagement – evidence of what works

When trying to establish the evidence base for the effectiveness engagement activities or strategies, there are some important limitations to the available research. Firstly, there is a strong bias toward quantitative studies on voting data compared to private persuasion (eg private calls or meetings between the investor and target company)<sup>109</sup>. Second, much of the research undertaken has been carried out in the United States, where there are important differences to other regions, including the UK, in shareholders’ rights, which might impact the

<sup>106</sup> CalPERS, ‘CalPERS Sustainable Investments 2030 Strategy: November Board Meeting’, November 2023, [https://www.calpers.ca.gov/docs/board-agendas/202311/invest/item06d-01\\_a.pdf](https://www.calpers.ca.gov/docs/board-agendas/202311/invest/item06d-01_a.pdf).

<sup>107</sup> Note that the legal interpretation of fiduciary duty differs between the UK and US.

<sup>108</sup> CalPERS, ‘California Public Employees’ Retirement System Total Fund Investment Policy’, 17 June 2020, [https://www.calpers.ca.gov/docs/board-agendas/202109/invest/item06a-01\\_a.pdf](https://www.calpers.ca.gov/docs/board-agendas/202109/invest/item06a-01_a.pdf).

<sup>109</sup> Chuah et al., ‘Shareholder Activism Research’.

effectiveness of engagement efforts depending on where an engagement target is listed<sup>110</sup>. Further, reliable measurement of outcomes is difficult. For example, cases have been documented where an engagement has appeared successful - a company has agreed to undertake a particular action – only for the company to take different action to that agreed or no action at all<sup>111</sup>. Finally, outcomes can be path-dependent, which can make causation difficult to infer<sup>112</sup>. All of these points mean that any conclusions should be drawn subject to careful caveats.

### *Overall success factors for engagement*

Certain factors have been widely identified as being associated with successful engagements, across a wide range of different engagement modes. Central among these is a strong familiarity with the specifics of a target company's strategy and operations, which in turn leads to an ability to make tailored asks of the company that reflect its particular context<sup>113</sup>.

Relatedly, companies tend to respond best to requests that have lowest implementation costs<sup>114 115</sup>. Since environment-related asks are often among the most expensive, this is a key challenge to their adoption<sup>116</sup>. However, this further supports the need for engagers to have deep familiarity with the target company, in order to understand and anticipate the cost implications of any proposal, and for example, to identify effective mitigation where this might be problematic.

More controversial in the context of engagement on climate is a focus on governance-related issues. For example, addressing issues with a company's approach to climate by targeting changes in the company's climate governance. While organisations such as the UK's Investor Forum argue that a governance-led approach leads to more effective engagement<sup>117</sup> and this appears to be supported by broader academic research<sup>118</sup>, others argue that such an approach can be too remote and incrementalist. For example, that adding a board representative with climate expertise does not automatically lead to the types of change a climate-aware investor might seek directly. However, a governance-led approach is argued to address a common concern – that investor demands that are too prescriptive may reduce a company's ability to adjust to changing circumstances in a way that is counterproductive for both the company and the engager's objectives<sup>119</sup>. Ultimately, governance is likely to be a key target for any effective engager, but more activist engagers are likely to also push for strategic and operational changes.

### *The power of private persuasion*

Private persuasion is a mode of engagement which has been identified as being potentially influential<sup>120</sup> but there is limited evidence to support specific steps to take that make it more or less effective. Its apparent effectiveness

---

<sup>110</sup> Chuah et al.

<sup>111</sup> Chuah et al.

<sup>112</sup> Chuah et al.

<sup>113</sup> Investor Forum, 'Defining Stewardship and Engagement', April 2019, <https://www.investorforum.org.uk/wp-content/uploads/securepdfs/2019/04/Defining-Stewardship-Engagement-April-2019.pdf>.

<sup>114</sup> Julian F. Kölbel et al., 'Can Sustainable Investing Save the World? Reviewing the Mechanisms of Investor Impact', *Organization & Environment* 33, no. 4 (1 December 2020): 554–74, <https://doi.org/10.1177/1086026620919202>.

<sup>115</sup> Tamas Barko, Martijn Cremers, and Luc Renneboog, 'Shareholder Engagement on Environmental, Social, and Governance Performance', SSRN Scholarly Paper (Rochester, NY, 31 May 2017), <https://doi.org/10.2139/ssrn.2977219>.

<sup>116</sup> Elroy Dimson, Oğuzhan Karakaş, and Xi Li, 'Active Ownership', *The Review of Financial Studies* 28, no. 12 (1 December 2015): 3225–68, <https://doi.org/10.1093/rfs/hhv044>.

<sup>117</sup> Investor Forum, 'Shaping Tomorrow's Dialogues: Bridging the Gaps Between Companies & Investors', March 2024, <https://www.investorforum.org.uk/wp-content/uploads/securepdfs/2024/03/InvestorForumShapingTomorrowsDialogueFullReport2024.pdf>.

<sup>118</sup> Kölbel et al., 'Can Sustainable Investing Save the World?'

<sup>119</sup> BlackRock, '2022 Climate-Related Shareholder Proposals More Prescriptive than 2021' (BlackRock, 2022), <https://www.blackrock.com/corporate/literature/publication/commentary-bis-approach-shareholder-proposals.pdf>.

<sup>120</sup> Willard T. Carleton, James M. Nelson, and Michael S. Weisbach, 'The Influence of Institutions on Corporate Governance through Private Negotiations: Evidence from TIAA-CREF', *The Journal of Finance* 53, no. 4 (1998): 1335–62.

might also be versus a counterfactual of ‘no engagement’, given the age of the main studies<sup>121</sup>, yet its importance is still lauded by some asset managers<sup>122</sup>. However, the potential sensitivity in the content of engagement conversations, the differences in potential outcome based on the size of a holding, the reliance on engagers having kept detailed records, and the challenges associated with interpreting such data, mean that very few studies have sought to identify empirically what makes for effective private persuasion<sup>123</sup>.

What evidence there is in respect of private persuasion points to a need for the engager and the target company to find ‘common ground’. Forming a shared understanding is theorised (with some empirical support) to allow the maintenance of a dialogue between the engager and target company, which would not be available in more confrontational engagement approaches<sup>124</sup>. Organisations including the Investor Forum continue to argue that maintaining this type of dialogue allows the engager and target company to deliberate over potential solutions and reach a consensus, and that this applies to collaborative engagements as well as individual ones<sup>125</sup>. Nonetheless, private persuasion is a mode which depends heavily on the investor’s scale – very few are of sufficient scale that they could credibly claim to influence a company on their own<sup>126</sup>.

### Case study 2 – AP7<sup>127</sup>

- AP7 believes in taking an active ownership approach to investment in fossil fuel companies, seeking to use its influence to improve outcomes rather than simply divesting.
- It also holds a ‘climate transition portfolio’ run by Legal & General Investment Management (LGIM) which combines active asset management with active ownership, specifically aimed at accelerating the climate transition in portfolio companies. The aim is for this transition portfolio to comprise 10% of AP7’s investment portfolio by 2025. LGIM selects the companies for this portfolio based on them fitting into one of the following three categories:
  - Companies that are lagging behind in their transition.
  - Companies with a strong transition plan but that are underestimated by the market.
  - Companies with special potential to act as catalysts to accelerate transition
- AP7’s engagement approach is based on 4 key methods:
  - Taking action at general meetings
  - Direct dialogue
  - Legal processes
  - Public blacklisting

<sup>121</sup> Marco Becht et al., ‘Returns to Shareholder Activism: Evidence from a Clinical Study of the Hermes UK Focus Fund’, *The Review of Financial Studies* 22, no. 8 (1 August 2009): 3093–3129, <https://doi.org/10.1093/rfs/hhn054>.

<sup>122</sup> BlackRock, ‘Investment Stewardship Global Engagement Summary Report Q1 2024’, 31 March 2024, <https://www.blackrock.com/corporate/literature/press-release/investment-stewardship-global-quarterly-engagement-summary.pdf>.

<sup>123</sup> Irene Beccarini et al., ‘The Contingent Role of Conflict: Deliberative Interaction and Disagreement in Shareholder Engagement’, *Business Ethics Quarterly* 33, no. 1 (January 2023): 26–66, <https://doi.org/10.1017/beq.2021.46>.

<sup>124</sup> Fabrizio Ferraro and Daniel Beunza, ‘Creating Common Ground: A Communicative Action Model of Dialogue in Shareholder Engagement’, *Organization Science* 29, no. 6 (December 2018): 1187–1207, <https://doi.org/10.1287/orsc.2018.1226>; Beccarini et al., ‘The Contingent Role of Conflict’.

<sup>125</sup> Investor Forum, ‘Shaping Tomorrow’s Dialogues: Bridging the Gaps Between Companies & Investors’; BlackRock and Ceres, ‘21st Century Engagement: Investor Strategies for Incorporating ESG Considerations into Corporate Interactions’, 2015.

<sup>126</sup> Dimson, Karakaş, and Li, ‘Active Ownership’.

<sup>127</sup> AP7, ‘Climate Action Plan 2023: An Integrated Climate Action Plan for AP7’s Investments and Active Ownership’ (AP7, May 2023), [https://www.ap7.se/app/uploads/2023/05/ap7\\_climate-action-plan-2023-eng.pdf](https://www.ap7.se/app/uploads/2023/05/ap7_climate-action-plan-2023-eng.pdf).

- The final point about public blacklisting is important. Although AP7 prioritises active ownership and influencing outcomes, it will divest from companies it sees as violating the Paris Agreement or violating the UN Global Compact. To have the most influence, it ensures that this blacklisting is done publicly, to send a clear signal around its views on these companies.
- Shell Plc is on AP7’s public blacklist<sup>128</sup>. The reason for this being blacklisted is because of ‘involvement in the violation norms and human rights in oil extraction operations in Nigeria’. BP is not on the blacklist.

*Where common ground can’t be found: the role of confrontation in engagements*

The appropriate level of confrontation in engagement strategy – tactics such as ‘naming and shaming’ or the threat of divestment – is disputed. While it is less likely to be appropriate where private persuasion is possible and can achieve the desired ends, it may be unavoidable where common ground cannot be found. ShareAction notes that few asset managers currently use the full set of tools listed in its escalation framework, with many citing the potential for a detrimental impact on their relationships with companies<sup>129</sup>. These asset managers’ view that confrontation can be counterproductive is supported by research focused on management reactions to shareholder engagement, and consistent with the findings around what makes private persuasion effective<sup>130</sup>.

Non-confrontational approaches are, though, necessarily less ambitious in their demands. Companies and engagers find common ground, rather than the engager forcing an involuntary change in the target companies’ behaviour. ShareAction and other activist groups argue that this incrementalist approach will be insufficient to achieve the rapid change in corporate behaviour implied in maintaining global temperature increases below 1.5°C<sup>131</sup>.

Confrontation has yielded positive results in some high-profile cases, although there are important caveats about timescales. For example, Engine No. 1’s successful campaign to secure board seats at ExxonMobil in 2021 demonstrated how a confrontational approach could lead to significant governance changes in a major corporation<sup>132</sup>. However, over the longer term, it is not clear that this had the anticipated positive impacts on Exxon’s strategy in respect of climate: since the new directors were appointed, ExxonMobil has expanded both merger and acquisition activity and production<sup>133</sup>.

*Collaboration makes for more powerful engagement*

A consistent conclusion across the literature is that engagements made in concert by multiple investors tend to be more effective. These manifest in two main ways: collaborative engagements, where investors have consciously co-ordinated their engagement activity; and a more reactive form of engagement, where an initial move by one or more investors mobilises a wider set of investors to take aligned actions (we’ll refer to these as ‘chain reaction’ engagements)<sup>134</sup>. Importantly, while the mechanisms and implications of these engagement modes differ, both of

---

<sup>128</sup> AP7, ‘AP7 Blacklist as of June 3, 2024’ (AP7, 3 June 2024), <https://www.ap7.se/app/uploads/2024/06/ap7-blacklist-june-2024.pdf>.

<sup>129</sup> ShareAction, ‘Introducing a Standardised Framework for Escalating Engagement with Companies: RISE Guidance Paper #2’.

<sup>130</sup> First Sentier MUGF Sustainable Investment Institute, ‘Constructive Corporate Engagements from a Corporate Perspective’, September 2023, <https://www.firstsentier-mufg-sustainability.com/content/dam/sustainabilityinstitute/assets/research/corporate-engagement-report/sustainable-investment-institute-corporate-engagements-report.pdf>.

<sup>131</sup> ShareAction, ‘Undermining Transition, Risking Capital: RISE Guidance Paper #3 - the Need for a New Investor Blueprint for the Fossil Fuel Sector’.

<sup>132</sup> Ortenca Aliaj and Derek Brower, ‘Engine No 1, the Giant-Killing Hedge Fund, Has Big Plans’, *Financial Times*, 3 June 2021, sec. Climate Capital, <https://www.ft.com/content/ebfdf67d-cbce-40a5-bb29-d361377dea7a>.

<sup>133</sup> Micheal D. Goldhaber, ‘Reimagining Shareholder Advocacy on Environmental and Social Issues: The Promise and Pitfalls of “E&S Stewardship”’ (New York: NYU Stern Center for Business and Human Rights, July 2024), [https://bhr.stern.nyu.edu/wp-content/uploads/2024/07/NYU-CBHR-ESG-Stewardship\\_July-29-Updated-with-links.pdf](https://bhr.stern.nyu.edu/wp-content/uploads/2024/07/NYU-CBHR-ESG-Stewardship_July-29-Updated-with-links.pdf).

<sup>134</sup> Chuah et al., ‘Shareholder Activism Research’.

these types of engagements have the potential to address issues of scale – that any one investor in a company is unlikely to own a sufficient share to influence company behaviour in its own right<sup>135</sup>.

When well-conceived, collaborative engagements have multiple benefits for engagers. By effectively pooling their assets under management in support of engagement asks, collaborative engagers are better able to communicate their relevance and establish their credibility and legitimacy with target companies<sup>136,137</sup>. This typically leads to an improved level of access to senior individuals within companies and on their boards, which is particularly important in jurisdictions like the USA, where companies are not under the same pressure to engage with shareholders as, for example, UK-listed companies are via the UK Corporate Governance Code<sup>138</sup>. Engaging collaboratively also allows the collaboration members to pool resources, making them more resource efficient, and allowing the collaborators to engage a wider range of companies with higher impact than each individually.

As with individual engagements, collaborative engagements are most successful when they are tailored to the target company. A large or diversified coalition of investors has a further benefit that it is likely to have members with local expertise and may also be able to build on strong relationships between a particular member(s) and the target company<sup>139</sup>.

However, collaborations are constrained by the need to agree engagement objectives. While the size of a coalition notionally increases its potential influence over a target company, it also increases the number of actors who must agree on engagement aims. Indeed, some asset managers pointed to challenges of this sort as part of the reason they had decided to leave the CA100+ initiative<sup>140</sup>.

#### *'Chain reaction' engagement*

In their comprehensive review of the literature on shareholder activism, Chuah *et al.* identified an important mechanism for influencing companies which has, to date, received little research attention<sup>141</sup>. This is what we have called 'chain reaction' engagement, where one or a small group of actors takes an action which leads to further alike actions by other stakeholders. The simplest version of this is that Investor A decides to divest from a particular company and communicates its rationale for doing so widely. Other investors which agree with Investor A's rationale then decide to take the same action, multiplying its impact.

Chuah *et al.* note the potential for further system-wide impacts, such as the attention being drawn by Investor A's action leading to changes in consumer sentiment in relation to the target company. Ansar *et al.* also highlight that such impacts are likely to be much greater than the direct impact of a single investor's action<sup>142</sup>. This highlights the potential power of broad communication by engagers in relation to their engagement activity at the companies which they are seeking to influence. This also implies a potential role for forward guidance given by an investor attempting to engage a company – providing a clear indication of an intention to divest based on some robust criteria. A plausible case for this leading to wider divestment could lead a target company to act before any divestment occurs.

---

<sup>135</sup> Investor Forum, 'Collective Engagement: An Essential Stewardship Capability', November 2019, <https://www.investorforum.org.uk/wp-content/uploads/securepdfs/2019/11/The-case-for-collective-engagement-211119.pdf>.

<sup>136</sup> Jean-Pascal Gond and Valeria Piani, 'Enabling Institutional Investors' Collective Action: The Role of the Principles for Responsible Investment Initiative', *Business & Society* 52, no. 1 (1 March 2013): 64–104, <https://doi.org/10.1177/0007650312460012>.

<sup>137</sup> Elroy Dimson, Oğuzhan Karakaş, and Xi Li, 'Coordinated Engagements', SSRN Scholarly Paper (Rochester, NY, 27 April 2023), <https://doi.org/10.2139/ssrn.3209072>.

<sup>138</sup> 'UK Corporate Governance Code 2024' (Financial Reporting Council, January 2024).

<sup>139</sup> Rieneke Slager *et al.*, 'Tailor-to-Target: Configuring Collaborative Shareholder Engagements on Climate Change', *Management Science* 69, no. 12 (December 2023): 7693–7718, <https://doi.org/10.1287/mnsc.2023.4806>.

<sup>140</sup> Brooke Masters and Patrick Temple-West, 'JPMorgan and State Street Quit Climate Group as BlackRock Scales Back', *Financial Times*, 15 February 2024, sec. Fund management, <https://www.ft.com/content/3ce06a6f-f0e3-4f70-a078-82a6c265ddc2>.

<sup>141</sup> Chuah *et al.*, 'Shareholder Activism Research'.

<sup>142</sup> Ansar, Caldecott, and Tilbury, 'Stranded Assets and the Fossil Fuel Divestment Campaign: What Does Divestment Mean for the Valuation of Fossil Fuel Assets?'

Chain reaction engagement has important distinctions from collaborative engagement. The most important of these is that the engagement objectives are entirely the prerogative of Investor A, removing the need for negotiation with other engagers. However, if Investor A has an objective of influencing other investors to take the same action, it will need to be at least somewhat cognisant of what types of rationale are likely to garner a critical mass of support. Relatedly, unlike in a collaborative engagement, the target company has no way to tell what the size of the eventual coalition might be when undertaking engagement. This means that taking this approach in isolation would likely lead to less access to important figures at the company, and less responsiveness to engagement objectives at the outset, relative to collaborative engagement.

## Benefits and limitations of divestment

### *What is 'divestment'?*

Divestment refers to the process by which investors sell off assets, typically shares or bonds, in companies. This can be motivated by a range of strategic, financial, or ethical reasons. Investors might divest from a company to reallocate capital to more profitable ventures; to avoid losses from underperforming sectors or firms; or to avoid supporting industries that are considered harmful, such as tobacco, or the manufacture of controversial weapons.

Divestment is controversial. Some large investors specifically eschew divestment, believing that it is always better to have the potential to influence a company that comes through ownership<sup>143,144</sup>. That has also been the position of the WYPF to date<sup>145</sup>. However, increasingly, large investors are assessing whether there is a case for divestment from certain companies or sectors on several (overlapping) grounds<sup>146,147,148</sup>:

- 1) The company is deemed to have financial risk that is not compensated for by its expected returns;
- 2) To influence the company into changing its behaviour:
  - a. By selling its shares, the investor hopes to increase the target company's cost of capital and use this as a lever of influence;
  - b. Identifying the company as unworthy of investment sends a public message with impacts beyond the investor base (eg with potential customers).
- 3) The company is deemed to (have) violate(d) fundamental ethical norms.

### *Divestment as risk management*

While the first of these is a decision that may be made by any active manager as part of routine stock selection, and from that perspective is uncontroversial, a wider range of factors is starting to be considered within the scope of financial risks. In relation to climate change, this includes the risk that a company's assets will become inviable ('stranded') in the context of a decarbonised economy<sup>149</sup>. For example, coal must be largely phased out in net zero scenarios due to its outsized emissions profile and abundant lower-carbon alternatives<sup>150</sup>, so some investors have decided that coal producers are too risky to invest in. Like the WYPF, very large asset owners including Norges Bank in Norway and AP7 in Sweden exclude thermal coal companies on this basis<sup>151</sup>.

