



We have developed LGIM Destination@Risk as a proprietary toolkit to assess climate-related risk for our investments. It allows us to explore a range of possible climate futures and examine their company, sector and portfolio-level financial implications as well as our investments' alignment with net-zero outcomes.

It allows us to answer the questions that we believe investors should be asking:

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

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. Our scenarios focus on the energy system as this is the source of the majority of anthropogenic GHG emissions. Our scenario, risk and temperature alignment models all rely on approximations, assumptions and external data, which could in turn include approximations, assumptions and errors, all of which could significantly alter results.

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





1. Scenarios

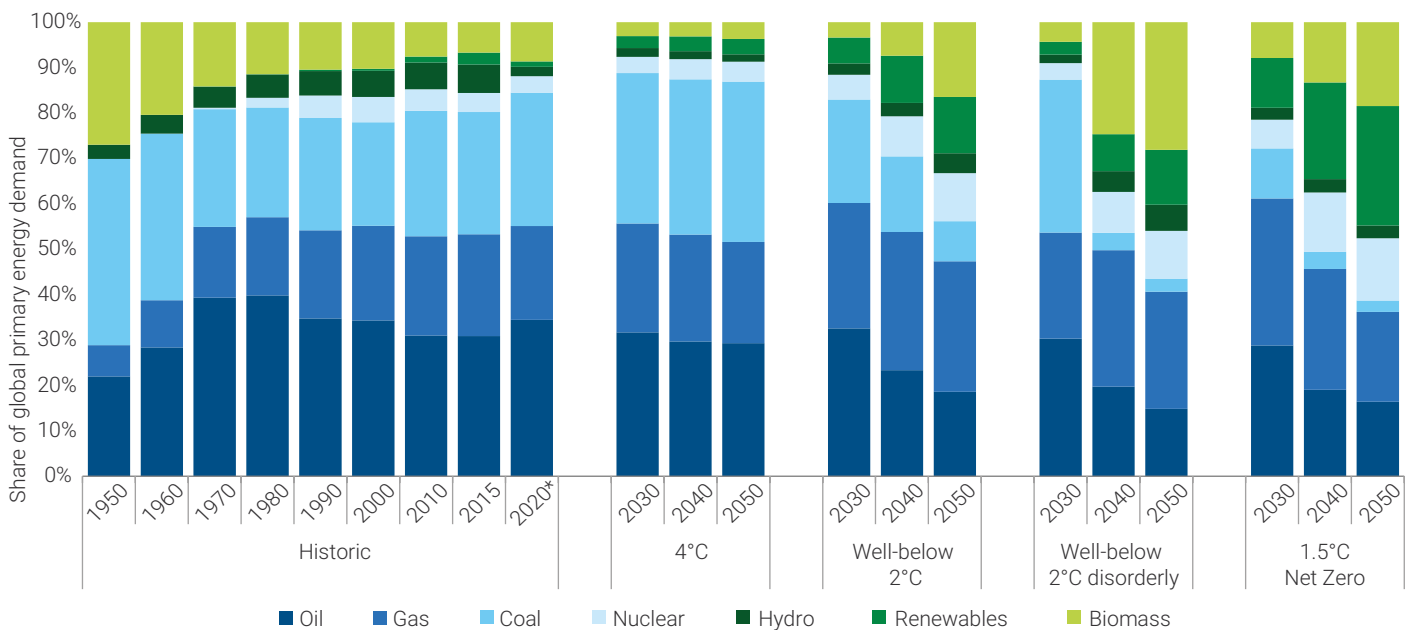
Scenario analysis helps us understand the implications of possible climate pathways, including the key features of a transition to a net zero CO₂ economy.

At LGIM, we develop our own bottom-up scenarios of how the energy system 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 currently models four energy pathways to 2050, defined by their approximate global warming to 2100 relative to pre-industrial temperatures:

1.5°C net zero	Well-below 2°C	Well-below 2°C Disorderly	4°C
Immediate, highly ambitious action to address climate change leads to a reduction in global CO ₂ emissions to net zero around 2050	Immediate, ambitious policy and investment action to address climate change succeeds in limiting global warming to well-below 2°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	Global failure to act on climate change means emissions continue to grow at historical rates

Example output: Global primary energy mix



Source: LGIM Destination@Risk analysis April 2022
 *2020 data is estimated, not actual



