

The tip of the iceberg

How UK institutional investors are responding to climate risks

December 2021



Introduction

The IPCC's sixth climate change report¹ published in August 2021 gave a clear statement on the realities and risks of climate change.

But what could the government policy response to this mean for investors looking to manage risks and fulfil fiduciary duties, and where do the opportunities exist for investors?

We have carried out an extensive climate risk profiling of a large dataset of UK institutional investors, and three themes emerge:

Risks - find them, understand them. Institutional investors need a framework for quickly understanding where their greatest climate vulnerabilities might lie, that takes into account their asset allocation. Asset managers need to come to the party with better data and disclosures, particularly in multi-asset and private markets.

Net Zero - the standard for investor climate action and risk management. We find that on average 75% of institutional investor portfolios are held in asset classes where clear pathways exist to get to Net Zero by 2050; this can help these institutional investors manage climate risks. A good deal of progress can be made quickly, building on independent publicly available work.

Opportunities - a low carbon transition means a once in a generation flow of capital. This could create many opportunities if managed correctly and if governments and regulators make available the right type of assets to suit investors' needs.

¹ <https://www.ipcc.ch/assessment-report/ar6/>

LCP has found that:



UK institutional investors today hold more in bonds (corporate bonds and gilts) than they do in equities, suggesting that bonds are fast becoming the largest area of climate vulnerability, especially in a world of ultra-low bond yields (are climate risks fairly compensated in a low yield world?)



UK institutional investors hold 75% of their portfolios in asset classes that already have realistic pathways to Net Zero emissions and therefore potential to lower climate risks.



of UK institutional investors could significantly reduce their climate risk exposure over the next decade with two relatively simple asset changes (to their equity and corporate bond holdings).



of UK institutional investors hold more than a tenth of their assets in private markets or multi-asset mandates where there are question marks which need addressing over the transparency and availability of data.



The most well-known equity market climate risks are just the tip of the iceberg for UK investors with potentially greater risks in credit, and in private markets where data on emissions and company business plan alignment is generally unavailable.



The trend in UK investors' asset allocation suggests a shifting pattern of climate risks away from the most visible (equities) and toward the less visible (fixed income and private markets).



of our sample of UK institutional investors have 'significant' climate risks in their portfolios, while only 10% have low climate risk, based on analysis of LCP's proprietary Visualise dataset covering 321 UK institutional investors.



Key findings

Conclusions for institutional investors

Climate risks come in a variety of forms, and may change significantly if your asset allocation evolves. One option is to focus on your strategy today, another is to focus on the strategy you are moving to. We recommend prioritising the latter.

Most institutional investors in our dataset hold well over half of their assets (c75% on average) in three asset classes (equity, corporate bonds and gilts) that could be allocated more effectively to align with Net Zero over time and therefore lower the climate risk in the institutional investor's overall portfolio substantially.

- In equities there is an extensive and rapidly growing range of low carbon and transition-aligned funds to choose from (some better than others), which we can help you select.
- On the credit side you may have the option of a pooled fund, or a segregated account. If your credit assets are already managed on a segregated basis, it is possible to work with the existing manager(s) to establish alternative guidelines to reflect a lower carbon portfolio pathway. Alternatively, you could select a new manager that has skills in this area.

A simple approach to dissecting your portfolio into different areas of climate risk can be an effective way of prioritising your climate risk management actions, without getting bogged down in the detail too soon.

- With the UK Government enshrining a Net Zero 2050 commitment in law, gilts can be considered aligned as things stand today. The challenge will be holding the Government accountable to meeting this commitment. Studies show there is much to be done here.

Identifying the two or three most pressing areas of climate risk in your portfolio is relatively straightforward.





Key findings

Conclusions for asset managers

Our analysis highlights a pressing need for better data and understanding in private markets, and more transparency in all forms of multi-asset funds for institutional investors to better understand climate risks and opportunities in these areas. This is in line with the FCA consultation on fund-level climate reporting. We would like to see asset managers:

- Taking a clearer stance on Net Zero and how they view alignment, particularly where they manage private market assets.
- Highlighting to clients how they should think about climate risk in their portfolio and show where the highest risks are likely to occur.
- Communicating to clients how managers are assessing and managing climate risk on new investments into the portfolio.
- Developing frameworks for multi-asset portfolios that help clients understand where the climate risks and opportunities lie in their funds, integrating data in the best way possible.

In actively managed equity and credit strategies, better reporting of carbon intensity and alignment metrics would help investors compare mandates and take a more informed overall view on their portfolio.

- We would like to see reporting of portfolio companies' science-based targets become standard in actively managed portfolios.

Better frameworks should be developed for engagement with corporate bond issuers. Buyers of bonds provide much of the primary capital into those sectors most sensitive to the transition. Although bond holders lack the voting power of equity holders, they can vote with their feet in supporting new financings. Better frameworks to set expectations, redlines and accountability to issuers are badly needed for investors to exercise their power here.



We would like to see reporting of portfolio companies' science-based targets become standard in actively managed portfolios.



Key findings

Conclusions for government and regulators

Global standards on climate reporting are urgently needed to empower investors to properly analyse and make the right choices with respect to their portfolios.

- There is already a lot of work underway in this space, such as the G7's backing of mandatory climate reporting under the Task Force on Climate-Related Financial Disclosures (TCFD).
- There will need to be reporting by both companies and asset managers.

Climate regulations must be designed to lead to real-world change and not just decarbonisation of portfolios in a way that does not help to meet the Paris goals.

- This requires careful consideration of the right targets for investors, eg measures of portfolio company alignment, and not just a focus on portfolio emissions.

Responsible investment initiatives and consultations are placing a real administrative burden on institutional investors. There is a huge and growing volume of paperwork and form-filling, so efforts should be made to streamline these and any new initiatives should build on what exists, not add to it.

Conclusions for advisers

Simple frameworks for assessing climate risk at an overall institutional investor level are sorely needed to grapple with this complex problem but need not be hugely complex themselves to make progress.

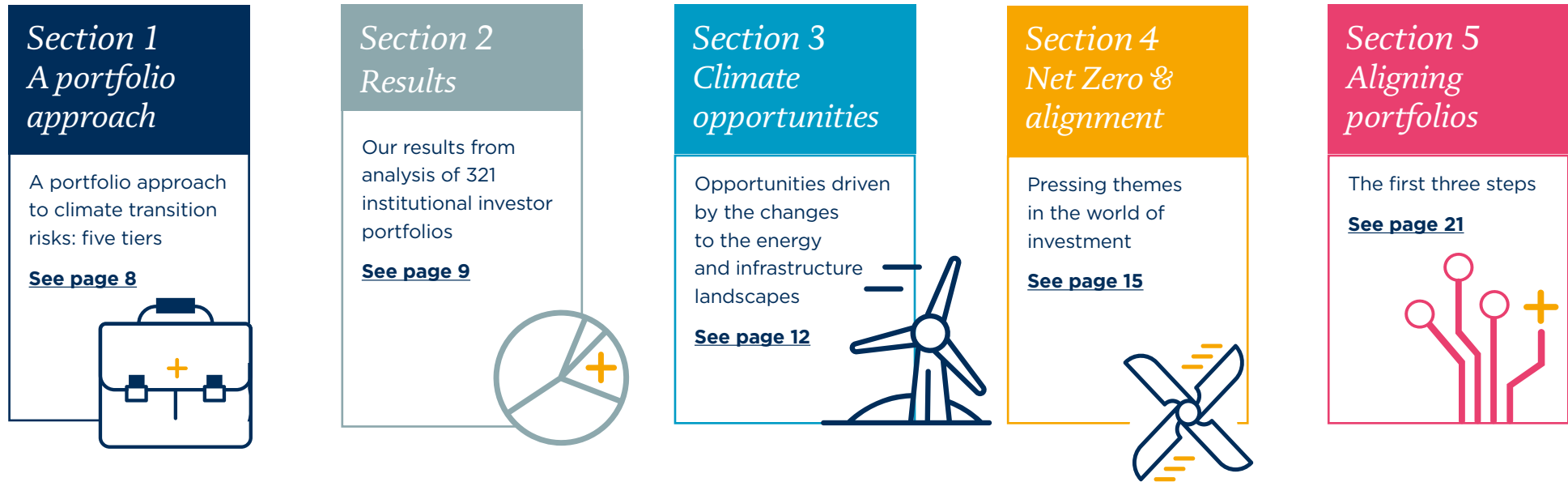
Many existing independent and freely available tools exist which can be adapted into usable frameworks without the development of a lot of additional intellectual property. These include the Transition Pathway Initiative (TPI), Climate Action 100+ and the Science-Based Targets initiative (see pages 19 and 20 for more details).