---

<sup>143</sup> Sibylle Braungardt, Jeroen Van Den Bergh, and Tessa Dunlop, 'Fossil Fuel Divestment and Climate Change: Reviewing Contested Arguments', *Energy Research & Social Science* 50 (April 2019): 191–200, <https://doi.org/10.1016/j.erss.2018.12.004>.

<sup>144</sup> CalPERS, 'CalPERS and Divestment'.

<sup>145</sup> WYPF, 'Stewardship Code 2024'.

<sup>146</sup> Julie Ayling and Neil Gunningham, 'Non-State Governance and Climate Policy: The Fossil Fuel Divestment Movement', *Climate Policy* 17, no. 2 (2015): 131–49, <https://doi.org/10.1080/14693062.2015.1094729>.

<sup>147</sup> Braungardt, Van Den Bergh, and Dunlop, 'Fossil Fuel Divestment and Climate Change'.

<sup>148</sup> Luis E. Hestres and Jill E. Hopke, 'Fossil Fuel Divestment: Theories of Change, Goals, and Strategies of a Growing Climate Movement', *Environmental Politics* 29, no. 3 (2019): 371–89, <https://doi.org/10.1080/09644016.2019.1632672>.

<sup>149</sup> Ansar, Caldecott, and Tilbury, 'Stranded Assets and the Fossil Fuel Divestment Campaign: What Does Divestment Mean for the Valuation of Fossil Fuel Assets?'

<sup>150</sup> IEA, 'World Energy Outlook 2023' (International Energy Agency, 2023).

<sup>151</sup> 'Ethical Exclusions', Norges Bank Investment Management, 10 May 2023, <https://www.nbim.no/en/responsible-investment/ethical-exclusions/>.

A 'universal owner' perspective instead takes the view that whether or not a particular investor owns fossil fuel companies, those companies' activities generate risks to the system as a whole which will negatively impact the companies in which the investor is invested<sup>152</sup>. To sell these companies' shares could be seen in this context as effectively *reducing* the investor's risk management capability, as it removes the levers of influence available to it as a shareholder, and potentially gives greater influence to less climate-aware investors<sup>153,154</sup>.

However, which view is 'correct' is a matter of investment horizon and scope, as well as investment beliefs and values. For an asset owner with a very diversified portfolio and a very long investment horizon, the universal owner perspective is likely to most accurately reflect their position<sup>155</sup>. However, such a perspective does not rule out the potential for using (threat of) divestment as a means of influencing companies.

#### *Divestment as a lever of influence*

The evidence on whether divestment works as a form of influence is mixed. While some studies indicate that divestment can lead to declines in stock prices and increase the cost of capital for targeted companies<sup>156</sup>, the preponderance of research suggests these financial impacts are often short-lived and insufficient to drive substantial changes in corporate behaviour<sup>157</sup>. Some argue that divested assets are simply acquired by neutral – or less responsible – investors, mitigating the intended pressure<sup>158</sup>. There does appear to be demand for fossil fuel assets among some investors<sup>159</sup>. The lack of consistent, long-term outcomes and the variability across different sectors and regions highlight the complexity of divestment as an influence strategy.

It is important to distinguish between direct and indirect impacts of using divestment to influence firms. The direct impacts are those which arise directly from the divestment action, whereas the indirect effects are spillovers which spur action from other stakeholders (as in 'chain reaction' engagement above). Given the limited size of any one investor's allocation to fossil fuel companies and the volatility inherent in daily stock prices, it is highly unlikely that one investor's divestment would be sufficient to move the share price (albeit this is more likely for coal companies which are smaller and more thinly traded)<sup>160</sup>. Ultimately, for divestment to be most effective may require integration with other tactics, such as shareholder activism and regulatory changes<sup>161</sup>. Therefore, most of the impact of a divestment decision (if any) is expected to come from its impact on other stakeholders<sup>162</sup>.

Certain factors appear to lead to divestment being more effective as a lever of influence. In particular, as with engagement more broadly, mass divestments do appear to be effective in reducing asset prices, although it is not clear that this subsequently translates to company action<sup>163</sup>. The efficacy of divestment often hinges on the scale and visibility of the divestment campaign, the level of media attention, and the involvement of influential

---

<sup>152</sup> Tom Gosling, 'Universal Owners and Climate Change', SSRN Scholarly Paper (Rochester, NY, 2 February 2024), <https://doi.org/10.2139/ssrn.4713536>.

<sup>153</sup> Ellen Quigley, Emily Bugden, and Anthony Odgers, 'Divestment: Advantages and Disadvantages for the University of Cambridge', SSRN Scholarly Paper (Rochester, NY, 1 October 2020), <https://papers.ssrn.com/abstract=3849513>.

<sup>154</sup> Gosling, 'Universal Owners and Climate Change'.

<sup>155</sup> Divya Mankikar, 'Universal Ownership: Why Environmental Externalities Matter to Institutional Investors' (PRI Association and UNEP Finance Initiative, 2010), <http://www.ssrn.com/abstract=2222753>.

<sup>156</sup> Truzaar Dordi and Olaf Weber, 'The Impact of Divestment Announcements on the Share Price of Fossil Fuel Stocks', *Sustainability* 11, no. 11 (2019): 3122, <https://doi.org/10.3390/su11113122>.

<sup>157</sup> Emma Sjöström, 'Active Ownership on Environmental and Social Issues: What Works?' (Mistra Center for Sustainable Markets; Stockholm School of Economics, 2020).

<sup>158</sup> Ansar, Caldecott, and Tilbury, 'Stranded Assets and the Fossil Fuel Divestment Campaign: What Does Divestment Mean for the Valuation of Fossil Fuel Assets?'

<sup>159</sup> FT Lex, 'Private Equity Roll-Ups Bet Energy Transition Will Go Slow', *Financial Times*, 22 June 2024, sec. Lex, <https://www.ft.com/content/a67d5fd1-cc9d-4187-9b2a-3851b7cf8944>.

<sup>160</sup> Ansar, Caldecott, and Tilbury, 'Stranded Assets and the Fossil Fuel Divestment Campaign: What Does Divestment Mean for the Valuation of Fossil Fuel Assets?'

<sup>161</sup> Chuah et al., 'Shareholder Activism Research'.

<sup>162</sup> Ansar, Caldecott, and Tilbury, 'Stranded Assets and the Fossil Fuel Divestment Campaign: What Does Divestment Mean for the Valuation of Fossil Fuel Assets?'; Chuah et al., 'Shareholder Activism Research'.

<sup>163</sup> Kölbel et al., 'Can Sustainable Investing Save the World?'; Dordi and Weber, 'The Impact of Divestment Announcements on the Share Price of Fossil Fuel Stocks'.

stakeholders<sup>164,165</sup>. Additionally, divestment is more likely to impact companies that rely heavily on their public image and reputation<sup>166</sup>. As with the evidence on engagement, this supports the need for consensus- and coalition-building among like-minded investors.

Empirical work on divestment suffers from a lack of real-world examples at scale. Most divestment campaigns are relatively small and fragmented, making it difficult to assess their broader impact<sup>167</sup>. Furthermore, the available data often lacks granularity, which obscures the nuanced effects of divestment on different sectors and companies<sup>168</sup>. Without large-scale, well-documented case studies, the empirical analysis remains speculative, relying on theoretical models and limited instances that may not be representative. However, some argue for a precautionary principle; and suggest that demanding evidence of this sort before acting is self-defeating, since the action itself would generate evidence<sup>169</sup>.

One area very poorly covered by research to date is the potential for re-investment following divestment. Establishing clear, measurable criteria for re-entry could provide a constructive framework for companies to improve their practices and regain investor confidence. Re-entry criteria could include demonstrable changes in governance, adherence to ethical standards, or significant improvements in environmental and social performance. By maintaining the possibility of re-investment, investors signal their commitment to positive change rather than merely penalising past behaviour. This dynamic may foster a more cooperative relationship, which has been found to contribute to improved corporate behaviour<sup>170</sup>, and may also reduce the potential for missed returns.

### Case study 3 – Church of England National Investing Bodies

The Church of England has three National Investing Bodies (NIBs), which together represent assets of around £16.2bn in assets<sup>171</sup>: Church Commissioners for England; Church of England Pensions Board and the CBF Church of England Funds. These organisations, and especially the Pensions Board, have played important roles in setting up some of the largest climate investing initiatives, including Climate Action 100+, the Transition Pathway Initiative (TPI), and the Net Zero Standard on Oil and Gas.

The Church of England Pensions Board is responsible for managing the Church's pension scheme investments, and therefore is most closely analogous to the WYPF.

In July 2018, the Church of England's General Synod – its legislative body – passed a motion which included the following request to the NIBs:

*“That this Synod:...*

*... e) urge the NIBs to engage urgently and robustly with companies rated poorly by TPI and, beginning in 2020, to start to disinvest from the ones that are not taking seriously their responsibilities to assist with the transition to a low carbon economy;*

<sup>164</sup> Ayling and Gunningham, 'Non-State Governance and Climate Policy: The Fossil Fuel Divestment Movement'.

<sup>165</sup> Sjöström, 'Active Ownership on Environmental and Social Issues: What Works?'

<sup>166</sup> Dimson, Karakaş, and Li, 'Active Ownership'.

<sup>167</sup> Chuah et al., 'Shareholder Activism Research'.

<sup>168</sup> Sjöström, 'Active Ownership on Environmental and Social Issues: What Works?'

<sup>169</sup> Hugues Chenet et al., 'Developing a Precautionary Approach to Financial Policy – from Climate to Biodiversity' (International Network for Sustainable Financial Policy Insights, Research, and Exchange; SOAS Centre for Sustainable Finance; Grantham Research Institute on Climate Change and the Environment, April 2022), <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/04/INSPIRE-Sustainable-Central-Banking-Toolbox-Policy-Briefing-Paper-2.pdf>.

<sup>170</sup> Sjöström, 'Active Ownership on Environmental and Social Issues: What Works?'

<sup>171</sup> Church of England National Investing Bodies, 'Approach to Climate Change: A Report for the General Synod, June 2023', June 2023, 8, <https://www.churchofengland.org/sites/default/files/2023-06/gs-2302-nibs-approach-to-climate-change-2023-synod-report-reduced-file.pdf>.



*f) urge the NIBs to ensure that by 2023 they have disinvested from fossil fuel companies that they have assessed, drawing on TPI data, as not prepared to align with the goal of the Paris Agreement to restrict the global average temperature rise to well below 2°C...*<sup>172</sup>

In response to the General Synod motion, the NIBs established a set of hurdles with increasingly ambitious climate change performance criteria for companies, which each NIB used independently to guide exclusion or divestment decisions. These hurdles were grounded in objective, science-based approaches - using the TPI's Management Quality and Carbon Performance criteria to assess whether companies implemented robust governance practices and decarbonisation strategies to support their efforts to reduce emissions and align with the Paris Agreement. The hurdles were systematically increased year on year to maintain continuous pressure on companies.

However, the NIBs have been clear that they see engagement as critical and set out an enhanced programme of engagement alongside the timelines for potential divestment. They each collaborated closely with Climate Action 100+, including acting as a co-lead for a key engagements<sup>173</sup>.

The hurdle set for coal mining, oil and gas companies was that they should be aligned with the Paris Agreement Goals in the short, medium and long term, based on TPI's Carbon Performance criteria<sup>174</sup>. No oil and gas companies met this hurdle when assessed in 2023 (see table below). Though BP and Shell were both aligned in the long-term with the 2050 goal, and Shell was aligned with the medium time horizon to 2035, neither firm were aligned with short-term alignment (to 2025)<sup>175</sup>.

Company	2025 alignment	2035 alignment	2050 alignment
BP	Not aligned	National pledges	1.5°C
Ecopetrol	Not aligned	National pledges	National pledges
Eni	National pledges	National pledges	1.5°C
Equinor	Not aligned	Not aligned	Not aligned
ExxonMobil	Not aligned	Not aligned	Not aligned
Occidental Petroleum	Not aligned	Below 2°C	1.5°C
Petroleos Mexicanos	Not aligned	Not aligned	Not aligned
Repsol	Not aligned	Not aligned	National pledges
Royal Dutch Shell	Not aligned	Below 2°C	1.5°C
Sasol	Not aligned	Not aligned	1.5°C
TotalEnergies	Not aligned	National pledges	1.5°C

*Assessment by TPI as of April 2023*<sup>176</sup>.

As a result of these companies failing to meet the hurdle set, the Church of England Pensions Board publicly announced that it would divest its remaining oil and gas company holdings from its portfolio by the end of 2023, with the following rationale<sup>177</sup>:

<sup>172</sup> Church of England National Investing Bodies, 11.

<sup>173</sup> Church of England National Investing Bodies, 'Approach to Climate Change: A Report for the General Synod, June 2023'.

<sup>174</sup> Church of England National Investing Bodies.

<sup>175</sup> Church of England National Investing Bodies.

<sup>176</sup> Church of England National Investing Bodies, 15.

<sup>177</sup> Church of England Pensions Board, 'Church of England Pensions Board Disinvests from Shell and Remaining Oil and Gas Holdings', The Church of England, 22 June 2023, <https://www.churchofengland.org/media/press-releases/church-england-pensions-board-disinvests-shell-and-remaining-oil-and-gas>.

*“There is a significant misalignment between the long term interests of our pension fund and continued investment in companies seeking short term profit maximisation at the expense of the ambition needed to achieve the goals of the Paris Agreement. Recent reversals of previous commitments, most notably by BP and Shell, has undermined confidence in the sector’s ability to transition”<sup>178</sup>*

## WYPF’s approach to engagement with fossil fuel companies

We understand that, so far, WYPF has taken the view that the benefits of owning and engaging with fossil fuel companies outweigh any potential benefits from divesting. The WYPF’s 2024 stewardship report states, “Divestment is therefore both a missed opportunity to enact real change and an abdication of responsibility”<sup>179</sup>. Therefore, your engagement efforts are critical to your efforts to managing climate-related risks to the WYPF.

WYPF’s work on engagement with fossil fuel companies to date, like the broader approach to engagement discussed in the Introduction, rests on three strands: direct engagement by the in-house team, engagement through collaborative initiatives such as Climate Action 100+, and engagement through PIRC and LAPFF. We understand that, while substantive action has been taken by WYPF through each of these strands, for example, voting against the election of company directors and against companies’ climate reports, engagements have been open-ended, without formal milestones for companies to meet.

WYPF’s current approach to escalation, as described in its 2024 Stewardship Report, is as follows<sup>180</sup>:

*“Our approach to escalation is defined by our Principle #5: Positive Engagement for Change.*

*The nature of our escalation depends on the specific set of circumstances but could include one or a variety of the following options:*

- *If management proves unresponsive, we may decide to approach the board chair or NEDs.*
- *We may choose to vote against or abstain from supporting management proposals or vote against the re-election of specific directors. We believe in holding individual directors to account on areas for which they have lead responsibility.*
- *Ordinarily most engagements are conducted privately but on occasion it may make sense to release a press statement to publicly air an issue we believe to be in the public interest.*
- *We can join collaborative actions with other shareholders (Principle 10).*
- *We can submit or support shareholder resolutions at company meetings.*
- *We may want to undertake legal action including participation in Class Actions.*
- *We can consider divesting our shares. We view this very much as a last resort as we consider our power to influence companies is derived from our economic interest: if we sell our shares, we abdicate our responsibility.*

*We recognise that Stewardship and Engagement are most advanced in European and UK equity markets and less well developed in other geographies and asset classes. A recognition of this situation influences where and under what circumstances we choose to escalate and with which partners. To date many of the escalations undertaken by WYPF have been in the UK equity space to which WYPF is heavily weighted. We believe that considerations of materiality are important when considering our engagements and escalations (Principle 7 and 9). Nevertheless, we would look to engage in different geographies and asset classes if we believed the risk to be material.*

*Most commonly we have escalated through voting against specific resolutions or directors at AGMs, see Principle 12.”*

<sup>178</sup> Church of England Pensions Board.

<sup>179</sup> WYPF, ‘Stewardship Code 2024’, 17.

<sup>180</sup> WYPF, 20.

## Agreeing a sensible way forward for WYPF

In the light of the evidence summarised in the sections above, we believe that an appropriate approach for WYPF is to adopt a more formal escalation pathway with specific milestones – to help you to engage with companies effectively – with well-defined criteria for divestment in some circumstances.

In the subsections that follow, we set out:

- a recommended three-step engagement process (identify, analyse, influence);
- a suggested framework for identifying companies for engagement in step one, with a possible output of that process;
- one possible framework for analysing companies in step two, with illustrative output from applying that framework; and
- a suggested escalation pathway for use during the third step of the process.

We have developed these items based on our discussions with you about the WYPF's objectives, your current engagement approach, and the possibilities and practicalities for enhancing your approach.

We start by suggesting some key principles to underpin how you could analyse companies within step two of your engagement process.

### 1. Focused on assessing a company's actions, not just its disclosure.

Naturally, the main source of information about a company's strategy and activities is the company itself. Companies' failure to disclose relevant information in sufficient detail therefore can leave investors unable to sufficiently assess their action. However, disclosure for its own sake is too often the focus of investor engagements. For example, an investor might ask to see more detail on planned and actual capex in company's accounts, and then only once this has been published will they ask for changes in strategy.

We propose that this process is condensed, so that investors identify important activity metrics and their desired trajectory up front, and then seek to escalate engagement where the company has failed to disclose on the same basis as if they had disclosed an indicator moving in an undesired direction or in a desired direction but at insufficient pace.

### 2. Evidence-based

A large body of evidence exists to indicate the progress which companies in each sector must make in reducing their greenhouse gas emissions in order to keep global average temperatures to a safe level. The assessment framework should incorporate this evidence.

### 3. Based on publicly available information

Collaboration is an important way for investors to increase their influence with the companies they invest in. Effective collaborative engagement requires arriving at an agreed set of 'asks'. These might be agreed through active engagement with other stakeholders, but sources in the public domain also equip the largest possible group of actors to make an assessment of a company's position. Structuring that assessment around a common set of facts is more likely to lead to a common set of demands.

### 4. Designed for, used or usable by other investors

While the fact of being publicly available makes relevant frameworks and datasets more likely to be used to inform other actors, a very large amount of such information is produced. Therefore, it makes sense to focus on information which investors already use, particularly where it has been specifically designed for use by investors.

### 5. Responsive to changes in strategy over relevant timescale

Companies undertake strategic changes, including M&A activity and disposals, through the course of a whole year, and not just in the run up to the publication of their financial statements. This means that an assessment made at one point in time risks quickly becoming outdated. Any framework should therefore be capable of adapting to new information, for example by allowing an investor to perform its own analysis (equivalent to any public assessment source) of the new company position mid-year.

Given the engagement cycle for a company will typically run in line with its financial year, we expect that it will be important for underlying data to be updated at least annually to make an adequate assessment.

**6. Applicable to a broad range of relevant firms**

Even within sectors and industries, companies operate very different strategies. This can make it challenging to balance the need for robust assessment and specific engagement asks against the need to engage with a broad set of firms. As far as possible, the assessment framework should generate meaningful output when applied broadly, but we acknowledge that companies in high-emitting, hard-to-abate sectors like oil and gas will likely face specific considerations that require a more detailed level of assessment.

Oil and gas sector companies in particular have a range of different strategic options in pursuing a low carbon transition. An assessment framework therefore needs to be able to accommodate such differences while also providing meaningful output to shape engagement and escalation with specific firms.

**7. Interoperable with the escalation pathway**

The assessment framework should be useful for framing the influence step of the engagement process: to identify issues on which to engage and to escalate, and wherever possible to provide specific details of the actions a company is expected to take.

**Setting a clear escalation process**

Our review of the literature and practice among other large asset owners has confirmed that successful engagement generally follows the three-step engagement process we have described (identify, analyse, influence).

We note that, in line with best practice for investors, WYPF also has a programme of ongoing dialogue with the companies it invests in, which it uses, for example, to better understand investee companies' strategies and obtain information to inform investment decisions. However, this is distinct from, and will generally happen prior to, the 'engagement' process for influencing change at companies or 'escalation' which we focus on here.

