

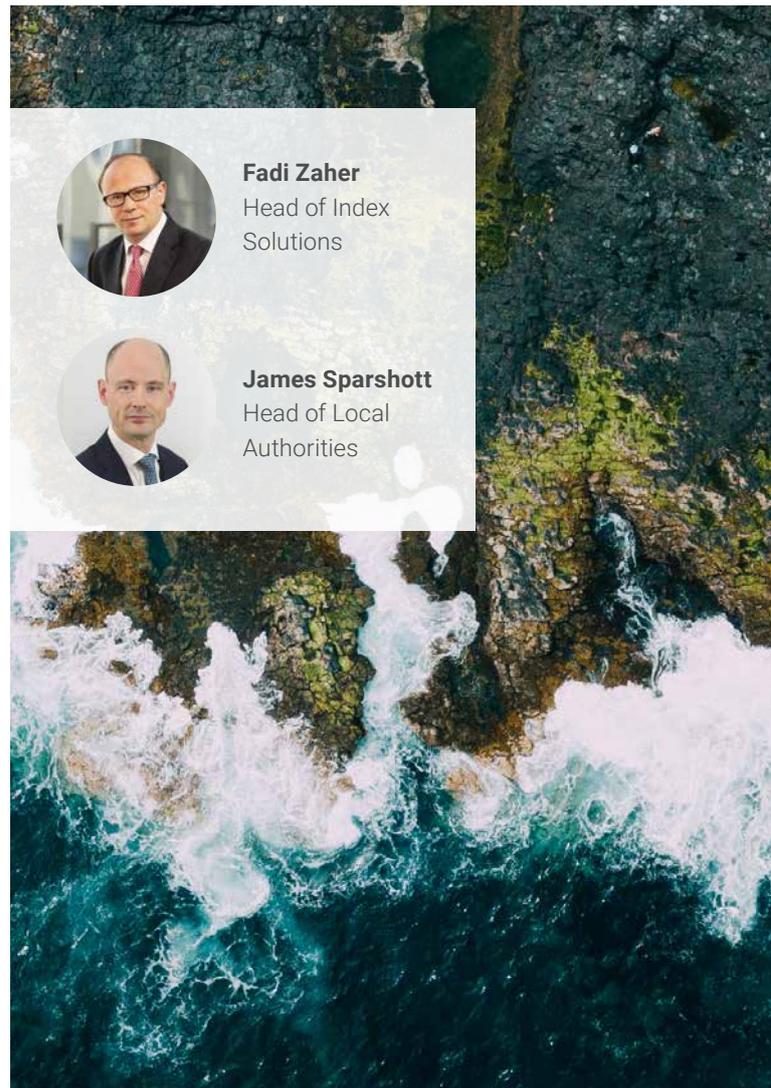
Defining and aligning climate investment intentions for the LGPS

We believe an index decarbonisation strategy may allow pension funds to demonstrate their commitment to climate-focused investing whether or not they have adopted net-zero targets.

Local authority pension scheme funds across the UK are likely to be aligning their investments with climate-positive goals, whether to mitigate their portfolio's climate risk, prepare for forthcoming regulation¹, address the concerns of members and campaigners or for a combination of these considerations.

A recent survey² of local authority pension scheme funds in England and Wales revealed that while 42% of respondents said they had set a net-zero target date, almost all funds that had not set one stressed that they are actively tackling climate change within their portfolios. Additionally, around 300 councils across the UK as well as the Local Government Association have declared climate emergencies³, demonstrating that climate is a major and urgent concern to the UK's local governments as well as the LGPS. We at LGIM are experiencing widespread adoption of ESG integration into local authority clients' portfolios.

An index decarbonisation strategy may offer the ability to clearly articulate a net-zero pathway and monitor its progress year on year. This provides pension funds with the assurance that their investments are working coherently toward the avoidance of the worst-case climate scenarios.



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Reaching net-zero emissions by 2050 is considered the safest way to limit global temperature rises to 1.5°C above pre-industrial levels, avoiding some of the worst impacts of climate change⁴. As a result, we believe many investors are looking to reduce the exposure to carbon emissions within their index strategies and align their portfolios with climate scenarios that may avoid the most severe impacts. This process requires a decarbonisation pathway that could align to a 1.5°C scenario.