Carbon emissions and intensity are a good starting point for understanding climate risk but are far from the whole picture. Other metrics and scores need to be brought into the picture.

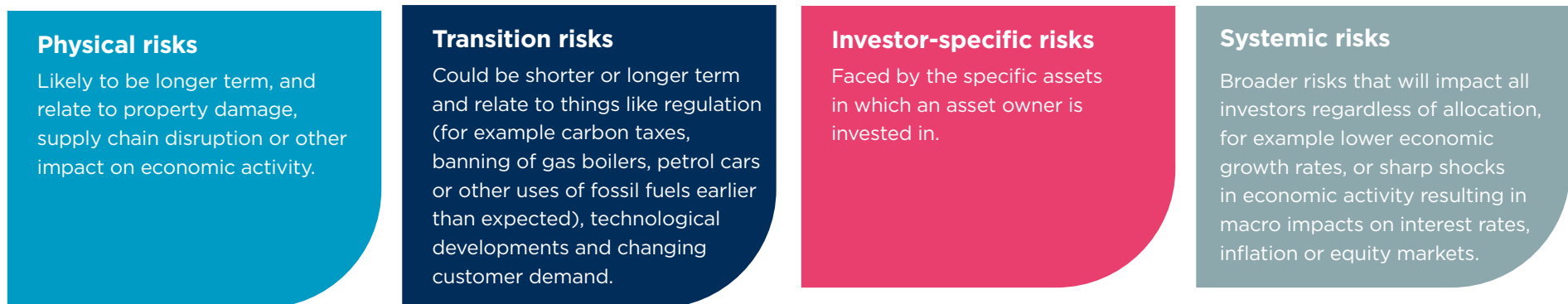




Overview of this paper



One key aspect of investigating climate risk is to consider the different ways this can manifest:





Overview of this paper continued

By layering our judgement of the presence of climate risks in each asset class over each institutional investor's strategic asset allocation, we identified five different classes of climate risk that are likely to be present across investor portfolios:

1. Equity risk

Probably poses the largest risk in £ terms, although tends to be most present for investors with the longest investment timescales, and needs to be set in context of the natural risk of equities that are expected to experience significant volatility which most investors will be prepared for. Crucially equities also carry substantial upside potential (which bonds do not). Also, many UK institutional investors have plans to move assets away from equities over the next decade, reducing their exposures to this type of risk.

2. Credit risk

Potentially the most underappreciated class of climate risk and most likely, in our view, to cause a significant negative shock. Many UK investors are set to increase allocations to corporate bonds. Even today, nearly half hold more in corporate bonds than equities, and with spread levels reaching their lowest point for more than a decade there is a question mark over whether any climate transition risks are realistically priced within corporate bonds. Recent work by the Bank of England² explicitly suggested that such risks are **not priced in**, while the recent scenarios published by the Bank considered a carbon price of up to \$1000/tonne³, which represents a lot of potential climate risk downside that may not be priced into yields today. Unlike equities, corporate bonds do not carry any potential upside beyond their yield. If carbon prices were to rise to this level it is likely that many investment grade issuers today would be at risk of losing that rating as they would face significant profit margin pressures. Corporate bond portfolios also typically carry a far greater weighting to those sectors like utilities and industrials that are most material to a low carbon transition and hence potentially most prone to climate related risks.

Because of the rising allocation to this asset class and the under-the-radar nature of this risk we believe this is potentially the most significant class of climate risk faced by investors.

3. Lack of data

Many UK institutional investors have allocated to private markets over the last decade, particularly private debt. The average allocation here is not large – but where held this can be a significant chunk of scheme assets (10-20%) and being illiquid these commitments are often made for many years. There can be significant climate risk here as the data availability to make any judgement around carbon intensity or climate alignment tends to not exist at all. This lack of data is a problem on two fronts: it is both hard to know whether risks exist or not; and it is hard to quantify and address them.

4. Lack of transparency

Another popular allocation choice for many schemes has been allocating to multi-asset and/or total return funds with a broad mandate such as diversified growth funds or multi-asset credit. The presence of different asset classes in one fund complicates the picture and may make it harder to get a handle on the overall climate exposures, even if there is data for the majority of assets. The presence of derivatives and emerging market assets adds another layer of complexity due to difficulties accessing data.

5. Asset transition risk

This is potentially the most complex class of risk to get to grips with as it is associated with investors undergoing a significant strategic rotation in their assets over the next decade, which is the case with many defined benefit pension schemes. The next decade is an important time period to consider as research has suggested the period to 2030 is crucial for lowering the overall temperature rise of the planet. Here, investors are potentially exposed to all of the risk classes (1) – (4) identified at different times so it is potentially a real challenge to correctly identify where to focus time and effort. We recommend focusing more on the portfolio into which the investor is transitioning, rather than the portfolio today. Asset rotations also present potential to benefit from opportunities presented by the transition to a low carbon economy, for investors that can identify the relevant issues and that have appointed managers with the right knowledge and mandate to do so.

² <https://www.bankofengland.co.uk/paper/2021/options-for-greening-the-bank-of-englands-corporate-bond-purchase-scheme>

³ <https://www.bankofengland.co.uk/stress-testing/2021/key-elements-2021-biennial-exploratory-scenario-financial-risks-climate-change>



A portfolio approach to climate transition risks: five tiers

Sophisticated approaches to measuring climate risk have been developed⁴ and applied with success in some asset classes, but a common shortcoming of these approaches is that they do not stretch across all asset classes in a portfolio. This means that investors lack a 360° view of their potential climate exposures, even at a simple level.

LCP has developed a five-tier scale to provide a straightforward way to triage an institutional investor's exposure to climate related risks in their portfolio using the high-level asset allocation.

We determine these tiers based on three criteria:

- The availability, or otherwise, of data to assess climate risks (allocating asset classes to the lowest tier if data is unavailable).
- The overall carbon intensity of the asset class as determined by commonly used benchmark indices.
- The presence of climate opportunities within the asset class on average, such as due to innovation prompted by a response to climate risks (allocating to the highest tier for the portion representing climate opportunities).

This gives a very quick and easy way of highlighting which parts of the portfolio to undertake further detailed, security level analysis to determine risks more precisely, or where the efforts should be put in terms of obtaining more data from managers.

This does not give a definitive view of climate risk, but it does help institutional investors to prioritise their key actions.

Using historical data from the PPF Purple Book we can also gain insight into how UK investors' exposure to climate risk has changed over recent years: the current trend is for climate risks to shift from equities into credit and private markets, which changes the nature of climate risks while slightly reducing the overall potential for impact.

