

# Investing for a sustainable future

Task Force on Climate-related Financial Disclosures Report 2022

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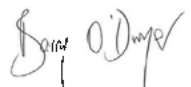
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## Compliance statement

The disclosures for The Royal London Mutual Insurance Society Limited, including any third party or Group disclosures cross-referenced, comply with the requirements under the FCA's Policy Statement PS21/24



**Barry O'Dwyer**  
Group Chief Executive

# Foreword from CEO

The United Nations' Intergovernmental Panel on Climate Change (IPCC) has highlighted that the climate crisis is a threat to human wellbeing and the health of the planet. Despite this, it says the action being taken globally is insufficient to meet the goals of the Paris Agreement. In almost all future scenarios it has modelled, the global temperature rise is expected to hit 1.5°C by the early 2030s.

In 2021, we published our climate commitments: to halve carbon equivalent emissions across our investment portfolio by 2030 and to achieve net zero by 2050.<sup>1</sup> Our commitments are based on the expectation that governments and policymakers will deliver on their commitments to achieve the goals of the Paris Agreement and the need for us to ensure that our actions do not contravene our fiduciary duty to our members and customers.

Policymakers, businesses and individuals must take decisive action now, changing the things that we can directly control while influencing others to change too.

The move to a sustainable world will require systemic changes and that is why we are a strong advocate for a 'Just Transition' to a sustainable low-carbon economy, ensuring social issues are considered and addressed as we move towards net zero.

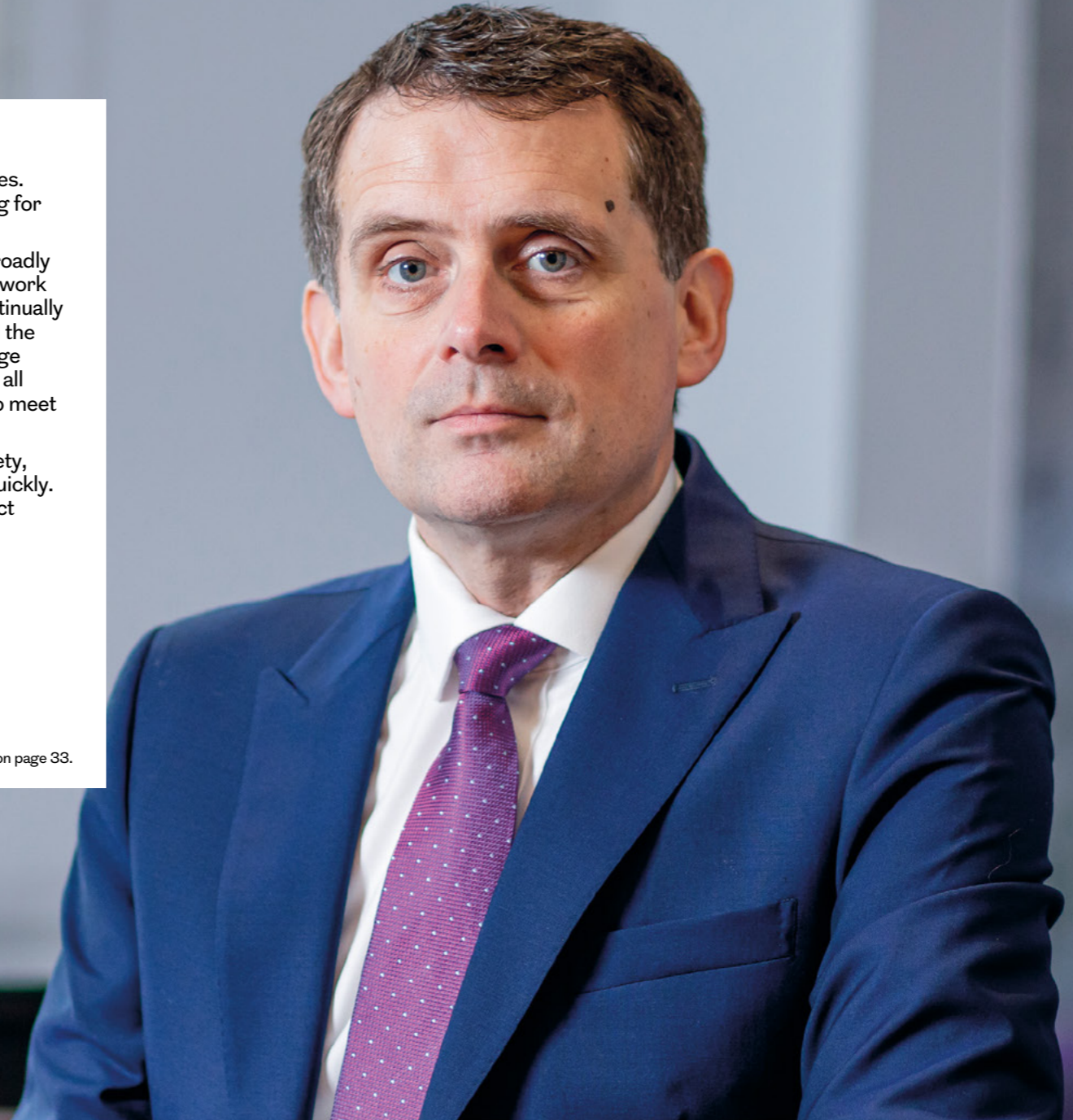
As a modern mutual, we are focused on delivering positive, enduring change on behalf of our members and customers and their families. We want to help to protect the standard of living for this and future generations.

We know that for us as a business, and more broadly across our industry, there is still a great deal of work to do. We can always do better, and we are continually striving to do so. Companies disclosing in detail the progress they are making on their climate change commitments is a critical step to ensure we are all holding ourselves, and each other, to account to meet the challenges that lie ahead.

Across government, industry and broader society, we need to work together and we need to act quickly. By doing so, we will deliver the real-world impact needed to secure our future.

**Barry O'Dwyer**  
Group Chief Executive

1. The basis and assumptions underlying our targets are set out on page 33.



# Introduction

## Our business

Royal London is the UK's largest life, pensions and investment mutual. We look after 8.7 million policyholders, and are entrusted to manage £147bn of our customers' assets.

Sustained by high-quality propositions and strong customer service for over 160 years, we help customers protect themselves and their loved ones against potential life shocks, save for the future, and manage their wealth in later life. We help build financial resilience while championing how we move fairly to a sustainable world.

## Our Purpose

Our Purpose, 'Protecting today, investing in tomorrow. Together we are mutually responsible', defines the impact we want to have. It shapes what we do on behalf of our members and customers, financial advisers, our colleagues and the communities which we serve.

As a committed and modern mutual, we take a longer-term view, ensuring we deliver positive, enduring change, helping to protect the standard of living for this and future generations.

With over £3tn<sup>1</sup> invested in UK pensions, our industry must play a crucial role in the transition to a low-carbon economy. We are committed to making a difference, which is why investing responsibly is at the heart of our business and why we have taken steps to put key climate commitments in place.

In 2021, we committed to achieving net zero across our investment portfolio by 2050, with an interim target of halving our financed emissions by 2030. These commitments are based on the expectation that governments and policymakers will deliver on their commitments to achieve the goals of the Paris Agreement and that the required actions do not contravene our fiduciary duty to our members and customers. The basis and assumptions on which our targets are based are set out on page 33. Our commitments are embedded in our investment beliefs, which are provided on page 15.

We also recognise the need to reduce our operational and value chain emissions to play our part in moving fairly to a sustainable world. We have committed to reach net zero across our direct operational emissions by 2030 and in 2022, we committed to reach net zero across our indirect Scope 3 (value chain) emissions by 2050.

1. Make My Money Matter, November 2022.

## Background

We are pleased to present our entity-level Task Force on Climate-related Financial Disclosures (TCFD) report for The Royal London Mutual Insurance Society Limited (RLMIS), which has been prepared in accordance with the recommendations of the TCFD framework. In this report we aim to:

- detail how we identify, assess and manage climate-related risks and opportunities;
- disclose the governance we have in place to manage climate-related risks and opportunities;
- reflect on the progress we have made in integrating climate into our wider strategic and risk management frameworks; and
- set out the areas where we will focus our efforts as we continue on the journey to achieve our Purpose.

The Royal London Group (the "Group") comprises RLMIS and its subsidiary undertakings. We have included reference to strategies, policies and actions taken at Group level that are applicable to RLMIS as an entity.

Royal London Asset Management (RLAM), our asset manager subsidiary, manages over 95% of RLMIS assets. RLAM also publishes its own TCFD report, which can be found [here](#).



