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Moving toward future-proof portfolios:

Aligning financial performance and climate in active fixed income

Positive climate impacts and financial returns are not incompatible. This is how LGIM's AFI team factors climate change into our portfolios.

Marc Rovers
Head of European Credit

Executive summary

- Instead of viewing climate impact and financial returns as conflicting, we think investors should see them as goals that can be addressed simultaneously.
- We believe there are two main approaches to sustainability: net zero, where investments are selected to be in line with the goal of net zero emissions by 2050, and the UN Sustainable Development Goals, which include climate but also include many other environmental, social, and governance (ESG) considerations.
- Fixed income assets display specific characteristics when valuing the impact of climate change depending on their lifespan. In our view, longer-maturity securities are significantly more exposed to climate risk than shorter-term investments.
- Managing a credit portfolio with financial and net-zero objectives involves balancing yield and climate considerations, with an emphasis on measurable decarbonisation. We believe selecting appropriate data to focus on is critical.
- At LGIM, we seek to engage, rather than simply exclude. Unilaterally divesting holdings is not guaranteed to lead to the decarbonisation of the real economy and indeed could impede necessary investment in climate solutions.
- LGIM's Active Fixed Income teams use our Destination@Risk tool to set fund objectives around temperature alignment, understand macro trends and transition opportunities, evaluate climate risk concentrations in portfolios, and engage with companies on their climate positioning.
- This framework can help us identify the climate-related risk and temperature alignment of individual companies and, by extension, make investment decisions that can both seek to reduce risk and improve the environmental impacts of their portfolios.

LGIM

Active management and the climate question

2023 was the hottest year on record[1], with extreme weather events becoming far more frequent. We believe investors have a crucial role to play in driving the transition to a low-carbon economy and mitigating climate-related risks.

How should an investor balance a focus on reducing the negative climate impacts of their investments with a desire for financial returns?

This negative framing of the climate question is evident to many investors, who see balancing carbon and returns as an increasing challenge. However, it is our firm belief that instead of framing the challenges and opportunities of the energy transition in these terms, investors could be asking a different, more positive question: how can these opportunities and risks be addressed simultaneously?

In fact, we believe that addressing the opportunities and risks created by the energy transition to help target positive impacts on climate outcomes can be closely aligned with a focus on long-term returns. However, far from maximising the potential value created by the transition, in our view many companies are still failing to transition at an optimal pace.

It's the combination of the negative framing of the climate question and the slow transition progress of many companies that, in our view, create such a significant opportunity for active investors to have both a positive impact on climate outcomes and also target returns. On the one hand, many still misunderstand the fundamentally economic nature of decarbonisation – leading to the possibility of material mispricing for investors to take advantage of as they seek to reduce their climate impact; on the other hand, there is a window of opportunity for investors to engage with and positively influence those companies who continue to underperform their real climate potential.

Net zero or SDGs?

Recently, we have observed that many investors with sustainability priorities have been coalescing their efforts around one of two approaches - investments which focus on a climate-focussed ambition of reaching net zero carbon emissions by 2050, and the multi-faceted UN Sustainable Development Goals (SDGs) that include climate but also extend to many other environmental, social, and governance (ESG) considerations.

Our net zero framework primarily focuses on carbon in the value chains of its constituent companies, especially coal extraction or power generation, and alignment with LGIM's Climate Impact Pledge. Underpinning our net zero framework is LGIM's Destination@Risk model, which we will explore in more detail later in this document. This model enables us to robustly measure the climate risk embedded in the portfolio and its climate alignment. It combines decarbonisation objectives based on backward-looking data and an objective based on forward-looking data (temperature alignment). This allows us to assess climate and transition risk in a way which overlays additional, independent insight to the data which is most commonly available from third-party agencies. Drawing on the energy scenario insights of this framework, the relevant strategies target a 1.5C alignment by 2030

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1. Source: Climate.gov

Meanwhile, the UN SDGs create a 'blueprint' for a more sustainable world. They provide a useful structure for measuring the impact of investment portfolios on the environment and on society, and they also enable us as a firm to focus our engagement efforts on acknowledged themes of importance for companies and governments and align our activities with other significant stakeholders around the world.

We integrate our SDG analysis directly into the fund management process. We have created a proprietary framework to score companies on each of the SDGs. If we deem a company to be negatively aligned on any of the SDGs, it will score -1 and will be excluded from an SDG-aligned portfolio. The reverse is true with positively aligned companies, to which we would look to have an exposure. In our SDG portfolios, we measure the overall alignment of the fund versus the relevant benchmark and seek to achieve higher overall alignment to SDGs.

How we see net zero

In December 2020, LGIM was a founding signatory to the Net Zero Asset Managers Initiative, which is committed to supporting the goal of net-zero greenhouse-gas emissions by 2050 or sooner and enabling investing aligned with net-zero.