⁴ <https://www.unepfi.org/wordpress/wp-content/uploads/2021/02/UNEP-FI-The-Climate-Risk-Landscape.pdf>

⁵ Carbon intensity refers to scope 1 & 2 emissions only

Tier 5: Climate investment opportunities

Tier 4: Climate risks moderate

Equivalent to portfolio CO₂ intensity⁵ above 40T/\$m sales

Tier 3: Climate risks likely

Equivalent to portfolio CO₂ intensity above 130T/\$m sales

Tier 2: Climate risks high

Equivalent to portfolio CO₂ intensity above 180T/\$m sales

Tier 1: No data or data not good enough today





2.7/5

The average DB pension fund in our data set scored 2.7 out of 5, 50% scored below 2.7 and only 10% above 3.5

Our results from analysis of 321 institutional investor portfolios

	Average LCP data set allocation	PPF Purple Book allocation (2020)	PPF Purple Book allocation (2011)	Climate risk tier ^(c) (and potential improvement using climate focused funds)
Developed Equities	21%	20% ^(a)	27% ^(a)	3 (potentially 4 or 5) ^(d)
Emerging Market Equities	2%			2 (potentially 4) ^(e)
Multi-Asset ^(b)	12%	7%	7%	1
Investment Grade Corporate bonds	18%	19%	26%	2 (potentially 4) ^(f)
Infrastructure	2%	-	-	2 (potentially 5) ^(g)
Property	3%	5%	5%	1
Multi-Asset Credit	5%	-	-	2
Private Debt	3%	-	-	1
Gilts & LDI	35%	43%	30%	4
Annuities	-	5%	3%	4
Total	100%	100%	100%	
Climate risk score	2.7	3.0	2.8	
Potential climate risk score	3.5	3.7	3.7	

(a) Purple Book climate scores assume 5% of equity allocation is in emerging markets

(b) Multi-asset includes the Purple Book allocation to Hedge Funds

(c) Assuming allocation within the asset class is in line with the market average

(d) Changing the developed market equity mandate to a low carbon version would change the climate risk score from a 3 to a 4, and changing to a climate opportunities version would change the climate risk score from a 3 to a 5.

(e) Changing the emerging market equity mandate to a low carbon version would change the climate risk score from a 2 to a 4

(f) Changing the investment grade corporate bond mandate to a low carbon version would change the climate risk score from a 2 to a 4

(g) Changing the infrastructure mandate to a climate opportunities version would change the climate risk score from a 2 to a 5

The weighted average of these tiers applied across an institutional investor's strategic allocation provides a score out of 5, with the average DB pension fund in our data set scoring 2.7 out of 5, 50% scoring below 2.7 and only 10% above 3.5.

By allocating to low carbon equity and corporate bond funds, investors could improve their score to 3.5 (note this assumes two-thirds of developed equities in low carbon and one-third in climate opportunity funds, giving developed equities a climate risk score of 4.33).

A note on our data: Our database covers 321 UK institutional asset owners with total assets over £200bn - around 10% of the private sector pensions assets in the UK. We believe this dataset is representative of the wider universe of DB pension schemes, as can be seen by the similarity with the PPF Purple Book data in the average allocations.





Conclusions from our analysis of climate risks

By allocating equity and investment grade corporate bonds to low carbon or Paris-aligned investments products which exist today, the score for the average pension fund could be improved from 2.7 to 3.5.

This analysis allows us to build a simple climate ladder, unique to each investor, which indicates the climate risk profile and the top-level priorities for further climate risk work.

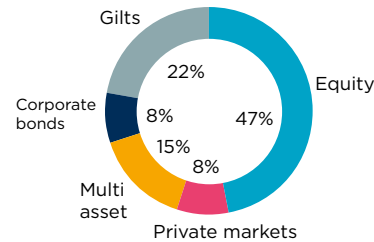
We have identified four distinct profiles of UK institutional investors all with very different climate risk profiles. Which one are you?

We found that three out of four profiles, covering 87% of UK institutional investors, could substantially improve their climate risk profile by adjusting their equity and corporate bond allocations to take into account climate risk.

The pie charts on the right confirm the average asset allocation of an investor in each of the four climate risk profiles identified, according to our data.

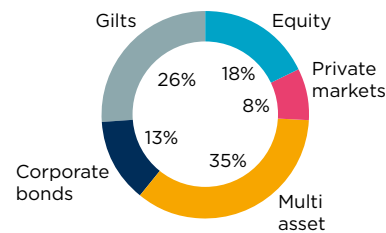
The four profiles:

1. Growth



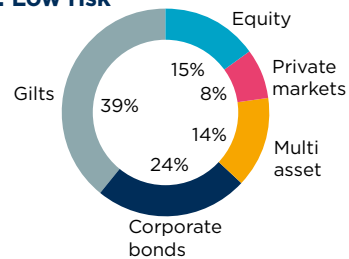
These asset owners invested more than 30% in equity (and less than 50% in low risk assets) and represent a traditional growth-focused investor, typically with a longer time horizon such as a DC pension scheme. These investors are typically also invested in private markets and some corporate bonds, but equities (both developed and emerging) tend to be the core driver of climate-related risks, both now and over the coming decade. Growth investors comprise 25% of investors, but 31% of assets in the study.

2. Diversified



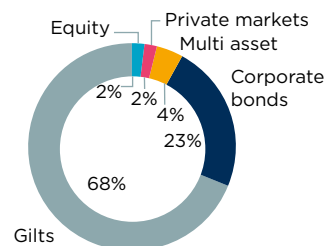
Similar to the growth profile, these investors have a reasonable growth asset exposure but are less dependent on equities, with more diversification into private markets, growth credit and multi-asset type mandates. They are exposed to a slightly different climate risk profile to the growth cohort due to the risks inherent in the lack of data and transparency in private markets and multi-asset mandates. Diversified portfolios comprise 20% of investors and 12% of assets in the study.

3. Low risk



These asset owners hold between 50% and 80% in low risk bonds, many on a path to steadily reduce the remaining allocation to growth assets over time. This presents a changing climate risk profile over the next decade (and therefore asset transition risks) which complicates the task of what to focus on. Low risk investors have seen their climate risks shift from equity risks and a lack of data to credit risks along their de-risking journey. They comprise 42% of investors, but 51% of assets in the study.

4. Cashflow matched



This group consists largely of defined benefit pension schemes which have de-risked and hold more than 80% in cashflow matching assets (ie bonds). Due to the nature of their asset allocations these schemes face the fewest climate-related risks of the four profiles described but should still consider climate factors in their manager appointments and any insurance provider selection. These comprise 13% of investors and just 6% of assets in the study.



Section 2
continued

Summary stats

	Definition	% of asset owners	% of assets	Principal climate risk exposure	Average climate score	Potential climate score
<i>Growth</i>	>30% equity (<50% low risk bonds)	25%	31%	Equity	2.7	3.6
<i>Diversified</i>	>40% growth, below 30% equity (<50% low risk bonds)	20%	12%	Equity, data and transparency	2.3	2.9
<i>Low risk</i>	Between 50% and 80% low risk bonds	42%	51%	Credit	2.8	3.5
<i>Cashflow matched</i>	>80% cashflow matching	13%	6%	n/a	3.3	3.8
Overall		100%	100%		2.7	3.5

- Those asset owners in the low risk and growth categories have potentially the greatest gains from addressing climate risk due to the higher sensitivity to the risks being taken within the high equity and corporate bond allocations.
- The low risk category represents 42% of the dataset and thus significant change could be made in this group by improving investment grade corporate bonds to low carbon mandates.
- Those asset owners in the diversified category have the lowest climate score due to the lack of data and transparency in private markets and multi-asset mandates.

We found that almost 90% of institutional investors, could move themselves from a profile of more material climate risk by adjusting their equity and corporate bond allocations to take into account climate risk.



