



# LGIM Temperature Alignment



LGIM Temperature Alignment provides a tool, both for our clients and LGIM as an investor, for measuring and managing the impact of investments on climate change. The LGIM temperature alignment metric is constructed to follow the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD).<sup>1</sup>

The temperature alignment metric enhances our portfolio management and research, enabling us to provide our clients with solutions that consider climate risks alongside other investment risks, and help us to meet our clients' investment and climate-related objectives.

The metric asks of companies: what climate outcome are your actions compatible with? The approach reflects the direct connection between companies' greenhouse gas (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.

<sup>1</sup> LGIM Temperature Alignment relies on approximations, assumptions and third party data. Such third party data could also include approximations and assumptions. LGIM has not validated such third party data and has not verified the accuracy of such data.  
\* Greenhouse gases, such as carbon dioxide, trap heat in the atmosphere, thereby causing the "greenhouse effect".





## Scenario narratives

To evaluate asset performance against climate targets, we have devised four core scenario narratives against which to compare companies' and sovereigns' actions:

Scenario <sup>2</sup>	Narrative
<b>1.5°C (net zero GHGs)</b>	To reach net zero greenhouse gases (GHGs) by 2050 globally, all companies must decarbonise extremely rapidly, at an unprecedented scale. This requires all companies, regardless of starting point or sector, to reduce absolute GHG emissions by half by 2030. It does not require convergence on an end point.
<b>2°C</b>	The 2°C scenario is a convergence scenario in which companies are expected to converge over time. This means more emissions-intensive companies today must work harder than less emissions-intensive peers to achieve the same outcome by 2030.
<b>4.5°C</b>	To reach global warming of 4.5°C, the highest temperature scenario modelled by the IPCC, the world would have to abandon all existing climate targets and grow GHG emissions at a rate that is higher than historical trends. This is not a convergence scenario, as companies can grow their emissions no matter the starting point.
<b>6°C</b>	There is no climate scenario, even from the IPCC, which sets out what a 6°C outcome would entail in terms of emissions growth. As a result, this is less a specific scenario than an upper bound communication device for temperature alignment. It would involve a significant regression towards coal-fired power and result in exponential emissions growth.

<sup>2</sup> Please note that these scenario narratives are defined by their approximate global warming to 2100 relative to pre-industrial temperatures.

# Calculation

There are three key steps to the calculation of temperature alignment:

## 1.

- Project a company's GHG emissions pathway to 2030

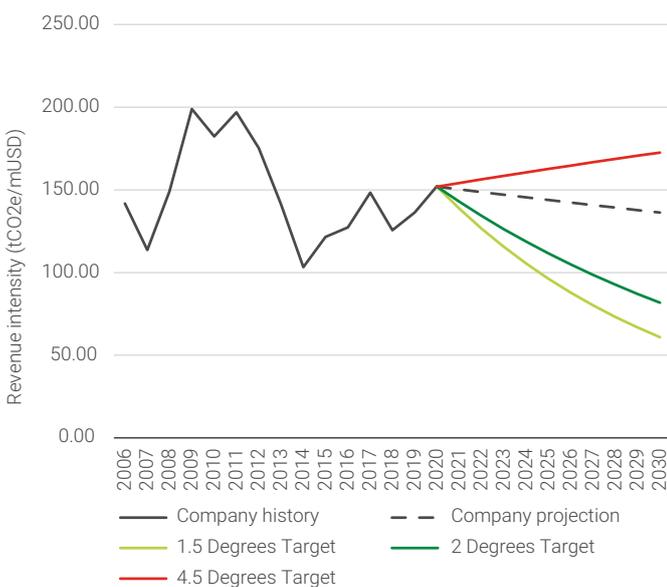
## 2.

- Project relevant science-based sector emissions targets using decarbonisation pathways from climate scenarios

## 3.

- Rate companies' temperature alignment by assessing carbon intensity against science-based targets

### Example output: Company temperature alignment



Source: LGIM Destination@Risk analysis April 2022

## 1.

We project companies' GHG emissions to 2030 considering both historical decarbonisation and future emissions-reduction targets. Using a decade of historical observations, we assess how companies have historically evolved their emissions, as well as any targets companies have set regarding future decarbonisation. We use a quantitative method for assigning a probability that targets will be met on a company basis.

## 2.

Companies are grouped into 'GHG peer groups', which are sectors with similar GHG emissions profiles based on primary business activity. From our internal scenario modelling, we then derive sector-specific pathways for required decarbonisation across four temperature outcomes: 1.5°C, 2°C, 4.5°C and 6°C.