**Table 2.1: Recommended escalation process**

	<b>Step</b>	<b>Purpose</b>	<b>Proposed implementation by WYPF</b>
<b>1.</b>	Identify	Identifying appropriate target firms for engagement	We propose that you use a consistent framework across all stocks, to help you identify appropriate targets for engagement.  The identification step would also be used to classify engagement targets into different tiers, to help ensure you focus your resources most effectively in the analyse and influence steps.
<b>2.</b>	Analyse	Undertaking more detailed analysis of those target firms in order to shape specific engagement asks	The level of analysis you carry out will depend on the company, with most effort focussed on the highest risk firms.
<b>3.</b>	Influence	Influencing the target firms, using an escalating set of engagement tools	The approach you use to influence companies will depend on the company, with most effort focussed on the highest risk firms.

The WYPF already undertakes engagement broadly in line with these steps. Therefore, our proposals reflect an elaboration on the content of each step, rather than suggesting the adoption of a brand-new process. In particular, they reflect the special status that should be accorded to firms from which the WYPF might disinvest – more detailed analysis, more detailed asks, and closer tracking of progress. We note that other approaches are possible and we would be pleased to discuss alternatives with you.

Below we describe each of the steps in more detail.

## Step one: Identifying appropriate targets for engagement

Focused, informed engagement with fewer firms is likely to lead to more impact. An initial 'Identify' step should seek to understand where engagement effort is likely to have highest impact, across all the companies the WYPF holds in its portfolio.

### *WYPF's current process*

The WYPF already prioritises companies for engagement based on its exposure, with CA100+ companies where WYPF's holding is worth £25mn or more and all companies where WYPF's holding is worth £75mn or more automatically being prioritised for engagement.

Further, the WYPF already has in place a robust set of criteria for classifying companies according to their assessed alignment toward net zero, based on the Paris Aligned Investment Initiative's Net Zero Investment Framework (NZIF). This puts companies into one of five categories: "Achieving net zero", "Aligned to a net zero pathway", "Aligning to a net zero pathway", "Committed to aligning" and "Not aligning".

The WYPF's alignment categorisation is based on data from CA100+, Transition Pathway Initiative (TPI)<sup>181</sup>, Science-Based Targets Initiative (SBTi)<sup>182</sup>, Trucost and Carbon Tracker (see Table 2.2 below). This meets the principles that we have set out above and results in a common focus with other investors. Most importantly, these data are aligned to key engagement initiatives in which WYPF participates.

---

<sup>181</sup> The [Transition Pathway Initiative](#) is an independent organisation which works in conjunction with several other large climate initiatives, including CA100+, to help investors assess companies' approaches to climate and align portfolios to net zero.

<sup>182</sup> The [Science Based Targets Initiative](#) is an organisation that develops standards, tools and guidance for companies to set greenhouse gas (GHG) emissions reductions targets in line with the Paris Agreement goals.

**Table 2.2 WYPF Net Zero Investment Framework (NZIF) Assessment Framework – use of TPI and CA100+ data<sup>183</sup>**

Criterion	Alignment category				Assessment Criteria	
	Committed	Aligning	Aligned	Net Zero	CA100+	TPI (v5.0) <sup>184</sup>
<b>1. Ambition: A long term 2050 goal consistent with achieving global scenario net zero</b>	X	X	X	X	1	Q3
<b>2. Targets: Emission reduction targets for short &amp; medium term <sup>(1)(3)</sup></b>		X	X	X	2,3 & 4	Q4, Q7 & Q13
<b>3. Emission Performance: emissions <sup>(1)</sup> intensity relative to targets <sup>(3)</sup></b>		X	X	X	11	Carbon Performance
<b>4. Disclosure: Disclosure of emissions <sup>(1)(3)</sup></b>		X	X	X	10,11	Q5, Q8, Q9 & Q12
<b>5. Decarbonisation Strategy: quantified plan to deliver targets</b>			X	X	5	Q18, Q19, Q20
<b>6. Capital Allocation: Verification CAPEX is consistent with NZ pledge</b>			X	X	6	Q21 & Q22
<b>Emissions at or near Net Zero</b>				X		Carbon Performance
<sup>(1)</sup> <b>Scope 1, 2 and material scope 3 emissions</b>						
<sup>(2)</sup> <b>A company which is already achieving the emissions intensity required by the sector &amp; regional pathway for 2050</b>						
<sup>(3)</sup> <b>High Impact Sectors Only</b>						

### Enhancing your approach

We believe that WYPF’s alignment categorisation provides a useful basis for prioritising firms for more intensive engagement. For most of your holdings, this will provide enough information to enable participation in collaborative engagements, ie by providing additional support for the aims.

As with all organisations, WYPF has resource constraints which limit the maximum number of companies with which it can carry out detailed engagement. This means the team will only be able to engage with a certain number of companies, so some assessment of materiality is necessary.

There are a large number of different ways in which materiality might be assessed, with varying levels of relevance and complexity. For example, one might take a company’s overall emissions as indicative of its materiality, on the basis that this represents its risk to the economy overall. Alternatively, one might take the proportion of a company’s emissions to which the WYPF is exposed (ie total emissions multiplied by the percentage of the company which WYPF owns) – what WYPF calls ‘Apportioned Emissions’. We believe that continuing to assess a

<sup>183</sup> Details of WYPF’s NZIF were provided to LCP by WYPF in the course of drafting this report.

<sup>184</sup> TPI, ‘TPI’s Methodology Report: Management Quality and Carbon Performance v5.0’ (Transition Pathway Initiative, November 2023).

company's materiality based on the WYPF's total exposure to it is sensible, as the size of a holding will also impact the extent to which a company is likely to respond to engagement. This approach therefore focuses efforts on companies more likely to be influenced.

**Table 2.3 WYPF top 10 holdings by Apportioned Emissions as at 31 March 2024<sup>185</sup>**

Company	Value of WYPF Holding (£ mn)	GICS Sector	GICS Subindustry Group	Apportioned Scope 1 & 2 (tCO <sub>2</sub> e)
Shell plc	379.3	Energy	Oil and Gas	94,765
BP p.l.c.	169.2	Energy	Oil and Gas	43,620
Rio Tinto Group	110.4	Materials	Metals & Mining	34,692
AGL Energy	3.6	Utilities	Multi-Utilities	28,893
Glencore plc	67.9	Materials	Metals & Mining	25,353
Anglo American	49.8	Materials	Metals & Mining	19,600
RWE	6.5	Utilities	Electricity Generation	15,894
Nippon Steel	4.9	Materials	Steel	14,304
Linde plc	66.8	Materials	Industrial Gases	12,961
IAG	13.7	Industrials	Airlines	12,906
ArcelorMittal S.A.	2.7	Materials	Steel	12,033

We also support your use of a lower threshold for CA100+ companies which are, by definition, high emitters and so have greater potential for real-world impact. The absolute level of thresholds will likely change over time, depending on the total number of companies which the team has resource to engage.

We propose that the WYPF refines its identification criteria by also using its alignment assessment to identify priority companies for engagement, with engagement being targeted at firms which have committed to aligning in preference to those which are aligning, and so on.

Currently the WYPF holds shares in nearly 1,200 companies. We illustrate below one possible approach to applying the "Identify" step, based on the latest available information (CA100+ Net Zero Benchmark October

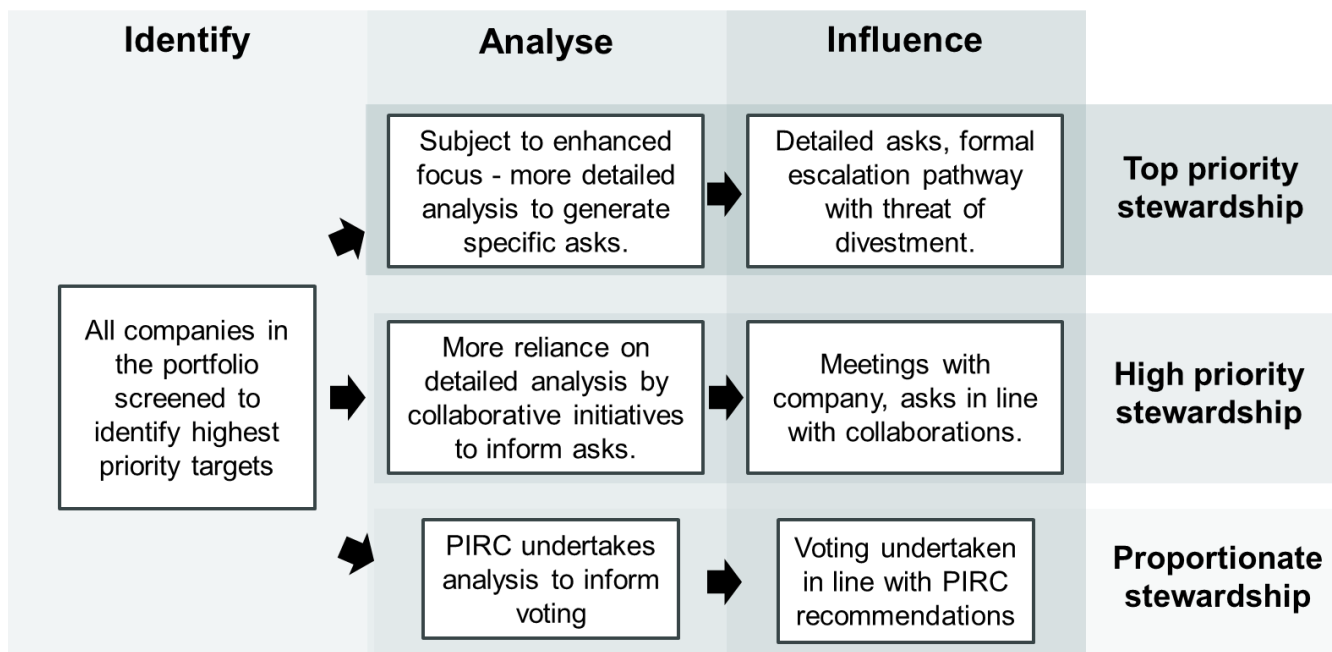
<sup>185</sup> Details provided to LCP by WYPF during the drafting of this report.

2024<sup>186</sup>, Net Zero Oil and Gas Standard October 2023<sup>187</sup>, TPI Beta v5 as at 1 November 2023<sup>188</sup>) and the portfolio holdings data as at 31 March 2024 supplied to us by WYPF:

- Companies in which the WYPF invests more than £75mn (or more than £25m where they are covered by CA100+) are identified for “High priority engagement”. Each of these companies would be subject to active engagement by representatives of WYPF, reflecting the fact that their behaviour must change in order to address climate change. This currently represents around 40 stocks.
- For those c.40 stocks, priority for engagement is determined by the status under the WYPF NZIF, such that less aligned companies are higher priority (eg ‘Committed’ companies are a higher priority than ‘Aligned’).
- However, a subset of those c.40 stocks undertake activities which, if unreformed, create additional risks to the WYPF – namely UK fossil fuel companies in which WYPF has a material holding (defined here as >£25mn). This is based both on the nature of the activity and the size of the WYPF holding. Firms in this group would be subject to the highest level of scrutiny as well as the potential threat of divestment. Two stocks (BP and Shell) would currently be identified as “Top priority stewardship” under this approach.
- The rest of the c.40 stocks would be identified as “High priority stewardship” – these are companies whose behaviour needs to change, but which may pose less acute risks. They would still be subject to active engagement by representatives of WYPF, with their priority for engagement again being determined by their status under the WYPF NZIF.
- The remaining 1,000+ stocks would be identified as “Proportionate stewardship”. These firms would still be subject to voting sanctions based on recommendations from PIRC, where their activity does not meet expectations. The WYPF invests less than £75mn in each of these companies (or less than £25m where they are covered by CA100+).

We propose that you apply the “analyse” and “influence” steps in a tailored way, depending on the classification, as illustrated below.

**Figure 2.2.** Proposed engagement process



<sup>186</sup> Climate Action 100+, ‘Net Zero Company Benchmark’, June 2024, <https://www.climateaction100.org/net-zero-company-benchmark/>.

<sup>187</sup> Transition Pathway Initiative, ‘Net Zero Standard of Oil & Gas’ (Climate Action 100+; IIGCC, 31 October 2023).

<sup>188</sup> TPI, ‘TPI’s Methodology Report: Management Quality and Carbon Performance v5.0’.



In the sections below, we describe how you could analyse and influence each of these categories.

## Step two: Analysing “top priority stewardship” companies

We believe that major fossil fuel companies require more detailed assessment than companies in other sectors. This is because many have the potential to play an important role in a low carbon economy, for example by transporting hydrogen or providing electric vehicle charging facilities. Understanding how much progress a company is making in transitioning toward these types of activities therefore requires greater scrutiny. But at the same time, their products make a significant contribution to global warming now.

In our view, when analysing Oil & Gas companies’ transition commitments and progress, investors should focus on activities which most closely relate to real-world action to address climate change.

LCP has a dedicated team of approximately 120 specialists analysing and advising on the energy transition. We have drawn upon their extensive experience of the energy sector to suggest three core areas of activity to focus on:

- **Capital allocation** – Where a company decides to invest is a key indicator of whether the company is taking climate change seriously, but poor disclosure can hamper monitoring.
- **Oversight and executive remuneration** – Companies can set targets, but without senior oversight and strong incentives for managers to meet the targets, they are less likely to be met. Monitoring evidence of Board-level oversight and the extent to which executive pay is linked to climate outcomes provides a transparent way to keep track of companies’ commitment to climate goals.
- **Alignment** – Companies’ forward-looking guidance about how they expect their business to evolve gives an important signal of the extent of their climate commitment, although it can be subject to change. Weakening of climate commitments is a particularly important negative signal.

When setting your assessment framework for top priority Oil & Gas companies in step two, we suggest you focus on these aspects of fossil fuel businesses.

We describe below one possible assessment framework which illustrates how this could be implemented in practice.

In Appendix 1, we set out a number of possible assessment criteria for top priority Oil & Gas companies. These relate to the three suggested focus areas outlined above and are taken from three publicly available assessment frameworks, the first two of which are already used in WYPF’s NZIF:

- CA100+;
- TPI Management Quality (v5.0); and
- Net Zero Standard for Oil and Gas<sup>189</sup>.

The same criteria could be used in step three of the engagement process to identify areas for improvement, ie important criteria on which the firm does not score well. These areas could be used as the basis for engagement asks, and to determine whether the firms are making sufficient progress to avoid divestment.

We suggest that the engagement assessment framework consists of two levels: a set of minimum expectations; and a set of ongoing expectations. Where companies fall short of the WYPF’s **minimum expectations**, this could indicate that there are aspects of their strategy which would require changes to be made quickly for their business to be on a credible pathway to net zero alignment. For this reason, they would be placed on an accelerated pathway toward potential divestment. The pathway should allow time for sufficient engagement in which the WYPF (and other investors) would be able to request the specific changes and make clear the importance of the change, as well as giving the company time to consider those requests, change its strategy or activities, produce

---

<sup>189</sup> Transition Pathway Initiative, ‘Net Zero Standard of Oil & Gas’.

reporting which informs investors of the change, and for that reporting to be reflected in the analyses carried out by organisations such as TPI and CA100+.

The **ongoing expectations** could reflect activities which WYPF believe Oil & Gas companies should be undertaking in order to effectively execute a transition to a role in a low carbon economy. Over time, companies which are making attempts to transition should meet an increasing number of these expectations, and engagement efforts should be focused on encouraging companies to do so. Therefore, while these expectations inform engagement, they would not initially be tied to an explicit threat of divestment.

If it chooses to adopt this type of engagement assessment framework, over time WYPF may wish to make amendments to the specific criteria used and the classification of minimum or ongoing expectations. Of course, events such as war or the introduction of new carbon pricing regimes may materially change the position of Oil & Gas firms in either direction. The output of any such framework should therefore be treated as a proposed outcome and taken in the context of the time, not followed blindly.

Over time, we also expect that the minimum expectations will increase. For example, the possible minimum expectations set out in Appendix 1 do not currently include evidence of companies' long-term planning for capital expenditures related to their decarbonisation strategy. However, such planning is critical for businesses to make such a significant transition. Therefore, this could form part of a set of minimum expectations in the future.

### Step three: Influencing top priority companies

Top priority companies would be categorised as such because they represent a particular risk to WYPF as well as contributing to a system-level risk. For this reason, we propose you retain the option to disinvest from firms that are not making sufficient progress. As collaborative engagement initiatives such as CA100+ do not provide guidance on divestment, the WYPF will need to decide its own thresholds for executing this. The additional scrutiny to which the top priority companies are subject would allow WYPF to build confidence in any decision to use the threat of divestment as a tool for engagement as well as risk management.

Investors' engagement with target companies is typically undertaken on an annual cycle, reflecting the frequency of shareholder meetings. We suggest an iterative escalation process to operate over this cycle, as laid out below.

**Figure 2.3: Suggested iterative escalation pathway**

	Engagement or escalation action	Considerations
	Pose engagement questions/asks based on findings from the Analyse phase.	As identified in our review of the literature, specific requests with a clear win-win for the company in implementation are more likely to be adopted and less likely to require escalation beyond this phase
	Throughout the year, engage with the company via an escalating set of interactions. Exact steps will differ depending on the extent of company engagement, but are likely to include: <ul style="list-style-type: none"> <li>• Formal letter outlining new 'asks' or noting progress against 'asks' already made.</li> <li>• Explicit recognition of asks in conversations with company representatives (eg Investor Relations)</li> <li>• Raise asks in meetings with relevant executives (eg Chair, CEO, Head of Sustainability).</li> </ul>	
<b>Engagement unsuccessful – escalate further</b>		
	Voting at AGM based on company's progress against asks. Escalating voting pathway for voting against directors where minimum thresholds for action not met:	A bespoke voting policy or specific processes for overriding PIRC recommendations for target firms would

Engagement or escalation action	Considerations
<ul style="list-style-type: none"> <li>• Director identified as responsible for the issue</li> <li>• Director identified as responsible for the issue + Chair</li> <li>• Full board.</li> </ul>	<p>lead to better alignment with engagement strategy.</p> <p>Public communication of WYPF's progress along the escalation pathway with target companies is likely to be key. This, for example, could mean both publicly declaring where WYPF intends to vote against, as well as publicly recognising progress made by companies against 'asks', leading to supportive votes.</p>
<p>Where specific concerns are raised which are relevant to the following, also using vote to provide voice on the following:</p> <ul style="list-style-type: none"> <li>• Accounts</li> <li>• Transition plans (if subject to vote)</li> <li>• Shareholder resolutions.</li> </ul>	
<p><b>Engagement unsuccessful – escalate further</b></p>	
<p>(Co-)file a shareholder resolution formalising the ask.</p>	
<p><b>Engagement unsuccessful – escalate further</b></p>	
<p>Threat of divestment. Thresholds for divestment set based on performance against assessment and on 'asks'</p>	
<p><b>Engagement unsuccessful – escalate further</b></p>	
<p>Divestment</p> <ul style="list-style-type: none"> <li>• Tests for divestment: <ul style="list-style-type: none"> <li>• Has the company met the threshold for divestment based on non-performance against any asks?</li> <li>• Is WYPF's action (potentially as part of a coalition of investors) likely to impact the share price or generate negative publicity?</li> </ul> </li> </ul>	<p>Decision to divest ideally supported by a coalition of like-minded investors to have strongest impact on company strategy.</p>

One way that WYPF could use the engagement assessment framework to set triggers for divestment is as follows:

- If the minimum expectations are not met, follow an accelerated escalation pathway with possible divestment after one full engagement cycle (18-24 months) if the expectations are still not met.
- If the ongoing expectations are not met, follow a full escalation pathway such as the one shown in Figure 2.3 above, moving to the next stage in the pathway at each successive engagement cycle if the expectations are still not met.

**Illustration: applying the engagement assessment framework and escalation pathway to BP and Shell<sup>190</sup>**

As requested by WYPF, to illustrate how the possible analysis and escalation pathway could work, we have analysed the two top priority companies – BP and Shell – against the framework using the latest third-party assessments available at 25 November 2024. The details of this analysis are provided as Appendix 1. It should be noted that LCP does not provide stock-level investment advice and the analysis we lay out below should not be taken as a recommendation to buy or sell any securities.

<sup>190</sup> Our analysis of BP and Shell is for illustrative purposes only. It should not be interpreted as advice on whether to buy, hold or sell shares in these companies. We are not authorised to give individual stock recommendations.