## TCFD framework

The TCFD disclosure recommendations are structured around four thematic areas: governance, strategy, risk management and metrics and targets. They are interrelated and supported by 11 recommended disclosures that should help stakeholders understand how we consider climate-related risks and opportunities.

The table below indicates where we have reported against each TCFD recommendation within our report.

	TCFD recommendation	Pages
Governance	Describe the Board's oversight of climate-related risks and opportunities	7
	Describe management's role in assessing and managing risks and opportunities	10
Strategy	Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term	31
	Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning	12
	Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	29
Risk Management	Describe the organisation's processes for identifying and assessing climate-related risks	26
	Describe the organisation's processes for managing climate-related risks	27
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management	25
Metrics and targets	Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process	32
	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	35, 39
	Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets	33, 38

## Summary of 2022 activity

- The Board, its committees and management engaged with and considered key climate-related activities in 2022 including establishing the Group Sustainability Oversight Committee (GSOC) and the Group Sustainability & Stewardship team.
- Launched an internal Sustainability Learning Programme in collaboration with the University of Edinburgh Business School.
- On behalf of investors RLAM engaged with 393 companies, including 175 climate-related interactions over the year and exercised voting rights at more than 3,500 company meetings.
- Expanded our Just Transition engagement beyond the utilities sector to banks and social housing.
- Achieved signatory status of the UK Stewardship Code 2020 for the first time.
- Conducted research to better understand our UK customers' understanding, concerns and preference on sustainability and responsible investment.
- Updated approach to reporting Scope 3 portfolio emissions for our Corporate Fixed Income and Listed Equity and expanded reporting to include property and sovereign bonds.
- Broadened the scope of our Climate Risk Appetite Statement to consider the management and mitigation of our exposure to the financial, strategic and operational risks arising from climate change.
- Defined our value chain non-investment Scope 3 targets to reduce emissions 50% by 2030 and net zero by 2050.
- Scope 1 emissions reduced by 79% from our 2019 baseline.
- Achieved 'A-' for our climate change disclosure awarded by CDP, an independent body, up from a 'C' in 2021.

## Key areas of focus for 2023

In 2023, we are continuing work to develop our climate transition plan (CTP) to cover in detail how we intend to achieve our climate commitments, with associated timeframes. We will stay focused on embedding sustainability across our entire business by building colleague capabilities through formal education and supporting our Eco Champions network.

We will further develop our government and policymaker engagement strategy to ensure, through industry bodies and directly, that we carry out targeted engagement to influence for the right policy framework and support, to drive the transition to net zero across the real economy.

We will continue to refine our approach to risk management through aggregating climate risk reporting from across the business into a biannual Climate Risk Report and expanding our climate scenario analysis to assess the impact climate-related risks will have on our longer-term business strategy.

Our data strategy will be developed further as we consider our methodology for calculating and assessing forward-looking metrics as well as our portfolio emissions in line with best practice.



# Governance

Effective risk management is fundamental to achieving our Purpose, delivering on our strategy, serving our customers and growing our business sustainably. Strong governance, with effective oversight from the Board and its committees, is critical to our approach. In this section we discuss:

- How our Board and its committees oversee climate-related activities across the business.
- The role of management in climate-related activities.
- How climate change is embedded in our Remuneration Policy.

# Governance

## Board oversight

The Royal London Group Board is responsible for promoting the long-term success of the Group in a manner that seeks to generate value for our members whilst taking account of the interests of all our stakeholders. The Board therefore has ultimate responsibility for the way we manage our response to climate change and oversee climate-related risks and opportunities across the Group, including our impact on the environment and contribution to wider society.

Accountability is appointed in line with the Senior Managers and Certification Regime requirements to members of the Board and its committees.

- The Group Chief Executive Officer (Group CEO), Barry O'Dwyer, is responsible for the day-to-day management of the Group, to achieve our Purpose and to implement our strategy and objectives in line with our culture, values and ethical and regulatory standards.
- The Group Chief Financial Officer (Group CFO), Daniel Cazeaux, has regulatory responsibility for managing the financial risks arising from climate change.
- The Group Chief Risk Officer (Group CRO), Dr James McCourt, is responsible for maintaining the robustness of our risk management system. He provides a quarterly report to the Board with an assessment of risks against appetite, including material climate-related risks where relevant, across our business and geographies.

The Board receives updates at least every six months on climate-related activities. This is in addition to conducting final review of any external climate-related disclosures.

### Board

Audit  
Committee

Disclosure  
Committee

Investment  
Committee

Nominations and  
Governance Committee

Remuneration  
Committee

With-Profits Committee

Risk and Capital  
Committee

Independent  
Governance Committee

### Group Executive Committee (GEC)

Further information on our governance structures can be found in our [2022 Annual Report and Accounts](#).



**Barry O'Dwyer**  
Group Chief Executive Officer

**Appointed**  
8 January 2020

#### Skills and experience

Barry O'Dwyer was appointed to the Board on 8 January 2020. He is an actuary with extensive financial services experience in the UK and Ireland. He began his career at Standard Life in 1988, when it was a mutual. In 2008, he moved to HBOS and shortly afterwards to Prudential UK & Europe, where he became Deputy CEO. He returned to Standard Life in 2013, where he became CEO of Standard Life's platform, pensions and savings businesses. He joined the Board of Standard Life plc in 2017. Following its merger with Aberdeen Asset Management, he was the head of Standard Life Aberdeen's UK business before joining Royal London.

#### Climate-related experience

Since becoming Group Chief Executive, Barry has led the work to ensure Royal London is a purpose-driven business. Central to the Group's Purpose is to support a fair transition to a sustainable world, using Royal London's position as a responsible investor to influence progress on sustainability.

#### External appointments

He plays a prominent role in the industry as President of the Association of British Insurers (until July 2023). He is also a Non-Executive Director of Coop Exchange Limited



**Daniel Cazeaux**  
Group Chief Financial Officer

**Appointed**  
22 September 2020

#### Skills and experience

Daniel Cazeaux joined Royal London in June 2020. He was appointed to the Board on 22 September 2020. He is a member of the Disclosure Committee, the Investment Committee and the With-Profits Committee, and a director of Royal London Insurance DAC (Royal London's business in Ireland). He is a Chartered Accountant and from 2008 to 2020 was a partner at KPMG in the UK where he led global client teams delivering audit services to UK and global insurance companies, as well as advising on finance change programmes and transactions. In his time at KPMG he also performed

executive secondment roles into finance functions of large UK insurers and has deep-rooted specialist and commercial expertise.

#### Climate-related experience

Daniel has built climate-specific experience through his responsibilities for the financial implications of climate risk, which are considered as part of Royal London's risk management system and in its stress and scenario testing.



## Committee structure

Our committees are structured to ensure that relevant expertise and diverse opinions are engaged in managing and overseeing our affairs. The Board has established committees with delegated authority to consider and make recommendations to the Board on important issues, including those that are climate-related.

All committees must demonstrate that they take Environmental, Social and Governance (ESG) considerations into account. A mandatory template, prescribed in Board and committee paper templates, acts as a tool to embed these key considerations in day-to-day decision making.

The Board and its committees directly engage with and consider key climate-related activity. During 2022 this included:

- two updates to the Board focused on Royal London's strategy to play its part in moving fairly to a sustainable world. These updates covered our active stewardship and engagement strategy to influence meaningful change and a progress update on the development of Royal London's Climate Transition Plan;
- a review of Royal London's climate commitments and initiatives to meet them, including our regulatory and voluntary sustainability reporting obligations;

- updates to the Group Climate Risk Appetite Statement to reflect the focus on embedding of climate risks across the Group;
- a review of the Stewardship and Engagement Policy and reporting;
- consideration of updated analyses of climate change scenarios, in respect of the own risk and solvency assessment (ORSA)<sup>1</sup> 2022, which was previously conducted in 2021 following the Bank of England's 2021 Climate Biennial Exploratory Scenario;
- a review of a refreshed Strategic Asset Allocation (SAA) Framework to incorporate climate change scenario testing;
- consideration and approval of targets for our non-investment related Scope 3 (value chain) emissions.
- approval of our refreshed Investment Philosophy and Beliefs;
- consideration of the measurement against climate targets in executive and colleagues' incentive programmes; and
- a review of our progress towards our interim 2030 financed emission targets and key initiatives being pursued to meet these.

1. The ORSA (Own Risk and Solvency Assessment) is an exercise carried out by insurers subject to the EIOPA Solvency II regulations (or equivalent regime e.g. under the Prudential Regulation Authority (PRA) within the UK) to assess the adequacy of an insurer's current and future solvency position and risk management position under stressed scenarios.