## 3.

We can then compare companies' projected 2030 GHG emissions intensity with the decarbonisation pathways of various climate scenarios and assign a 'temperature alignment' score. In the illustration below, the company is aligned to around 3°C.

## Coverage

For most companies, implied temperature alignment is calculated based on Scope 1 and 2 GHG emissions.<sup>1</sup> We include LGIM estimates of Scope 3 GHG emissions for financials and oil and gas companies, where Scope 3 emissions are the largest component of companies' emissions.

Our methodology covers listed equities, corporate bonds, sovereign bonds and quasi-sovereign bonds. For sovereign bond holdings, we incorporate Climate Action Tracker country level alignment assessments, country decarbonisation targets and historical carbon data to calculate sovereign alignment scores which can be compared directly to corporate alignments. These reflect the latest country targets and progress to date.

<sup>1</sup>Scope 1 emissions are direct emissions from operations; Scope 2 emissions are those from purchased electricity, heat, steam and cooling; Scope 3 emissions are not directly controlled by the company but indirectly impacted by the company's purchases, sales and actions along its value chain.

LGIM temperature alignment is one component of the LGIM Destination@Risk toolkit, a suite of climate analytics tools developed to follow the recommendations of the TCFD. The toolkit can be used to assess potential climate scenarios, climate risk, temperature alignment, and gap risk to net zero. Please contact your LGIM representative for further information

## Contact us

For further information about LGIM, please visit [lgim.com](https://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 alignment scores and scenario analyses are constructed to follow the recommendations of the TCFD and are a quantitative expression of LGIM modelling and assumptions around the energy transition. We note that there are numerous portfolio metrics in development across the industry and advise caution in comparing scores across different methodologies at this stage. **The temperature alignment model relies on approximations, assumptions and external data, which could in turn include approximations, assumptions and errors, all of which could significantly alter results. LGIM has not validated each external input data point.** Assumptions, opinions and estimates are provided for illustrative purposes only. There is no guarantee that any forecasts made will come to pass.

### Important information

This document is not a financial promotion nor a marketing communication. It has been produced by Legal & General Investment Management Limited and/or its affiliates ('Legal & General', 'we' or 'us') as thought leadership which represents our intellectual property. The information contained in this document (the 'Information') may include our views on significant governance issues which can affect listed companies and issuers of securities generally. It intentionally refrains from describing any products or services provided by any of the regulated entities within our group of companies, this is so the document can be distributed to the widest possible audience without geographic limitation.

No party shall have any right of action against Legal & General in relation to the accuracy or completeness of the Information, or any other written or oral information made available in connection with this publication. No part of this or any other document or presentation provided by us shall be deemed to constitute 'proper advice' for the purposes of the Pensions Act 1995 (as amended).

### Limitations:

Unless otherwise agreed by Legal & General in writing, the Information in this document (a) is for information purposes only and we are not soliciting any action based on it, and (b) is not a recommendation to buy or sell securities or pursue a particular investment strategy; and (c) is not investment, legal, regulatory or tax advice. To the fullest extent permitted by law, we exclude all representations, warranties, conditions, undertakings and all other terms of any kind, implied by statute or common law, with respect to the Information including (without limitation) any representations as to the quality, suitability, accuracy or completeness of the Information.

The Information is provided 'as is' and 'as available'. To the fullest extent permitted by law, Legal & General accepts no liability to you or any other recipient of the Information for any loss, damage or cost arising from, or in connection with, any use or reliance on the Information. Without limiting the generality of the foregoing, Legal & General does not accept any liability for any indirect, special or consequential loss howsoever caused and on any theory or liability, whether in contract or tort (including negligence) or otherwise, even if Legal & General has been advised of the possibility of such loss.

### Third Party Data:

Where this document contains third party information or data ('Third Party Data'), we cannot guarantee the accuracy, completeness or reliability of such Third Party Data and accept no responsibility or liability whatsoever in respect of such Third Party Data.

### Publication, Amendments and Updates:

We are under no obligation to update or amend the Information or correct any errors in the Information following the date it was delivered to you. Legal & General reserves the right to update this document and/or the Information at any time and without notice. Although the Information contained in this document is believed to be correct as at the time of printing or publication, no assurance can be given to you that this document is complete or accurate in the light of information that may become available after its publication. The Information may not take into account any relevant events, facts or conditions that have occurred after the publication or printing of this document.

© 2022 Legal & General Investment Management Limited, authorised and regulated by the Financial Conduct Authority, No. 119272. Registered in England and Wales No. 02091894 with registered office at One Coleman Street, London, EC2R 5AA.

D003681