To this end, we have set concrete targets. Our ESG strategies are increasingly incorporating net-zero considerations; we continue to engage investee companies on climate issues and there may be consequences, should they fail to act.

We also incorporate net-zero strategy considerations into some of our strategies alongside broader ESG components, such as LGIM's Active ESG View, UN SDG assessment, Climate Impact Pledge, and more.

Key risk: The value of investments and the income from them can go down as well as up and you may not get back the amount invested. Past performance is not a guide to future performance.

Valuations

Valuing the impact of climate change in fixed income securities is fundamentally different than in other asset classes such as equities. Fixed income securities lack homogeneity due to, among other things, coupon, maturity, and specific covenant protections. Therefore, the impacts of climate change will not impact the probability of default of each security in the same manner.

For example, climate change is not as large a consideration for evaluating the probability of default for overnight commercial paper as it would be for 30-year debt securities. As such, a broad exclusion policy may not be a reasonable investment approach to climate change in the fixed income world. Instead, we consider the impact to an issuer's long-term credit quality, security-specific features, and risk mitigation techniques.

At LGIM, we use proprietary analytics (see below for discussion of our Destination@Risk toolkit) in tandem with an engagement approach designed with the aim of providing superior returns while creating positive change in the real economy.

Climate metrics for credit

Managing a credit portfolio with dual targets of financial performance and net-zero objectives requires a thoughtful optimisation exercise between yield and climate-related considerations.

Our portfolios targeting net zero are aimed at achieving relative and measurable decarbonisation, while also investing in issuers whose GHG emissions are aligned with the pathway to net zero by 2050. LGIM's net-zero framework is applied to these portfolios, with an emphasis on the reduction of emissions versus the reference benchmark and an improvement in temperature alignment over time.

Our targets capture past and future improvements in climate-related metrics. This means active managers can look for alpha opportunities in sectors with high carbon-emission intensity, rather than excluding them entirely. As these sectors will continue to require capital to transition towards net zero, we believe issuers transitioning adequately should eventually benefit from a lower risk premium. This is because market participants are likely to start repricing climate-related risks and model their impact on credit ratings.

We also establish targets for our net-zero portfolios at the outset – and make them more stringent over time – as well as engaging with laggards and closely monitoring progress by issuers.

Using company emissions data in credit selection

A key metric that our portfolios targeting net zero use as an input into their investment decision-making process is data from companies showing their Weighted Average Carbon Intensity, known as WACI. WACI gives a current snapshot of how much carbon a company is emitting today.

It is worth noting that certain industries will usually have higher or lower carbon profiles depending on their business area. For instance, an energy provider is typically likely to emit far more carbon than a technology or media company. If an investor is solely focused on reducing WACI that's likely to drive significant sector skews, which in turn can materially affect the portfolio's profile.

We believe a sole focus on WACI can also potentially lead to some overly short-term behaviour, however. For instance, just reducing the carbon score of a portfolio based on today's considerations does not necessarily enable the largest potential impact on the climate transition. This is because we believe companies in low-emitting sectors using additional capital to reduce emissions further is likely to have a much less material impact than if companies in higher-emitting sectors decide to reduce emissions.

So, while WACI is important, we believe it is not the only data point investors should be considering.

How does LGIM apply exclusions?

In a sentence: we seek to engage, rather than simply exclude.

The net-zero challenge is broader than merely excluding high-emitting sectors, as all companies generate some emissions – either directly through their operations (Scope 1 and 2) or through their value chain (Scope 3).

Some high emitters, such as mining companies, will have an important role in developing and investing in solutions. Unilaterally divesting holdings is, therefore, not guaranteed to lead to the decarbonisation of the real economy and indeed could impede necessary investment in climate solutions.

Our exclusions relating to new thermal coal and new oil sands target some of the highest-carbon sectors of the global economy, which are structurally misaligned to the direction of travel, and to which cleaner, cheaper alternatives are increasingly available. These exclusions are also designed pragmatically, so as not to immediately and substantially reduce diversification – and increase turnover and costs – for some of the existing portfolios that are committing to net zero.

Over the next decade, issuers that are not making substantial progress in reducing their own emissions – regardless of their sector – are likely to find themselves at risk of exclusions from the growing share of LGIM assets managed in line with net zero. Where relevant, we may also seek to apply further sanctions – for example, under our Climate Impact Pledge, or more stringent temperature alignment requirements.

We believe the most significant question for most diversified investors is not whether a portfolio is net-zero today, but how to devise strategies that effect long-term change in the market.

Two of the key methods we can use to do this by harnessing data in credit selection, and modelling possible climate pathways that portfolios are aligned with.

Beyond WACI: Harnessing Destination@Risk

LGIM's Active Strategies teams use our Destination@Risk tool to set fund objectives around temperature alignment, understand macro trends and transition opportunities, evaluate climate risk concentrations in portfolios, and engage with companies on their climate positioning.

