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A multi-asset approach to navigating net zero

From pledge to practice



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Summary

In this paper, we focus on the practical implications of moving from climate pledges to practice for multi-asset investors. Key highlights include:

What net zero means for investors: The Paris Agreement seeks to limit temperature increases to 1.5-2°C above pre-industrial levels, which is often equated to transitioning to a “net zero” global economy by 2050. Aligning a portfolio to this objective doesn’t mean building a portfolio with zero emissions today. The spirit behind the Paris Agreement lies in transitioning the most impactful sectors (such as energy) to lower carbon intensity. From a portfolio perspective, this requires a multi-year pathway.

Carbon metrics across asset classes: Different carbon metrics have different utility for investors. We evaluate various approaches to forward-looking metrics and identify an approximate “decarbonisation rate” at the asset class level for multi-asset portfolio constructors.

Monitoring portfolios and milestones: The portfolio pathway to 2050 is long. We propose incorporating interim milestones and conducting annual reviews to ensure the portfolio is evolving consistent with its chosen pathway or adapt as needed.

Building an implementation plan: Strategies that align with the Paris Agreement can include building blocks across index, factor and alpha-seeking strategies. We propose re-allocating to certain asset classes with more explicit climate goals.

Upcoming research: We advocate a flexible framework for portfolios, recognising this is an evolving space. Topics for future exploration include climate goals for government bond allocations or measuring portfolios against temperature alignment metrics.

Investors globally are focusing on decarbonisation. In March 2021, 22 asset owners with \$1.2 trillion in assets committed to cutting their portfolios’ carbon emissions to net zero by 2050.¹ There is also a tidal wave of pending regulation that will require asset owners to report on climate risk. For example, UK regulations requiring trustees to disclose climate-related risks will start to become a standard. Beyond the UK, the G7 summit held in London in June led to an agreement that G7 nations will mandate climate reporting in line with the recommendations of the global Taskforce on Climate-related Financial Disclosures.

¹ Source: Institutional Investors Group on Climate Change, March 2021.



Investors are accepting that climate risk represents investment risk. This has moved from a novelty to something approaching mainstream thinking in just a few years, accelerated by four powerful changes:

- Record damages from extreme weather events in 2020² have underscored the importance of physical risk;
- The number of countries making net zero pledges has rapidly grown in the recent years, and some have even reinforced their ambitions with shorter timelines to neutrality;
- Clean energy innovations are reducing the cost and carbon intensity of energy production;³
- And investor sentiment appears to be turning in favour of sustainable strategies.⁴

In this paper, we focus on the practical implications of moving from climate pledges to practice for multi-asset investors. Despite potential benefits to those who are early to the era of climate investing, aligning multi-asset portfolios to net zero comes with unique challenges and is achieved by evolving the integration of ESG considerations into the investment process. A framework is, therefore, our preferred approach as opposed to a single investment decision. This framework should facilitate change but be flexible enough to adapt to the portfolio's progress in meeting decarbonisation targets.

² Source: Munich Re NatCatSERVICE database, March 2021. ³ Source: Financial Times, International Energy Agency, February 2021. ⁴ Source: BlackRock [Global Sustainable Investing Survey](#), 2020.

What does net zero mean for investors?

The Paris Agreement seeks to limit temperature increases to 1.5-2°C above pre-industrial levels. At the heart of this lies a forward-looking aspiration, often equated to transitioning to a net zero global economy by 2050. When investors make a commitment to “Net Zero 2050” or “Paris Alignment,” they are ultimately building an objective around emissions intensity of portfolio companies.

Net zero is a complex topic and demands a transformation of the entire economy – which is today highly dependent

on fossil fuels and requires significant policy and technological innovation over the coming decades. Net zero investing requires translating these commitments based on entire economies into investment policies. The time frame, scale and complexity of this challenge can seem daunting even to experienced investors. This paper, therefore, focuses on practical implications and seeks to establish a framework to understand, monitor and integrate important carbon emissions metrics into the investment process.