**Table 2.4: Summary assessment of BP and Shell against illustrative criteria**

	Description	BP	Shell
<b>Minimum standards</b>	A set of attributes and activities which are considered essential for Oil & Gas companies to be on a credible pathway to net zero alignment.	<b>x</b>	<b>x</b>
<b>Ongoing standards</b>	Activities and attributes which Oil & Gas companies should be undertaking in order to effectively execute a transition to a role in a low carbon economy.	Capital allocation score	38%
		Oversight and executive remuneration score	100%
		Alignment score	34%

**BP does not meet all of the minimum standards under the possible assessment framework.** This is because it has not decreased its emissions intensity relative to the previous year or disclosed details on the carbon credits it retired in the previous year.

Therefore, **BP would be earmarked for enhanced engagement, with the threat of divestment if the minimum expectations are still not met following substantive efforts by WYPF to engage.** The time horizon for divestment should reflect that the required changes are on critical aspects, requiring changes to be made quickly, but also allow sufficient time for engagement and reporting to take place in order for BP to address the concerns.

BP's scores for the three focus areas are as follows. Full details of the criteria used to calculate these illustrative scores are provided in Appendix 1.

- **Capital allocation** – score of 38%
- **Oversight and executive remuneration** – score of 100%
- **Alignment** – score of 34%

**Key areas for engagement with BP**

In the immediate term, based on the illustrative criteria, BP would be encouraged to target year-on-year reductions in emissions intensity. To support this, the company would be encouraged to align future capital expenditures with its long-term decarbonisation goals and disclose how the alignment is determined.

**Shell does not meet all of the minimum standards under the possible assessment framework.** This is because: it has not explicitly stated that it has phased out or is planning to phase out capital expenditure in new unabated carbon-intensive assets or products by a specified year; and it does not disclose the stated value of the capital expenditure it intends to allocate to climate solutions in the future.

Therefore, **Shell would be earmarked for enhanced engagement, with the threat of divestment if the minimum expectations are still not met following substantive efforts by WYPF to engage.** The time horizon for divestment should reflect that the required changes are on critical aspects, requiring changes to be made quickly, but also allow sufficient time for engagement and reporting to take place in order for Shell to address the concerns.

Shell's scores for the three focus areas are as follows. Full details of the criteria used to calculate these illustrative scores are provided in Appendix 1.

- **Capital allocation** – score of 38%
- **Oversight and executive remuneration** – score of 100%
- **Alignment** – score of 27%

### **Key areas for engagement with Shell**

Based on the illustrative criteria, Shell would be encouraged to explicitly state that it has phased out or is planning to phase out capital expenditure in new unabated carbon-intensive assets or products by a specified year; and to disclose the stated value of its capital expenditure that it intends to allocate to climate solutions in the future.

### **Steps two and three: Analysing and influencing “high priority stewardship” companies**

Under the Identify framework described above (in “Step one: Identifying appropriate targets for engagement”), the c. 40 “**high priority stewardship**” companies would be assessed against the WYPF’s NZIF to identify the extent of their alignment. This assessment would also reveal any criteria the company fails to meet under various high-profile initiatives, including TPI, CA100+, SBTi and so on. Each of these initiatives is supported by a broad set of like-minded investors who are likely to make aligned asks of the companies.

For these companies, we propose that WYPF continues to attend meetings with senior representatives of the company, and to make known the WYPF’s support for the collaborative initiatives in which it participates. WYPF may want to consider taking a more active role in such initiatives.

Further, WYPF could make more active voting decisions in respect of proposals at high priority companies’ AGMs, to ensure that its voting actions are aligned with the actions requested from companies in meetings and supporting correspondence. In practice, this would mean evaluating PIRC’s voting recommendations for proposals at each AGM, identifying whether these reflect the level of engagement consistent with WYPF’s engagement escalation, and instructing the vote differently where necessary.

### **Steps two and three: Analysing and influencing “proportionate stewardship” companies**

For the 1,000+ “**proportionate stewardship**” companies described above (in “Step one: Identifying appropriate targets for engagement”), the WYPF’s proxy adviser, PIRC, already undertakes analysis of companies’ efforts to decarbonise, and makes recommendations for voting at shareholder meetings. These recommendations might include voting against directors, voting for shareholder resolutions on climate or voting against the report and accounts. Such actions are designed to signal a desired direction of travel to company management where a company’s actions fall short of expectations.

For proportionate stewardship companies, WYPF would continue to use voting as its primary lever of influence, initially based on PIRC’s standard voting recommendations. You could consider moving to a bespoke voting policy (which could be implemented by PIRC) over time, as you learn from your engagement with top & high priority companies.

## Question 3: Should WYPF’s fund benchmark for UK listed equities change from FTSE All Share?

### Section summary

The fossil fuel sector poses specific risks to investors which may not be fully reflected in the market’s assessment. A failure to properly assess the long-term risks and costs to which companies in the sector are exposed could mean that these considerations are not fully reflected in their share performance.

Given the specific risks associated with fossil fuel firms, it is sensible for the WYPF to be open to divesting from firms that are making insufficient progress to transition. Analysis from LCP’s Covenant and Financial Advisory specialists highlights the potential financial risks to WYPF of these firms’ fossil fuel reserves becoming ‘stranded’.

If in future WYPF does choose to divest from one or more fossil fuel firms, for example as a result of implementing an agreed escalation pathway, we recommend that you change your benchmark to remove the divested stocks. This will help align the objectives of your in-house investment management team with your decision to divest. We have not considered the potential for adopting a ‘climate-tilted’ benchmark, which would reduce the weight of the fossil fuel sector, since we believe that an approach which combines robust engagement with divestment as a possible final escalation step is more likely to lead to real-world change.

As your assets are managed by an in-house team, WYPF can implement divestment with lower costs than would be incurred by an otherwise similar asset owner which had outsourced the management of its assets.

### Current investment arrangements:

To understand the practicalities of disinvesting from Oil, Gas and Coal holdings, such as BP and Shell, it is first worth considering the WYPF’s current investment arrangements.

The Administering Authority of an LGPS has the responsibility to formulate an appropriate investment strategy<sup>191</sup>. Formulating an appropriate investment strategy involves a number of different considerations, including making decisions around the selection and use of investment benchmarks. The Administering Authority of the WYPF delegates this responsibility to the Investment Advisory Panel (“IAP”), as noted in the WYPF’s Investment Strategy Statement:

*“The IAP has responsibility for establishing and implementing a suitable investment strategy as well as overseeing and monitoring the management of WYPF’s investment portfolio and investment activity... The IAP is supported by the in-house investment team, led by the Chief Investment Officer.”<sup>192</sup>*

The in-house investment team manages the WYPF’s assets, with one of its aims being to *“maximise the returns from the investments within reasonable risk parameters.”<sup>193</sup>*

These returns and risks incorporate longer-term considerations, with the Investment Strategy Statement noting that *“WYPF is inherently long-term in its attitude to risk and return to reflect the duration of the liabilities of the Fund.”<sup>194</sup>*

The in-house team adopts an active management approach as described in the Investment Strategy Statement:

*“WYPF believes in actively managing the fund and does this via an in-house team, with the majority of the Fund directly invested in securities.”<sup>195</sup>*

---

<sup>191</sup> LGPS, ‘Guidance on the Creation and Operation of Local Pension Boards in England and Wales’, 4 February 2015, <https://www.lgpslibrary.org/assets/ewsab/LPBv1.1t.pdf>.

<sup>192</sup> WYPF, ‘Investment Strategy Statement’, 2.

<sup>193</sup> WYPF, 2.

<sup>194</sup> WYPF, 3.

<sup>195</sup> WYPF, 3.

Stock-specific investment decisions are the responsibility of the investment team, within the parameters set by IAP policies.

WYPF currently has a strategic asset allocation which includes holding 18% of its overall assets in UK equities<sup>196</sup>. As at 31 March 2024, the WYPF held ~£19.2bn of total invested assets<sup>197</sup>. The numbers in this paper are based on the strategic asset allocation, although we understand that the current allocation to UK equities is higher than this, as the WYPF is transitioning to its new strategic asset allocation following a change earlier this year.

This overall strategic allocation of 18% to UK equities is equivalent to c. £3.5bn of assets being invested in UK equities.

WYPF actively manages its UK equity portfolio against a benchmark, the FTSE All Share Index<sup>198</sup>.

The FTSE All Share benchmark is an index of the largest UK companies that are publicly traded. There are around 600 companies that make up this index, and these are weighted based on their market capitalisation<sup>199</sup>.

Based on 30 June 2024 data, around 11.2% of the benchmark was made up of holdings in Oil, Gas and Coal companies<sup>200</sup>. Of this, around 7.6% was held in Shell and around 3.4% was held in BP (ie ~11% combined)<sup>201</sup>. The exact weightings of different constituent holdings in the index will vary over time as the relative market capitalisations of the underlying companies change.

If WYPF were to replicate the weightings of the FTSE All Share Index exactly within its UK equity portfolio, then the allocation to Oil, Gas and Coal companies (which is predominantly made up of BP and Shell) would be 11.2% of the UK equity portfolio, or c.£400m<sup>202</sup>. This is around 2% of the total WYPF assets.

A key objective of your UK equity investment team is to maximise your returns within reasonable risk parameters<sup>203</sup>. An important measure of risk where investment managers are managing against a benchmark is the deviation between the return of the portfolio and the benchmark return – in this case how much the return on the UK equity portfolio differs from the return on the FTSE All Share Index over the same period. From this perspective, the “lowest risk” position for your investment team to take is to hold the same weightings to each company as the FTSE All-Share.

Using the FTSE All Share benchmark for your UK equity portfolio helps the IAP to:

- Encourage your investment management team to hold a well-diversified portfolio of UK-listed companies, to avoid taking an inappropriate level of risk relative to the benchmark; and
- Monitor the performance of your UK equity portfolio.

More generally, the choice of benchmark can also help investors to implement their investment beliefs. For example, if an investor believes that small companies are likely to outperform large companies over the long term, this belief could be implemented by choosing a benchmark that is focused on smaller companies.

## Implementing a disinvestment from a stock

This section considers the options for changing the benchmark after the escalation pathway described in Question 2 has been applied, and how this could be implemented effectively within your investment arrangements.

---

<sup>196</sup> WYPF, ‘Stewardship Code 2024’.

<sup>197</sup> WYPF.

<sup>198</sup> WYPF, ‘Investment Strategy Statement’, 3.

<sup>199</sup> There were 563 constituents at 31 July 2024. If the benchmark is FTSE All-Share ex Investment Trusts, then this had 375 constituents at the same date. Source: [FTSE factsheet](#)

<sup>200</sup> Data source: Datastream; LCP analysis

<sup>201</sup> Data source: Datastream; LCP analysis

<sup>202</sup> Data source: Datastream; LCP analysis

<sup>203</sup> WYPF, ‘Investment Strategy Statement’.

There are alternative approaches that could be considered, such as introducing a climate-tilted benchmark which may or may not have exposure to specific Oil, Gas and Coal holdings.

A climate-tilted benchmark is an index where the constituent companies' weights have been adjusted using climate-related factors such as carbon footprint and fossil fuel reserves. For example, the weights of companies with below average carbon footprints are reduced and those with above average carbon footprints are increased (compared to a standard index weighted by market capitalisation). Various standard climate-tilted indices are published, for example by FTSE and MSCI. It would also be possible for WYPF to work with an index provider to develop a custom index, tailored to reflect its climate beliefs and objectives, to use as its benchmark.

We have not considered climate-tilted benchmarks further in this paper, because we believe the approach we have set out in Question 2 above – where robust engagement is combined with divestment as a possible final escalation step – is more likely to drive forward positive real-world change. We note that at least two industry working groups are seeking to develop new climate-related indices that may be more effective at reducing real world emissions than current indices, which instead may be encouraging decarbonisation of portfolios on paper only<sup>204</sup>.

The benchmark used to manage the UK equity portfolio could be changed to be the FTSE All Share Index excluding a specific company, or even excluding a full sector such as Oil, Gas and Coal (which is currently comprised predominantly of BP and Shell in the UK).

The “lowest risk” position would therefore become for your in-house team to hold a zero allocation to those stocks, given that they are no longer part of the benchmark. This is in contrast to your current arrangements, whereby the “lowest risk” position is for your investment team to hold the same allocation to these stocks as the benchmark.

If your in-house team believed there to be a strong financial rationale for holding any excluded stock, they could have the discretion to do this. However, this would represent an “off-benchmark” position and your team would have to be comfortable that doing this would still meet the requirements set out in the Investment Strategy Statement around considering long-term risks and returns, sustainability and stewardship responsibilities. You should also ensure it is consistent with any public statements that WYPF makes about divestment. For example, if you decide to remove a company from the UK equity benchmark but to permit the in-house team to hold an “off-benchmark” position in the company, it may not be accurate to announce that WYPF was divesting from that company.

If only a few stocks are chosen to be excluded, or a single sector, then it is relatively straightforward to calculate what the updated benchmark would look like (for example, if the benchmark was ‘FTSE All Share Index excluding Oil, Gas and Coal’). This could be calculated by stripping out the Oil, Gas and Coal holdings and pro-rating up the weights of the other holdings. We understand that FTSE has now created such an index, removing the need for you to calculate the index yourselves.

In addition to changing your benchmark, a further step that the IAP could take would be to amend the investment guidelines for the UK equity portfolio to explicitly prohibit holding certain investments such as those within the Oil, Gas and Coal Sector, or specific companies identified for divestment from time to time (which could be determined using the process suggested under Question 2). Before doing so, the IAP should satisfy itself that this would be acting within its fiduciary duty to members.

If this approach were taken, the in-house team would have no discretion to hold “off-benchmark” positions in these companies, even if it felt there was a very strong financial rationale for doing so.

On balance, if you were to decide to divest from a particular stock(s) in future, our recommendation would be to amend the benchmark to exclude the relevant companies, but not to introduce an explicit exclusion. This approach would ensure that your investment team would only hold those stocks if it believes there is a strong financial rationale, rather than being encouraged to hold those companies to minimise the risk of deviating from a benchmark index. However, you should consider the practical implications of such an approach, given that it might result in changes to the benchmark index as often as once a year, as individual stocks are divested and reinvested.

---

<sup>204</sup> IIGCC, ‘Five Principles to Improve the next Generation of Net Zero Benchmarks’, IIGCC, 23 May 2023, <https://www.iigcc.org/insights/five-principles-to-improve-the-next-generation-of-net-zero-benchmarks>; ‘Glasgow Financial Alliance for Net Zero Launches Consultation on Index Guidance to Support Real-Economy Decarbonisation’, *Glasgow Financial Alliance for Net Zero* (blog), 9 October 2024, <https://www.gfanzero.com/press/consultation-on-index-guidance/>.



In the next section we consider the potential financial impacts of disinvesting from UK Oil, Gas and Coal companies.

It is first worth noting that WYPF’s holdings in UK Oil, Gas and Coal currently make up c. 2% of its overall strategic allocation (based on investing the UK equity allocation in line with the FTSE All Share benchmark)<sup>205</sup>. This relatively small size limits the potential impact of excluding these holdings on WYPF’s overall investment performance.

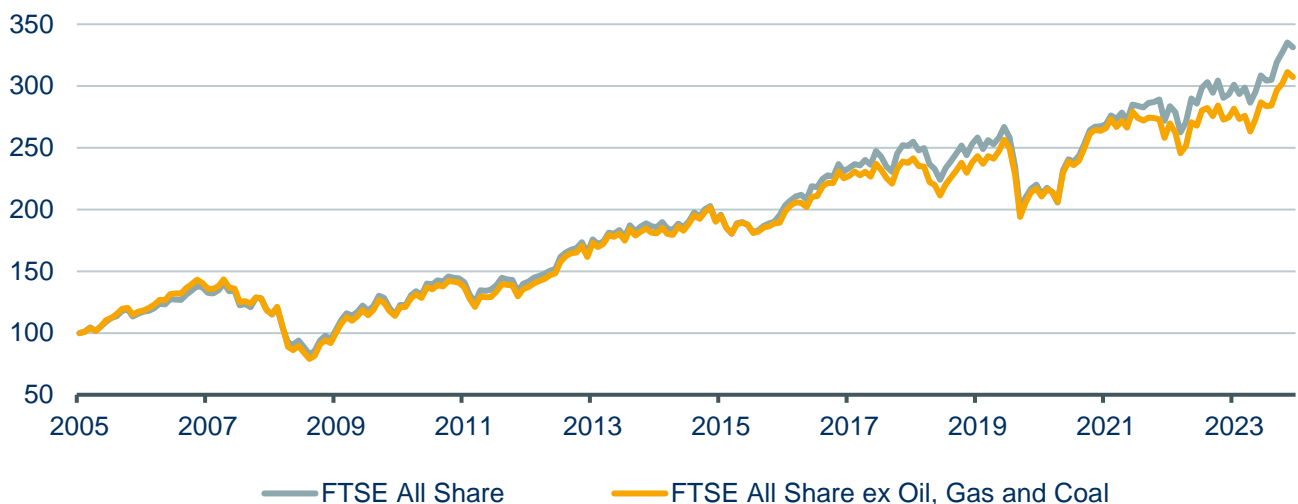
### Backward looking analysis

We believe that the market environment facing Oil, Gas and Coal firms over the coming decades is likely to be very different to the historical environment. Nonetheless, it can be helpful to consider historical performance, to assist in considering the potential implications of disinvesting from that sector.

The chart below illustrates the returns of the FTSE All Share index in grey vs the returns this index would have delivered if Oil, Gas and Coal holdings (predominantly made up of holdings in BP and Shell) had been excluded from the index (the orange line), over the period from July 2005 to June 2024<sup>206,207</sup>.

At an overall fund level, we estimate that the effect of excluding the UK Oil, Gas and Coal sector on WYPF’s total return over this period would have been to reduce returns by ~0.1% pa, assuming an 18% UK equity holding throughout, invested in line with the benchmark<sup>208</sup>.

**Figure 3.1: Cumulative total returns of FTSE All Share vs FTSE All Share ex Oil, Gas and Coal<sup>209</sup>**



However, we do recognise that investing across a wide range of sectors can provide diversification benefits. Some of these diversification benefits would be lost if the fossil fuel sector is excluded, given it forms a key part of the UK economy.

<sup>205</sup> WYPF, ‘Investment Strategy Statement’. Benchmark data from Datastream.

<sup>206</sup> For these purposes, we have adjusted the return of the FTSE All Share Total Return Index over the period 31 July 2005 to 30 June 2024 to manually strip out the total return of BP plc and Shell plc (which are constituents of the index). In order to create a proxy for the “UK Oil, Gas & Coal” sector, we have calculated an average of the total return of BP and Shell, weighted by market cap and with a manual adjustment for dividends.

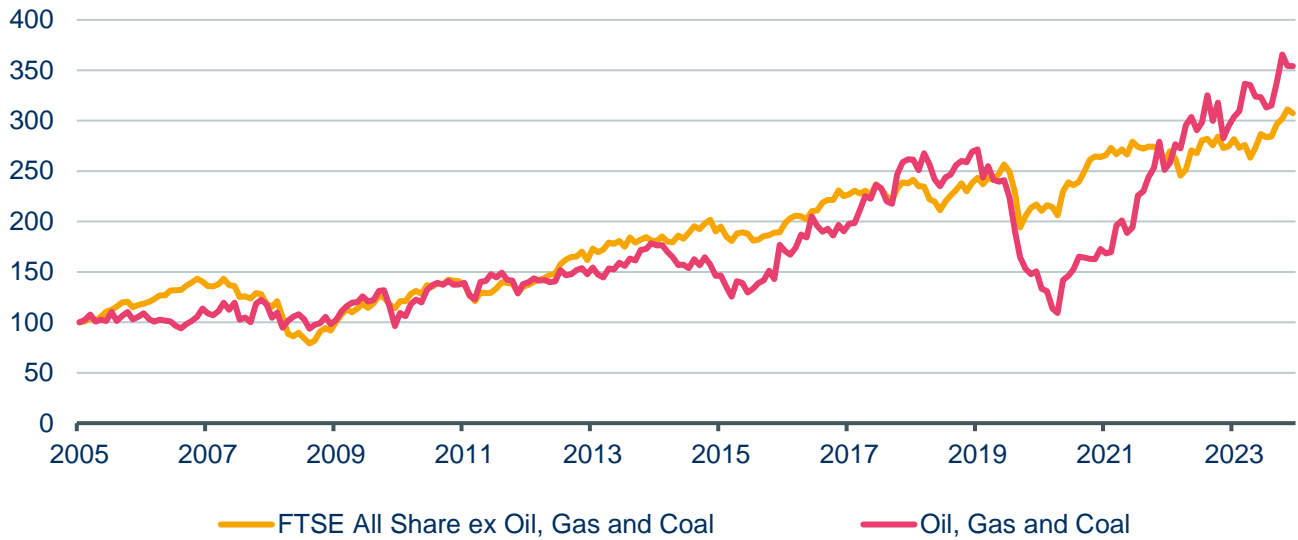
<sup>207</sup> Datastream data

<sup>208</sup> Datastream data

<sup>209</sup> Datastream data

This is illustrated in the chart below, which shows that Oil, Gas and Coal holdings (the pink line) have exhibited a quite different pattern of returns to the other stocks in the FTSE All Share index (the orange line), over the period from July 2005 to June 2024.