In our view, it is very important that investors aim to align with the climate transition by taking a forward-looking view, using focused credit analysis to seek to invest in the most appropriate names in each sector. This means giving capital to the companies that need it the most to reduce their carbon intensity and also have good strategies around ESG factors.

One way investors can seek to achieve this is by applying LGIM's Destination@Risk framework. This framework can help us identify the climate-related risk and temperature alignment (Figure 1) of individual companies and, by extension, make investment decisions that can both seek to reduce risk and improve the environmental impact of their portfolios.

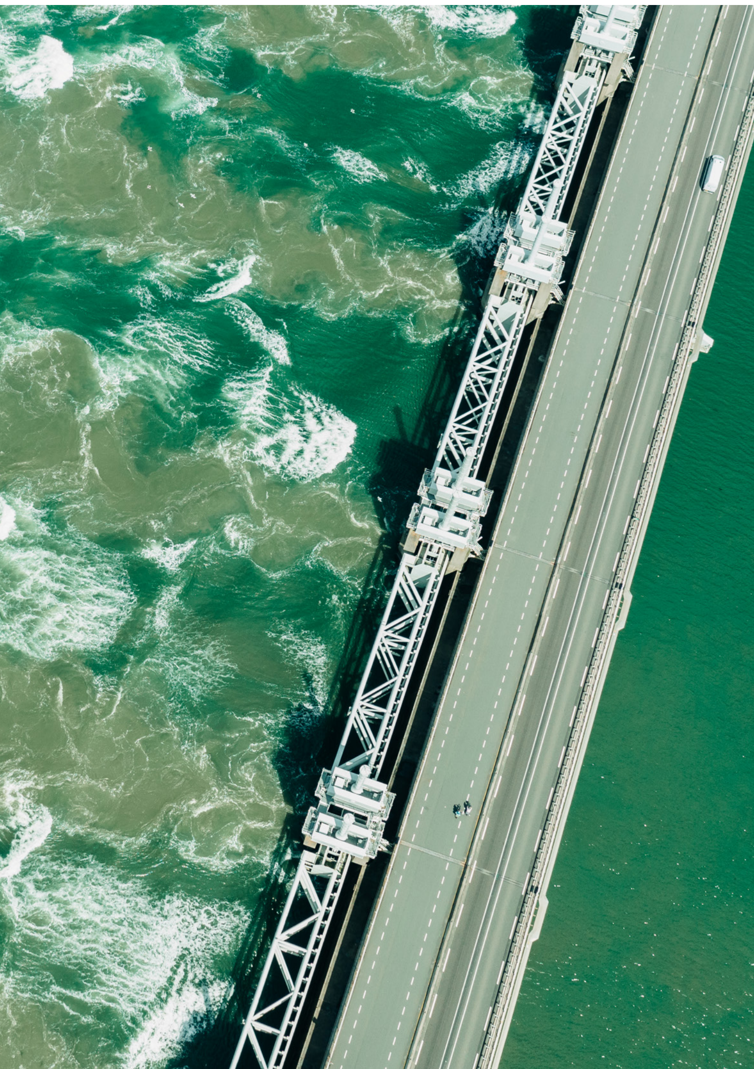
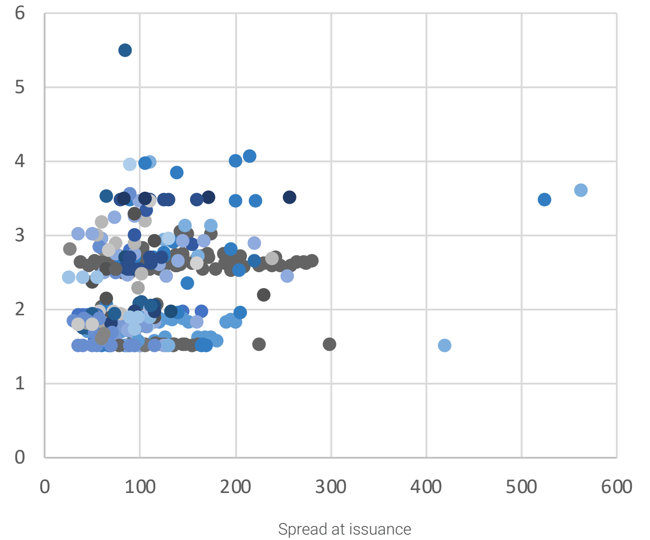


Figure 1: Using LGIM Destination@Risk to compare temperature alignment to credit spreads



- Aerospace Defence
- Agriculture
- Auto Manufacturers
- Auto Parts & Equipment
- Banks
- Beverages
- Buidling Materials
- Chemicals
- Commercial Services
- Computers
- Cosmetics/Personal Care
- Diversified Financial Services

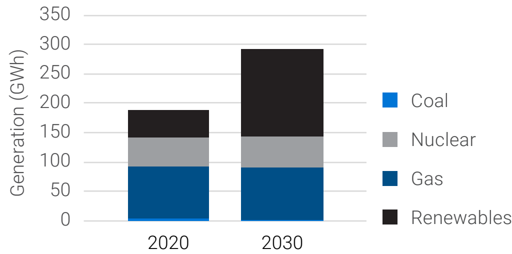
Source: Destination@Risk and Bloomberg, December 2023.
Past performance is not a guide to the future. Case study shown for illustrative purposes only.