Committee	Climate-related roles and responsibilities
Group Executive Committee	The GEC is responsible for the day-to-day management of climate change risks and opportunities across the Group.
Board Investment Committee	The Board Investment Committee supports the Board in discharging its responsibilities regarding investment matters, including climate-related investment risks and opportunities, in a manner consistent with our Investment Philosophy and Beliefs.
Risk and Capital Committee	The Risk and Capital Committee is responsible for the Group's risk management and internal control system. This is designed to manage and mitigate risks to achieving our business objectives within our risk appetite. Our Risk Appetite Framework is approved by the Board and defines the level of risk we are willing to take in alignment with our Purpose and strategy.
Independent Governance Committee	The Independent Governance Committee (IGC) acts independently to assess the ongoing value for money provided by Royal London for Workplace Pension customers and pathway investors. The IGC's remit includes consideration of environmental, social and governance factors that are material to the suitability of an investment.
With-Profits Committee	The With-Profits Committee advises the Board in considering the interests of all policyholders with an entitlement to a share in profits.
Remuneration Committee	The Remuneration Committee supports the Board in determining the Group's Remuneration Policy and the compensation of key officers. This includes how climate-related targets and objectives are considered as part of the Remuneration Policy.

## The role of management

The Group Sustainability Oversight Committee (GSOC) supports the GEC in the management of climate risks and opportunities. It supports, oversees and challenges the delivery of the product, investment and operational sustainability goals of the Group, considering both the impact of climate change on Royal London and the impact of Royal London on climate change. This complements the embedding of climate-related risk management across business units, under our standard risk management processes, including the Royal London Risk Management Framework as described on page 25 of this report. The GSOC will consider any pertinent climate-related items under its terms of reference.

The GSOC is supported by the Group Sustainability and Stewardship (GSS) team, which was established in January 2022 and is staffed by eight full-time colleagues. This function is led by the CEO Office Director and is accountable for:

- providing insight and expertise for teams across the Group on sustainability issues and solutions;
- challenging the status quo, to help ensure sustainability is embedded in everything we do;
- building capability across the Group so that all colleagues understand how their roles can support the Group's sustainability ambitions;
- supporting effective stewardship of our products, creating long-term value for customers and members;
- strengthening our external voice to effect greater positive real-world change, in collaboration with relevant business areas; and
- supporting industry-wide change through collaboration with initiatives targeting a Just Transition to a low-carbon economy.

A number of our teams provide support across the Group in managing climate-related risks. Some examples are noted in the table below.

Team/Group	Climate-related responsibilities
Group Risk and Compliance team	The Group Risk and Compliance team is responsible for embedding climate-related risks into our risk management framework.
Insight team	The Insight team provides insight to the business on topics which are central to fulfilling our Purpose. This includes customer vulnerability, market sustainability and environmental impact.
Commercial team	The Commercial team's climate-related responsibilities include contributing to responses to industry consultations related to sustainability and climate change. They act as subject matter experts for specific areas of the business or consultation responses, providing these responses and insight and participating with industry bodies.
Investment Office	The Investment Office is responsible for developing and implementing the investment strategy and strategic asset allocation for the Group, overseeing the performance of RLAM and other asset managers and monitoring regulatory developments related to investment matters. Sustainability and climate-related considerations are integrated across all these activities by the team.
Group Actuarial	Group Actuarial conducts climate scenario stress testing across a range of timescales to assess the impact of climate change on our capital position and business planning, and to address regulatory expectations.

Forums and working groups also play a central part in supporting and informing our committees, management and the wider business about climate-related risks and opportunities. Some of the climate-related topics considered and responsibilities for these forums and working groups are detailed below:

Group	Climate-related responsibilities
Group Sustainability and Stewardship Forum	The Group Sustainability and Stewardship Forum was established in 2022 and comprises members from across the Group. The Forum enables regular communication between teams delivering activities that, in aggregate, will enable achievement of the Group's sustainability goals in support of our Purpose.
Emerging and Strategic Risk Forum	The role of the Emerging and Strategic Risk Forum is to identify, monitor, assess and report emerging and strategic risks, including related climate risks, to the Group Executive Risk Committee. It also supports the Group's stress and scenario testing processes.
TCFD Working Group	The TCFD Working Group's responsibility is to facilitate the delivery of the entity- and product-level reports from each business unit across the Group.

## Remuneration

The Group's performance management and reward incentive framework focuses activities on delivery of key strategic objectives. The framework includes a Short-Term Incentive Plan (STIP), which applies to the majority of colleagues and aims to focus participants on the in-year results that need to be achieved to meet the Group's annual objectives. There is also a Long-Term Incentive Plan (LTIP), which aims to align Group executives with the long-term interests of members and customers through the delivery of our long-term strategy. Both incentive plans align to scorecards with measures and targets set annually by the Remuneration Committee and include progress against our climate commitments. Details can be found in the Directors' Remuneration Report in our 2022 Annual Report and Accounts.

The STIP and LTIP are grounded in our Purpose and help instil behaviours that contribute to delivering sustainable value for our members and other stakeholders.

Progressing against our climate ambitions was included in our 2022 STIP scorecard as one of the "Major projects". Major projects has an overall 15% weight. Sustainability is also integrated into a number of other measures within the STIP scorecard, such as assessment of risk and risk culture.

In 2022, 'Sustainability' was included in the LTIP scorecard with an overall impact on the scorecard of 10% and the following measures:

- Reduce portfolio CO<sub>2</sub>e emissions in line with the timeframe outlined by our climate commitments;
- Progress in securing Just Transition plans from our top investee companies by the end of 2024; and
- Implement agreed Diversity and Inclusion strategy

Performance with regards to Royal London's Climate Change strategy also accounted for 10% of the 2021 LTIP scorecard.

## Three lines of defence

We operate a 'three lines of defence' model that defines ownership and responsibilities for all risks, including those directly relating to climate matters.

- 'First line' business units and Group functions have primary responsibility for managing risks. In line with our Group risk management framework, all business areas must attest to the design and effectiveness of their controls twice a year. This includes business units and Group functions with climate-related responsibilities. The GEC manages the risks affecting their areas of responsibility.
- Our 'second line' is our Group Risk and Compliance function, independent from business units and Group functions. The second line provides specialist advice, oversight, challenge and assurance. This includes assessing adherence to relevant internal policies and external regulation.
- A Group-wide internal audit function represents the 'third line'. This provides independent assurance and has a reporting line independent of executive management

## Assurance

Consistent with the rest of our business, we apply the 'three lines of defence' model to provide assurance over the completeness and accuracy of our climate-related disclosures. We complement this with external assurance as necessary. We have received public assurance on our operational (Scope 1 and 2) emissions and our non-investment (Scope 3) value chain emissions to a limited level of assurance from ERM Certification and Verification Services. Full details of the scope, activities, limitations and conclusions of the assurance engagement are included in the assurance statement on our [website](#).



# Strategy

At Royal London, we recognise the urgency of addressing the climate crisis. We understand that the move to a more sustainable future will require systemic changes that will impact our global economy and so consider sustainability as a key component of our strategy.

In this section we will discuss:

- How climate-related risks and opportunities are integrated into our business and investment strategy.
- Our climate commitments and the steps we are taking to meet these.
- How we are engaging with our investee companies and partners to encourage them to take steps towards a sustainable future.



Our approach towards the integration of climate-related risks and opportunities into our strategy, investments and wider business planning can be split into three main categories;



Our overall approach to climate change is to be clear and resolute in our purpose-led ambition, while adapting our focus in response to recurring shorter-term challenges. When we consider the move to a sustainable world, we think about both:

- the impact the climate crisis may have on our business, our members, and our customers; and
- the impact we have on the climate.

These dual considerations lead us to scrutinise potential business opportunities alongside responsible mitigation opportunities, while closely managing climate-related risks.



### Our customer survey results

In 2021, we carried out research on a sample of nearly 3,000 UK nationally representative consumers. We found that 60% of these customers are concerned about their own contribution to the climate crisis and 43% expected Royal London to do everything necessary to urgently address climate change on their behalf. We conducted further research in 2022, where 33% of customers who answered the survey said that having a positive impact on real-world change is the most important factor. Only 15% would want to prioritise returns at the expense of having a positive impact on real-world change.

## Embedding sustainability across our business

Moving fairly to a sustainable world is embedded in our Purpose. This underpins the decisions we make every day. It not only applies to how we run our business but our approach to stewardship, managing our investments and how we consider and engage with all of our stakeholders.

## Our Purpose is 'Protecting today, investing in tomorrow. Together we are mutually responsible'.

We are driven by our Purpose and we are clear on the impact we want to create to protect the standard of living now and for future generations.