Section 3

Climate opportunities

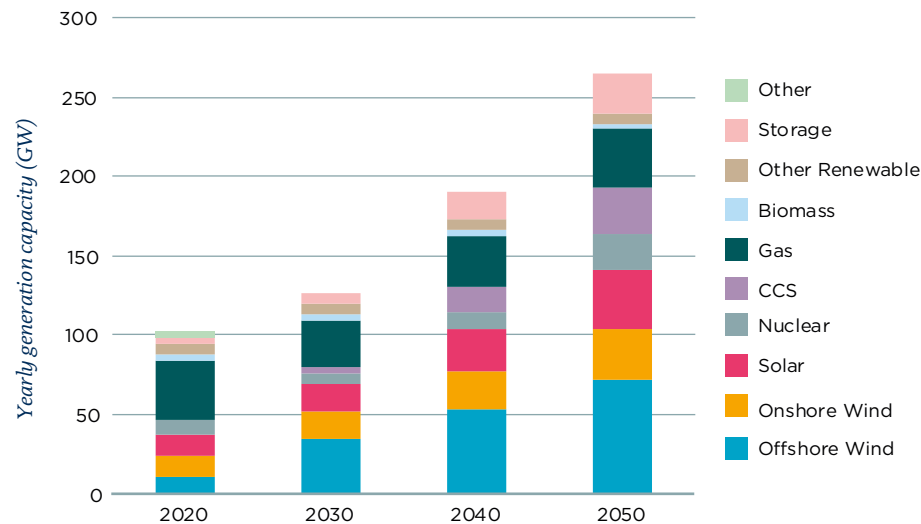
We believe the vast scale of change required to meet global Net Zero commitments will reshape the energy and infrastructure landscape in ways we are only just beginning to appreciate.

For example, in the UK over the next decade, we expect a quadrupling of offshore wind generation alongside the rollout of electrification infrastructure like charging points to support a ban on petrol cars. Opportunities will abound for investors in what looks set to be one of the largest flows of capital in a generation to support the electrification of the UK power network.

In a recent open letter to investors⁶, the Prime Minister and Chancellor appealed for a “big bang” of institutional investment into the UK. This could easily happen, but as we discuss here it depends on government and industry being tuned in to the areas of demand that exist in UK institutional investors: for example long-dated, inflation linked secure income streams rather than venture capital assets.

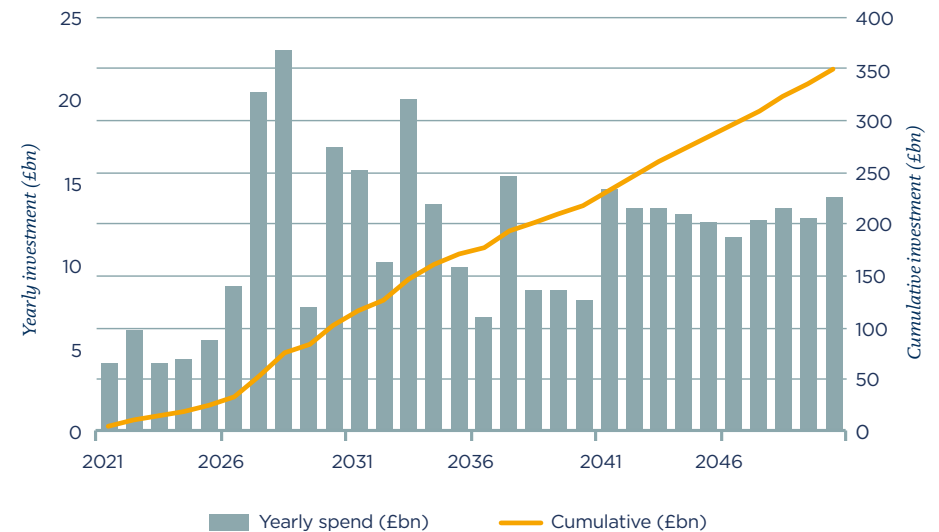
As we show below, and lay out in more detail in our paper: [Aligning the stars](#), there is a clear pathway to greater investment in the UK transition and opportunities for investors, but this won't happen by itself. Some clear choices and signals need to be sent.

Figure 1: Big increases in electricity generation are required from a mix of technologies



Source: LCP Energy Analytics Net Zero Scenario

Figure 2: Required investment in power generation



Source: LCP Energy Analytics Net Zero Scenario



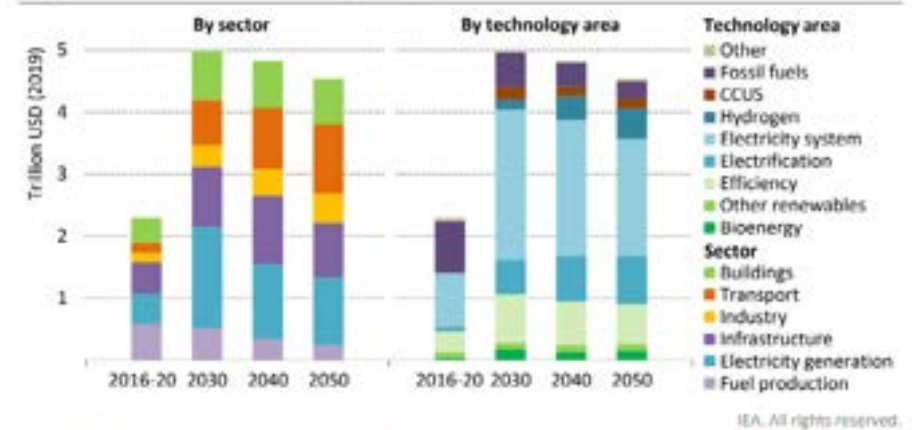
Section 3 continued

The same pattern holds globally, but the numbers are even higher. JP Morgan⁷, quoting data from Bloomberg NEF, tracks current investment flows of \$500bn per year into low carbon energy. A recent influential report by the International Energy Agency (IEA)⁸, which called for a quadrupling of renewable energy capacity over the next decade coupled with radical increases in the use of other technologies, sees global energy investment rising from \$2trn annually to \$5trn annually by the end of this decade.

If the energy strategy is well managed, there stands to be a range of investment opportunities becoming available across the energy market. Particularly given the changing asset allocation profile of many UK institutional investors, we see an opportunity for investment capital in long-dated, inflation-linked bonds, perhaps backed by the new UK infrastructure bank. This requires some creative thinking by issuers.



Figure 3: Annual average capital investment to achieve Net Zero by 2050



Capital investment in energy rises from 2.5% of GDP in recent years to 4.5% by 2030: the majority is spent on electricity generation, networks and electric end-user equipment

Notes: Infrastructure includes electricity networks, public EV charging, CO₂ pipelines and storage facilities, direct air capture and storage facilities, hydrogen refuelling stations, and import and export terminals for hydrogen, fossil fuels pipelines and terminals. End-use efficiency investments are the incremental cost of improving the energy performance of equipment relative to a conventional design. Electricity systems include electricity generation, storage and distribution, and public EV charging. Electrification investments include spending in batteries for vehicles, heat pumps and industrial equipment for electricity-based material production routes.

Source: IEA (2021) Net Zero by 2050: A Roadmap for the Global Energy Sector. All rights reserved. CCUS = Carbon capture, utilisation and storage.



Section 3 continued

Conclusions from our paper on energy investing

The UK's energy transition over the last decade has been a success. A continuation of this trend will present many opportunities for investors, if they are designed correctly to meet investors' needs, and investors remain open-minded and embrace the details.

Offshore wind was still seen as an emerging technology a decade ago and is now considered a mature technology. Along with onshore wind and solar, it will make up the majority of power generation in the future with investors able to finance projects through well understood mechanisms such as the Contract for Difference (or CfD, a form of government subsidy that guarantees renewable projects a set price for their energy). New technologies are now at a similar stage to where today's mature technologies began: these will benefit from the same roadmap that led to cost reductions in other technologies.

The Government's Energy White Paper⁹ (published in 2020) commits the UK to a sea change across the energy sector in order to achieve Net Zero. Many of these require substantial investment, some of which could be opportunities for institutional investors.