Source: LGIM as at August 2024.

Furthermore, we believe taking a forward-looking view of temperature alignment gives investors more chance of uncovering a 'transition winner' that the markets have not yet priced in. By contrast, we believe many of the 'lower-WACI' companies are already likely to trade with an 'ESG premium' given their popularity in many existing climate-related investment strategies.

Figure 2: Companies in same industry with similar WACI, but differing temperature alignments

Electric Utility A



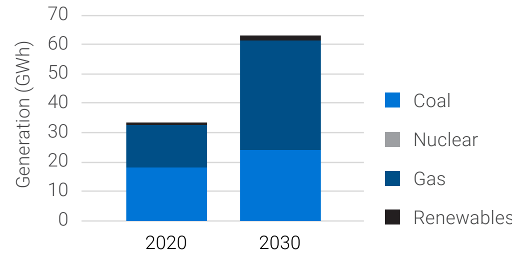
Region: NAM

Alignment: 1.67 C

Current Carbon Intensity: 2535 tCO2/ $m revenue

Rapid coal phase out nearly complete, expansion of renewables, ambitious forward-looking carbon intensity targets

Electric Utility B



Region: NAM

Alignment: 2.75 C

Current Carbon Intensity: 2795 tCO2 / $m revenue

Coal phase out slow, gas ramp up and renewables deployment too slow starting from a low base. Targets set but low probability assigned

Figure 2 uses an anonymous case study to give a clear example of how taking a forward-looking approach in addition to reviewing WACI data can highlight where companies in the same sector can have a similar current carbon intensity, but very different long-term temperature alignment paths.

Source: LGIM as at August 2024. Case study shown for illustrative purposes only.

Breaking down Destination@Risk

LGIM's Destination@Risk tool allows us to go further than WACI. It helps us answer the following questions:

- What might different climate outcomes mean for the economy?
- To which climate-related risks might my portfolio be exposed?
- Which warming scenario is my portfolio aligned with?
- How far away from net zero 2050 are the greenhouse gas (GHG)[2] emissions associated with my portfolio?

Scenario analysis based on this modelling framework helps us to understand the strategic implications of possible climate pathways, including the key features of transition to a net-zero economy.

Our LGIM Destination@Risk toolkit translates these scenarios into company, sector, and portfolio-level implications. Our modelling helps estimate the physical and transition risks associated with various climate scenarios.

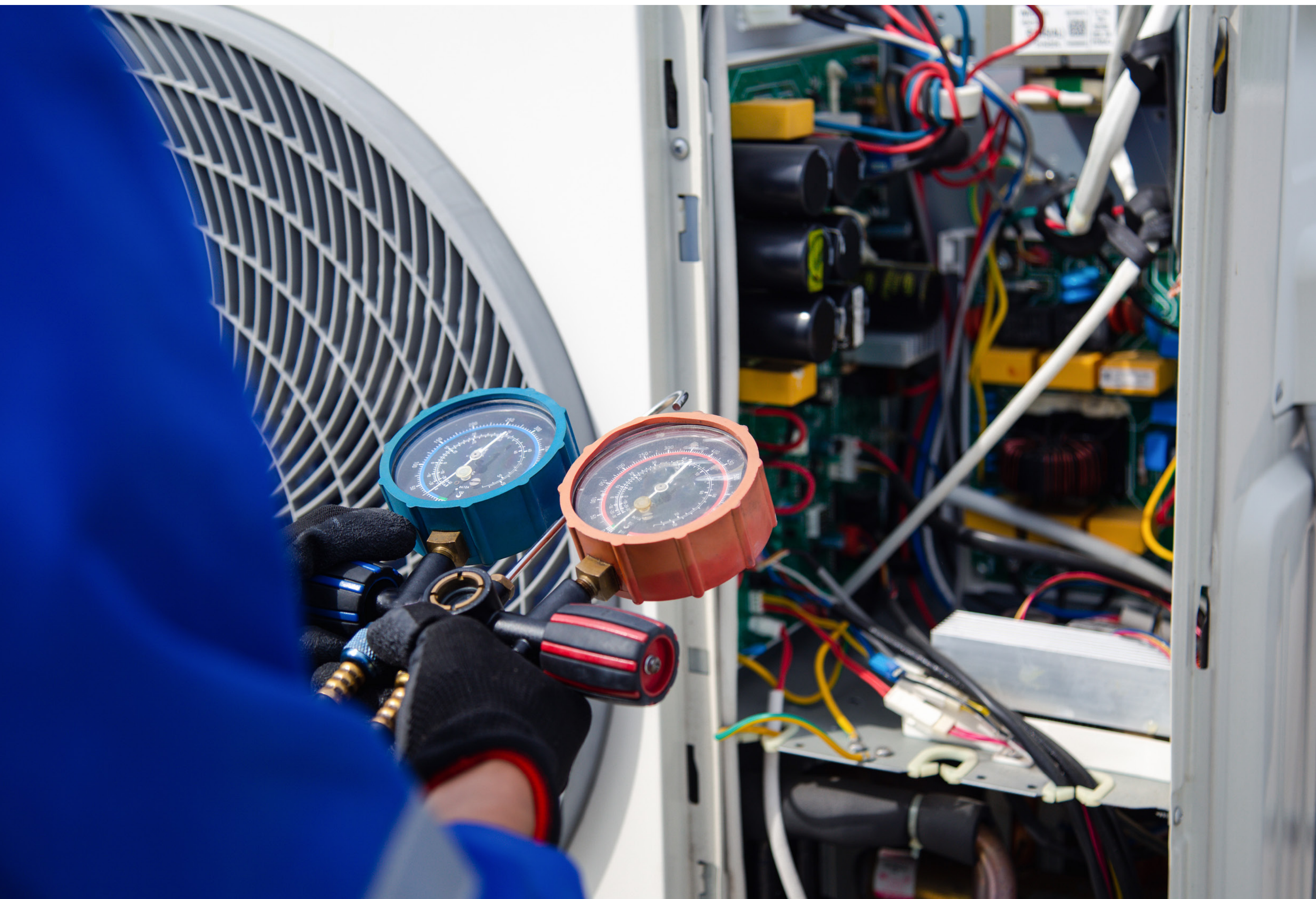
2. Greenhouse gases, such as carbon dioxide, trap heat in the atmosphere, thereby causing the 'greenhouse effect'.