There are different avenues to delivering a decarbonised index strategy with net-zero ambitions. We focus on the exclusion and capital allocation methods, as well as a combination of the two.

1. Local Government Pension Scheme (England and Wales): Governance and reporting of climate change risks - GOV.UK (www.gov.uk)

2. Local Government Chronicle, 10 March 2022

3. Local Government Association, Climate change hub | Local Government Association

4. Intergovernmental Panel on Climate Change: Special Report on Global Warming of 1.5°C (2018)

1. Sin stocks and high misalignment– the role of exclusions

The exclusion approach, also known as negative screening, has been used to avoid having specific stocks or industries in an index. The most prominent exclusions have tended to be of the ‘sin stocks’, which include tobacco, alcohol, gambling, fossil fuels and controversial weapons.

Some of these exclusions have been related to normative or ethical principles and go beyond purely carbon-related considerations. In addition, climate exclusions may come with elements of ethical and norms-based exclusions, such as the violation of international conventions; e.g. the United Nations Global Compact (UNGC).

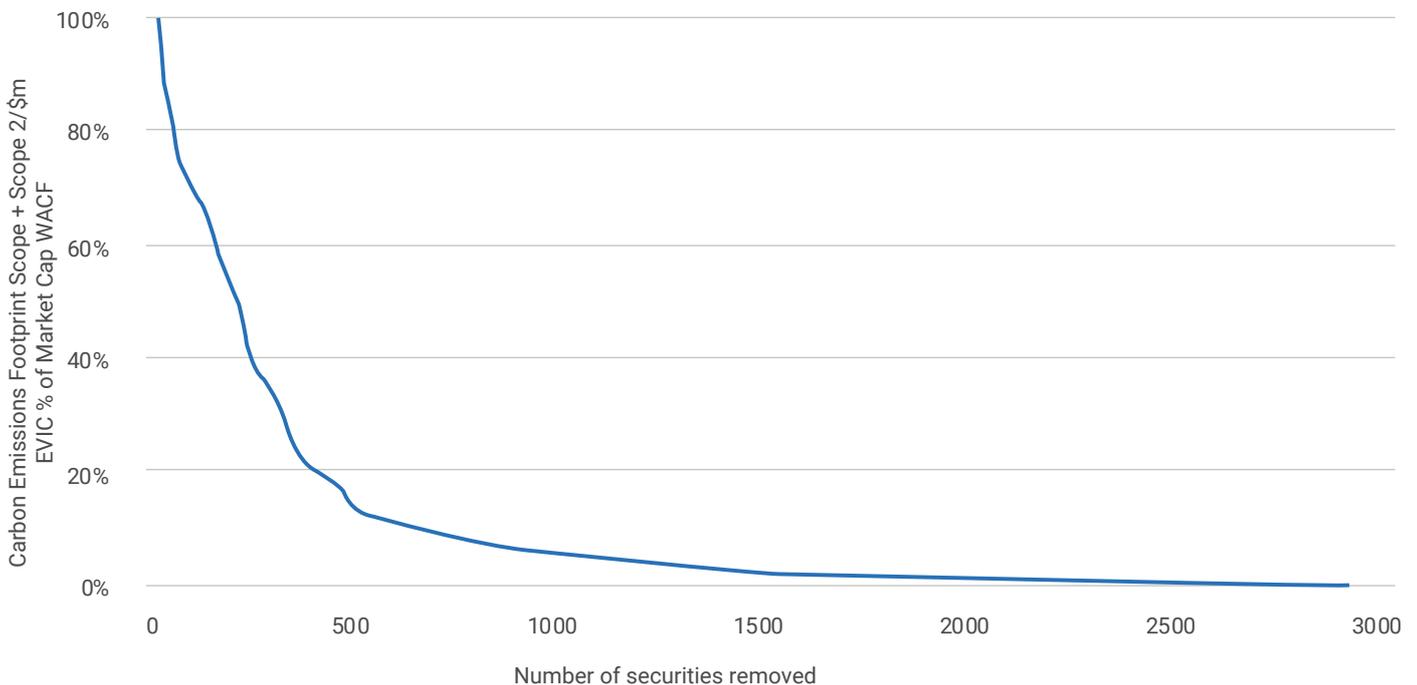
Different exclusions can resonate with different types of investors and across different regions. Some prefer this approach as it is transparent, easy to communicate and offers peace of mind if an investor’s ultimate objective is to remove exposure to specific securities and sectors.