Our mutuality allows us to take a longer-term view, without the short-term demands of shareholders, ensuring we are well placed to invest responsibly and champion positive, enduring change. The consistency and authenticity of this approach provides an ideal platform for us to create and sustain value through active engagement on sustainability issues.

## Our mutuality boosts our ability to strive for the following outcomes:



### Helping build financial resilience

By providing great value investment solutions, we help customers to build the financial resilience they need in an ageing society. We want them to accumulate the wealth required to retire well. We protect families against life shocks along the way. We support those in wider society through our social impact activity.



### Moving fairly to a sustainable world

Using our position as a responsible investor to imagine, invest, engage and influence progress on wider social priorities. We will achieve net zero in our investments by 2050, be a leader on delivering a 'Just Transition' and build sustainability into our operations.



### Strengthening the mutual choice for customers

As a mutual, our longer-term mindset and focus on customer outcomes sets us apart. Royal London will continue to be the leading advocate of mutuality.



## What is a mutual?

Royal London is a mutual, which means we are owned by our members. This means that rather than paying money to shareholders through dividends, our profits are reinvested into our company, products and services for the benefit of our customers and members, or shared with eligible customers.

Some mutuals began as Friendly Societies – named because the members of these voluntary groups would often enjoy a social gathering when meeting to make their payments. Over time, the introduction of modern insurance and government regulation meant Friendly Societies grew into the mutuals we have today.

Royal London was founded as a Friendly Society in 1861 before becoming a mutual in 1908 and, today, we are just as proud to be one of the remaining mutuals as we are to have been one of the first.



## Our Investment Beliefs

We believe:

- That our customers want to know where their money is invested and the impact that it has on the world around them.
- That the best future for our customers is one where we collectively achieve the goals of the Paris Agreement.
- That actions taken up to 2030 will determine the shape of the century to come.
- That we should act as a responsible steward of the assets we invest in on behalf of our customers who rely on us to adopt a responsible investment approach.
- That change is best driven by being an active owner and engaging with companies where there are issues to be addressed.
- That allocating capital based solely on market weight is not a viable investment strategy for a responsible investor committed to ESG integration.

### Embedding sustainability in our investment process

Consideration of climate risks and opportunities are integrated into all aspects of our investment processes, from our investment beliefs to selecting and monitoring our asset managers, setting strategic asset allocations and managing investments across different asset classes.

### Asset manager selection and ongoing assessment

We have a formal assessment approach covering our standards, expectations and requirements when selecting and considering whether to adopt or retain asset managers, with the Board Investment Committee holding responsibility for final approval.

Our initial selection process and ongoing assessment of managers includes an assessment of their responsible investment and climate change activities through a due diligence questionnaire. This questionnaire drives our baseline assessment by asking asset managers about exclusions, voting, engagement and climate change aspects. The asset managers are also asked about their process for integrating stewardship and responsible investment requirements, such as ESG integration, across their investment process. Furthermore, in order for new asset managers to be considered, we require them to be signatories to the UK 2020 Stewardship Code, the UN PRI and the Net Zero Asset Managers initiative.

We seek to validate the information provided to us by cross-checking against MSCI data on ESG fund manager ratings and other externally available information, including ShareAction reports, UN PRI assessments, and UK Stewardship Code disclosures.

### Our Asset Manager Oversight Framework

The Asset Manager Oversight framework incorporates three core pillars:

1. Performance oversight framework.
2. Responsible Investment and Climate Change (RICC) oversight framework.
3. Operations oversight framework.

Within the RICC oversight framework, we include three tiers of oversight, in line with the materiality of our exposure. Each level determines the frequency and sophistication of our oversight activities. Our managers are split across these levels as follows:

- All 29 asset managers with RLMIS customer investments are subject to our Tier 1 arrangements.
- Seven asset managers, who manage over £100m each on our behalf, are subject to additional Tier 2 'enhanced oversight' arrangements.
- RLAM, which manages c. 95% of assets, is subject to Tier 3 'advanced monitoring' arrangements, in addition to Tier 1 and 2.

The RICC oversight framework focuses on policy, resources, ESG integration, climate and stewardship aspects including voting, engagement and exclusions. We continue to refine our frameworks to reflect best practices as industry data quality and policy expectations evolve.

We conduct biannual stewardship meetings with our 'key' (Tier 2 and 3) asset managers. At these meetings we:

- Focus discussions on our oversight framework, including responsible investment and climate change requirements and expectations such as the monitoring of net zero progress;

- Inform them of any changes to our policies and procedures or stewardship requirements; and
- Discuss the outcome of monitoring activities.

In 2022 our stewardship meetings highlighted that all key asset managers who manage RLMIS assets were signatories of the Net Zero Asset Managers Initiative.

We also reviewed the exclusion policies and voting guidelines of our key asset managers. We concluded from our review that all are aligned with our Investment Philosophy and Beliefs.

Tier 3

### RLAM

RLAM is subject to Tier 3 'advanced monitoring' arrangements, in addition to Tier 1 and 2.

95% of AUM

Tier 2

### Key Asset Managers

Asset managers who manage over £100m each on our behalf, are subject to additional Tier 2 'enhanced oversight' arrangements.

99% of AUM

Tier 1

### All Asset Managers

All 29 asset managers with RLMIS customer investments are subject to our Tier 1 arrangements.

100% of AUM

## Our Asset Manager Oversight Framework *continued*

### Monitoring RLAM

RLAM manages over 95% of RLMIS assets. Although RLMIS and RLAM are both part of the Royal London Group, RLAM is managed separately and is overseen by its own Board. RLMIS operates with RLAM as if it were an unconnected asset manager. We subject RLAM's performance to our highest level of oversight, with more rigorous checks than our other external asset managers due to the high proportion of RLMIS assets managed by RLAM.

We implement two assessments to ensure RLAM's appropriateness to manage the majority of our assets. The first is a triennial review of RLAM's suitability, which includes a review of governance, investment philosophy, investment capabilities, investment performance and fees and other key items. The second is an ongoing responsible investment monitoring programme that we use to review our asset managers' responsible investment capabilities. This involves detailed questionnaires and increased ongoing monitoring of RLAM's responsible investment activity.

### Triennial assessment

Every three years, we perform a more detailed review of RLAM, where we consolidate all the ongoing oversight we perform, collate feedback from key stakeholders and perform a fees analysis. In the latest triennial review, which covered the three years to the end of September 2022, we noted the following points regarding RLAM's responsible investment and sustainability approach:

- its responsible investment team had grown significantly;
- RLAM empowers its fund managers to understand and integrate ESG risks and opportunities into their investment process to support and enhance risk-adjusted returns; and
- a suite of tools, including a proprietary ESG dashboard, are being used to support investment decisions. These tools continue to evolve over time with a view to further enhancing their use within the responsible investment team and individual portfolio managers.

The output of our regular oversight activity is reviewed on a quarterly basis by the Investment Committee, as are triennial and ad-hoc reviews into specific aspects of RLAM capability.

Through this process, we concluded that RLAM's responsible investment and climate change approach is robust and aligns with our policies and industry standards.

### RLAM's Climate Transition Plan

Like RLMIS, RLAM has committed to reaching net zero emissions across its investment portfolios by 2050.<sup>1</sup>

During 2022, RLAM worked with internal and external experts in support of its climate transition planning, effectively creating a road-map for action. This exercise helped RLAM consider the additional steps it could take in support of its efforts to fulfil its climate commitments, what it means to its business, industry, and the products and services it delivers and designs for its clients. The core of the recommendations focused on how RLAM's engagement activities could be strengthened and developed further, with a focus on increasing climate-aware investment strategies.

Moving forward, RLAM will consider how some of these recommendations can be integrated into a change programme.

### Strategic asset allocation

One of our largest exposures to climate-related risks is the impact these risks may have on the assets we manage for our customers and members. To help manage these risks, we have embedded climate risk evaluation into our strategic asset allocation process.

Climate-related risks and opportunities are considered across this process by:

- considering our emission reduction targets when setting strategic asset allocation objectives, in addition to optimising investment returns;
- considering climate-related risks when setting risk limits and constraints;
- embedding climate-related risks and opportunities into the approved asset policy and Group's Investment Philosophy, both of which are used when determining the assets which can be part of the strategic asset allocation;
- reviewing the strategic asset allocation against at least two climate change scenarios to understand our exposure to the associated risks; and
- assessing the carbon emissions of the existing and shortlisted strategic asset allocation proposals to determine the impact any change might have on meeting our emission reduction targets.

1. The commitment is based on the expectation that governments and policymakers will deliver on commitments to achieve the goal of the Paris Agreement. It also assumes this action does not contravene RLAM's fiduciary duty to external investors.