Establishing principles: Pathway to net zero

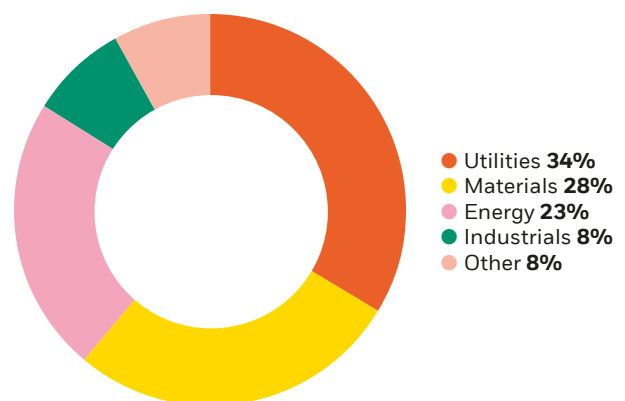
Net zero by 2050 on its own means little given the time horizon. However, what companies and investors do now from here to 2025 and 2030 will define what else needs to be done by 2050. For this reason, we focus on the “pathway to net zero”.

Using emissions data (which we cover in more detail in a later section), an investor could build a portfolio with zero emissions today by excluding the worst emitting sectors, such as energy. On the right, we show the scope 1 & 2 emissions at a sector level for MSCI ACWI, a global market index. Energy, utilities and materials are the largest contributors to emissions. Excluding companies based on carbon metrics could, in theory, meet a pledge to net zero, but a blunt divestment approach based on emissions is not consistent with the spirit of the Paris Agreement.

It is also essential to maintain exposure to the most critical (or high impact) sectors as these are the ones with the most significant scope for change and the most vital for achieving a net zero world. Engaging with companies and encouraging them to lay out plans to decarbonise, particularly in high-impact climate sectors, will be much more important in achieving a global low carbon economy than excluding them from the investment universe.

We appreciate exclusions on controversial segments that are commonplace in portfolios. However, a policy of broad-based exclusions is not our preferred approach. We outline potential implementation considerations in a later section and argue for asset class replacement where relevant. In that same vein, exclusions may not be the best way forward within asset classes. A portfolio would, through extensive exclusions, inherit very different risk characteristics to the market cap index.

Contribution to emissions by sector (MSCI ACWI)



Source: BlackRock, MSCI, March 2021. Based on scope 1 & 2 emissions.

Carbon metrics across asset classes

There are many ways to measure carbon emissions intensity. To build a portfolio that is aligned to the objectives of the Paris Agreement, we start by assessing various carbon metrics:

Metric	Absolute emissions	Emissions intensity (emissions/enterprise value)
Description	Total carbon emissions of a company	Emissions per unit of enterprise value
Advantages/disadvantages	<ul style="list-style-type: none"> ⊕ Purer link to net zero, since net zero implies zero absolute emissions by 2050 ⊖ Can create a bias against larger companies 	<ul style="list-style-type: none"> ⊕ Intensity adjusts for the size of a company ⊖ Intensity could be reduced by a change in enterprise value, rather than emissions

Source: BlackRock. For illustrative purposes. Subject to change.

For illustrative purposes, we review absolute emissions and emissions relative to enterprise value for a strategic asset allocation for a UK Defined Contribution pension scheme. We find that the two approaches are complementary. For example, global credit has the highest emissions on an absolute basis, but emerging market equities have the highest emissions intensity.

One striking observation from the table below is the absolute emissions. Getting this to net zero seems like a huge task. Intensity allows a more considered view as it adjusts for the size of the underlying companies on a like-for-like basis.

We also observe some key implications for multi-asset investors: firstly, no asset class is the same. Different asset classes will have different pathways. Emerging

markets are associated with a higher emissions intensity than developed markets, credit tends to have a lower carbon intensity than equities and government bonds are treated differently. However, these carbon metrics should serve as a monitoring function rather than an input to dictate investment decisions. Removing an asset based on these metrics would have significant investment implications and potentially breach guidelines or the ability to meet return/risk objectives. Alongside, these metrics only show part of the picture: a historic snapshot of how these asset classes look today and therefore what the starting point is for the investor. We therefore advocate the use of these metrics for reporting and monitoring purposes. Utilising forward-looking metrics alongside these will be crucial in the design of the investment strategy.

Emissions metrics for a sample portfolio

Asset class	Weight	Absolute emissions (billions of tons)	Emissions intensity (emissions/enterprise value)
UK equities	2%	0.4	83
Developed ex UK equities	50%	4.7	51
Emerging market equities	8%	5.7	135
UK credit	4%	1.9	63
Global credit	4%	10.6	74
Developed government bonds*	30%	9.2	267
Emerging market government bonds*	2%	2.5	900

Source: BlackRock, MSCI, March 2021. For illustrative purposes only. Absolute emissions reflect the absolute emissions of the underlying index, not scaled to the proportion of the index owned by the illustrative client, and therefore aggregation is not recommended. *For completeness, we have shown emissions intensity for government bonds by dividing emissions by GDP. The absolute emissions for government bonds represent countries' aggregate emissions and therefore include company-level emissions (meaning there could be an element of 'double counting' with the indices shown). For Emerging Market Government Bonds, the low absolute emissions can be explained by a low coverage overall for the index. For the purpose of this paper, we focus on company-level targets and note that incorporating a net zero investment strategy for government bonds is an area for future research.