Our Destination@Risk toolkit

The toolkit consists of four modules

Module	Primary inputs	Primary outputs
1. Destination	Carbon budgets, technology costs, service demand projections	Energy mix, oil prices, carbon prices, economic output, emissions pathways
2. Climate Risk	Carbon prices, energy demand, emissions pathways	Risk to GDP, inflation and asset values (listed corporate and sovereign bonds and equities)
3. LGIM Temperature Alignment	Energy mix, sectoral emissions pathways, economic output	Company and country temperature alignment scores
4. Gap Risk to Net Zero	Temperature alignment scores, sectoral emissions pathways	Distance to net zero outcome for countries and companies

LGIM Destination@Risk is constructed to follow the recommendations of the TCFD and provides scenario analysis to explore a range of possible future climate pathways and their potential impacts, rather than predictions or probabilities.



Module 1

Scenarios

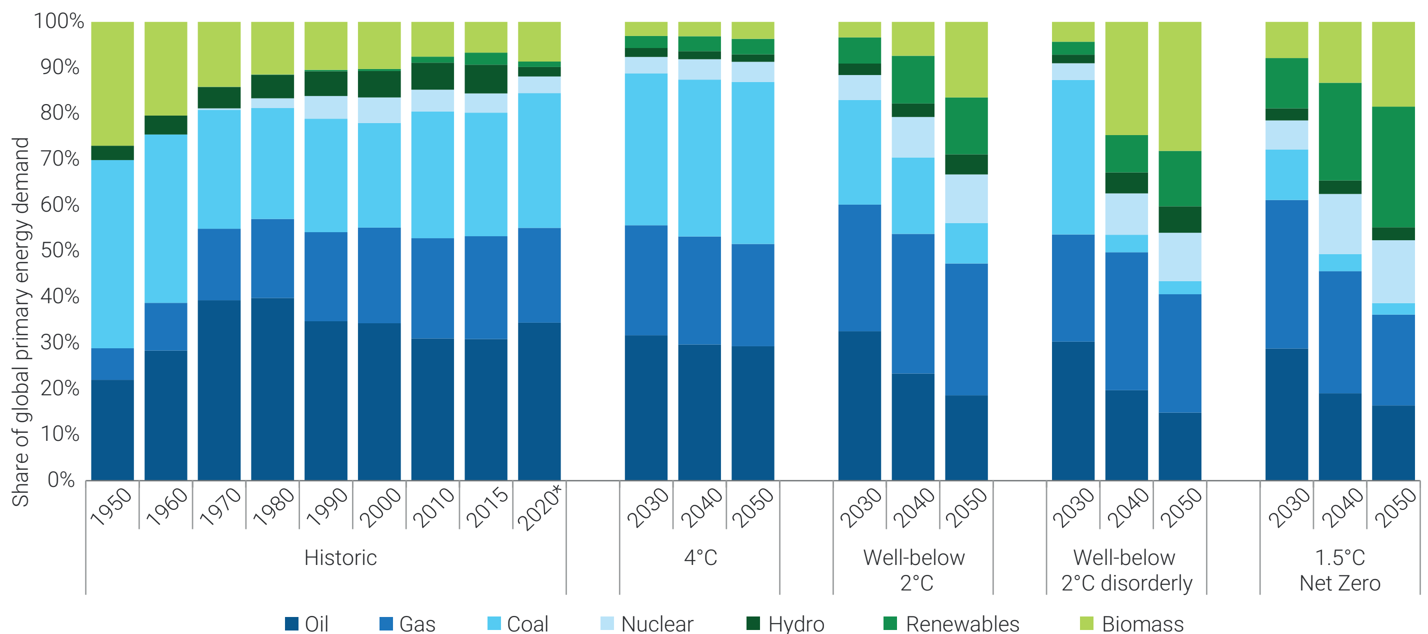
Scenario analysis helps us understand the implications of possible climate pathways, including the key features of a transition to a net-zero CO2 economy.