### Building internal capabilities

In order to achieve our Purpose and play our part in moving fairly to a sustainable world, sustainability must be embedded across our entire business. Over 2022, building internal capabilities has been a key focus.

### Education

Our Sustainability Learning Programme, developed in collaboration with the University of Edinburgh Business School, was agreed and approved in 2021 and delivered over 2022. Over 140 colleagues across six learning cohorts attended this eight-week programme. The course was a key tool for further embedding climate and sustainability-related considerations into colleagues' roles. Live sessions and an interactive forum allowed colleagues to share ideas and lessons learned. Attendees were asked to set clear goals for 2022 aligned to our Group climate targets.

The course covered four topics:

1. The role of financial services in supporting a thriving society by providing services that meet consumer needs.
2. The responsibility of individuals in addressing the climate and sustainability crisis and the need to embed this in everyone's roles across our business.
3. Climate change fundamentals on the 'what', including terminology, emissions sources and measurement, climate scenarios, mitigation and adaptation.
4. Climate change fundamentals on the 'how', including ESG data, modelling, investment decision-making and portfolio analysis.

### Eco Champions

We have continued to develop our internal Eco Champions colleague network which, by the end of 2022, had grown to over 400 members. This voluntary network helps to build a culture of sustainability across Royal London by educating, engaging and inspiring colleagues. During 2022, the Eco Champions organised 15 events and published a range of internal articles, as well as playing an integral role in imagining and then creating our first Sustainability Summit.

### Our 2022 Sustainability Summit

We held a Sustainability Summit at the end of November 2022 with a week-long focus on how everyone in the business can play their part in moving fairly to a sustainable world.

Over 400 colleagues joined webinars and Q&As across the week with internal and external speakers covering a range of topics from recovering lost peatlands to jargon busting, with the aim of inspiring colleagues to take action, big or small, at work or home, to help tackle the climate crisis.



## Delivering our climate ambitions

Our climate commitments help steer our actions and strategy. They help us to play our part in moving fairly to a sustainable world, while contributing to the effective management of climate-related risks and opportunities for our customers and members.

We have committed to:

- reach net zero across our direct operational emissions by 2030 and indirect operational emissions by 2050; and
- reduce the emissions from our investment portfolio by 50% by 2030 as part of the transition to net zero by 2050.

These commitments are based on the expectation that governments and policymakers will deliver on their commitments to achieve the goals of the Paris Agreement.

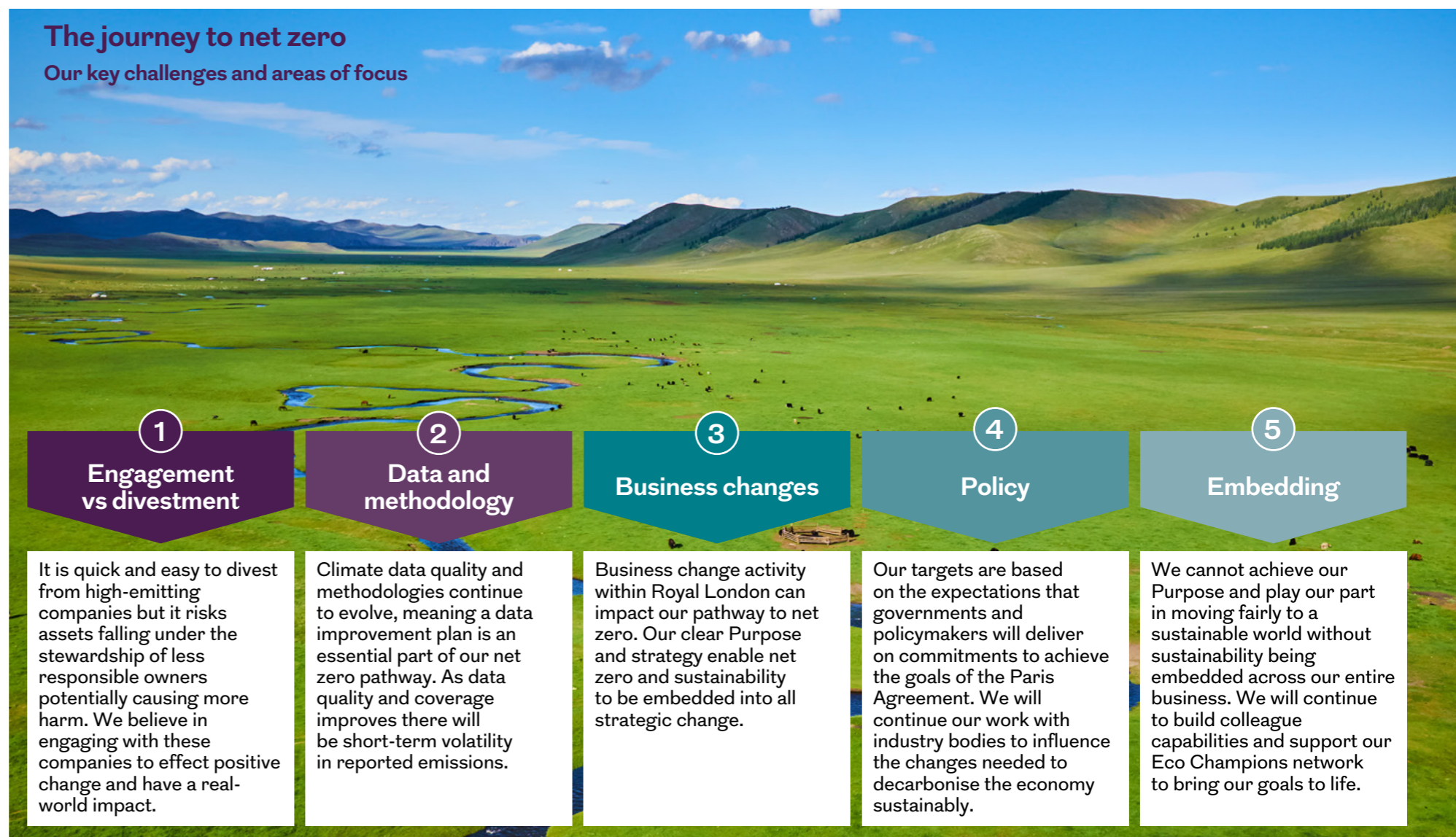
The basis and assumptions underlying our climate targets and metrics are set out in detail on page 33.

### Supporting a Just Transition

Rapid climate action that limits global warming can help prevent some of the worst human and economic costs of climate change. The scale and pace of the change required to achieve this goal is unprecedented and we have seen that rapid and disorderly changes can lead to increased social costs and leave people, sectors and communities stranded.

The concept of the Just Transition is to ensure that these social issues are considered and climate action supports an inclusive economy, avoiding exacerbating existing injustices or creating new ones.

Our colleagues, our members and our customers will all be impacted by the transition to a low-carbon economy. This is why we are a strong advocate for a Just Transition to a sustainable low-carbon economy, ensuring social issues are considered and addressed as we move to net zero.



## Decarbonising our portfolio

We have committed to reduce the emissions from our investment portfolio by 50% by 2030 (tCO<sub>2</sub>e/\$m invested) as part of the transition to net zero by 2050. These commitments are based on the expectation that governments and policymakers will deliver on the commitments to achieve the goals of the Paris Agreement and that the required actions do not contravene our fiduciary duty to our members and customers. The basis and assumptions underlying our commitments can be found on page 33.

We are founding signatories of the Paris Aligned Investment Initiative (PAII), a collaborative, investor-led global forum established in May 2019 by the Institutional Investors Group on Climate Change (IIGCC), that supports investors to align their portfolios and activities to the goals of the Paris Agreement. The framework outlines key components of a net zero investment strategy that should focus on achieving two alignment objectives:

1. Decarbonise investment portfolios in a way that is consistent with achieving global net zero GHG emissions by 2050.
2. Increase investment in the range of climate solutions needed to meet that goal.

## Listed equity and corporate fixed income

For our listed equity and corporate fixed income assets, our strategy is focused on engagement as a primary tool to reaching real-world carbon emission reductions as described on page 18.

We believe engagement, particularly with our highest-emitting investee companies, will have a more significant real-world impact than divestment.

Because of this, we accept that our financed emissions may rise in the short term, but believe that this is the best course of action to achieve our climate commitments and reduce emissions in the long term.

## Developing climate solutions

In 2022, RLMIS seeded the RLAM Sustainable Growth Fund which aims to invest in companies with strong ESG credentials and provide attractive investment returns for customers. These companies will be assessed and selected by RLAM based on their ESG and financial analysis, with minimum thresholds to ensure investments score highly on both. The fund has been specifically built around sustainability so that ESG considerations are fully integrated at the outset.