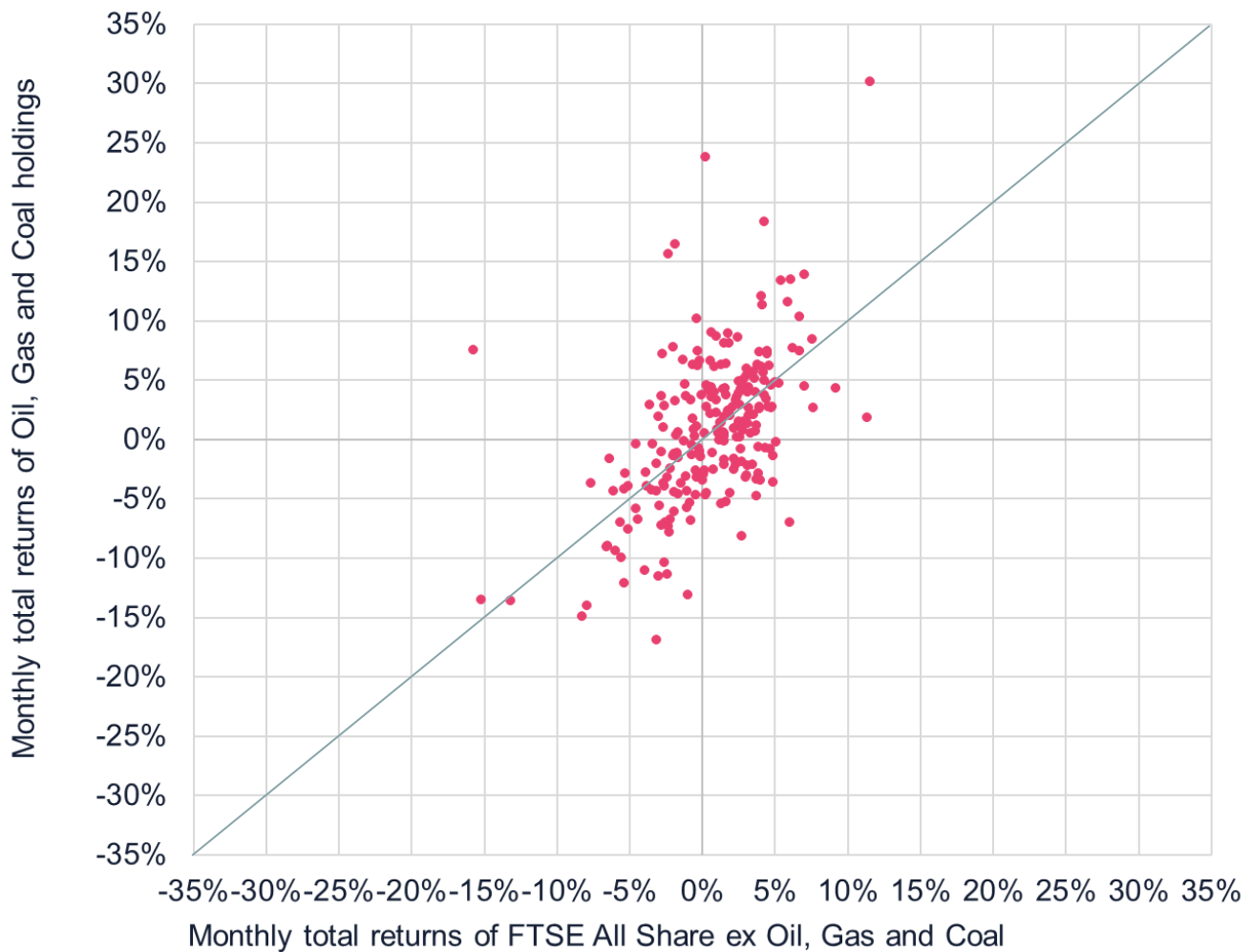
**Figure 3.2: Cumulative total returns of FTSE All Share ex Oil, Gas and Coal, vs Oil, Gas and Coal holdings<sup>210</sup>**



In the chart below, we plot each of the 227 monthly returns over the period from July 2005 to June 2024, both for the UK Oil, Gas and Coal holdings (vertical axis) and for the other stocks in the FTSE All Share (horizontal axis). This chart illustrates the diversification benefits of having an Oil, Gas and Coal allocation, as there are many dots that are far away from the diagonal line. This means there are times when UK Oil, Gas and Coal holdings have delivered a monthly return that is quite different to the wider UK equity market.

<sup>210</sup> Datastream data

**Figure 3.3: Comparison of monthly total returns of FTSE All Share ex Oil, Gas and Coal, vs Oil, Gas and Coal holdings<sup>211</sup>**



### Forward looking analysis

One of the key financial risks that companies in the Oil, Gas and Coal sector face is “stranded asset risk”<sup>212</sup>. This relates to the risk of assets becoming obsolete due to factors such as the energy transition, regulatory changes or market demands. A significant portion of Shell and BP’s assets are exposed to this risk.

Assets that become 'stranded' quicker than expected will suffer unanticipated or premature write-downs, potentially impacting shareholder value.

For assets in carbon intensive industries, such as the Oil, Gas and Coal sector, climate change is expected to cause a significant acceleration in stranded assets due to the need for a transition to a low-carbon economy that uses much less Oil, Gas and Coal than historically. This could be driven by government regulations (particularly if unexpected) that limit the use of fossil fuels (such as carbon pricing or carbon taxes), legal action against high emitters, consumer expectations, shifts in demand, relative attractiveness for renewable energy and many other reasons.

One way that Oil, Gas and Coal companies can protect themselves against the potential risks associated with stranded assets is by diversifying their business to include more renewable energy generation.

<sup>211</sup> Datastream data

<sup>212</sup> There are other risks associated with climate change that could have a significant financial impact on companies in the Oil, Gas and Coal sector – such as the physical impacts of climate change and underestimating decommissioning liabilities. These risks can often be difficult to measure and quantify.

Stranded asset risk poses a significant financial risk to investors, as if large proportions of a company’s assets are written down, the valuations of these companies could reduce significantly, thereby contributing to negative returns for the investor.

Investors should therefore consider:

- A. The extent to which stranded asset risk could affect their portfolio holdings;
- B. The extent to which stranded asset risk is already priced into the valuations of their portfolio holdings; and
- C. The extent to which stranded asset risk could affect their overall financial position.

We have assessed these considerations in turn for the UK Oil, Gas and Coal sector in the subsections that follow.

**A. How much could stranded asset risk impact the UK Oil, Gas and Coal sector? A case study considering Shell plc**

We were asked by WYPF to consider the risks to UK Oil, Gas and Coal sector companies by using Shell plc as an illustrative real-world example. Shell represents a large proportion of the sector, had the largest Apportioned Emissions of the WYPF’s holdings as at 31 March 2024 (see Table 2.3) and doesn’t meet the minimum standards under the escalation framework described in Question 2 above<sup>213</sup>. This subsection therefore focuses on the risks which might arise at Shell plc. This should not be taken as a recommendation to buy or sell any securities.

We have provided our high-level assessment of Shell to WYPF separately<sup>214</sup>. We set out summary comments below.

In summary, our company-level analysis has revealed that there are a number of matters that indicate stranded asset risk is significant for Shell, and is expected to remain so for the foreseeable future.

These matters, shown in the table below, could each be either detrimental to the estimated value of Shell’s assets or increase its liabilities (both in the short- and long-term). Either of these outcomes could result in Shell generating less cash from its operations to either distribute to shareholders (impacting short-term returns) or to reinvest in the business (thereby reducing support for longer-term returns), both of which could have a detrimental impact on the value of Shell’s shares.

Matters	Comment (the figures below relate to 2023)
Climate risk modelling uncertainty	<p>Modelling the physical and transitional impacts of climate change is hugely complex, and it has been acknowledged (for example by the IFoA<sup>215</sup>) that there are several weaknesses with existing climate models. Underestimating such risks could materially affect the estimated value of WYPF’s investment in Shell (or similar companies).</p> <p>To highlight the variation in scenarios (albeit not a like for like comparison), the worst-case scenario Shell considers in its accounts includes a 16% reduction in impacted asset values<sup>216</sup>, whereas Equinor discloses a potential 42% impact to the net present value of its future earnings<sup>217</sup>.</p>

<sup>213</sup> Our analysis of Shell is for illustrative purposes only. It should not be interpreted as advice on whether to buy, hold or sell shares in this company. We are not authorised to give individual stock recommendations.

<sup>214</sup> More information on the assumptions and sources used to produce the analysis can be found within this separate document.

<sup>215</sup> IFoA, ‘The Emperor’s New Climate Scenarios’ (Institute and Faculty of Actuaries, July 2023).

<sup>216</sup> Shell plc, ‘Annual Report and Accounts 2023’, 31 December 2023, <https://reports.shell.com/annual-report/2023/assets/downloads/shell-annual-report-2023.pdf>.

<sup>217</sup> Equinor, ‘Equinor 2023 Integrated Annual Report’, 21 March 2024, <https://cdn.equinor.com/files/h61q9gi9/global/76629806e2cc50eefdd89d5b8daabda39247db63.pdf?2023-annual-report-equinor.pdf>.

<p>Asset obsolescence risk</p>	<p>There is considerable uncertainty in the speed at which Shell's assets could become obsolete. An alternate view to Shell's current approach (eg due to external developments such as regulation), or challenge from Shell's auditors, could result in accelerated depreciation rates or one-off impairment charges which have the capacity to materially impact the estimated value of Shell's assets.</p> <p>As an example, and assuming a constant level of Capex, Shell's Exploration and Production assets could reach a value of \$nil within 10 years (compared to 20 years currently), if depreciation policies were doubled (for example due to the industry underestimating the speed of the transition)<sup>218</sup>.</p>
<p>Decommissioning policies</p>	<p>Costs relating to safely and properly shutting down facilities at the end of their economic and productive life, ie decommissioning costs<sup>219</sup>, are difficult to predict (both in terms of value and timing). As one of Shell's most significant liabilities, underestimating this risk could have a material impact on Shell's future liabilities.</p> <p>\$19bn of provisions (discounted) for decommissioning costs is currently included as a liability on Shell's balance sheet, which represents c9% of Shell's total liabilities<sup>220</sup>.</p>
<p>Segmental analysis</p>	<p>Shell is a significant player in both the renewable and non-renewable sectors, albeit the majority of its profits continue to be generated from its non-renewable segment<sup>221</sup>.</p> <p>Based on the indicative methodology we have applied, about a quarter of Shell's value may be derived from renewable business segments, which currently generate c11% of its profits<sup>222</sup>.</p>
<p>Sources and uses of cash</p>	<p>In 2023, Shell allocated c40% of cash generated from operations to each of Capex and shareholder distributions<sup>223</sup>. Of this, a significant portion remains in non-renewable business segments<sup>224</sup>. From public disclosures, it is challenging to decipher the level of Capex relating to maintenance or the level of spending on pursuing new fossil fuel projects.</p>
<p>External views</p>	<p>External independent organisations (eg Carbon Tracker Initiative) have scrutinised the industry's approach to decarbonisation, and concluded that risks are being understated<sup>225</sup>. In addition, some ESG rating providers consider that Shell still needs to make further progress to be considered 'best in class' compared its peers<sup>226</sup>.</p>

## B. To what extent is stranded asset risk already priced into valuations?

Our analysis suggests that stranded asset risk is likely to be partly priced into the Oil and Gas sectors.

<sup>218</sup> Shell plc, 'Annual Report and Accounts 2023'. LCP analysis

<sup>219</sup> This can include projects that relate to both renewable and non-renewable activities.

<sup>220</sup> Shell plc, 'Annual Report and Accounts 2023'. LCP analysis

<sup>221</sup> Shell plc. LCP analysis

<sup>222</sup> This illustrative analysis is based on Shell's 2023 earnings. Included within 'Renewable' is the 'Marketing' division which includes certain earnings from non-renewable activities, which are not separately disclosed in the annual report. It is difficult to accurately decipher what is 'renewable' and 'non-renewable' based on public disclosures.

<sup>223</sup> Shell plc, 'Annual Report and Accounts 2023'.

<sup>224</sup> Shell plc. LCP

<sup>225</sup> Barbara Davidson, 'Flying Blind: In a Holding Pattern' (Carbon Tracker Initiative, February 2024); Carbon Tracker, 'Crude Intentions II' (Carbon Tracker Initiative, February 2024).

<sup>226</sup> LCP research which considered ratings from TPI and MSCI

A broad measure of the “price-to-earnings ratios” of companies in the renewable energy sector is c. 14x, which is around three times higher than the same measure within the non-renewable energy sector, where the price to earnings ratio is c. 5x<sup>227</sup>. A higher price-to-earnings ratio indicates that a company’s earnings are expected to persist for longer and/or increase over time.

In this example, the difference in price-to-earnings ratios (14x vs 5x) may indicate that investors consider a non-renewable asset currently generating \$3 of earnings per year to be of broadly equivalent value to a renewable asset currently generating \$1 of earnings per year. This may be because investors expect renewable assets to deliver earnings for longer and/or have greater growth potential than non-renewable assets. This may be partly driven by the stranded asset risk of non-renewable investments, which could limit the growth potential.

There is some evidence to suggest that the risk of stranded assets is not currently fully priced in and reflected in the valuations of companies in the Oil and Gas sector. Research from Carbon Tracker has suggested that the current worst-case scenarios that are being considered by companies and investors alike are not fully reflective of the severity of risks that could be faced<sup>228</sup>. This suggests that both the impact and likelihood of these ‘worst-case’ climate scenarios are likely to be understated. As a result, the potential negative impact on asset values for companies in the Oil and Gas sector may be much bigger than those that are currently being priced in or reported on by the companies themselves.

Forward looking analysis suggests that Oil and Gas companies could face the risk of significant financial detriment in the future, especially if they do not transition their businesses to focus more on renewable energy<sup>229</sup>. This supports our conclusions for Question 2 – namely that WYPF should use engagement to encourage priority companies to reduce stranded asset risk, and ultimately be prepared to disinvest if companies do not meet the expectations of these engagements. This should help protect WYPF from the potential negative financial impact that holding these companies could pose over the longer term.

### **C. What is the potential impact of stranded asset risk on the overall funding position?**

In a worst-case scenario, if the value of the Oil, Gas and Coal holdings in WYPF’s UK equity portfolio were to fall to zero, WYPF would lose about 2% of the value of its overall invested assets (assuming they are invested in line with the strategic asset allocation, with the UK equity allocation invested in line with the FTSE All-Share index)<sup>230</sup>.

WYPF’s funding level was 108.5% at the 31 March 2022 actuarial valuation<sup>231</sup>, so (ignoring subsequent changes in assets and liabilities) this would be equivalent to a reduction in funding position to 106.3%. Though this would be a significant loss, it does not directly pose a material risk of the WYPF becoming underfunded. It is worth acknowledging, however, that in a scenario where the UK Oil, Gas and Coal holdings lose their value, other parts of the portfolio may also lose value due to the underlying risk factors driving this loss.

---

<sup>227</sup> The information on price-to-earnings ratio is based on EBITDA multiples sourced from Equidam (a company valuation specialist).

<sup>228</sup> Carbon Tracker, ‘Loading the DICE Against Pensions’ (Carbon Tracker Initiative, 27 July 2023).

<sup>229</sup> Carbon Tracker, ‘Crude Intentions II’.

<sup>230</sup> WYPF, ‘Investment Strategy Statement’. Datastream data. LCP Analysis

<sup>231</sup> Alison Murray and Sam Osborne, ‘Report on the Actuarial Valuation of the West Yorkshire Pension Fund as at 31 March 2022’ (Aon, 31 March 2023), <https://www.wypf.org.uk/media/khvf1mox/west-yorkshire-pension-fund-2022-actuarial-valuation-report-v2.pdf>.

## Selected Bibliography

This report relies on a synthesis of a wide range of sources, not all of which are in the public domain, and some of which are very specific or technical. This Selected Bibliography identifies key, high-quality sources which are accessible both in the sense that each should be possible to understand on its own terms with minimal reference to other documents, and wherever possible should be open access.

We have grouped the references below by topic for ease of use.

### What is required: the Oil & Gas Sector in energy transitions

IEA. **'The Oil and Gas Industry in Net Zero Transitions'**. In *World Energy Outlook Special Report*. International Energy Agency, 2023. <https://www.iea.org/reports/the-oil-and-gas-industry-in-net-zero-transitions> [Open access]

*The International Energy Agency's report is the most comprehensive on the technical details of the topic.*

Carbon Tracker. **'Navigating Peak Demand'**. Carbon Tracker Initiative, November 2023.

<https://carbontracker.org/reports/navigating-peak-demand/> [Open access requiring registration]

*Carbon Tracker's report identifies what the characteristics of the energy transition mean for investors in Oil & Gas companies.*

### Alternative approaches to Strategic Asset Allocation

Goehner, Adam, Alexandra West, Antti Savilaakso, Auriel Equities, Armelle de Vienne, Chris Vernon, David Hoyle, et al. **'Embedding ESG Issues Into Strategic Asset Allocation Frameworks: A Discussion Paper'**.

Principles for Responsible Investment, 5 September 2019. <https://www.unpri.org/embedding-esg-issues-into-strategic-asset-allocation-frameworks-discussion-paper/4815.article> [Open access]

*This PRI paper gives a high-level overview of some alternative approaches to strategic asset allocation.*

### Evidence on engagement versus divestment

Caldecott, Ben, Alex Clark, Elizabeth Harnett, and Felicia Liu. **'How Sustainable Finance Creates Impact: Transmission Mechanisms to the Real Economy'**. *Review of World Economics*, 23 May 2024. <https://doi.org/10.1007/s10290-024-00541-9> [Open access].

*Caldecott et al. (2024) is a comprehensive academic review of the evidence on how investors can generate impact, published in a high-ranking economics journal. This includes an assessment of both engagement and divestment, as well as a broader set of activities.*

Chuah, Kevin, Mark R. DesJardine, Maria Goranova, and Witold J. Henisz. **'Shareholder Activism Research: A System-Level View'**. *Academy of Management Annals* 18, no. 1 (January 2024): 82–120.

<https://journals.aom.org/doi/abs/10.5465/annals.2022.0069?journalCode=annals> [Paid article].

*Chuah et al. (2024) is the most recent review of the research on shareholder activism, published in a high-ranking academic management journal. We include it here despite not being open access as it is an important review of this topic, and forms part of the basis for our argument for 'chain reaction' engagement.*

### Approaches to effective engagement

*In the practitioner literature, two papers taken together outline the spectrum of views on what shareholder engagement should involve in order to be effective:*

Investor Forum. **'Shaping Tomorrow's Dialogues: Bridging the Gaps Between Companies & Investors'**, March 2024.