Our advice to institutional investors:

Be open to the benefits of accepting some construction risk in projects where technologies are more established, in return for being an equity partner from the start rather than only buying operational assets in the secondary market where prices will be higher and returns lower.

⁹ <https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future>

¹⁰ Regulated Asset Base



For our paper on [energy investing](#) [click here](#)

We believe these are key areas to watch for opportunities in the power market:



Solar and wind - the biggest investment opportunity over the medium term - has become a mature asset, but much more build out coming and the re-admission of onshore wind and solar to the next round of CfD auctions will stimulate additional supply.



Nuclear - problems getting projects off the ground in the past, but introduction of the RAB¹⁰ regime may make this technology more investor-friendly.



Hydrogen - investors need more certainty on the role Hydrogen will play from a system perspective, and the regulatory regime is also critical ([read more here](#)).



Batteries - a relatively new technology with a lot of recent interest. Due to a battery's characteristics (ability to charge and discharge quickly) it operates differently to traditional energy assets. It's worth understanding the market drivers behind this technology. Better to get to grips with these early rather than at the point of investment. [Read our battery report here](#).



Carbon capture and storage - may take years to become investible, but over time may become a legitimate asset class. Worth understanding at an early stage as the drivers may seem quite alien and hard-to-understand at first. As with batteries, better to get to grips with these early.



Net Zero & alignment

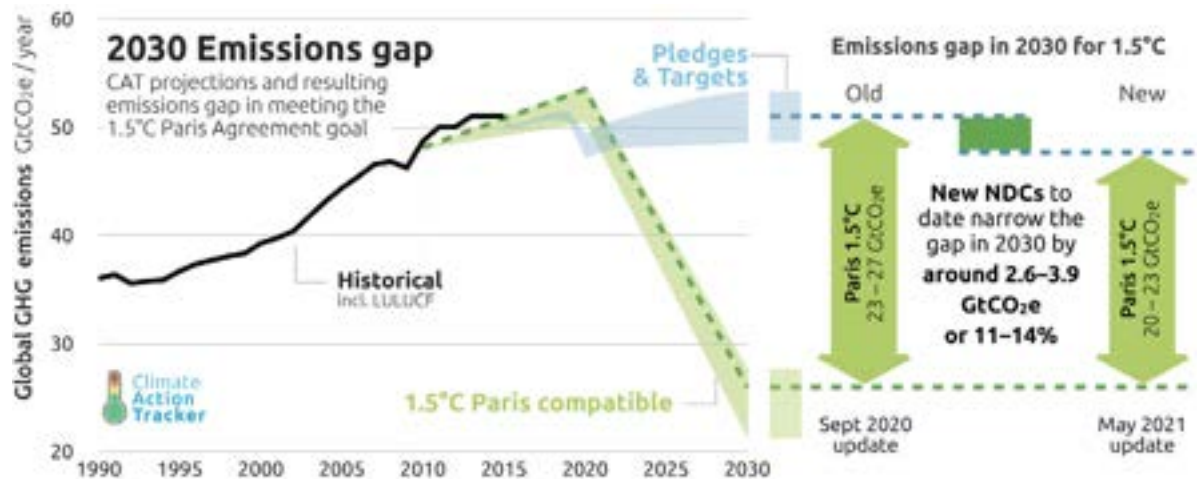
What does Net Zero really mean? And why do asset owners set net zero targets?

These are simple questions with long answers. The key point is that actually, it's not reducing emissions to zero that's the real goal here but aligning the portfolio with the Paris Agreement on climate change, for which "Net Zero" has become a neat shorthand referring to reducing greenhouse gas (GHG) emissions to zero by 2050 or offsetting the residual emissions that can't be eliminated. "Alignment with Paris" is more nuanced (and not as catchy). More on the concept of alignment in the next section.

Emissions "pathways" consistent with the Paris Agreement are shown on the right. You've almost certainly seen a chart like this before. Getting emissions to zero by mid-century remains the core standard behind climate action consistent with the Paris Agreement, re-iterated by the IPCC's most recent report.



Figure 4: Paris Agreement-consistent global emissions trajectories



Source: [Climate Action Tracker](#); Copyright © 2009-2021 by Climate Analytics and NewClimate Institute

NDC = National Determined Contribution
GtCO₂e = gigatonnes of equivalent carbon dioxide
LULUCF = land use, land use change, and forestry

Net Zero has become one of the big movements of our time with c87% of the UK public now being aware of the term¹¹ (a remarkable proportion). It is also one of the most pressing current themes in the investment world among institutional investors and investment managers that we speak to.

One key reason that institutional investors adopt Net Zero targets is to help manage some of the shorter-term risks and opportunities from climate change, particularly transition risks such as carbon pricing and carbon tax. The idea is that companies which are better aligned to a low carbon transition today will be subject to less regulatory risk if more aggressive measures are brought in during the 2020s. By adopting a Net Zero target your portfolio will be more tilted toward the likely winners from climate transition and avoid the worst losers.

¹¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/996575/Climate_change_and_net_zero_public_awareness_and_perceptions_summary_report.pdf



Section 4 continued

Net Zero is not defined as a specific portfolio today, but provides a solid concept to guide portfolio changes in the future. It also provides a signalling device, and a way to influence companies by setting a clear standard for what investible companies in the future will need to do in terms of decarbonisation.

Reducing emissions down to zero is a key part of the Paris Agreement but it is important not to focus myopically on that measure. For example, for an institutional investor, reducing emissions by allocating solely to low emission sectors like say, technology, (and stopping there) isn't necessarily consistent with the Paris Agreement. Today's low emissions sectors will be allocated only a very small part of the future emissions "budget" under the future pathways, and might actually be expected to get their emissions to zero much sooner or even go negative. The whole economy needs to transition. Investors who only allocate to low emission sectors will still be subject to economy-wide risks if global emission targets are not met.

Also, by ignoring transitioning companies in today's carbon-intense industries investors could miss good opportunities to influence the transition as well as missing good investment opportunities.

"Net Zero" as part of investment thinking looks like it's here to stay. It signals a huge amount of work for institutional investors and their managers, if they choose to adopt such a target, and many have done so already¹².

But the key is to see beyond that one slogan, think in terms of aligning with the Paris Agreement and ask deeper questions about interim targets and applicability to different parts of the portfolio.



¹² <https://www.ipe.com/news/chairs-of-pension-schemes-make-net-zero-statement-of-support/10054012.article>



Section 4 continued

The challenges of Net Zero

Investing toward Net Zero is not straightforward. It is much more complex than simply selling high carbon emitters and buying low-emitting companies in the technology, media and healthcare sectors. A balance will need to be struck between engaging collaboratively with companies in the toughest sectors and setting clear standards for them to reach, supporting on that journey, while retaining the ultimate sanction to disinvest if they fall too far off. At the same time some investors may perceive certain areas as too incompatible with a Net Zero world to finance at all. Much of this lives in the grey areas; it is not black and white.

The just transition is a framework for thinking through the impact of the transition on workers, communities and citizens, both at home and globally.

The just transition

At the heart of the transition is a legitimate concern around fairness and equality, encapsulated by the phrase “the just transition”. Unless carefully managed, the costs and burdens of a transition – like so many things – will not be felt equally. The developed world has historically emitted the vast majority of carbon emissions while building up our economies and enjoying the highly consumptive lifestyles that we do, most of which was built on fossil fuel powered energy. Is it right to deny developing countries this same journey? The recent [IEA report](#) put forward the idea that developing countries must continue to rely on fossil fuels for decades more, while the developed world ought to shift to renewable far quicker to compensate.

Closer to home there are particular regions of the UK (Yorkshire and the Humber for example, where 22% of jobs are expected to be affected by a transition to a low carbon economy) that could suffer worse than others if the transition is not managed and planned in a thoughtful way to mitigate these effects.