RLAM also launched a Global Equity Transition Fund in October 2022 that aims to support companies to move to a more sustainable world, which, again, RLMIS seeded. The Fund seeks to invest in corporates that can make a material contribution to the sustainability transition by either transitioning their business to a more sustainable path or enabling other businesses to transition, or both.

## Property

Our property investments are managed by RLAM and account for c. 7% of our overall investment portfolio. RLAM has committed to achieving net zero emissions across its property assets by 2040 through:

- reaching net zero emissions for directly managed property assets and developments by 2030<sup>1</sup>; and
- reaching net zero emissions for indirectly managed property assets by 2040<sup>2</sup>.

As announced in 2022, RLAM's new flagship development in London, The Earnshaw, looks to set new benchmarks commercially, socially and environmentally. Benefitting from impressive ESG credentials, it is designed to be rated as BREAAAM Outstanding and WELL Core Gold, and is a fully electric building. RLAM has incorporated several green initiatives into the space.

## Forward-looking action plan

Authenticity is a core characteristic of Royal London. We recognise there is a lot of work to do and that we, as a business and industry, have more to do. Building the trust and confidence of our customers remains a priority. We want to be clear about our purpose-driven ambition and the choices we make on their behalf, but also clear on the progress we have made and the challenges we face. To sustain and deepen this engagement with customers, we will seek and listen to their feedback, adapting our strategy and areas of focus so that we remain relevant and responsive to their needs and aspirations.

- We will continue to review our approach to asset allocation and portfolio construction, seeking opportunities to increase real-world positive impact through our allocations and investment decisions, while continuing to support customer outcomes with prudent management of investment risk.
- We will actively engage with the largest contributors to our carbon footprint and work with our peers, policymakers and the companies we invest in to play our part in enabling the transition to a low-carbon economy.
- We will continue to work collaboratively with industry bodies to support and influence policymakers to address the systemic change needed to decarbonise the economy sustainably.

- We will continue to be a strong advocate for a Just Transition to help ensure social issues are considered and addressed as society transitions to net zero.
- We will demonstrate our commitment by transparently reporting our activities and progress, including against our climate commitments.

Progress will not be linear, but we will not lose sight of the destination. Royal London will remain dedicated to building financial resilience and moving fairly to a sustainable world, advocating for progressive policies and aspiring to effect change that aligns with the best available climate science and the needs of our customers.

We are currently developing our Climate Transition Plan, which will provide detail on our journey to achieving our climate commitments and the associated timeframes.

1. Directly managed property assets are those over which RLAM has complete operational control, greater than 50% equity share and joint ventures where they would cover the proportionate amount of emissions. Developments are any new development or major refurbishment that comes online from 2030 onwards.
2. Indirectly managed property assets are managed wholly by the occupier.

### Decarbonising our own operations

We recognise the contribution of our own operations and value chain on climate change and have set targets to:

- reach net zero in our direct operational emissions (Scope 1 and 2) by 2030
- reach net zero in our Scope 3 (value chain) emissions by 2050, with an interim target of a 50% reduction by 2030.

### Direct operational emissions

Our strategy towards reaching net zero across our operational emissions includes:

- procuring 100% of electricity from high-quality green tariffs by 2025;
- transitioning 100% of company cars to electric vehicles by 2026;
- removing all fossil fuel-fired boilers and equipment by 2029;
- installing solar PV across all viable sites by 2027;
- identifying and implementing all energy efficiency capital expenditure initiatives by 2024; and
- aligning our operational estate strategy to our net zero trajectory.

As part of our journey to net zero, we have maintained carbon neutrality in our direct operational emissions since 2020 through carbon offsetting.

### Scope 3 (value chain) emissions

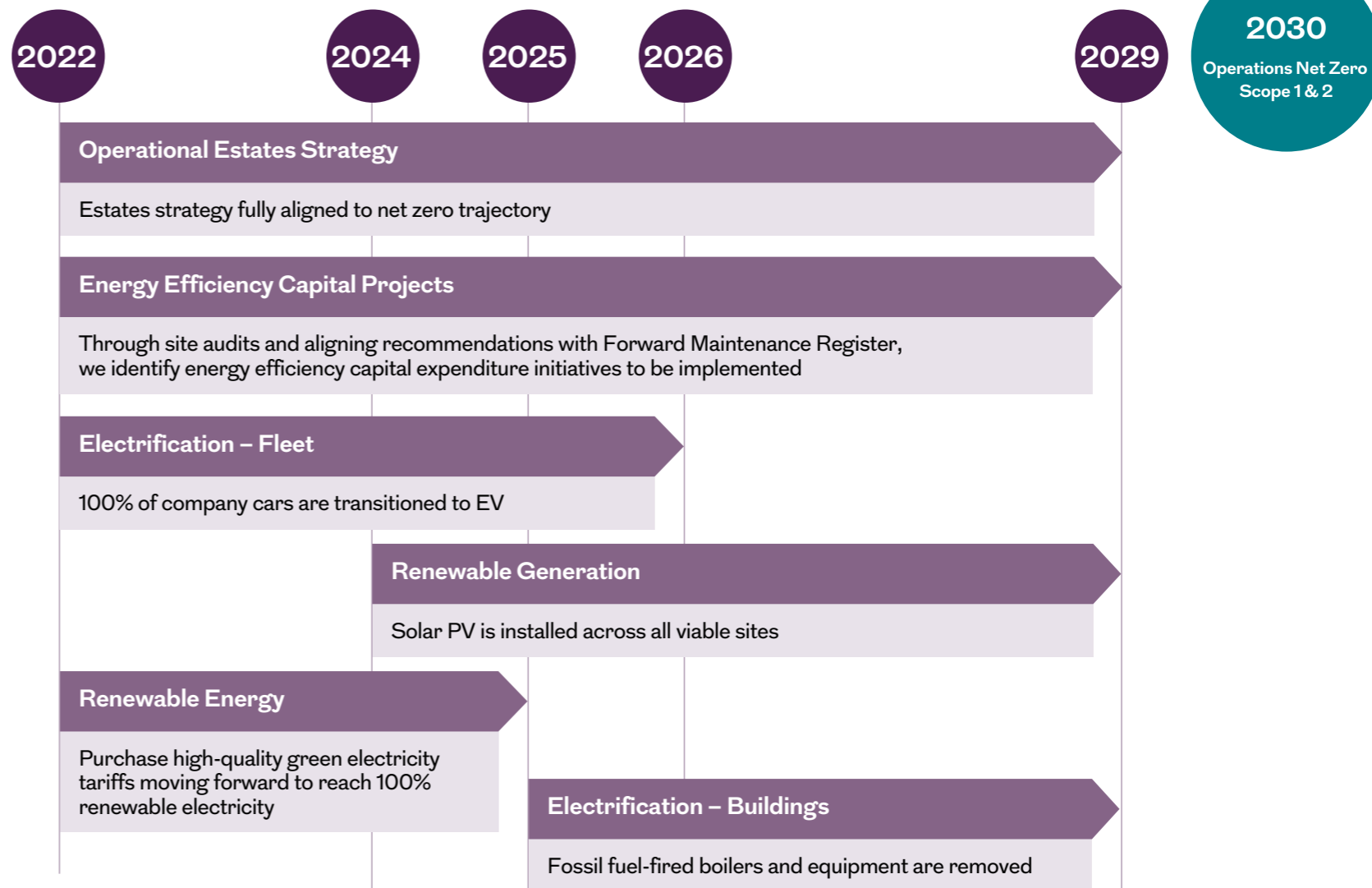
During 2022, we developed Royal London's non-investment related Scope 3 net zero commitments, setting a target to be net zero by 2050 with a 50% reduction by 2030.

Working in partnership with Mitie Energy, an external consultant, we identified that the main contributors to our value chain (non-investment Scope 3) emissions over the last three years were:

- purchased goods and services;
- employee commuting and emissions relating to homeworking; and
- business travel (mainly emissions associated with air travel).

In 2022, these accounted for 88% of our value chain emissions. Our net zero strategy has a priority focus on reducing these emissions as much as possible while continuing to pursue improvements in lower-emission categories such as waste and water. We expect to achieve a total reduction of 90% in non-investment Scope 3 emissions by 2050 against a 2019 baseline year, at which point carbon removal credits will be used to offset the residual emissions.