<https://www.investorforum.org.uk/wp-content/uploads/securepdfs/2024/03/InvestorForumShapingTomorrowsDialogueFullReport2024.pdf> [Open access]

*The Investor Forum argues for a more collaborative, governance-focused approach to engagement.*

ShareAction. **'Introducing a Standardised Framework for Escalating Engagement with Companies: RISE Guidance Paper #2'**, December 2023. <https://cdn2.assets-servd.host/shareaction-api/production/resources/reports/RISE-paper-2.pdf>

[Open access]

*ShareAction argues for a more activist approach.*

*See also Caldecott et al. (2024), above, for an academic perspective.*



## Full bibliography

- Aliaj, Ortenca, and Derek Brower. 'Engine No 1, the Giant-Killing Hedge Fund, Has Big Plans'. *Financial Times*, 3 June 2021, sec. Climate Capital. <https://www.ft.com/content/ebfd67d-cbce-40a5-bb29-d361377dea7a>.
- Ang, Andrew, and Geert Bekaert. 'International Asset Allocation With Regime Shifts'. *The Review of Financial Studies* 15, no. 4 (2002).
- Ansar, Atif, Ben Caldecott, and James Tilbury. 'Stranded Assets and the Fossil Fuel Divestment Campaign: What Does Divestment Mean for the Valuation of Fossil Fuel Assets?' Stranded Assets Programme, Smith School of Enterprise and the Environment, University of Oxford, October 2013. <https://ora.ox.ac.uk/objects/uuid:f04181bc-8c4f-4cc1-8f01-cafce57975ae>.
- AP7. 'AP7 and LGIM establish partnership to launch climate transition strategy'. [ap7.se](https://www.ap7.se/aktuell/ap7-and-lgim-establish-partnership-to-launch-climate-transition-strategy/), 30 May 2023. <https://www.ap7.se/aktuell/ap7-and-lgim-establish-partnership-to-launch-climate-transition-strategy/>.
- . 'AP7 Blacklist as of June 3, 2024'. AP7, 3 June 2024. <https://www.ap7.se/app/uploads/2024/06/ap7-blacklist-june-2024.pdf>.
- . 'Climate Action Plan 2023: An Integrated Climate Action Plan for AP7's Investments and Active Ownership'. AP7, May 2023. [https://www.ap7.se/app/uploads/2023/05/ap7\\_climate-action-plan-2023-eng.pdf](https://www.ap7.se/app/uploads/2023/05/ap7_climate-action-plan-2023-eng.pdf).
- Ayling, Julie, and Neil Gunningham. 'Non-State Governance and Climate Policy: The Fossil Fuel Divestment Movement'. *Climate Policy* 17, no. 2 (2015): 131–49. <https://doi.org/10.1080/14693062.2015.1094729>.
- Barko, Tamas, Martijn Cremers, and Luc Renneboog. 'Shareholder Engagement on Environmental, Social, and Governance Performance'. SSRN Scholarly Paper. Rochester, NY, 31 May 2017. <https://doi.org/10.2139/ssrn.2977219>.
- Beccarini, Irene, Daniel Beunza, Fabrizio Ferraro, and Andreas G. F. Hoepner. 'The Contingent Role of Conflict: Deliberative Interaction and Disagreement in Shareholder Engagement'. *Business Ethics Quarterly* 33, no. 1 (January 2023): 26–66. <https://doi.org/10.1017/beq.2021.46>.
- Becht, Marco, Julian Franks, Jeremy Grant, and Hannes F. Wagner. 'Returns to Hedge Fund Activism: An International Study'. *The Review of Financial Studies* 30, no. 9 (1 September 2017): 2933–71. <https://doi.org/10.1093/rfs/hhx048>.
- Becht, Marco, Julian Franks, Colin Mayer, and Stefano Rossi. 'Returns to Shareholder Activism: Evidence from a Clinical Study of the Hermes UK Focus Fund'. *The Review of Financial Studies* 22, no. 8 (1 August 2009): 3093–3129. <https://doi.org/10.1093/rfs/hhn054>.
- Benoit, Philippe. 'Engaging State-Owned Enterprises in Climate Action'. New York: Columbia Centre on Global Energy Policy, September 2019.
- BlackRock. '2022 Climate-Related Shareholder Proposals More Prescriptive than 2021'. BlackRock, 2022. <https://www.blackrock.com/corporate/literature/publication/commentary-bis-approach-shareholder-proposals.pdf>.
- . 'Investment Stewardship Global Engagement Summary Report Q1 2024', 31 March 2024. <https://www.blackrock.com/corporate/literature/press-release/investment-stewardship-global-quarterly-engagement-summary.pdf>.
- BlackRock, and Ceres. '21st Century Engagement: Investor Strategies for Incorporating ESG Considerations into Corporate Interactions', 2015.
- Blanco, G, R Gerlagh, S Suh, J Barrett, H.C. de Coninck, C.F. Diaz Morejon, R Mathur, et al. 'Drivers, Trends and Mitigation'. In *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by O Edenhofer, Pichs-Madruga, R, Sokona, Y, Farahani, E, S Kadner, Seyboth, K, Adler, A, et al. Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press, 2014. <https://doi.org/10.1017/CBO9781107415416>.
- Bolton, Patrick, Morgan Despres, Luiz Awazu Pereira da Silva, Frédéric Samana, and Romain Svartzman. *The Green Swan: Central Banking and Financial Stability in the Age of Climate Change*. Bank for International Settlements, 2020.
- Braungardt, Sibylle, Jeroen Van Den Bergh, and Tessa Dunlop. 'Fossil Fuel Divestment and Climate Change: Reviewing Contested Arguments'. *Energy Research & Social Science* 50 (April 2019): 191–200. <https://doi.org/10.1016/j.erss.2018.12.004>.
- Brunel Pension Partnership. 'Brunel Climate Change Policy 2023-2030', 2023. <https://www.brunelpensionpartnership.org/wp-content/uploads/2024/06/Brunel-Climate-Change-Policy-2024.pdf>.
- Caldecott, Ben, Alex Clark, Elizabeth Harnett, and Felicia Liu. 'How Sustainable Finance Creates Impact: Transmission Mechanisms to the Real Economy'. *Review of World Economics*, 23 May 2024. <https://doi.org/10.1007/s10290-024-00541-9>.
- CalPERS. 'California Public Employees' Retirement System Total Fund Investment Policy', 17 June 2020. [https://www.calpers.ca.gov/docs/board-agendas/202109/invest/item06a-01\\_a.pdf](https://www.calpers.ca.gov/docs/board-agendas/202109/invest/item06a-01_a.pdf).
- . 'CalPERS and Divestment', 30 March 2017. <https://calpers.ca.gov/docs/forms-publications/calpers-and-divestment.pdf>.
- . 'CalPERS Sustainable Investments 2030 Strategy: November Board Meeting', November 2023. [https://www.calpers.ca.gov/docs/board-agendas/202311/invest/item06d-01\\_a.pdf](https://www.calpers.ca.gov/docs/board-agendas/202311/invest/item06d-01_a.pdf).
- Carbon Tracker. 'Crude Intentions II'. Carbon Tracker Initiative, February 2024.
- . 'Loading the DICE Against Pensions'. Carbon Tracker Initiative, 27 July 2023.
- Carleton, Willard T., James M. Nelson, and Michael S. Weisbach. 'The Influence of Institutions on Corporate Governance through Private Negotiations: Evidence from TIAA-CREF'. *The Journal of Finance* 53, no. 4 (1998): 1335–62.
- Carney, Mark. *Value(s): Building a Better World for All*. London: William Collins, 2021.
- Chenet, Hugues, Katie Kedward, Josh Ryan-Collins, and Frank van Lerven. 'Developing a Precautionary Approach to Financial Policy – from Climate to Biodiversity'. International Network for Sustainable Financial Policy Insights, Research, and Exchange; SOAS Centre for Sustainable Finance; Grantham Research Institute on Climate Change and the Environment, April 2022. <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/04/INSPIRE-Sustainable-Central-Banking-Toolbox-Policy-Briefing-Paper-2.pdf>.

- Chuah, Kevin, Mark R. DesJardine, Maria Goranova, and Witold J. Henisz. 'Shareholder Activism Research: A System-Level View'. *Academy of Management Annals* 18, no. 1 (January 2024): 82–120. <https://doi.org/10.5465/annals.2022.0069>.
- Church of England National Investing Bodies. 'Approach to Climate Change: A Report for the General Synod, June 2023', June 2023. <https://www.churchofengland.org/sites/default/files/2023-06/gs-2302-nibs-approach-to-climate-change-2023-synod-report-reduced-file.pdf>.
- Church of England Pensions Board. 'Church of England Pensions Board Disinvests from Shell and Remaining Oil and Gas Holdings'. The Church of England, 22 June 2023. <https://www.churchofengland.org/media/press-releases/church-england-pensions-board-disinvests-shell-and-remaining-oil-and-gas>.
- Climate Action 100+. 'About Climate Action 100+'. Accessed 9 August 2024. <https://www.climateaction100.org/about/>.
- Climate Action 100+. 'Net Zero Company Benchmark', June 2024. <https://www.climateaction100.org/net-zero-company-benchmark/>.
- Climate Analytics, and NewClimate Institute. 'Climate Action Tracker Emissions Gap', November 2024. <https://climateactiontracker.org/global/cat-emissions-gaps/>.
- Coffin, Mike, and Guy Prince. 'Navigating Peak Demand'. Carbon Tracker Initiative, November 2023.
- Davidson, Barbara. 'Flying Blind: In a Holding Pattern'. Carbon Tracker Initiative, February 2024.
- Dhakal, S, J.C. Minx, F.L. Toth, A Abdel-Aziz, M.J. Figueroa Meza, K Hubacek, I.G.C. Jonckheere, et al. 'Emissions Trends and Drivers'. In *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, by IPCC, edited by P.R. Shukla, J Skea, R Slade, A Al Khourdajie, R van Diemen, D McCollum, M Pathak, et al., 1st ed. Cambridge University Press, 2023. <https://doi.org/10.1017/9781009157926.004>.
- Dimson, Elroy, Oğuzhan Karakaş, and Xi Li. 'Active Ownership'. *The Review of Financial Studies* 28, no. 12 (1 December 2015): 3225–68. <https://doi.org/10.1093/rfs/hhv044>.
- . 'Coordinated Engagements'. SSRN Scholarly Paper. Rochester, NY, 27 April 2023. <https://doi.org/10.2139/ssrn.3209072>.
- Dordi, Truzaar, and Olaf Weber. 'The Impact of Divestment Announcements on the Share Price of Fossil Fuel Stocks'. *Sustainability* 11, no. 11 (2019): 3122. <https://doi.org/10.3390/su11113122>.
- Elton, Edwin J., Martin Jay Gruber, Stephen J. Brown, and William N. Goetzmann. *Modern Portfolio Theory and Investment Analysis*. Ninth edition. Hoboken, NJ: Wiley, 2014.
- Equinor. 'Equinor 2023 Integrated Annual Report', 21 March 2024. <https://cdn.equinor.com/files/h61q9gi9/global/76629806e2cc50eefdd89d5b8daabda39247db63.pdf?2023-annual-report-equinor.pdf>.
- Ericson, Keith Marzilli, and David Laibson. 'Intertemporal Choice'. In *Handbook of Behavioral Economics: Applications and Foundations 1*, edited by B. Douglas Bernheim, Stefano DellaVigna, and David Laibson, 2:1–67. Handbook of Behavioral Economics - Foundations and Applications 2. North-Holland, 2019. <https://doi.org/10.1016/bs.hesbe.2018.12.001>.
- Ferraro, Fabrizio, and Daniel Beunza. 'Creating Common Ground: A Communicative Action Model of Dialogue in Shareholder Engagement'. *Organization Science* 29, no. 6 (December 2018): 1187–1207. <https://doi.org/10.1287/orsc.2018.1226>.
- Financial Reporting Council. 'The UK Stewardship Code 2020'. Financial Reporting Council, 23 October 2019. [https://media.frc.org.uk/documents/The\\_UK\\_Stewardship\\_Code\\_2020.pdf](https://media.frc.org.uk/documents/The_UK_Stewardship_Code_2020.pdf).
- First Sentier MUFG Sustainable Investment Institute. 'Constructive Corporate Engagements from a Corporate Perspective', September 2023. <https://www.firstsentier-mufg-sustainability.com/content/dam/sustainabilityinstitute/assets/research/corporate-engagement-report/sustainable-investment-institute-corporate-engagements-report.pdf>.
- FT Lex. 'Private Equity Roll-Ups Bet Energy Transition Will Go Slow'. *Financial Times*, 22 June 2024, sec. Lex. <https://www.ft.com/content/a67d5fd1-cc9d-4187-9b2a-3851b7cf8944>.
- FTSE. 'FTSE All Share Index'. Datastream, 30 April 2024.
- Goehner, Adam, Alexandra West, Antti Savilaakso, Auriel Equities, Armelle de Vienne, Chris Vernon, David Hoyle, et al. 'Embedding ESG Issues Into Strategic Asset Allocation Frameworks: A Discussion Paper'. Principles for Responsible Investment, 5 September 2019.
- Goldhaber, Micheal D. 'Reimagining Shareholder Advocacy on Environmental and Social Issues: The Promise and Pitfalls of "E&S Stewardship"'. New York: NYU Stern Center for Business and Human Rights, July 2024. [https://bhr.stern.nyu.edu/wp-content/uploads/2024/07/NYU-CBHR-ESG-Stewardship\\_July-29-Updated-with-links.pdf](https://bhr.stern.nyu.edu/wp-content/uploads/2024/07/NYU-CBHR-ESG-Stewardship_July-29-Updated-with-links.pdf).
- Gond, Jean-Pascal, and Valeria Piani. 'Enabling Institutional Investors' Collective Action: The Role of the Principles for Responsible Investment Initiative'. *Business & Society* 52, no. 1 (1 March 2013): 64–104. <https://doi.org/10.1177/0007650312460012>.
- Gosling, Tom. 'Universal Owners and Climate Change'. SSRN Scholarly Paper. Rochester, NY, 2 February 2024. <https://doi.org/10.2139/ssrn.4713536>.
- Gros, Daniel, Dirk Schoenmaker, Sini Matikainen, Sam Langfield, Philip Lane, Marco Pagano, and Javier Suarez. 'Too Late, Too Sudden: Transition to a Low-Carbon Economy and Systemic Risk'. Reports of the Advisory Scientific Committee. European Systemic Risk Board, 2016.
- Hestres, Luis E., and Jill E. Hopke. 'Fossil Fuel Divestment: Theories of Change, Goals, and Strategies of a Growing Climate Movement'. *Environmental Politics* 29, no. 3 (2019): 371–89. <https://doi.org/10.1080/09644016.2019.1632672>.
- IEA. 'Strategies to Reduce Emissions from Oil and Gas Operations – Global Methane Tracker 2023 – Analysis'. IEA. Accessed 24 June 2024. <https://www.iea.org/reports/global-methane-tracker-2023/strategies-to-reduce-emissions-from-oil-and-gas-operations>.
- . 'The Oil and Gas Industry in Net Zero Transitions'. In *World Energy Outlook Special Report*. International Energy Agency, 2023. <https://doi.org/10.1787/fd522f59-en>.
- . 'World Energy Outlook 2023'. International Energy Agency, 2023.
- IFoA. 'The Emperor's New Climate Scenarios'. Institute and Faculty of Actuaries, July 2023.

- IIGCC. 'About Us'. Accessed 9 August 2024. <https://www.iigcc.org/about-us>.
- Impact Cubed. 'Investment Solutions'. Impact Cubed, 2024. <https://www.impactcubed.com/investmentsolutions>.
- Investment Association. 'Good Stewardship 2021', February 2021. <https://www.theia.org/sites/default/files/2021-03/GOOD%20STEWARDSHIP.pdf>.
- Investor Forum. 'Collective Engagement: An Essential Stewardship Capability', November 2019. <https://www.investorforum.org.uk/wp-content/uploads/securepdfs/2019/11/The-case-for-collective-engagement-211119.pdf>.
- . 'Defining Stewardship and Engagement', April 2019. <https://www.investorforum.org.uk/wp-content/uploads/securepdfs/2019/04/Defining-Stewardship-Engagement-April-2019.pdf>.
- . 'Shaping Tomorrow's Dialogues: Bridging the Gaps Between Companies & Investors', March 2024. <https://www.investorforum.org.uk/wp-content/uploads/securepdfs/2024/03/InvestorForumShapingTomorrowsDialogueFullReport2024.pdf>.
- IPCC. 'Summary for Policymakers'. In *Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*, edited by V. Masson-Delmotte, P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, et al., 2018. [https://www.ipcc.ch/site/assets/uploads/sites/2/2022/06/SPM\\_version\\_report\\_LR.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2022/06/SPM_version_report_LR.pdf).
- . 'Summary for Policymakers'. In *Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*, edited by V. Masson-Delmotte, P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, et al., 2018. [https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15\\_SPM\\_version\\_report\\_LR.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_SPM_version_report_LR.pdf).
- . 'Summary for Policymakers'. In *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by V. Masson-Delmotte, P. Zhai, A. Pirani, S.L. Connors, C. Péan, S Berger, N Caud, et al. In Press, 2021. [https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC\\_AR6\\_WGI\\_SPM\\_Stand\\_Alone.pdf](https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM_Stand_Alone.pdf).
- . 'Summary for Policymakers'. In *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by V. Masson-Delmotte, P. Zhai, A. Pirani, S.L. Connors, C. Péan, S Berger, N Caud, et al. In Press, 2021.
- . 'Summary for Policymakers'. In *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Cambridge University Press, 2022. [https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC\\_AR6\\_WGII\\_SummaryForPolicymakers.pdf](https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf).
- Jurczenko, Emmanuel, ed. *Risk-Based and Factor Investing*. Quantitative Finance Set. London: ISTE Press, 2015.
- Kölbl, Julian F., Florian Heeb, Falko Paetzold, and Timo Busch. 'Can Sustainable Investing Save the World? Reviewing the Mechanisms of Investor Impact'. *Organization & Environment* 33, no. 4 (1 December 2020): 554–74. <https://doi.org/10.1177/1086026620919202>.
- Kolm, Petter N., Reha Tütüncü, and Frank J. Fabozzi. '60 Years of Portfolio Optimization: Practical Challenges and Current Trends'. *European Journal of Operational Research*, 60 years following Harry Markowitz's contribution to portfolio theory and operations research, 234, no. 2 (16 April 2014): 356–71. <https://doi.org/10.1016/j.ejor.2013.10.060>.
- LAPFF. 'About | Fund & Pool Members | LAPFF'. Local Authority Pension Fund Forum. Accessed 9 August 2024. <https://lapfforum.org/about/fund-pool-members/>.
- . 'About | Mission | LAPFF'. LAPFF Forum. Accessed 8 August 2024. <https://lapfforum.org/about/>.
- LCP. 'LCP Analysis', 2024.
- LGPS. 'Guidance on the Creation and Operation of Local Pension Boards in England and Wales', 4 February 2015. <https://www.lgpslibrary.org/assets/ewsab/LPBv1.1t.pdf>.
- Local Authority Pension Fund Forum. 'Responsible Investment Policy Guide', September 2022. [https://lapfforum.org/wp-content/uploads/2022/09/LAPFF\\_Policies\\_Full\\_Version.pdf](https://lapfforum.org/wp-content/uploads/2022/09/LAPFF_Policies_Full_Version.pdf).
- Lukomnik, Jon, and James P. Hawley. *Moving Beyond Modern Portfolio Theory: Investing That Matters*. 1st ed. Routledge, 2021.
- Mankikar, Divya. 'Universal Ownership: Why Environmental Externalities Matter to Institutional Investors'. PRI Association and UNEP Finance Initiative, 2010. <http://www.ssrn.com/abstract=2222753>.
- Markowitz, Harry. 'Portfolio Selection'. *The Journal of Finance* 7, no. 1 (1952): 77–91. <https://doi.org/10.2307/2975974>.
- Masters, Brooke, and Patrick Temple-West. 'JPMorgan and State Street Quit Climate Group as BlackRock Scales Back'. *Financial Times*, 15 February 2024, sec. Fund management. <https://www.ft.com/content/3ce06a6f-f0e3-4f70-a078-82a6c265ddc2>.
- McKinsey. 'How Oil and Gas Companies Can Lead in the Energy Transition', 27 February 2023. <https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/how-oil-and-gas-companies-can-be-successful-in-renewable-power>.
- MSCI. 'Index Factsheet: MSCI ACWI Index (USD)'. MSCI, 31 July 2024. <https://www.msci.com/documents/10199/8d97d244-4685-4200-a24c-3e2942e3adeb>.
- Murray, Alison, and Sam Osborne. 'Report on the Actuarial Valuation of the West Yorkshire Pension Fund as at 31 March 2022'. Aon, 31 March 2023. <https://www.wypf.org.uk/media/khvf1mox/west-yorkshire-pension-fund-2022-actuarial-valuation-report-v2.pdf>.
- Norges Bank Investment Management. 'Ethical Exclusions', 10 May 2023. <https://www.nbim.no/en/responsible-investment/ethical-exclusions/>.
- Paleologo, Giuseppe A. *Advanced Portfolio Management: A Quant's Guide for Fundamental Investors*. First Edition. Hoboken, NJ: Wiley, 2021.
- Paris Aligned Asset Owners. 'Commitment – Paris Aligned Asset Owners'. Accessed 1 October 2024. <https://www.parisalignedassetowners.org/commitment/>.