The importance of forward-looking metrics

Around the world, a growing number of companies are publishing plans to decarbonise, following on country-level commitments that now concern about two-thirds of global scope 1 & 2 carbon emissions (i.e., direct emissions from owned or controlled sources and indirect emissions from the generation of purchased energy). Reflecting this view in portfolios can help us map the expected pathway of the portfolio and compare this to the pathway required by the Paris Agreement.

What is the best way to do this, and what is the probability companies will meet their targets? One approach is to tilt towards companies whose plans have been validated by independent initiatives such as the Science Based Target Initiative (SBTi). The SBTi defines and promotes best practice in science-based targets to decarbonise and then assesses and approves companies' targets in line with its criteria. The SBTi is widely recognised by the industry as having a robust, independent and reliable approach.

However, focusing solely on companies with science-based targets has drawbacks, namely that their number is relatively limited. Selecting these companies only would lead to concentrated exposures. To broaden the investment universe for our analysis, we have used MSCI ESG data. This incorporates any company with a

decarbonisation plan in place, including those with science-based targets and those which have not been independently verified. We use this data to identify an approximate decarbonisation rate at the asset class level, to inform whether the portfolio is aligning with the Paris Agreement through time.

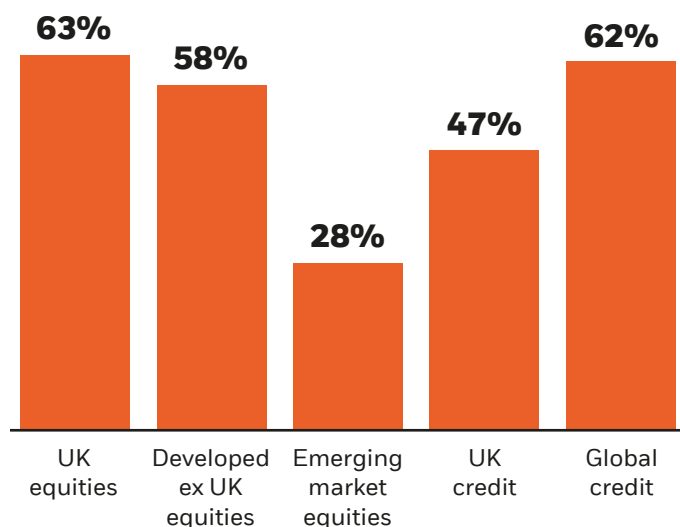
Now that we have individual company decarbonisation targets, we can aggregate these at the portfolio level to calculate the portfolio's expected decarbonisation rate. The EU Technical Expert Group on Sustainable Finance have provided minimum requirements for benchmarks to align with the Paris Agreement. The group's criteria have two categories: risk-oriented and opportunity-oriented. Risk-oriented includes, amongst others, a target to lower overall emissions intensity relative to the underlying universe by 50%. Opportunity-oriented includes a minimum self-decarbonisation rate of 7% on average per annum, along with other criteria, such as overweighting companies with more 'green' activities, or upweighting those with science-based targets. We propose taking a consistent approach with these criteria. This section is focused on achieving the 7% decarbonisation rate, though we will return to the other categories, such as targeting a 50% overall emissions intensity reduction, in the implementation section.

Understanding the different approaches to forward-looking metrics

Metric	Science Based Target Initiative (SBTi)	MSCI
Breadth	1,577 companies (including private)	8,500 companies (not all will have a decarbonisation target)
Comments	<ul style="list-style-type: none"> Industry-leading independent verification Limited number of companies with a target – problematic for investors with index allocations 	<ul style="list-style-type: none"> Includes companies verified by SBTi <i>and</i> companies not independently verified Broader coverage

Source: BlackRock, MSCI, SBTi, June 2021. For illustrative purposes. Subject to change.