### Direct operational emissions – net zero pathway



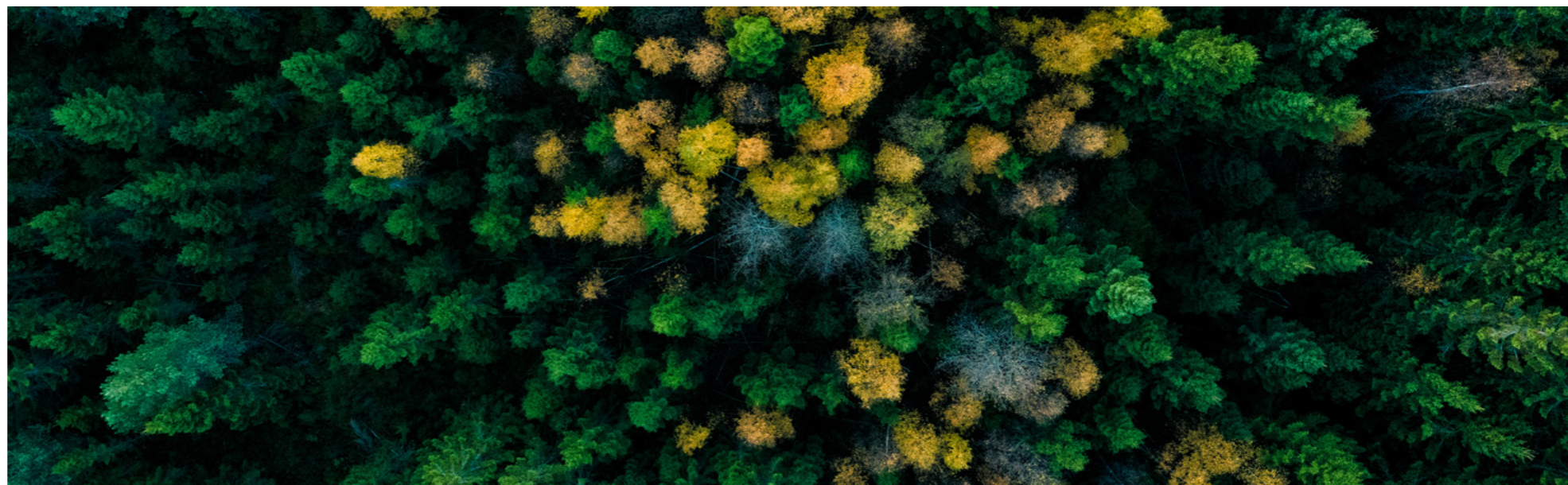
### Influencing real change through active engagement

Engagement is a fundamental part of our strategy. Central to our stewardship approach is our asset managers engaging with investee companies on a broad range of issues to support our aims of enhancing returns for our customers while delivering benefits for society as a whole. As well as engaging with the companies we invest in, we actively engage with asset managers, policymakers, regulators and other stakeholders in pursuit of our climate targets and to support achieving our Purpose.

### Industry engagement and initiatives

By actively collaborating with industry bodies on key climate-related issues and using our position to influence others, we are able to further Royal London's positive impact. Over 2022 we led and participated in a number of industry forums and initiatives focused on minimising and mitigating the effects of the climate crisis.

Organisation	Role	Key activity in 2022
<b>Association of British Insurers (ABI)</b>	<ul style="list-style-type: none"> <li>Participant in Climate Change Steering and Working Groups</li> <li>Financial and Corporate Reporting Committee</li> </ul>	<ul style="list-style-type: none"> <li>Response to the call for evidence on the independent review of the Government's approach to delivering net zero</li> </ul>
<b>The Institutional Investors Group on Climate Change (IIGCC)</b>	<ul style="list-style-type: none"> <li>Utilities Sector Working Group (Co-chair)</li> </ul>	<ul style="list-style-type: none"> <li>Contributed to a letter for European utilities on energy security and affordability considerations and proactive lobbying for climate policies</li> <li>Provided feedback to sector methodologies (banks, oil and gas)</li> </ul>
<b>Climate Financial Risk Forum (CFRF)</b>	<ul style="list-style-type: none"> <li>Data, Disclosures and Metrics Working Group participant</li> </ul>	<ul style="list-style-type: none"> <li>Chaired and contributed to various workstreams from the working groups resulting in publications including the guidelines on climate solutions, managing legal risks of disclosures and a carbon primer for financial institutions</li> </ul>
<b>Institute and Faculty of Actuaries (IFoA)</b>	<ul style="list-style-type: none"> <li>Net Zero Portfolio Alignment Working Group participant</li> <li>Life Climate Change Working Party</li> </ul>	<ul style="list-style-type: none"> <li>'Net Zero Investing – A Beginner's Guide' published</li> <li>Co-presented at the annual IFoA Life Conference on 'Practical Insights into the Implementation of Climate Risk Management'</li> </ul>



## Stewardship of our assets

Good stewardship requires regular, ongoing engagement with our asset managers and, through them, with the companies and projects in which we invest. Our Stewardship and Engagement Policy formalises the actions we expect from asset managers to address our priority engagement themes and informs how we oversee asset managers to ensure our expectations are met.

Our two key engagement themes are:

- Climate change; and
- Inclusion (focused on a Just Transition).

Voting and engagement are central to our strategy towards reaching net zero across our investment portfolio and championing the Just Transition. As asset owners, we expect our asset managers to vote on resolutions in company holdings managed on our behalf. We view voting and engagement as inextricably linked, with voting serving as both a starting point and an escalation technique to complement the engagement.

The quality of the stewardship activity undertaken by RLMIS was recognised this year through our achievement of signatory status of the UK Stewardship Code 2020. The Financial Reporting Council (FRC) reviews and approves submissions to ensure that applicants meet the UK stewardship standards which are some of the highest in the world.

## Voting

Voting is one of the valuable rights attached to holding shares in a company. As asset owners, we delegate voting decisions to our asset managers, as part of the investment management process.

Our Stewardship and Engagement Policy, which includes our Voting Policy, acts as the basis from which we monitor and influence our asset managers' decisions when voting on our behalf. This policy sets out the stewardship and engagement principles we apply as asset owners, including the actions we expect from our asset managers to address our priority engagement themes, and informs our related oversight processes.

For investments in 'pooled' collective investment funds, we engage with all of our asset managers to assess how they 'comply or explain' with our voting principles. We monitor and analyse asset managers' voting patterns and will engage with and take appropriate action with asset managers who consistently vote out of line with our voting principles.

For segregated mandates managed by RLAM, we have established a Reserved Voting process that enables us to directly vote on resolutions.

- We identify and analyse potentially highly sensitive voting cases arising in respect of companies on our ESG watchlist, RLAM's own watchlists and other market sources.
- We review these voting cases taking into consideration a range of aspects such as RLMIS' holdings.
- Where we consider the voting resolution to be potentially controversial, the matter is escalated to the Group CFO for consideration and, as required, a Reserved Voting Forum (RVF) meeting may be requested. The RVF is comprised of executive and non-executive directors of RLMIS.

In 2022, we analysed 14 climate votes of investee companies on the ESG watchlist through the Reserved Voting Process.

## ESG Watchlist

Our ESG watchlist, which is informed by assessment and meetings held with companies that do not respond to engagement requests on sustainability issues, helps focus our voting and engagement activity. Our model is still evolving but as of 2022, it:

- identifies investee companies with the poorest environmental, social and governance ratings (based on independent ESG rating data provided by MSCI);
- considers the top 10 contributors to our portfolio's carbon emissions intensity; and
- considers our top 20 equity holdings by assets under management (AUM).

This leads to a list of companies we choose to focus on, including when reviewing potentially sensitive votes across our segregated mandates. The watchlist is updated on a quarterly basis.

Below are some examples of how RLAM voted on our behalf in line with our voting principles in 2022:

SSE plc Net zero transition report	Shell plc Energy transition strategy	BP plc Reporting and reducing GHG emissions
SSE provided its Net zero Transition Report to shareholders including RLAM, to provide an update on activities against SSE's previously agreed Transition Plan. SSE passed RLAM's assessment for a credible strategy and is viewed as a clear industry leader by RLAM, who therefore voted in favour of the resolution. SSE's ambitious targets are backed with clear and detailed disclosure, along with a strong track record of delivering against these. While RLAM is still engaging to gain further clarification on the role of offsets in the plan, RLAM believes this deserved their support.	This was the second year that Shell requested shareholders to vote on its energy transition strategy. Considerable progress has been made since the first vote in 2021. However, RLAM could not fully support the 2022 proposal because it did not think the Scope 3 emissions and capital expenditure targets were aligned to the Paris Agreement. RLAM's decision to abstain was made in this context. It believes the company is on the right path and has shown a willingness to make continual improvements but there is further work to be done.	A shareholder proposal was put to BP requesting that the company publish a report including emission reduction targets aligned with the Paris Agreement. RLAM agreed with the argument put forward in the proposal, but adoption of this would have forced the company to reconsider the carbon reduction plan it currently has in place. RLAM saw greater value in engaging with BP to improve its current plan, and therefore voted against the shareholder proposal.