- Paris Aligned Investors Initiative. 'NZIF 2.0: The Net Zero Investment Framework', June 2024. [https://www.parisalignedassetowners.org/media/2024/06/PAII\\_NZIF-2.0\\_240624\\_Final.pdf](https://www.parisalignedassetowners.org/media/2024/06/PAII_NZIF-2.0_240624_Final.pdf).
- Petzelt, Todd E. *Modern Portfolio Management: Moving Beyond Modern Portfolio Theory*. 1st ed. Wiley, 2021.
- PIRC. 'What We Do | Engagement'. PIRC, 2024. <https://www.pirc.co.uk/what-we-do/engagement/>.
- PRI Association. 'A Legal Framework for Impact'. Principles for Responsible Investment; UN Environment Programme; Generation Foundation. Accessed 7 August 2024. <https://www.unpri.org/download?ac=17214>.
- Quigley, Ellen, Emily Bugden, and Anthony Odgers. 'Divestment: Advantages and Disadvantages for the University of Cambridge'. SSRN Scholarly Paper. Rochester, NY, 1 October 2020. <https://papers.ssrn.com/abstract=3849513>.
- Railpen. 'Stewardship Report 2023', 2023. <https://cdn-suk-railpencom-live-001.azureedge.net/media/media/ivgnhsse/stewardship-report-2023.pdf>.
- Ritchie, Hannah, Pablo Rosado, and Max Roser. 'Energy Mix'. *Our World in Data*, 25 March 2024. <https://ourworldindata.org/energy-mix>.
- Robeco. 'Introducing Climate Beta: A Complementary Climate Risk Metric'. Indices Insights Summaries. Robeco, 31 March 2023. <https://assets.ctfassets.net/tl4x668xzide/5eHeDV71PxadJan6KWhlaw/312eddf3e12a60f826a585c5e95a551c/indices-insights-summaries-introducing-climate-beta-a-complementary-climate-risk-metric-march-2023.pdf>.
- Rogelj, Joeri, Alexander Popp, Katherine V. Calvin, Gunnar Luderer, Johannes Emmerling, David Gernaat, Shinichiro Fujimori, et al. 'Scenarios towards Limiting Global Mean Temperature Increase below 1.5 °C'. *Nature Climate Change* 8, no. 4 (April 2018): 325–32. <https://doi.org/10.1038/s41558-018-0091-3>.
- ShareAction. 'Introducing a Standardised Framework for Escalating Engagement with Companies: RISE Guidance Paper #2', December 2023. <https://cdn2.assets-servd.host/shareaction-api/production/resources/reports/RISE-paper-2.pdf>.
- . 'Undermining Transition, Risking Capital: RISE Guidance Paper #3 - the Need for a New Investor Blueprint for the Fossil Fuel Sector'. ShareAction, June 2024. [https://cdn2.assets-servd.host/shareaction-api/production/resources/reports/RISE-Paper-3\\_Undermining-transition-risking-capital.pdf](https://cdn2.assets-servd.host/shareaction-api/production/resources/reports/RISE-Paper-3_Undermining-transition-risking-capital.pdf).
- Shell plc. 'Annual Report and Accounts 2023', 31 December 2023. [https://reports.shell.com/annual-report/2023/\\_assets/downloads/shell-annual-report-2023.pdf](https://reports.shell.com/annual-report/2023/_assets/downloads/shell-annual-report-2023.pdf).
- Sjöström, Emma. 'Active Ownership on Environmental and Social Issues: What Works?' Mistra Center for Sustainable Markets; Stockholm School of Economics, 2020.
- Slager, Rieneke, Kevin Chuah, Jean-Pascal Gond, Santi Furnari, and Mikael Homanen. 'Tailor-to-Target: Configuring Collaborative Shareholder Engagements on Climate Change'. *Management Science* 69, no. 12 (December 2023): 7693–7718. <https://doi.org/10.1287/mnsc.2023.4806>.
- Taleb, Nassim Nicholas. *The Black Swan: The Impact of the Highly Improbable*. London: Penguin, 2008.
- Thinking Ahead Institute. 'Total Portfolio Approach: A Global Asset Owner Study Guide into Current and Future Asset Allocation Practices'. Willis Towers Watson, August 2019. [https://www.thinkingaheadinstitute.org/content/uploads/2020/11/Total\\_Portfolio\\_Approach-1.pdf](https://www.thinkingaheadinstitute.org/content/uploads/2020/11/Total_Portfolio_Approach-1.pdf).
- TPI. 'TPI's Methodology Report: Management Quality and Carbon Performance v5.0'. Transition Pathway Initiative, November 2023.
- Transition Pathway Initiative. 'Net Zero Standard of Oil & Gas'. Climate Action 100+; IIGCC, 31 October 2023.
- 'UK Corporate Governance Code 2024'. Financial Reporting Council, January 2024.
- UNFCCC. 'The Paris Agreement | UNFCCC'. UNFCCC, 2021. <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.
- United Nations Environment Programme. 'Emissions Gap Report 2024: No More Hot Air ... Please! With a Massive Gap between Rhetoric and Reality, Countries Draft New Climate Commitments'. Nairobi, 24 October 2024. <https://doi.org/10.59117/20.500.11822/46404>.
- USS. 'The Universities Superannuation Scheme (USS) Stewardship Code Report 2024', 2024. <https://www.uss.co.uk/-/media/project/ussmainsite/files/how-we-invest/uss-stewardship-code-report-2024.pdf?rev=eaabff7d2058488280f2550a624297b0>.
- WYPF. 'Investment Strategy Statement', February 2024. <https://www.wypf.org.uk/media/3595/wypf-investment-strategy-statement-2024-draft.pdf>.
- . 'Stewardship Code 2024'. West Yorkshire Pension Fund, 2024. [https://media.frc.org.uk/documents/stewardship\\_report\\_2024\\_final.pdf](https://media.frc.org.uk/documents/stewardship_report_2024_final.pdf).

## Our team

*John Clements FIA CFA*  
*Partner*

+44 (0)20 7432 0600  
[John.Clements@lcp.uk.com](mailto:John.Clements@lcp.uk.com)



*Claire Jones FIA*  
*Partner*

+44 (0)1962 873373  
[Claire.Jones@lcp.uk.com](mailto:Claire.Jones@lcp.uk.com)



*Drew Henley-Lock*  
*Principal*

+44 (0)20 7432 3788  
[Drew.Henley-Lock@lcp.uk.com](mailto:Drew.Henley-Lock@lcp.uk.com)



### The use of our work

This work (including any Appendices) has been produced by Lane Clark & Peacock LLP under the terms of our written agreement with the City of Bradford Metropolitan District Council as administering authority for the West Yorkshire Pension Fund ("Our Client").

This work (including any Appendices) is only appropriate for the purposes described and should not be used for anything else. It is subject to any stated limitations (eg regarding accuracy or completeness). For the avoidance of doubt, it does not include any stock recommendations and is intended to give guidance to WYPF to enable you to make decisions around UK fossil fuel investment. We accept no liability to anyone who is not WYPF.

### About Lane Clark & Peacock LLP

We are a limited liability partnership registered in England and Wales with registered number OC301436. LCP is a registered trademark in the UK and in the EU. All partners are members of Lane Clark & Peacock LLP. A list of members' names is available for inspection at 95 Wigmore Street, London, W1U 1DQ, the firm's principal place of business and registered office.

Lane Clark & Peacock LLP is authorised and regulated by the Financial Conduct Authority and is licensed by the Institute and Faculty of Actuaries for a range of investment business activities.

© Lane Clark & Peacock LLP 2024

<https://www.lcp.com/third-party-privacy-notice/emails-important-information/> contains important information about this communication from LCP, including limitations as to its use.

# *Appendix 1*



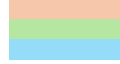
## Appendix 1: Possible assessment criteria for escalation framework, with illustrative results for BP and Shell

The tables below summarise illustrative assessments of BP and Shell under a possible engagement assessment framework, as outlined under Question 2. The analysis uses the latest assessments available under three external frameworks (CA100+, TPI and the Net Zero Standard on Oil and Gas) at 25 November 2024.

It should be noted that LCP does not provide stock-level investment advice and the analysis we lay out below should not be taken as a recommendation to buy or sell any securities.

### Key

Criteria treated as minimum expectations in the illustrative analysis  
 Criteria treated as ongoing expectations in the illustrative analysis  
 Criteria not used in the illustrative analysis



### Overall

(three external frameworks combined)

Assessment category		BP - count of indicators			Shell - count of indicators		
		Critical	Relevant	Less relevant	Critical	Relevant	Less relevant
Minimum standards	TRUE	27	0	0	26	0	0
Capital allocation	TRUE	0	3	0	0	3	0
Oversight and exec remuneration	TRUE	0	6	0	0	6	0
Alignment	TRUE	0	20	0	1	16	0
Other	TRUE	0	7	0	0	5	0
Less relevant	TRUE	0	0	11	0	0	6
Minimum standards	FALSE	2	0	0	2	0	0
Capital allocation	FALSE	0	5	0	0	5	0
Oversight and exec remuneration	FALSE	0	0	0	0	0	0
Alignment	FALSE	2	39	0	1	43	0
Other	FALSE	0	6	0	0	8	0
Less relevant	FALSE	0	0	12	0	0	17

Assessment category		BP - % of indicators met			Shell - % of indicators met		
		Critical	Relevant	Less relevant	Critical	Relevant	Less relevant
Minimum standards		93%	-	-	93%	-	-
Capital allocation		-	38%	-	-	38%	-
Oversight and exec remuneration		-	100%	-	-	100%	-
Alignment		0	34%	-	0.5	27%	-
Other		-	54%	-	-	38%	-
Less relevant		-	-	48%	-	-	26%

### Climate Action 100+

Climate Action 100+ framework only, based on publicly disclosed information by companies as of 9 June 2024

Assessment category		BP - count of indicators			Shell - count of indicators		
		Critical	Relevant	Less relevant	Critical	Relevant	Less relevant
Minimum standards	TRUE	16	0	0	15	0	0
Capital allocation	TRUE	0	0	0	0	0	0
Oversight and exec remuneration	TRUE	0	4	0	0	4	0
Alignment	TRUE	0	7	0	1	7	0
Other	TRUE	0	2	0	0	0	0
Less relevant	TRUE	0	0	6	0	0	3
Minimum standards	FALSE	2	0	0	2	0	0
Capital allocation	FALSE	0	0	0	0	0	0
Oversight and exec remuneration	FALSE	0	0	0	0	0	0
Alignment	FALSE	2	5	0	1	4	0
Other	FALSE	0	0	0	0	2	0
Less relevant	FALSE	0	0	7	0	0	10

Assessment category		BP - % of indicators met			Shell - % of indicators met		
		Critical	Relevant	Less relevant	Critical	Relevant	Less relevant
Minimum standards		89%	-	-	88%	-	-
Capital allocation		-	-	-	-	-	-
Oversight and exec remuneration		-	100%	-	-	100%	-
Alignment		0	58%	-	0.5	64%	-
Other		-	100%	-	-	0%	-
Less relevant		-	-	46%	-	-	23%

### Transition Pathway Initiative

TPI framework only, 1 November 2023 publication, MQ assessed 24 April 2023

Assessment category		BP - count of indicators			Shell - count of indicators		
		Critical	Relevant	Less relevant	Critical	Relevant	Less relevant
Minimum standards	TRUE	10	0	0	10	0	0
Capital allocation	TRUE	0	0	0	0	0	0
Oversight and exec remuneration	TRUE	0	2	0	0	2	0
Alignment	TRUE	0	2	0	0	2	0
Other	TRUE	0	3	0	0	2	0
Less relevant	TRUE	0	0	3	0	0	3
Minimum standards	FALSE	0	0	0	0	0	0
Capital allocation	FALSE	0	1	0	0	1	0
Oversight and exec remuneration	FALSE	0	0	0	0	0	0
Alignment	FALSE	0	1	0	0	1	0
Other	FALSE	0	0	0	0	1	0
Less relevant	FALSE	0	0	1	0	0	1

Assessment category		BP - % of indicators met			Shell - % of indicators met		
		Critical	Relevant	Less relevant	Critical	Relevant	Less relevant
Minimum standards		100%	-	-	100%	-	-
Capital allocation		-	0%	-	-	0%	-
Oversight and exec remuneration		-	100%	-	-	100%	-
Alignment		-	67%	-	-	67%	-
Other		-	100%	-	-	67%	-
Less relevant		-	-	-	-	-	-

Appendix 1: Possible assessment criteria for escalation framework, with illustrative results for BP and Shell (continued)

The following table sets out all the indicators used in the possible engagement assessment framework, with their values for BP and Shell at 25 November 2024.

External framework	Theme / Indicator	Number	Metric type	Question	Used in WYPF NZIF?	Minimum WYPF NZIF level	Assessment category	BP	Shell
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 1	Q1	n/a	Q1L0   Does the company acknowledge climate change as a significant issue for the business?	FALSE	n/a	Oversight and exec remuneration	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 1	Q2	n/a	Q2L1   Does the company recognise climate change as a relevant risk and/or opportunity for the business?	FALSE	n/a	Oversight and exec remuneration	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 1	Q3	n/a	Q3L1   Does the company have a policy (or equivalent) commitment to action on climate change?	TRUE	Committed	Minimum standards	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 2	Q4	n/a	Q4L2   Has the company set greenhouse gas emission reduction targets?	TRUE	Aligning	Minimum standards	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 2	Q5	n/a	Q5L2   Has the company published information on its Scope 1 and 2 greenhouse gas emissions?	TRUE	Aligning	Minimum standards	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 3	Q6	n/a	Q6L3   Has the company nominated a board member or board committee with explicit responsibility for oversight of the climate change policy?	FALSE	n/a	Minimum standards	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 3	Q7	n/a	Q7L3   Has the company set quantitative targets for reducing its greenhouse gas emissions?	TRUE	Aligning	Alignment	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 3	Q8	n/a	Q8L3   Does the company report on Scope 3 emissions?	TRUE	Aligning	Minimum standards	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 3	Q9	n/a	Q9L3   Has the company had its operational (Scope 1 and/or 2) greenhouse gas emissions data verified?	TRUE	Aligning	Minimum standards	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 3	Q10	n/a	Q10L3   Does the company support domestic and international efforts to mitigate climate change?	FALSE	n/a	Less relevant	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 3	Q11	n/a	Q11L3   Does the company have a process to manage climate-related risks?	FALSE	n/a	Less relevant	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 3	Q12	n/a	Q12L3   Does the company disclose materially important Scope 3 emissions?	TRUE	Aligning	Minimum standards	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 4	Q13	n/a	Q13L4   Has the company set long-term quantitative targets for reducing its greenhouse gas emissions?	TRUE	Aligning	Minimum standards	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 4	Q14	n/a	Q14L4   Does the company's remuneration for senior executives incorporate climate change performance?	FALSE	n/a	Minimum standards	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 4	Q15	n/a	Q15L4   Does the company incorporate climate change risks and opportunities in their strategy?	FALSE	n/a	Other	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 4	Q16	n/a	Q16L4   Does the company undertake climate scenario planning?	FALSE	n/a	Other	TRUE	FALSE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 4	Q17	n/a	Q17L4   Does the company disclose an internal price of carbon?	FALSE	n/a	Less relevant	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 4	Q18	n/a	Q18L4   Does the company disclose the actions necessary to meet its emissions-reduction targets?	TRUE	Aligned	Minimum standards	TRUE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 5	Q19	n/a	Q19L5   Does the company quantify the key elements of its emissions reduction strategy and the proportional impact of each action in achieving its targets?	TRUE	Aligned	Alignment	FALSE	TRUE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 5	Q20	n/a	Q20L5   Does the company's transition plan clarify the role that will be played by offsets and/or negative emissions technologies?	TRUE	Aligned	Alignment	TRUE	FALSE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 5	Q21	n/a	Q21L5   Does the company commit to phasing out capital expenditure on carbon intensive assets or products?	TRUE	Aligned	Less relevant	FALSE	FALSE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 5	Q22	n/a	Q22L5   Does the company align future capital expenditures with its long-term decarbonisation goals and disclose how the alignment is determined?	TRUE	Aligned	Capital allocation	FALSE	FALSE
Transition Pathway Initiative (01 November 2023)	Management Quality (v5.0) Level 5	Q23	n/a	Q23L5   Does the company ensure consistency between its climate change policy and the positions taken by trade associations of which it is a member?	FALSE	n/a	Other	TRUE	TRUE
Climate Action 100+ (9 June 2024)	Indicator 1 - Net Zero GHG Emissions by 2050 (or sooner) Ambition	1.1.a	n/a	Metric 1.1.a - The company has made a qualitative net zero GHG emissions ambition statement that explicitly includes at least 95% of its Scope 1 and 2 emissions.	TRUE	Committed	Minimum standards	TRUE	TRUE
Climate Action 100+ (9 June 2024)	Indicator 1 - Net Zero GHG Emissions by 2050 (or sooner) Ambition	1.1.b	n/a	Metric 1.1.b - The company's net zero GHG emission ambition covers the most relevant Scope 3 GHG emissions categories for the company's sector (where applicable).	TRUE	Committed	Minimum standards	TRUE	TRUE
Climate Action 100+ (9 June 2024)	Indicator 2 - Long-term (2036-2050) GHG Reduction Target(s)	2.1	n/a	Note: Metric 1.1.b is contingent on 1.1.a. See the Methodology Document (English) for more detail. Sub-indicator 2.1 - The company has set a long-term target for reducing its GHG emissions in the period between 2036 and 2050.	TRUE	Aligning	Minimum standards	TRUE	TRUE
Climate Action 100+ (9 June 2024)	Indicator 2 - Long-term (2036-2050) GHG Reduction Target(s)	2.2.a	n/a	Metric 2.2.a - The company has specified that this target covers at least 95% of its total Scope 1 and 2 emissions.	TRUE	Aligning	Alignment	TRUE	TRUE
Climate Action 100+ (9 June 2024)	Indicator 2 - Long-term (2036-2050) GHG Reduction Target(s)	2.2.b	n/a	Note: Metrics 2.2.a and 2.2.b are contingent on the results of Sub-indicator 2.1. See the Methodology Document (English) for more detail. Metric 2.2.b - The company's Scope 3 GHG reduction target covers at least the most relevant Scope 3 emissions categories for its sector and the company has published the methodology used to establish its Scope 3 target (where applicable).	TRUE	Aligning	Alignment	TRUE	TRUE
Climate Action 100+ (9 June 2024)	Indicator 2 - Long-term (2036-2050) GHG Reduction Target(s)	2.3	n/a	Note: Metrics 2.2.a and 2.2.b are contingent on the results of Sub-indicator 2.1. See the Methodology Document (English) for more detail. Sub-indicator 2.3 - The target (or, in the absence of a target, the company's latest disclosed GHG emissions intensity) is aligned with the goal of limiting global warming to 1.5°C.	TRUE	Aligning	Alignment	TRUE	TRUE
Climate Action 100+ (9 June 2024)	Indicator 2 - Long-term (2036-2050) GHG Reduction Target(s)	2.3	n/a	Note: Sub-indicator 2.3 is not currently conditional on 2.1 or 2.2. See the Methodology Document (English) for more detail.					
Climate Action 100+ (9 June 2024)	Indicator 3 - Medium-term (2028 to 2035) GHG Reduction Targets	3.1	n/a	In the absence of a credible 1.5°C scenario, companies have been measured against a best-available below 2°C scenario. Company assessments will be adjusted when a credible 1.5°C scenario becomes available.					
Climate Action 100+ (9 June 2024)	Indicator 3 - Medium-term (2028 to 2035) GHG Reduction Targets	3.2.a	n/a	Sub-indicator 3.1 - The company has set a medium-term target for reducing its GHG emissions in the period between 2028 and 2035. Metric 3.2.a - The company has specified that its medium-term GHG reduction target covers at least 95% of its total Scope 1 and 2 emissions.	TRUE	Aligning	Minimum standards	TRUE	TRUE
Climate Action 100+ (9 June 2024)	Indicator 3 - Medium-term (2028 to 2035) GHG Reduction Targets	3.2.b	n/a	Note: Metrics 3.2.a and 3.2.b are contingent on the results of Sub-indicator 3.1. See the Methodology Document (English) for more detail. Metric 3.2.b - The company's medium-term Scope 3 GHG reduction target covers at least the most relevant Scope 3 emissions categories for its sector and the company has published the methodology used to establish its Scope 3 target (where applicable).	TRUE	Aligning	Minimum standards	TRUE	TRUE
Climate Action 100+ (9 June 2024)	Indicator 3 - Medium-term (2028 to 2035) GHG Reduction Targets	3.3	n/a	Note: Metrics 3.2.a and 3.2.b are contingent on the results of Sub-indicator 3.1. See the Methodology Document (English) for more detail. Sub-indicator 3.3 - The target (or, in the absence of a target, the company's latest disclosed GHG emissions intensity) is aligned with the goal of limiting global warming to 1.5°C.	TRUE	Aligning	Alignment	FALSE	FALSE
Climate Action 100+ (9 June 2024)	Indicator 3 - Medium-term (2028 to 2035) GHG Reduction Targets	3.4	n/a	Note: Sub-indicator 3.3 is not currently conditional on 3.1 or 3.2. See the Methodology Document (English) for more detail. Sub-indicator 3.4 - The company already states its medium-term GHG reduction target on an absolute basis; or converts its medium-term GHG intensity target into projected absolute emissions.	TRUE	Aligning	Alignment	Not Assessed	Not Assessed
Climate Action 100+ (9 June 2024)	Indicator 3 - Medium-term (2028 to 2035) GHG Reduction Targets	3.4	n/a	Note: Sub-indicator 3.4 applies to a company's medium-term target for its Scope 1 and 2 emissions (Metric 3.2.a) stated on an intensity basis.					
Climate Action 100+ (9 June 2024)	Indicator 4 - Short-term (up to 2027) Reduction Target(s)	4.1	n/a	If a company has also set a GHG reduction target for its Scope 3 emissions (i.e., meets the criteria of both Metrics 3.2.b and 3.2.a) on an intensity basis, this Sub-indicator applies to both the company's Scope 1 and 2, and Scope 3 target. Companies that have only set a Scope 3 target (3.2.b) and no Scope 1 and 2 target (3.2.a) are assessed solely on their Scope 3 target (3.2.b).					
Climate Action 100+ (9 June 2024)	Indicator 4 - Short-term (up to 2027) Reduction Target(s)	4.2.a	n/a	Sub-indicator 4.1 - The company has set a short-term target for reducing its GHG emissions in the period up to 2027. Metric 4.2.a - The company has specified that its short-term GHG reduction target covers at least 95% of its total Scope 1 and 2 emissions.	TRUE	Aligning	Alignment	TRUE	TRUE
Climate Action 100+ (9 June 2024)	Indicator 4 - Short-term (up to 2027) Reduction Target(s)	4.2.b	n/a	Note: Metrics 4.2.a and 4.2.b are contingent on the results of Sub-indicator 4.1. See the Methodology Document (English) for more detail. Metric 4.2.b - The company's short-term Scope 3 GHG reduction target covers at least the most relevant Scope 3 emissions categories for its sector and the company has published the methodology used to establish its Scope 3 target (where applicable).	TRUE	Aligning	Alignment	TRUE	TRUE
Climate Action 100+ (9 June 2024)	Indicator 4 - Short-term (up to 2027) Reduction Target(s)	4.3	n/a	Note: Metrics 4.2.a and 4.2.b are contingent on the results of Sub-indicator 4.1. See the Methodology Document (English) for more detail. Sub-indicator 4.3 - The company's last disclosed carbon intensity OR the company's expected carbon intensity derived from their short-term GHG target is aligned with or below the trajectory (for its respective sector) to achieve the Paris Agreement goal of limiting global temperature increase to 1.5°Celsius with low or no overshoot (equivalent to IPCC Special Report on 1.5°Celsius pathway P1 or net zero emissions by 2050) in 2027.	TRUE	Aligning	Alignment	FALSE	FALSE
Climate Action 100+ (9 June 2024)	Indicator 4 - Short-term (up to 2027) Reduction Target(s)	4.3	n/a	Note: Sub-indicator 4.3 is not currently conditional on 4.1 or 4.2. See the Methodology Document (English) for more detail.					
Climate Action 100+ (9 June 2024)	Indicator 5 - Decarbonisation Strategy	5.1.a	n/a	In the absence of a credible 1.5°C scenario, companies have been measured against a best-available below 2°C scenario. Company assessments will be adjusted when a credible 1.5°C scenario becomes available. Metric 5.1.a - The company identifies the set of actions it intends to take to achieve its GHG reduction targets over the targeted timeframes. These actions clearly refer to the main sources of the company's GHG emissions, including Scope 3 emissions (where applicable).	TRUE	Aligned	Alignment	TRUE	TRUE
Climate Action 100+ (9 June 2024)	Indicator 5 - Decarbonisation Strategy	5.1.a	n/a	Note: Decarbonisation strategies are separately captured in relation to each target timeframe (medium or long-term). Metric 5.1.a is contingent on Sub-indicators 2.1 and 3.1. See the Methodology Document (English) for more detail.					