The just transition is a framework for thinking through the impacts of the transition on workers, communities and citizens, both at home and globally. To find out more read the excellent [report by the Grantham Institute](#). Investors should ensure their asset managers have clear policies in place to ensure they are taking into account this angle in their engagement activities with companies and their investments.



Section 4 continued

Net Zero & alignment

Alignment

The phrase Net Zero naturally focuses the mind on emissions, but they are not the only part of a Net Zero strategy, and often not the most important.

Alignment is a helpful measure as it is arguably easier to define and measure today than emissions, partly because other organisations have done the hard work for you. It is also more forward looking and broader than simply considering today's emissions.

Reported emissions at a portfolio level have a few disadvantages as a measure: they are subject to change when additional companies begin to disclose, or make changes to their reporting, eg due to mergers or acquisitions. So reported emissions can increase for counterintuitive reasons. Another issue relates to "avoided emissions", eg emissions generated by manufacturing wind turbines or building insulation can result in much lower emissions elsewhere, but the original emitter usually doesn't get credit for this.

Emissions are a one dimensional picture; low-emitting companies could be subject to high climate risks whereas high-emitting companies in crucial sectors (eg steel) could be important to the transition and subject to lower climate risks than the emissions footprint would suggest.

An over-focus on emissions can also lead you down the road of offsets, where emissions generated are "compensated" by funding an equivalent carbon dioxide saving elsewhere (a very simple example being the planting of trees to compensate for fossil fuels used in heating). Offsets can be questionable, especially for institutional investors, as there is generally a cost for purchasing offsets and no discernible financial benefit. Our view is that institutional investors themselves should not generally be purchasing offsets, and should be encouraging asset managers and portfolio companies to reduce real world emissions substantially first, before any offsets are used, and insist on high standards in terms of any offsets that are used.



For further reading
[click here](#)

From an institutional investor's perspective, managing the transition requires a more nuanced picture than just emissions – that's where alignment comes in.

What is alignment?

It is a judgement of how well a business plan is aligned with a low carbon transition.

If companies are not aligned and/or not thinking strategically about the low carbon transition, they are likely to be more exposed to climate risk, even if emitting less GHG today because they are naturally in a lower-emitting sector.

Conversely, if companies in vital but carbon intensive sectors (eg steel) are thinking strategically about the transition, this could represent good investment opportunities as well as being aligned with a sub 2°C world even if they have a large carbon footprint today.

It is important that we go beyond just looking at whether companies have set a target, and also keep track of the progress they make against their targets over time, and assess the likelihood of them meeting their targets.

But how can we know whether an investment is aligned?

Good news: others do the hard work so you don't have to...

A number of independent organisations make publicly available assessments of listed companies' business alignment based on disclosures, such as those overleaf.



Section 4 continued



Climate Action 100+

Climate Action 100+ is an investor-led initiative to ensure the world's largest corporate GHG emitters take necessary action on climate change.

- More than 570 investors, responsible for over \$54 trillion in assets under management, are engaging companies on improving climate change governance, cutting emissions and strengthening climate-related financial disclosures.
- Launched in December 2017, and designed by investors for investors, Climate Action 100+ garnered immediate worldwide attention. It currently covers 167 companies accounting for over 80% of global industrial emissions.
- The work of the initiative is coordinated by five regional investor networks: the Asia Investor Group on Climate Change (AIGCC), Ceres, Investor Group on Climate Change (IGCC), Institutional Investors Group on Climate Change (IIGCC) and Principles for Responsible Investment (PRI). It is supported by a global Steering Committee.

Climate Action 100+ is an engagement initiative to encourage companies to set better climate targets and have actions in place to meet them.



Science Based Targets Initiative (SBTi)

The SBTi is a partnership between the Carbon Disclosure Project (CDP), the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF) that uses science-based approaches to assessing the compatibility with the Paris Agreement of companies' targets.

Science-based targets show companies how much and how quickly they need to reduce their GHG emissions to reduce their GHG emissions in line with the Paris Agreement goals. The SBTi:

- Defines and promotes best practice in emissions reductions and Net Zero targets in line with climate science.
- Provides technical assistance and expert resources to companies who set science-based targets in line with the latest climate science.
- Brings together a team of experts to provide companies with independent assessment and validation of targets.

The initiative has grown with 1,040 companies involved as of the [latest progress report in January 2021](#), roughly a 30% annual growth rate. Around half these companies have a validated science-based target, accounting for around 20% of global stock market capitalisation.

The SBTi assesses whether a company has a sound climate target.





Section 4 continued



Transition Pathway Initiative (TPI)

The Transition Pathway Initiative (TPI) is a global initiative led by asset owners and supported by asset managers.

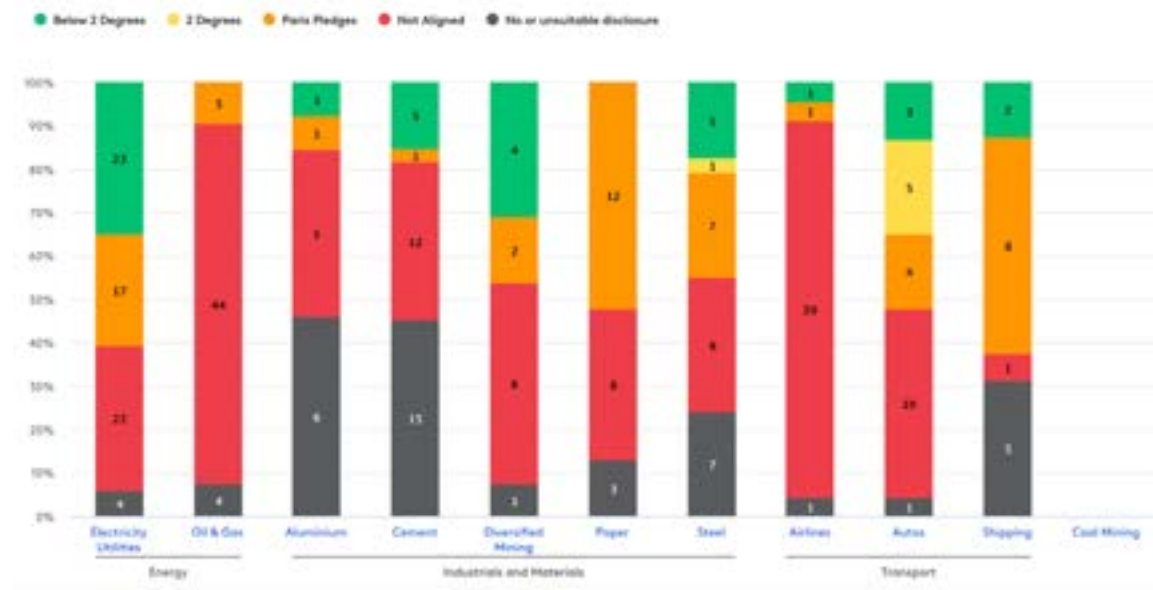
Aimed at investors and free to use, it assesses companies' preparedness for the transition to a low carbon economy, supporting efforts to address climate change. Launched in 2017, it assesses the transition readiness of around 400 global companies in the key carbon intensive sectors. TPI assesses companies in two key areas: a management quality score to assess management's awareness and preparedness, and a carbon performance score to assess the current and forward-looking carbon performance of the company.

The Transition Pathway Initiative provides an indication of how likely a company is to meet its target.

Here is an example of the current alignment picture across "material" sectors (those with the highest current carbon emissions) according to TPI:

Figure 5: Carbon performance: all sectors

CP alignment with the Paris Agreement benchmarks by sector and cluster (number and % of companies). Please note that this information is not available for all sectors.



Source: Transition Pathway Initiative, <https://www.transitionpathwayinitiative.org/sectors>



Aligning portfolios

The first three practical steps

Equities

The first asset class to get a lot of focus in terms of decarbonisation and Paris-alignment.