Proportion of companies with established emissions reduction targets (by market cap weight)



Source: BlackRock, MSCI, March 2021. For illustrative purposes only. Subject to change. UK equities represented by FTSE All-Share Index; developed ex UK equities by MSCI World ex UK Index; emerging market equities by MSCI Emerging Markets Index; UK credit by iBoxx Sterling Non-Gilts Index; global credit by BBg/Barclays Global Aggregate Corporate ex UK Index.

The figure above highlights the percentage of companies with a target to reduce emissions in future, weighted by market capitalisation. Companies in developed markets tend to have more targets, while the number of targets in emerging markets is more limited.

Average decarbonisation rate (at total index level)

Asset class	2022	2030	2050
UK equities	-2.3%	-1.6%	-0.5%
Developed ex UK equities	-1.7%	-1.2%	-0.2%
Emerging market equities	-0.7%	-0.4%	-0.1%
UK credit	-1.6%	-1.1%	-0.4%
Global credit	-2.0%	-1.3%	-0.3%

Source: BlackRock, MSCI, March 2021. For illustrative purposes only. Subject to change. UK equities represented by FTSE All-Share Index; developed ex UK equities by MSCI World ex UK Index; emerging market equities by MSCI Emerging Markets Index; UK credit by iBoxx Sterling Non-Gilts Index; global credit by BBg/Barclays Global Aggregate Corporate ex UK Index.

Next, we look at implied annual decarbonisation rate at the index level. To calculate this, we have assumed that any company without a target has a decarbonisation rate of zero. For those companies with targets, we have not made assumptions about whether these targets are credible, aggressive or moderate and have assumed any company with a target will achieve them. We have not made assumptions about the relative importance of each individual target at the company level, since we are focused on the aggregated projection at the index level. We have not upweighted companies with independent verification, such as through SBTi. Additionally, we have not made any assumptions around the decarbonisation rate for government bonds, due to methodology challenges in measurement. This is an area for future research.

Clearly certain asset classes are decarbonising at a faster rate than others. For example, a higher proportion of UK equity and global credit issuers have established targets and this drives a higher assumed decarbonisation rate in aggregate. This is unsurprising and no cause for concern: different sectors, countries and companies will decarbonise at different speeds.

Taking the strategic weights for the sample portfolio laid out earlier, we can now calculate an implied decarbonisation rate at the total portfolio level. This is in the range of 1% to 2030, much lower than the 7% ideal target for Paris Alignment, suggesting significant implications for multi-asset investors.

Average decarbonisation rate

	2022	2030	2050
Sample portfolio (as shown on page 6)	-1.1%	-0.8%	-0.1%

Source: BlackRock, MSCI, March 2021. For illustrative purposes only. Subject to change.

Evolving the monitoring of portfolios to include “decarbonisation milestones”

As has been reflected in the example on the previous page, the design of an overarching strategy to align with the Paris Agreement will vary as a function of the portfolio’s asset allocation and investors’ different risk/return objectives. Therefore, there will be no “one size fits all” approach, although there is a common framework multi-asset investors can apply to their portfolios.

Firstly, we advocate setting interim milestones between now and 2050. The Net Zero Asset Managers Initiative, for example, has proposed setting interim targets for 2030 in order to reduce the uncertainty associated with achieving the appropriate “decarbonisation pathway”.

We also propose an annual review to ensure the portfolio is on track. This will be in part to ensure that companies who have set targets are meeting them and if not, to set a remediation process (such as through engaging with the company). It is also an opportunity to monitor whether there are new companies setting targets, since this may increase the level of confidence that the decarbonisation rate can be met at the overall asset class level.

Creating an implementation plan that assesses a range of building blocks

In order to build diversified portfolios, we blend index, factor and alpha-seeking strategies. Each building block has its own characteristics and complements the others. Investors can select building blocks that explicitly align with the Paris Agreement. Understanding how each asset

class fares today and combining that with forward-looking decarbonisation rates guides investors towards which asset classes are most crucial to replace today. Those that are not replaced may still be influenced by a clear voting and engagement policy.

Driver of return	Typical characteristics	Considerations for investors
Index	<ul style="list-style-type: none"> Target 50% emissions reduction and 7% decarbonisation annually Lower fees Lower tracking error 	<ul style="list-style-type: none"> Comfort with index construction and tracking error Upweight to companies with science-based targets and/or companies with higher ‘green’ revenues
Factor	<ul style="list-style-type: none"> Target 50% emissions reduction and 7% decarbonisation annually Medium fees Medium tracking error 	<ul style="list-style-type: none"> Inclusion of additional signals, such as green patents
Alpha	<ul style="list-style-type: none"> Target transition opportunities Higher fees Higher tracking error 	<ul style="list-style-type: none"> Manage ability to seek targeted transition opportunities, such as through private markets

Source: BlackRock. For illustrative purposes. Subject to change.