Appendix 1: Possible assessment criteria for escalation framework, with illustrative results for BP and Shell (continued)

External framework	Theme / indicator	Number	Metric type	Question	Used in WYPF NZIF?	Minimum WYPF NZIF level	Assessment category	BP	Shell
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.i.ii.a	Disclosure	The company discloses the total contribution of neutralising measures to the target (in MCO2e) in 5.1.c separately for long- and medium-term targets	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.i.ii.b	Alignment	The total contribution of neutralising measures is less than 50%	FALSE	n/a	Less relevant	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.i.ii.c	Disclosure	The company discloses the contribution of CCS to long-term emission target in either % or CO2 as appropriate	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.i.ii.d	Disclosure	The company discloses the contribution of offsets (nature-based solutions) to long-term emission target in either % or CO2 as appropriate	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.i.ii.e	Disclosure	Where the company has mentioned it will rely on other (technology-based) Carbon Dioxide Removal solutions such as BECCS and DACCS to long-term emission target, it has fully disclosed the contribution of in either % or CO2 as appropriate	FALSE	n/a	Alignment	Not applicable	Not applicable
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.i.ii.f	Disclosure	The company discloses the contributions of actions by third parties to long-term emission target in both % or CO2 as appropriate (even when that contribution is zero)	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.i.ii.g	Disclosure	The company discloses the contribution of CCS to medium-term target in either % or CO2 as appropriate	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.i.ii.h	Disclosure	The company discloses the contribution of offsets (nature-based solutions) to medium-term emission target in either % or CO2 as appropriate	FALSE	n/a	Alignment	TRUE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.i.ii.i	Disclosure	Where the company has mentioned it will rely on other (technology-based) Carbon Dioxide Removal solutions such as BECCS and DACCS to medium-term emission target, it has fully disclosed the contribution of in either % or CO2 as appropriate	FALSE	n/a	Alignment	Not applicable	Not applicable
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.i.ii.j	Disclosure	The company discloses the contributions of actions by third parties to medium-term emission target in both % or CO2 as appropriate (even when that contribution is zero)	FALSE	n/a	Alignment	FALSE	TRUE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.i.ii.k	Disclosure	The company publishes detailed information setting out its offset strategy, specifying the costs (Stonne and total assumptions), accounting approach, type, mix, storage, and provider	FALSE	n/a	Alignment	Not applicable	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.i.ii.l	Disclosure	The company publishes detailed information on all the technology solutions it is planning to deploy (CCUS/BECCS/DACCS) specifying the amount it intends to invest and the expected timing for operational availability	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.i.ii.m	Disclosure	The company has clearly set out the actions it is expecting others to take, how it will account for them, etc	FALSE	n/a	Less relevant	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iii.a	Climate Solutions	The company has set out a definition of "climate solutions/green energy" that it uses to consistently report both investment in low carbon energy production, increases in production capacity, output, and revenues as well as sales of low carbon energy	FALSE	n/a	Alignment	FALSE	TRUE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iii.b	Climate Solutions	The definition of "climate solutions/green energy" excludes unabated fossil fuel-based products and for fuels like hydrogen and bioenergy references emission thresholds consistent with established taxonomies	FALSE	n/a	Alignment	FALSE	TRUE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iii.c	Climate Solutions	The company has set a target to grow total green energy production (in TJ or KWh, see paragraph 97, from investment in new capacity + long-term PPAs) with at least short- and medium-term target components and established base year and base year values	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iii.d	Climate Solutions	The targeted growth in total green energy production (short- and medium-term trajectory) is consistent with 1.5° scenario as modelled by the IEA	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iii.e	Climate Solutions	The company has set a quantified target (target/base year and values) to grow solar AND/OR wind energy production (measured in TWh or GJ)	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iii.f	Climate Solutions	The targeted growth in solar AND/OR wind energy production (short- and medium-term trajectory) is consistent with IEA's NZE 1.5° scenario	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iii.g	Climate Solutions	The company has given guidance on total annual sales of "green energy" (in TJ or TWh) for the year specified in its long-term emissions target (i.e. sales from investing in generation capacity/PPAs or from green energy generated by third parties)	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iii.h	Climate Solutions	The company has given guidance on total annual sales of "green energy" (in TJ or TWh) for the year specified in its medium-term emissions target (i.e. sales from investing in generation capacity/PPAs or from green energy generated by third parties)	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iv.a	Disclosure	Is a member of OGMP 2.0 and has made a public commitment to the "gold standard" of constant improvements in methane reporting covering all assets in-line with this initiative	FALSE	n/a	Minimum standards	TRUE	TRUE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iv.b	Disclosure	It has explicitly set out the date when, consistent with OGMP membership commitments (i.e. within three years of it becoming a member), it will publish an independent and externally verified assessment of its methane emissions which integrates direct measurement with estimations (OGMP Level 5)	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iv.c	Disclosure	Methane emissions are disclosed consistent with OGMP level 5, both on an absolute basis (in metric tonnes) and intensity basis (in ICH4 per PJ of total upstream production). An additional energy-based denominator should be disclosed for mid-stream or distribution companies as appropriate. The denominator of any intensity target should be clearly disclosed	FALSE	n/a	Other	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iv.d	Disclosure	The strategy to reduce methane emissions is clearly stated and references the contribution of AND action on emission sources (venting, flaring and leaks), AND prioritisation, AND coverage, AND the use of best available measurement technology	FALSE	n/a	Alignment	TRUE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iv.e	Disclosure	The company commits to zero routine flaring by 2030 in line with World Bank and UN initiative and minimise non-routine flaring	FALSE	n/a	Alignment	TRUE	TRUE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iv.f	Disclosure	Company has set a medium-term methane emissions reductions target stating a base year, base year value, target year, target year reduction with both absolute and intensity values and an interim milestone	FALSE	n/a	Alignment	TRUE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.iv.g	Alignment	The methane emissions pathway indicated in f) is aligned with the relevant benchmark	FALSE	n/a	Alignment	Under development	Under development
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.a	Disclosure	The company acknowledges the need for substantial reductions in fossil fuel production across the industry by 2050 and that those reductions need to begin before 2030, particularly for oil	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.b	Disclosure	Gives guidance on its annual long-term oil production (for the year specified in its long-term emissions target), expressed either in energy units (boe or TJ) or as a % or absolute change from a stated base year value	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.c	Disclosure	Gives guidance on its annual long-term gas production (for the year specified in its long-term emissions target), expressed either in energy units (boe or TJ) or as a % or absolute change from a stated base year value	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.d	Disclosure	Gives guidance on annual combined long-term oil and gas production (for the year specified in its long-term emissions target), expressed either in energy units (boe or TJ) or as a % or absolute change from a stated base year value	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.e	Disclosure	Gives guidance on its annual medium-term oil production (for the year specified in its medium-term emissions target), expressed either in energy units (boe or TJ) or as a % or absolute change from a stated base year value	FALSE	n/a	Alignment	TRUE	TRUE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.f	Disclosure	Gives guidance on its annual medium-term gas production (for the year specified in its medium-term emissions target), expressed either in energy units (boe or TJ) or as a % or absolute change from a stated base year value	FALSE	n/a	Alignment	TRUE	TRUE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.g	Disclosure	Gives guidance on annual combined medium-term oil and gas production (for the year specified in its medium-term emissions target), expressed either in energy units (boe or TJ) or as a % or absolute change from a stated base year value	FALSE	n/a	Alignment	Not applicable	Not applicable
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.h	Alignment	Is the long-term production plan for oil consistent with the IEA NZE (-78% by 2050 from 2019 levels)	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.i	Alignment	Is the long-term production plan for gas consistent with the IEA NZE (-77% by 2050 from 2019 levels)	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.j	Alignment	Is the long-term combined annual production plan for gas and oil consistent with the IEA NZE (-77% by 2050 from 2019 levels, assuming a 50% split)	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.k	Alignment	Is the medium-term production plan for oil consistent with the IEA NZE (-22% by 2030 from 2019 levels)	FALSE	n/a	Alignment	FALSE	TRUE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.l	Alignment	Is the medium-term production plan for gas consistent with the IEA NZE (-15% by 2030 from 2019 levels)	FALSE	n/a	Alignment	TRUE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.m	Alignment	Is the medium-term combined annual production plan for gas and oil consistent with the IEA NZE (-19% by 2030, assuming a 50% split)	FALSE	n/a	Alignment	Not applicable	Not applicable
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.n	Disclosure	If either 5.v.h-m are No, has the company given a reason?	FALSE	n/a	Other	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.o	Disclosure	If the oil pathway is not aligned with NZE (5.v.h or 5.v.k is No) the company has given guidance on the average breakeven cost of its currently sanctioned oil production (\$ per barrel)	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.p	Alignment	The average breakeven cost of its currently sanctioned Oil production (\$ per barrel) is consistent with a net zero scenario	FALSE	n/a	Alignment	Under development	Under development
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.q	Disclosure	If the gas pathway is not aligned with NZE (5.v.i or 5.v.l is No), the company has given guidance on an average breakeven cost of its currently sanctioned gas production (\$ per barrel), including a relevant regional breakdown	FALSE	n/a	Less relevant	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Decarbonisation strategy	5.v.r	Alignment	The average breakeven cost of its currently sanctioned gas production (\$ per barrel) is consistent with a net zero scenario	FALSE	n/a	Alignment	Under development	Under development
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.a	Disclosure	The company discloses total group capex in both the last financial year and a forward-looking guidance (minimum 3 years ahead and specifying the number of years included)	FALSE	n/a	Capital allocation	TRUE	TRUE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.b	Disclosure	The company discloses capex in all fossil fuel activities in both the last financial year and a forward-looking guidance (minimum 3 years ahead)	FALSE	n/a	Capital allocation	TRUE	TRUE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.c	Disclosure	The company discloses upstream oil and gas capex in the last financial year and a forward-looking guidance (minimum 3 years ahead)	FALSE	n/a	Capital allocation	FALSE	TRUE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.d	Disclosure	The company discloses exploration capex (i.e. non-maintenance of existing oil and gas facilities) in the last financial year and a forward-looking guidance (minimum 3 years ahead)	FALSE	n/a	Capital allocation	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.e	Disclosure	If production decline is not consistent with IEA NZE, the company discloses current and forward-looking guidance on long-lived greenfield capex	FALSE	n/a	Capital allocation	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.f	Disclosure	If reductions in oil production (if either 5.v.h or 5.v.k is scored as "No") are not consistent with IEA NZE, the company has disclosed the estimated pre-FID oil pipeline ranked by cost sufficiently low cost?	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.g	Alignment	Is the pre-FID oil pipeline ranked by cost sufficiently low cost?	FALSE	n/a	Alignment	Under development	Under development
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.h	Disclosure	If reductions in gas production are not consistent with IEA NZE (if either 5.v.i or 5.v.l is scored as "No"), the company has disclosed the estimated breakeven cost of all pre-FID gas pipeline ranked by cost	FALSE	n/a	Less relevant	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.i	Alignment	Is the pre-FID gas pipeline ranked by cost sufficiently low cost?	FALSE	n/a	Less relevant	Under development	Under development
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.ii.a	Climate Solutions	The company discloses total investment in "green" energy production in both the last financial year and a forward-looking guidance (minimum three years ahead)	FALSE	n/a	Capital allocation	TRUE	FALSE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.ii.b	Climate Solutions	The company discloses a target to increase PV (or combined PV / wind) generation capacity from a stated base year and value	FALSE	n/a	Alignment	TRUE	FALSE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.ii.c	Climate Solutions	The company discloses a target to increase wind generation capacity from a stated base year and value	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.ii.d	Climate Solutions	The company discloses a target to increase bioenergy production capacity from a specified base year and value	FALSE	n/a	Alignment	TRUE	FALSE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.i.ii.e	Climate Solutions	The company discloses a target to increase low-carbon hydrogen production capacity from a specified base year and value	FALSE	n/a	Alignment	TRUE	FALSE

Appendix 1: Possible assessment criteria for escalation framework, with illustrative results for BP and Shell (continued)

External framework	Theme / indicator	Number	Metric type	Question	Used in WYPF NZIF?	Minimum WYPF NZIF level	Assessment category	BP	Shell
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.ii.f	Climate Solutions	Is the PV (blended PV/Wind) capacity target consistent with IEA NZE?	FALSE	n/a	Alignment	TRUE	FALSE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.ii.g	Climate Solutions	Is the wind production capacity target (6.ii.c) consistent with IEA NZE?	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.ii.h	Climate Solutions	Is the bioenergy capacity target (6.ii.d) consistent with IEA NZE?	FALSE	n/a	Alignment	TRUE	FALSE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.ii.i	Climate Solutions	Is the low-carbon hydrogen capacity target (6.ii.e) consistent with IEA NZE?	FALSE	n/a	Alignment	Under development	Under development
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.iii.a	Disclosure	The company discloses investment (including any capitalised R&D) in all appropriate abatement technology in most recent financial year and a forward-looking guidance (min. 3 yrs ahead)	FALSE	n/a	Capital allocation	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	Capital Allocation	6.iii.b	Disclosure	The company discloses the total current abatement capacity and expected capacity at the end of the investment (such that the increase can be calculated)	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	TCFD disclosure	10.i.a	Disclosure	Disclose all externally sold energy. This should be a comprehensive metric covering all forms of energy sales on both an equity and operational boundary and on a primary basis with no fossil fuel equivalent (FFE) adjustments and exclude non-energy and financial trading.	FALSE	n/a	Alignment	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	TCFD disclosure	10.i.b	Disclosure	Assumptions on the sales of "nonenergy" products and the impact of the exclusion are disclosed	FALSE	n/a	Other	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	TCFD disclosure	10.i.c	Disclosure	Assumptions on any "financial trading" volumes and the impact of the exclusion should be disclosed	FALSE	n/a	Other	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	TCFD disclosure	10.i.d	Disclosure	Any treatment of FFE either in the stated energy figure or targets is clearly disclosed	FALSE	n/a	Other	FALSE	FALSE
Net Zero Oil & Gas (March 2024)	TCFD disclosure	10.ii.a	Disclosure	Disclose net emissions from all externally sold energy. This should be disclosed on the same (comprehensive) footprint used for energy covering all emission scopes and greenhouse gases (methane, as well as CO2).	FALSE	n/a	Other	TRUE	TRUE
Net Zero Oil & Gas (March 2024)	TCFD disclosure	10.ii.b	Disclosure	The emissions data has been externally and independently verified	FALSE	n/a	Other	TRUE	TRUE
Net Zero Oil & Gas (March 2024)	TCFD disclosure	10.ii.c	Disclosure	The difference between gross and net emissions is explicitly stated	FALSE	n/a	Other	FALSE	TRUE