2. Climate Risk

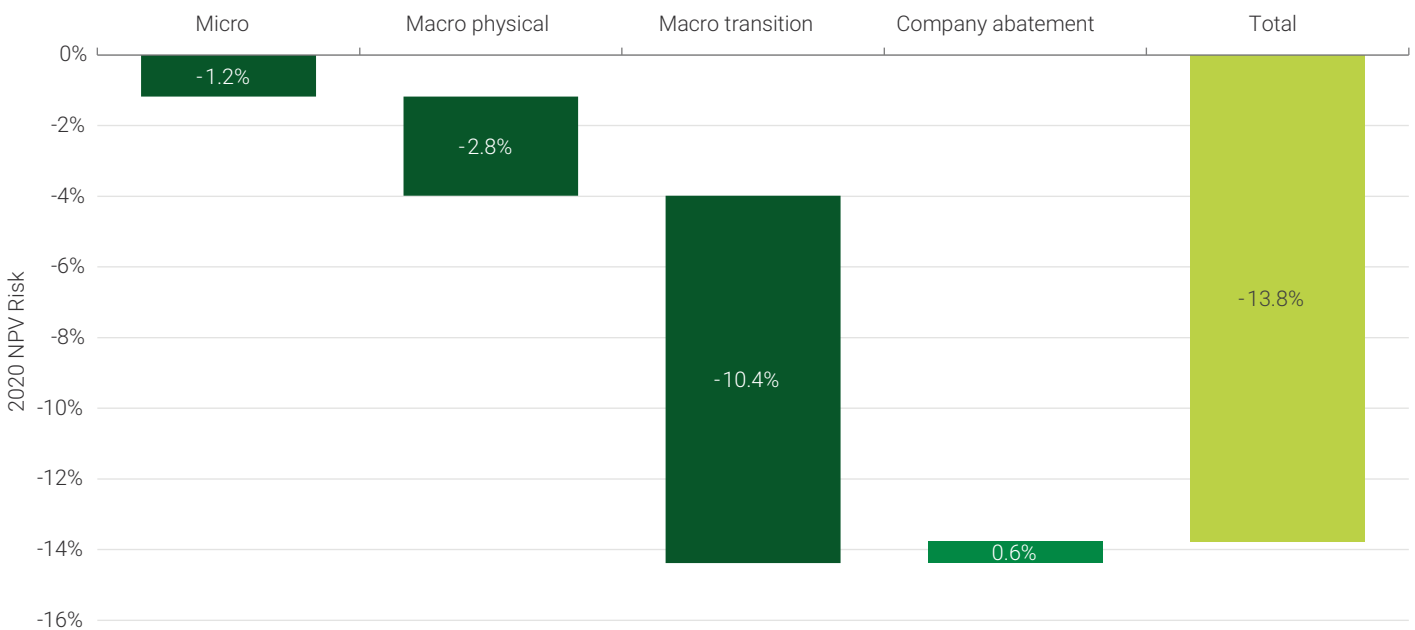
LGIM's climate risk metric allows investors to evaluate the physical and transition risks from climate change for their portfolios, across climate scenarios.

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.

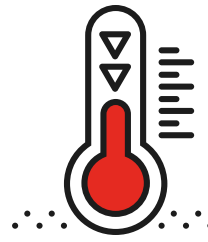
The climate risk metric offers a view on the extent of this mispricing across various climate scenarios. While the default configuration of the model is to run on 'Destination' outputs, the model can also take in external scenarios to assess climate risk.

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

Example output: Company NPV risk composition in well-below 2°C disorderly scenario



Source: LGIM Destination@Risk analysis April 2022



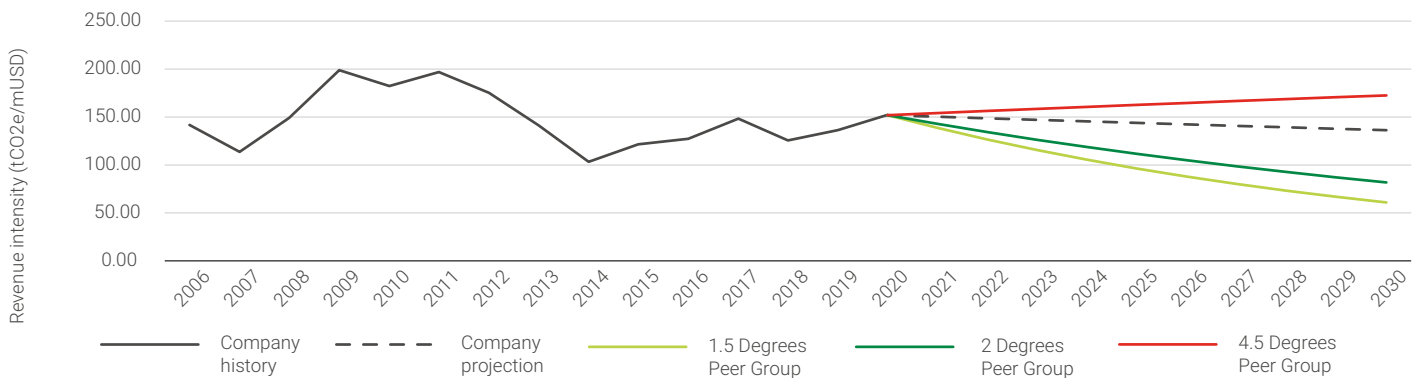
3. Temperature Alignment

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 carbon 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 3°C.

Example output: Company temperature alignment



Source: LGIM Destination@Risk analysis April 2022



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 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 2050 outcome.



LGIM Destination@Risk enables us to partner with our clients to meet their decarbonisation objectives, building Paris-aligned solutions and providing climate reporting. Please contact your LGIM representative for further information.

Contact us

For further information about LGIM, please visit [lgim.com](https://www.lgim.com) or contact your usual LGIM representative



Key Risk

The value of an investment and any income taken from it is not guaranteed and can go down as well as up, you may not get back the amount you originally invested. 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. Our scenarios focus on the energy system as this is the source of the majority of anthropogenic GHG emissions. Our scenario, risk and temperature alignment models all rely on external data which could include approximations, errors and assumptions. Assumptions, opinions and estimates are provided for illustrative purposes only. There is no guarantee that any forecasts made will come to pass.

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