But aggressive exclusions may alter the portfolio’s profile quite significantly. As the level of exclusions increases, the adjusted index often strays from its parent benchmark, and the index may no longer deliver a market-like, risk-return profile. This means that there is potential for the index to incur unintended active risk as compared to its benchmark.

Global market capitalisation indices offer two observations. First, a stock can have a high-carbon intensity and contribute a sizable amount of carbon to the portfolio. Second, a stock may have a low intensity but if it is heavily weighted in the benchmark it may still contribute sizeably to the overall emissions of the index.

Figure 1 shows that by removing just 30 securities (out of 2,827 in a global stock index) it is possible to achieve a 37% emission reduction in a global stock index from the Q1 2022 total emissions intensity level and a 50% emissions reduction from 2019 portfolio levels. This reduction can be achieved, typically, with a tracking error⁵ of less than 0.50% for a globally diversified strategy.

Figure 1. Carbon intensity reduction and number of removed securities in a global stock index



Source: LGIM, Source: ISS 2022, Source: Refinitiv Information 2022., MSCI, Solactive as at 29 April 2022.

5. Tracking error is a measure of financial performance that determines the difference between the return fluctuations of an investment portfolio and the return fluctuations of a chosen benchmark.

It should be noted that diversification is no guarantee against a loss in a declining market.

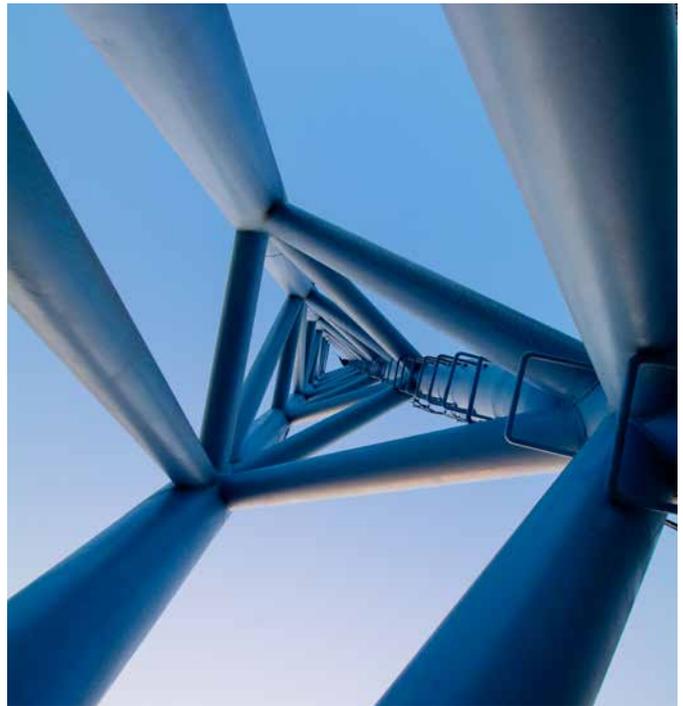
There is a role for exclusions in a net-zero approach, for example, to remove companies that are highly misaligned and have little likelihood of being willing or able to transition. Relying solely on an exclusionary approach to achieve net-zero portfolios, however, could be problematic, as some high emitters, such as mining companies and utilities will have an important role to play in developing and investing in order to facilitate a successful net zero approach.

For these types of emitters, an engagement approach may be more fruitful in achieving carbon emissions reductions. LGIM has a long history of climate-focused corporate engagement activities undertaken by its Investment Stewardship team, which focuses on holding companies to account for the pledges they make and actions they take.

Therefore, unilaterally divesting holdings is not guaranteed to lead to the decarbonisation of the real economy and indeed could impede necessary investment in climate solutions.