[See page 22](#)

Corporate bonds

Feasible pathways to Net Zero exist by using listed disclosures to understand alignment and emissions in corporate bond portfolios.

[See page 24](#)

Gilts

Institutional investors could have a key role in holding the Government to account for climate commitments.

[See page 27](#)

We've shown that UK institutional investors hold around 75% of their assets in listed equities, investment grade corporate bonds and government bonds. This overall percentage is likely to stay fairly stable over the next decade or even increase slightly. Practical steps exist in these asset classes today to align them with the goals of the Paris Agreement, eg tilting toward companies that have forward-looking plans which are consistent with Paris.

Practical steps exist in these asset classes today to align them with the goals of the Paris Agreement.





Section 5
continued

Aligning portfolios Equities

This was the first asset class to get a lot of focus in terms of decarbonisation and Paris-alignment. Corporate disclosures (eg TCFD) have supported a significant and growing level of transparency.

	% with TCFD climate metrics disclosure ¹	% with science-based target ²
Global Developed Markets	35%	25%
Emerging Markets	23-31% ³	6%
Europe	58%	34%
US	25%	18%

¹ % by number of companies. Source: TCFD Progress report 2020

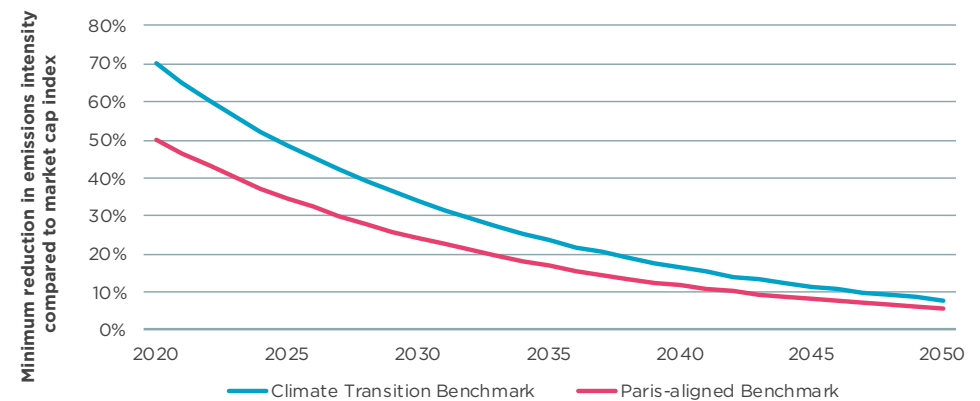
² % by number of companies in SBTi's high-impact sample. Source: SBTi Progress Report 2020

³ includes Middle East / Africa, Asia Pacific and Latin America

A first key point to make is that institutional investors cannot influence the emissions of their portfolio companies directly, although they can use voting and engagement to encourage companies to reduce their emissions. In the short term, their portfolio emissions are largely determined by their choice of stocks and bonds of companies to invest in – they can select on the basis of the current and forward-looking alignment of these companies with the Paris Agreement. Aligning portfolios with the goals of the Paris Agreement has become a key target for institutional investors as a tool to manage their own risks, and to influence systemic risks. For more reading on Paris-alignment, [click here](#).

Benchmarks have existed for several years that give institutional investors a rough target for the future decarbonisation that would need to be achieved in a portfolio to align with the Paris Agreement.

Figure 6: Decarbonisation pathways in new EU Benchmark Regulations



Source: LCP chart created using data from EU Benchmark Regulations

Index-based products have existed for several years that allow investors to do at least some of:

- Tilt away from companies that have business models not aligned to the transition
- Tilt toward those companies that are better aligned or aligning
- Focus collective stewardship efforts through a clear framework
- Embed increases in the level of decarbonisation and alignment through time
- Maintain low tracking error (below 1% p.a.) relative to traditional market capitalisation weighted indices.



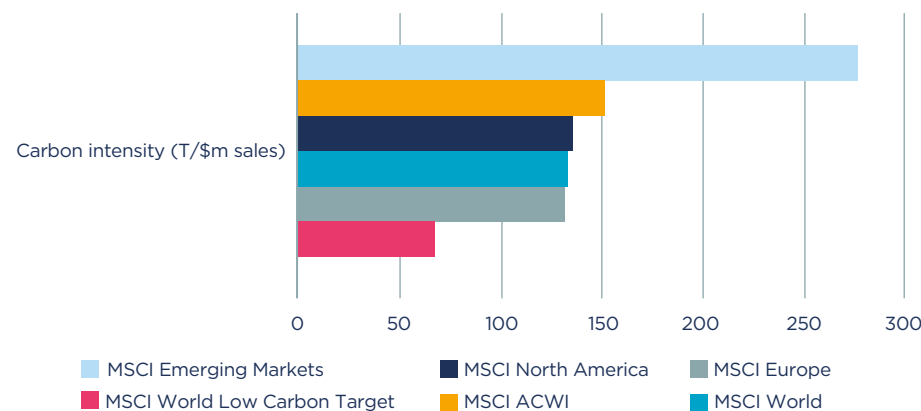
Section 5
continued

Aligning portfolios Equities (continued)

There is a wide variety of [such products](#) in existence today, many available at competitive fee levels no more expensive than standard index products.

It has become relatively common to see low carbon indices that can reduce carbon intensity by 30% or more compared to standard indices¹³.

Figure 7: Carbon emissions intensity of selected indices



Source: MSCI Index Carbon Footprint Metrics,
<https://www.msci.com/documents/1296102/18370713/MSCI-IndexCarbonFootprintMetrics-cfs-en.pdf/de79973f-2704-4987-bfb0-391e27577b47>
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As thinking has developed in these areas, the market has moved away from a focus on today's disclosed emissions levels, as focusing on this could result in a portfolio shift away from the small number of essential sectors (like electricity generation) that emit the bulk of the economy's emissions today. This could result in a skewed sector profile that might not be productive for individual investors or for the system as a whole. Thinking has moved towards a more sector-neutral approach that focuses on the companies within each sector that are most aligned with a low carbon transition. Approaches to assessing this alignment include the Transition Pathway Initiative¹⁴ and the Science-Based Targets Initiative (see pages 19 and 20).

The main ways in which these products tend to differ are:

- Approach to exclusions
- Focus on carbon emissions today vs in the future
- Whether they embed explicitly the future pathway toward Net Zero into their construction rules

We think that moving global passive equities to a low carbon or Paris-aligned index solution is a relatively straightforward and cost-effective approach to addressing climate risk in equity portfolios (relevant for both passive and active portfolios). But, as our database shows, equities are no longer the largest allocation for most UK institutional investors and are decreasing in relevance through time.

For institutional investors there is a need to assess managers' climate expertise and the level of strategic importance being given to it as part of selection and monitoring. Our [2020 Responsible Investment Survey](#) showed a wide variation in managers' climate practices – you can't assume they all do this well.

For more information check out [this piece](#).

¹³ <https://www.msci.com/documents/1296102/18370713/MSCI-IndexCarbonFootprintMetrics-cfs-en.pdf/de79973f-2704-4987-bfb0-391e27577b47>

¹⁴ <https://www.transitionpathwayinitiative.org/sectors>



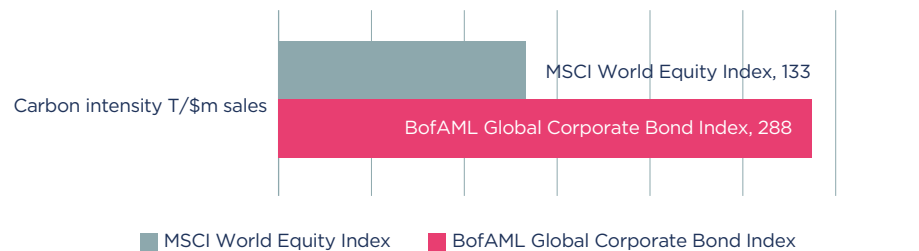
Section 5
continued

Aligning portfolios

Corporate bonds

Through listed disclosures investors can also get a good handle on the alignment and emissions in corporate bond portfolios making this another asset class where feasible pathways to Net Zero portfolios exist today. Corporate bond indices typically have higher carbon intensities than their equity counterparts due to higher allocations to carbon intensive sectors like utilities and industrials. This warrants a closer look from investors.