At LGIM, we develop our own bottom-up scenarios of how the energy and land systems may evolve between now and 2050. In modelling well-below 2°C futures, we aim to capture technology change across the entire energy system and make difficult trade-offs between minimising short-term policy impact and limiting long-term physical climate change.

Destination@Risk currently models four energy pathways to 2050, defined by their approximate global warming to 2100 relative to pre-industrial temperatures:

Net zero 1.5°C	Below 2°C	Delayed below 2°C	Inaction
Immediate, highly ambitious action to address climate change leads to a reduction in global CO2 emissions to net zero around 2050, most likely limiting warming to 1.5°C.	Immediate, ambitious policy and investment action to address climate change limits global warming to below 2°C, but warming most likely exceeds 1.5°C.	Policy and investment action to limit global warming to well-below 2°C is delayed by 10 years, resulting in much more disruptive change from 2030. Warming most likely exceeds 1.5°C.	Global failure to act on climate change means emissions continue to grow at historical rates. Global warming likely reaches 3-4°C.

Example output: Global primary energy mix

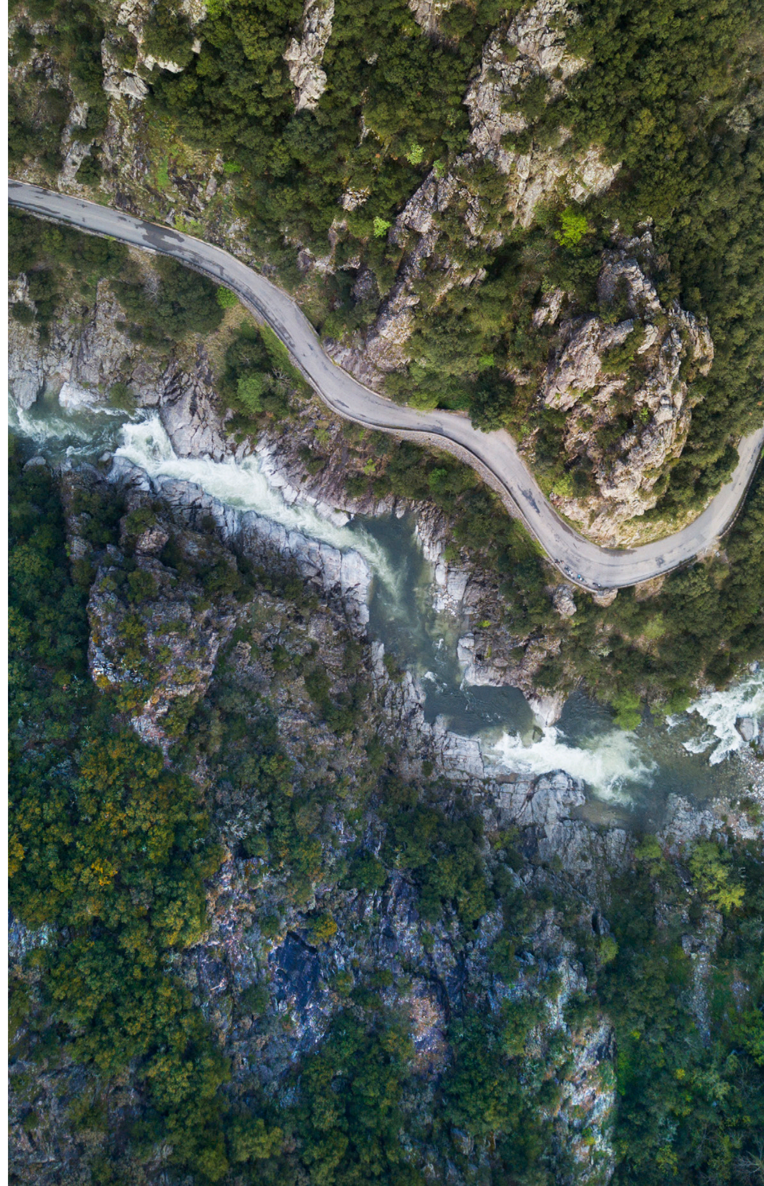


Source: LGIM Destination@Risk analysis August 2024. **Case study shown for illustrative purposes only.**

Module 2

Climate Risk

LGIM's climate risk metric allows investors to evaluate the physical and transition risks from climate change for their portfolios, across climate scenarios.