2. Choosing or planning to choose a net-zero pathway

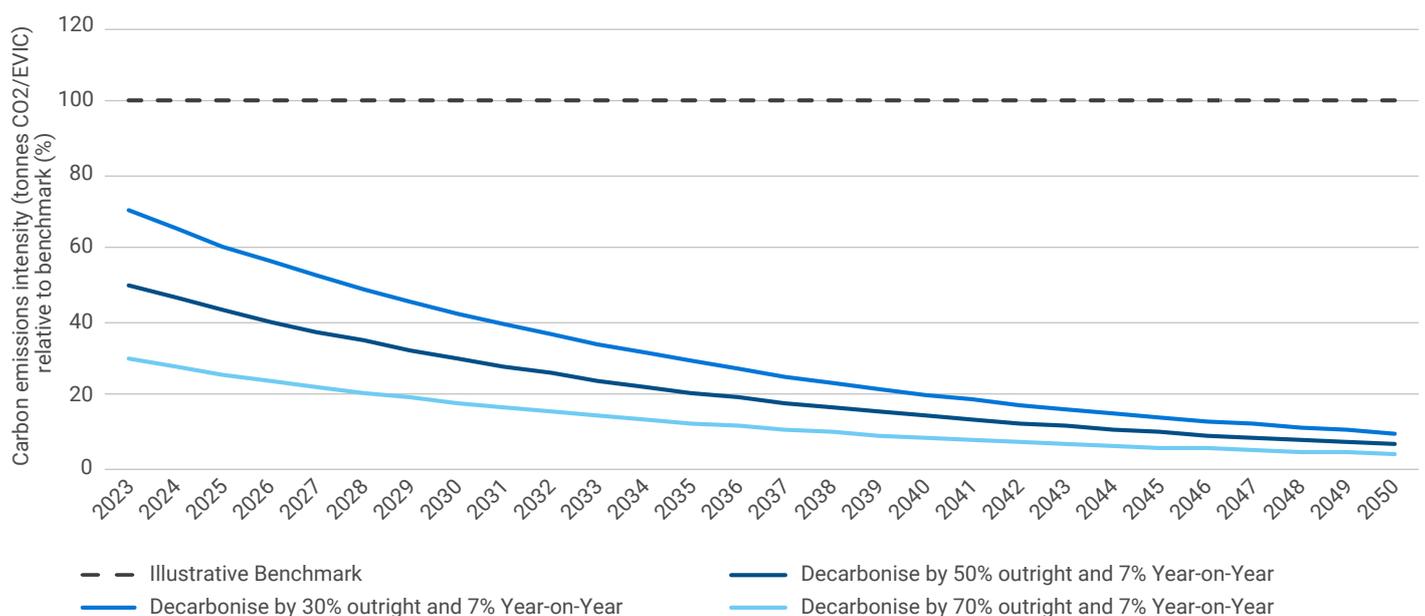
For those LGPS funds which have set a net-zero target date or anticipate setting one, there are various decarbonisation pathways from which to choose. A common decarbonisation pathway, based on recommendations from the Intergovernmental Panel on Climate Change (IPCC) and the EU Paris-aligned Benchmarks (PAB), is to reduce carbon emissions intensity by a fixed percentage relative to a parent



benchmark. The index portfolio would then continue to be decarbonised by additional percentage points each year.

Figure 2 shows different decarbonisation objectives that investors may choose from to embark on a net-zero pathway. The middle line shows a pathway which reduces an index portfolio's carbon intensity by 50% by 2030 before continuing with a carbon reduction trajectory of 7% year-on-year, with a goal of reaching net-zero by 2050.

Figure 2. Decarbonisation or net-zero pathways



Note: For illustrative purposes only. The illustrated baseline assumes no changes to the level of carbon emissions in aggregate. Assumptions, opinions and estimates are provided for illustrative purposes only. There is no guarantee that any forecasts made will come to pass. The future emissions intensity of the underlying benchmark is unknown (dashed line).