Figure 8: Corporate bonds indices tend to have higher carbon intensity than equity indices



Source: LCP calculations, MSCI Index Carbon Footprint Metrics, <https://www.msci.com/documents/1296102/18370713/MSCI-IndexCarbonFootprintMetrics-cfs-en.pdf/de79973f-2704-4987-bfb0-391e27577b47>, Certain information ©2021 MSCI ESG Research LLC. Reproduced by permission

The Bank of England recently published [an important piece](#) on this in relation to its own corporate bond holdings. As with equities, institutional investors can bring a view on a bond issuer’s forward-looking alignment with the Paris Agreement into their assessment of whether they wish to lend to that company or not.

One key difference between the way institutional investors hold corporate bonds compared to equities is the presence of **buy-and-maintain** mandates which are not driven by an index. So the alignment challenge here is around shaping the right guidelines rather than focusing on index construction.

Our research has found quite a wide range in terms of carbon intensities for standard buy-and-maintain portfolios, with the potential to reduce intensity by 25% or more without disrupting overall portfolio dynamics, if a low carbon tilt is built into the portfolio guidelines.

In the chart below, we illustrate the starting carbon intensity of standard buy-and-maintain portfolios sourced from 15 different asset managers, alongside the revised intensity of a similar portfolio guided to be tilted toward more sustainable issuers. Carbon intensity is only one measure. For managers 9 and 11, the bars don’t necessarily reflect their approach to climate change as a whole (see pages 16 and 18 for the need for a nuanced picture).

The portfolio weighted average intensity of the initial portfolios varied between 77-460 tonnes per \$m of sales, with an average of 180 T/\$m, above the average for developed market equity indices of 130, indicative of bond issuers being slightly more inclined to be in higher emissions intensity sectors like utilities and power.

Figure 9: Corporate bond portfolios - carbon intensity and potential reductions





Section 5
continued

Aligning portfolios Corporate bonds (continued)

With corporate bond spreads having undergone a historic tightening over the last 12 months – spreads on investment grade bonds are well below 1% in the UK, US and Europe – the question has to be “can this really compensate me for climate risks?”

With such low spreads and risk premia on offer, climate risk in corporate bond portfolios could be the most acute for UK institutional investors over the next 10 years, especially in light of the increasing allocations to this asset class. In a world of low-return portfolios there is not much margin for error in bonds that end up on the wrong side of the transition.

A quick analysis using data from the Bank of England’s paper shows that carbon price rises above £200/tonne would start to put a lot of pressure on the investment grade ratings of large swathes of the corporate bond universe, as shown in Figure 10.

Figure 10: Approximate profit margin impacts in key UK bond sectors.

	Approx margin	Intensity tCO2e/£m sales	Margin with carbon price		
			£100	£200	£500
Communications	15%	30	● 15%	● 14%	● 14%
Consumer, cyclical	15%	34	● 15%	● 14%	● 13%
Consumer, non-cyclical	15%	44	● 15%	● 14%	● 13%
Electricity	8%	657	● 1%	● -6%	● -25%
Energy	5%	344	● 2%	● -2%	● -12%
Gas	15%	338	● 12%	● 8%	● -2%
Industrial and transport	15%	271	● 12%	● 10%	● 1%
Property and finance	15%	52	● 14%	● 14%	● 12%
Water	30%	282	● 27%	● 24%	● 16%
Proportion loss making			● 0%	● 21%	● 27%

Calculation: LCP, source data: Bank of England

Intensity measured on scope 1 and 2 emissions. Carbon price applied to both scope 1 and 2 and assumed to impact bottom line, ie assuming company absorbs full carbon price and does not pass on to customers. We note that this means some double application of carbon price will apply.



Section 5 continued

Aligning portfolios Corporate bonds (continued)

A few nuances when considering alignment for corporate bond portfolios:

- Bond portfolios have a clear guide to the level of return: the yield (or spread). This enables a much easier view to be taken on the trade-offs when making portfolio changes than for equities.
- The issuer is not always the same as the listed entity. This is particularly the case in the UK market where several power and utility companies that are significant issuers are owned by global conglomerates with significant carbon footprints from their other operational businesses. This poses a question of how to correctly account for these anomalies.
- Our preferred approach is to go beyond focusing purely on changes in portfolio emissions and look to drive portfolio change by framing guidelines around the percentage of portfolio companies that have Science-Based Targets, or where relevant Transition Pathway Initiative scores exist.
- What we have found is that day-one emissions reductions of 30-40% are possible in corporate bond portfolios with minimal impact on yield, and only a slight impact on concentration.
- Typically, to align a portfolio, we would expect around 3-5% of straight removals (focussed in the energy sector) and around 20% level of turnover, mainly in the utilities and industrial sectors. Broadly, the aligned portfolio would be sector-neutral with the starting portfolio.

- Bond portfolios experience a natural turnover through time as bonds mature and are replaced. This allows the potential to “lean in” to that natural turnover, ensuring a higher standard is placed on new primary market activity in the portfolio, which over time will raise the alignment of the whole portfolio.

For more information [read this piece](#) and [listen to this podcast](#):





Section 5 continued

Aligning portfolios Gilts

Gilts are one category of assets that tend to not be discussed much in terms of climate risk, (i) because most gilts held by institutional investors are for liability matching and risk management purposes and it would not be a realistic prospect to make significant changes to these allocations in response to climate risk; and (ii) today the UK has a leading position in terms of climate commitments so gilts are generally considered aligned with the Paris Agreement.

However, the actual actions taken to date have not lived up to the lofty commitments in the UK, as laid out in the recent Committee for Climate Change (CCC) UK report¹⁵. This potentially unearths a key role for UK institutional investors, as large holders of gilts, to hold the Government to account for its climate commitments through the stewardship of their substantial gilt holdings (whether direct or via asset managers). So further work is welcomed on the engagement frameworks that investors could use over the next decade to engage productively in this key, but underappreciated, asset class.

We understand work has recently commenced with a workstream of the Institutional Investors Group on Climate Change (IIGCC) to bring further colour to this area. The Transition Pathway Initiative has also launched a sovereign bonds project¹⁶.



¹⁵ <https://www.bankofengland.co.uk/paper/2021/options-for-greening-the-bank-of-englands-corporate-bond-purchase-scheme>

¹⁶ <https://www.transitionpathwayinitiative.org/publications/84.pdf?type=Publication>



Related insights

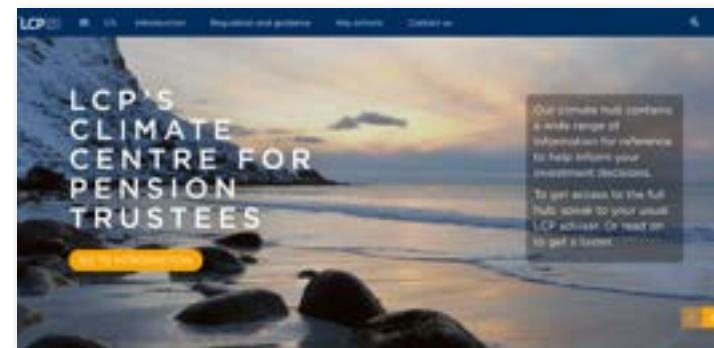
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