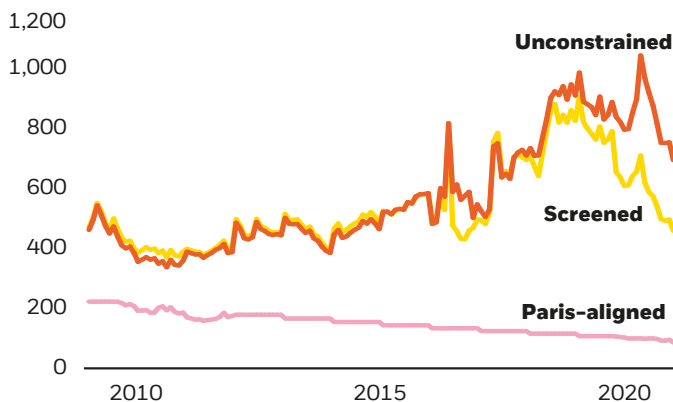
Index

We use indexes in portfolio construction to access broad market exposures in a cost-efficient manner. Traditional market cap-weighted indexes will come under scrutiny as investors consider a framework for net zero. There are, however, alternatives such as screened approaches that eliminate exposure to certain business areas or optimisation strategies that seek to enhance the sustainable features within a stated tracking error. Many major index providers are already offering Paris-Aligned indexes. All incorporate baseline and activity exclusions, a 50% relative decarbonisation and a self-decarbonisation rate (in some cases exceeding the minimum requirement of 7% per annum), but they slightly differ in how they incorporate corporate targets and measure revenues from sustainable activities. Most providers use SBTi datasets to measure corporate target settings. Depending on universe, those indexes come with tracking errors between 1-2% versus their market cap benchmarks.⁵

Factor

Factor portfolios invest in broad and persistent drivers of return. Like indexes, factor portfolios can align to the Paris Agreement by systematically incorporating minimum standards for decarbonisation (relative and self-decarbonisation), maintaining minimum exposures to high-impact sectors, applying exclusionary screens and incorporating corporate targets. As shown in the figure below, Paris-aligned factor portfolios have a clear decarbonisation pathway and can exhibit similar risk and return as compared to an unconstrained factor portfolio.

Carbon emissions intensity (metric tons) for sample equity factor portfolios



Source: BlackRock, December 2020. For illustrative purposes only. Screened portfolio excludes securities based on BLK Sustainable Baseline screens. Paris-aligned portfolio includes 50% carbon intensity reduction relative to benchmark and year over year decarbonisation assuming 2009 as the base year.

⁵ Source: BlackRock. For illustrative purposes. Subject to change.

Alpha & private markets

We can use alpha-seeking strategies to access exposures which contribute to the transition. These types of exposures have two potential benefits to the overall portfolio: firstly, bringing overall emissions down and second, the potential to generate alpha. The enormous magnitude of change required to achieve net zero gives rise to a plethora of new technologies and innovations which can be accessed by investors through liquid strategies or in private markets. In liquid strategies, investors can take a thematic approach, such as overweighting companies contributing to the circular economy or to the energy transition via renewable energy. In private markets, investors may benefit from accessing niche projects and technologies. One challenge in investing in private markets is a lack of widely available climate data. However, we are optimistic that industry collaboration and policymaker engagement will help to solve this in time. For now, it is critical that investors maintain discipline and keep sustainability considerations centre stage.

Conclusion

Aligning a portfolio to net zero by 2050 is not like flicking a light switch: it's a journey. Throughout this paper, we have advocated the need for a clear framework to design multi-asset investment strategies that align with the Paris Agreement. We need to understand what data is available, as well as recognising some of its limitations. We have proposed selecting portfolio level goals, introducing interim milestones and annual reviews and considering an array of building blocks.

The benefit of such a framework is also to be flexible. We recognise this is an evolving space and we need to be able to adapt as more insights become available. For example, we are undertaking extensive research on how best to incorporate government bonds in multi-asset portfolios from a climate perspective and other lenses for constructing portfolios including temperature alignment approaches and scenario analysis to stress-test portfolio pathways.

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