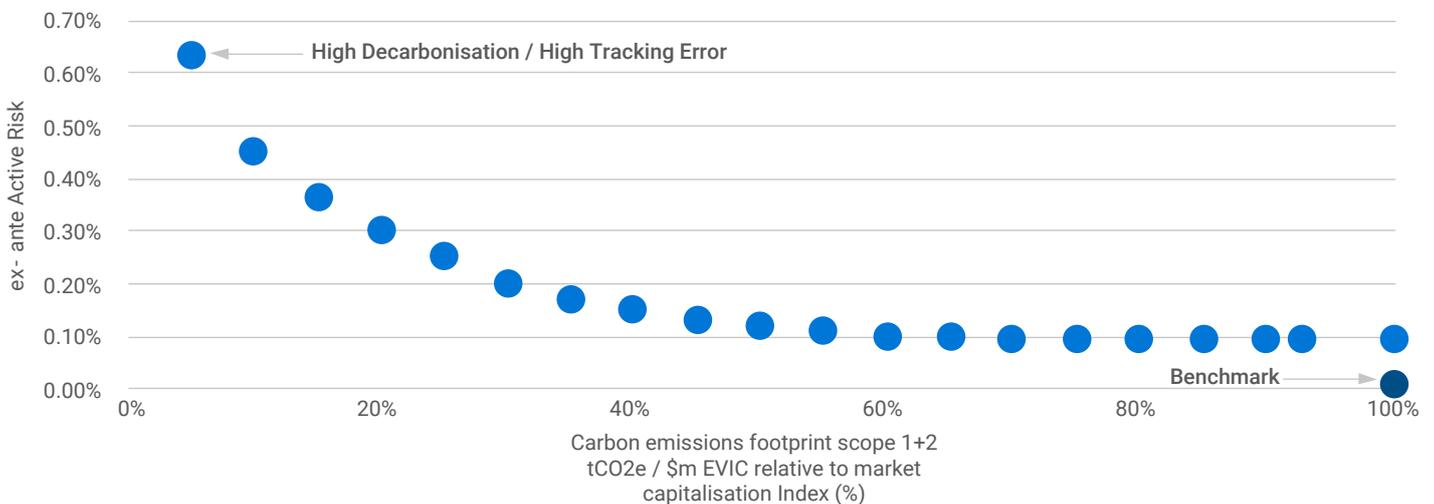
The aim here is to reallocate and adjust the exposure from stocks with high-carbon intensity to those that have less carbon intensity, subject to various investment constraints which may include security or sector deviations from the parent benchmark. As a result, a decarbonised index may have different constituents and/or a different number of holdings than its parent benchmark.

Below, we provide an example of creating a holistic index solution for transitioning to a 1.5°C environment to aim to reduce potential climate risks. The starting stock universe is based on market capitalisation for developed and emerging markets. We can illustrate the tracking error implications for

various degrees of decarbonisation rates subject to a range of investment constraints.

Figure 3 indicates that it could be possible to decarbonise a global index with a low tracking error, demonstrating that a 50% carbon intensity reduction can be achieved with about 15 basis points (0.15%) of tracking error. However, the tracking error rises sharply when the decarbonisation increases beyond 50%. The results may vary for specific regions and more concentrated indices. Furthermore, the construction of the example aims to mimic the market risk and return profile by applying various security, sector and geographical constraints.

Figure 3. Decarbonisation rates versus tracking error



Notes: Constraints on security +/-3%, sector +/- 3% and regional neutral. Minimal exclusions applied: thermal coal, UNGC violators, which represent 1.2% of the total weight of a global market universe (developed and emerging markets). Calculations based on: Qontigo. Portfolio Holdings and Risk model as at 29/04/2022. Broad market capitalisation global equity Index is based on MSCI ACWI, Solactive.
 Data source: LGIM, Solactive, MSCI, Source: ISS 2022, Source: Refinitiv Information 2022. Carbon footprint measured as tCO2e Scope 1 + Scope 2 / \$m EVIC.



Capital allocation and minimal exclusions combine for net-zero alignment

In our view, effective decarbonisation of index portfolios could involve a combination of minimal exclusion standards and greater reallocation of capital between leaders and laggards. We expect to see continued demand from investors seeking to align portfolios with a net-zero pathway, who recognise that potential financial and climate risks are different across different regions and industry sectors.

We also expect that increasing investor attention may be paid to broader climate themes such as biodiversity, as well as social and governance factors, all of which may complement a net-zero index strategy.

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