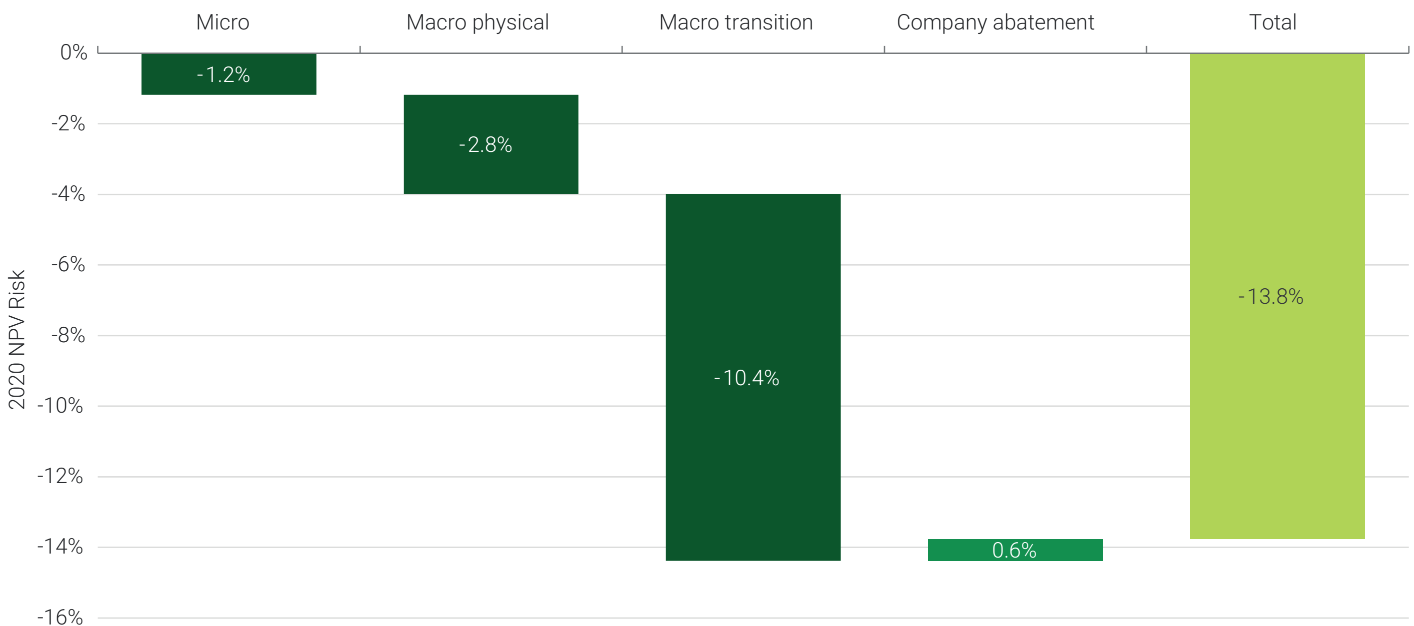


Risks are based on forward-looking valuations of individual companies across the capital structure, recognising the stock-specific nature of climate risk. Given the uncertainty around future climate outcomes, it is unlikely that climate risk is properly priced into markets today.

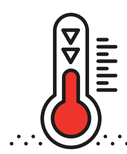
The climate risk metric offers a view on the extent of this mispricing across various climate scenarios. To quantify total climate risk, we consider microeconomic transition risk, macro physical risk, macro transition risk, and company abatement potential (which can partially offset micro transition risk). While the default configuration of the model is to run on 'Destination' outputs, the model can also take in external scenarios to assess climate risk.

Beyond security-level impacts, we also assess macroeconomic climate risk including risk to GDP and inflation at a country level.

Example output: Company net present value risk composition in well-below 2°C delayed scenario



Source: LGIM Destination@Risk analysis April 2024



Module 3

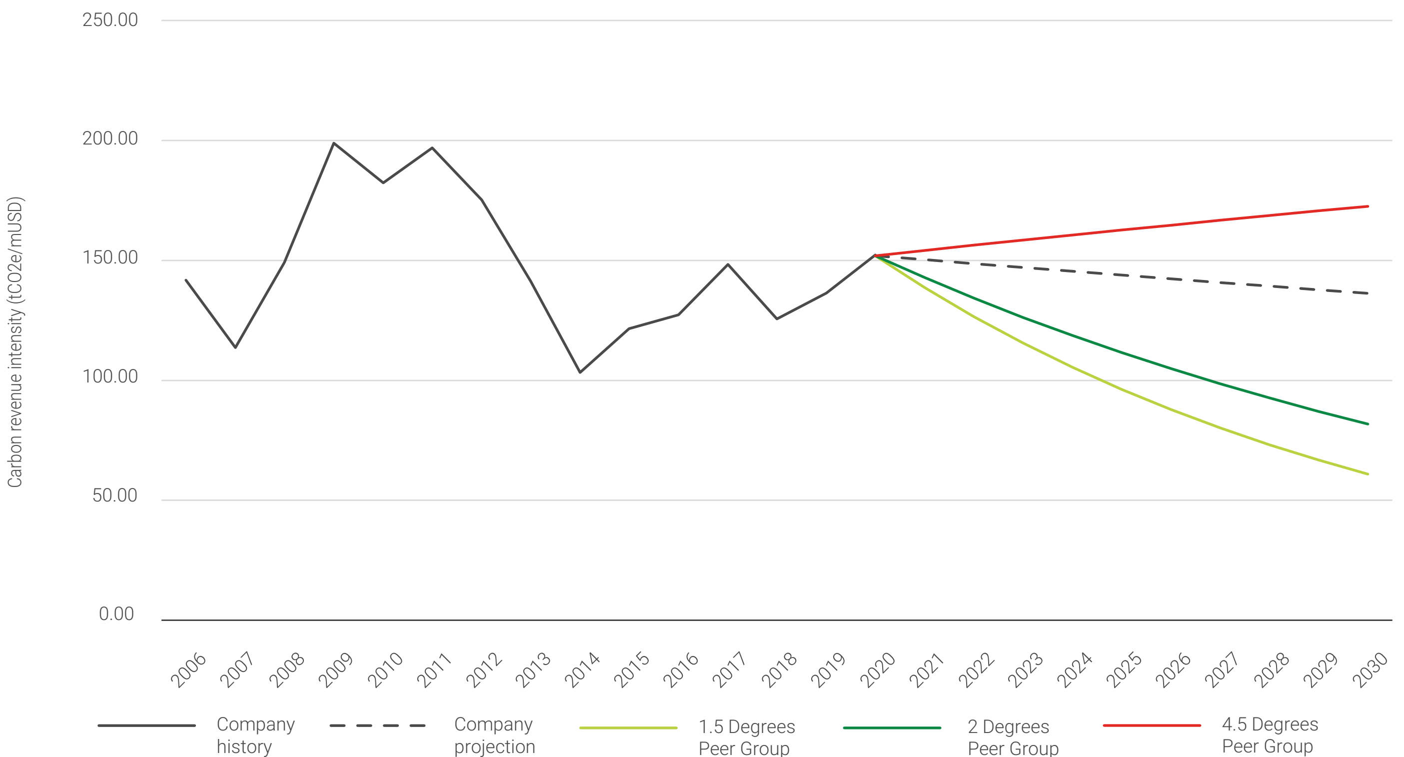
Temperature Alignment

Temperature Alignment provides a tool for measuring and managing the impact of investments on climate change.

The metric assesses what climate outcome are companies' actions compatible with. The approach reflects the direct connection between companies' GHG emissions and global warming.

It allows investors to measure their impact on climate change through their investments and evaluate performance against science-based global climate targets, such as 'well-below 2°C' and 'net-zero 2050'. In the below example, the company is aligned to around 2.1°C.

Example output: Company temperature alignment



Source: LGIM Destination@Risk analysis August 2024

Module 4

Gap Risk to Net Zero

LGIM's Gap Risk to Net Zero assesses the divergence of companies' future pathways from what is required to reach net zero greenhouse gas (GHG) emissions by 2050.

Taking outputs from our temperature alignment module as an input, it calculates how much further assets would need to decarbonise to reach a net zero GHG emissions 2050 target. It is therefore ideal for creating roadmaps of how the distance to net zero alignment can be reduced over time. This is especially relevant given many investors' commitments to align their investments to a net zero GHG emissions 2050 outcome.

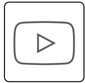
Client portfolios: harnessing the energy transition

Climate change is a meaningful component of our fixed income investment process. Importantly, our global network of investment professionals is well down the path of envisioning the course of this transition. We have used our own proprietary research to develop a process for evaluating climate-related risks and opportunities. Through the Destination@Risk framework, energy transition risk is explicitly included in our security analysis and portfolio construction.

In every transition there are winners and losers, and the great energy transition will be no different. We will remain committed to aiming to generate superior returns for our clients.

Contact us

For further information about LGIM, please visit lgim.com or contact your usual LGIM representative



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Key risks

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Whilst LGIM has integrated Environmental, Social, and Governance (ESG) considerations into its investment decision-making and stewardship practices, this does not guarantee the achievement of responsible investing goals within funds that do not include specific ESG goals within their objectives.

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