## Engagement

Although we delegate investee-level engagement to asset managers, within our segregated mandates we reserve the right to instruct engagement activity more directly, in line with three key principles:

- **Driving long-term outcomes for customers** – As an asset owner that regularly engages with our customers, we are closer to their long-term needs and interests than our asset managers. It is important that we have a voice in the stewardship and governance matters we deem most impactful on customer outcomes.
- **A stronger voice** – While we seek to avoid duplication of engagement activity with our asset managers, we recognise ‘an extra voice’ on occasion can amplify our impact.
- **Focus on materiality** – We focus our asset owner engagement activity on the matters with most relevance to our customers.

In line with these key principles, we have informed our asset managers of our engagement priorities, reserving the right to vote within our segregated mandates and the right to decide on the exclusions that apply to those mandates. If engagement activities do not meet the objectives that were set out at the start of the engagement, or if the activities do not result in material progress within the timeframes that have been set, we expect our asset managers to escalate their activities. Escalation that we may request asset managers undertake on our behalf can include:

- holding additional meetings with company management, the chair or other board members;
- divesting from, or reducing their exposure to, the investee company; and
- excluding or reducing exposure to the sector from their investment universe, withholding support or voting against management, and/or submitting a Shareholder Resolution.



### Engagement focused on the Just Transition

Focusing purely on coal demand in Asia where it is most significant and growing, RLAM met twice in 2022 with CLP Holdings, an energy utility based in Hong Kong. RLAM was pleased to hear that the company did not see any significant barriers to decarbonisation in Hong Kong, India, China, or Australia. The company has coal-fired plants in all these geographies. The company also does not believe divestment was the correct approach to delivering its climate targets and that Just Transition is a priority.

RLAM later met CLP’s Head of Sustainability and requested the company provide further details on its coal phaseout and Just Transition plans. CLP is exploring options to replace coal generation. Enabling additional renewables to come on stream is part of this, as well as capacity mechanisms such as battery storage and pumped hydro technologies.

# Risk Management

An overhead photograph of three people sitting around a light-colored wooden round table in a modern office setting. A woman in a yellow sweater is on the left, a man in a white shirt is on the right, and a man in a brown jacket is at the bottom. They are looking at a tablet on the table. The floor is dark grey with large tiles.

## Introduction

Climate risk is complex, with significant uncertainty surrounding the timing and severity of potential impacts.

We use our risk management system, in combination with our capital management framework, to manage climate-related risks so that our business remains sustainable and continues to best serve our customers. In this section, we cover:

- How we take a decentralised approach to climate risk and opportunity management by integrating climate considerations into existing controls and processes.
- How we identify and assess climate-related risks, including the types of risks posed by climate change and how these impact our business.
- How we manage climate-related risks, leveraging our risk management system and expertise across our teams.



## Group Risk Management System

As climate risk can manifest itself across any of our risk categories, the reporting of climate considerations has been integrated into our Group Risk Management System (RMS). Climate-related risks are owned by, and integrated into, individual business units across the Group, in our long-term savings, protection and asset management businesses in the UK and Ireland. With support from our Risk function, the management of each business unit and function is accountable for identifying, measuring, reporting, managing, and mitigating all risks relevant to its area of business. This includes the design and operation of suitable internal controls and the allocation of risk and control responsibilities.

This collaborative and decentralised approach helps us to drive consistent climate risk management activities across the business, within agreed risk appetites. It supports all areas of our business to integrate key climate-related issues into their day-to-day and strategic planning activities. By integrating climate-related financial risks into the Group's overarching risk framework, we are building the appropriate tools and capabilities to understand, monitor and mitigate the impact of these risks.

“Royal London will manage and mitigate our exposure to the financial, strategic and operational risks arising from climate change.

These risks will continue to be embedded into risk management disciplines across the Group. Their embedding will be monitored by setting exposure tolerances and establishing key climate risk metrics.”

### Climate Risk Appetite Statement

## The Group Risk Appetite Framework

Our Group Risk Appetite Framework (RAF) is a core part of our RMS and consists of three components:

- our **risk strategy** defines the types of risks we aim to take or avoid in the pursuit of our business objectives and sets the boundaries within which our risk appetite will operate;
- our **risk appetite statements** explain how much risk we are prepared to be exposed to in relation to each risk category outlined in the risk strategy alongside risk preferences; and
- our **risk metrics** help to measure the amount of risk we are exposed to against risk appetite.

The components of our RAF provide direction and assist in making key decisions relating to risk and capital management, for example, in our business planning, mergers and acquisition decisions and project prioritisation.

Our risk appetite statements have been constructed around five risk appetite categories, which we consider core to our business: strategic, capital, liquidity, insurance and operational risk.

### Climate change risk appetite statement

Our climate change risk appetite statement outlines our appetite towards, and therefore our confinement of, the strategic, financial and operational risks arising from climate change. Over 2022 we refined our climate risk management process to account for evolving best practice and to further support the embedding of climate risk management across our business.



## Identifying and assessing climate-related risks

### Climate risk landscape

Risks arising from climate change are diverse and far reaching, and can materialise across a range of time horizons. When assessing climate risk we typically group risks into physical and transition risks, as defined below.

Climate risk category	Description	Sub-category	Sub-category description
Physical	Risks related to the physical impacts of climate change	Primary	Damage to land, buildings, stock or infrastructure owing to physical effects of climate-related factors, such as heatwaves, drought, sea levels, ocean acidification, storms or flooding
		Secondary	Knock-on effects of physical risks, such as falling crop yields, resource shortages, supply chain disruption, as well as migration, political instability or conflict
Transition	Risks related to disorderly adjustments to markets as a result of the transition to a low-carbon economy	Policy	Including carbon pricing, emission caps and subsidies
		Market	Including the emergence of disruptive green technologies and changing consumer behaviours
		Reputation	Stakeholder expectations to address climate change

In addition to identifying the primary risks arising from climate change, we consider the interdependence of these risks, the direct impact that they have on our business and the potential they have to set in motion a range of knock-on direct and indirect impacts over varying time horizons. We use this complete understanding of each risk to assess their relative significance and inform our risk management process and prioritisation.

The table on page 31 provides details on the risks and opportunities we deem most material to our business, over each timeframe.

### Climate risk identification

We use different methods to identify and assess the physical and transition risks arising from climate change, including:

- **Horizon scanning** – we have a range of processes for identifying upcoming and existing climate-related risks, regulations and trends. These include:
  - **quarterly regulatory radar** – a report on emerging themes (short-, medium- and long-term), in-flight consultations and changes in these themes in the previous quarter. This is owned by the Group Risk and Compliance (GR&C) team.
  - **regulatory update newsletter** – a regular newsletter compiled by the GR&C team and distributed through our business, which highlights significant regulatory changes, including climate-related regulatory changes.
  - **emerging and strategic risk forum** – a bi-annual gathering of key individuals involved in the management of emerging risks, strategic risks and stress and scenario testing. The output report details the risks identified, an indication of when they might impact our business and who the appointed business owner is.
  - **technical support team daily scan** – a daily scan for any changes in legislation or regulation that could affect any of our UK products, including ESG-related changes. Changes are summarised and directed to the appropriate teams to address. The technical support team tracks items to completion.

- **competitors and markets scan** – a weekly newsletter that summarises key activity among our competitors and in the market. The newsletter includes a section on ‘climate, nature and sustainability’.
- **legal and regulatory horizon scanning roles and responsibilities forum** – a quarterly gathering to review and, where required, update roles and responsibilities for horizon scanning.
- **Climate risk assessments** are used to identify physical and transition climate-related risks across the short, medium and long term. This includes:
  - **climate scenario modelling** – we perform climate change scenario modelling to identify and assess the possible impacts of physical and transition climate-related risks to our business, over a range of potential transition pathways and time horizons. This gives us a quantitative and qualitative assessment of how climate-related risks might impact our business.
  - **qualitative risk assessment** – we perform further qualitative climate-risk assessment to capture a more holistic view of the risks associated with climate change and how these might materialise and impact our business over different time horizons. This is in part informed by the outputs from our horizon scanning activity and climate scenario modelling.

The outputs of our climate risk identification and assessment can be found in the Risks and Opportunities Assessment section of this report.

## Managing climate-related risks

We do not actively seek to avoid exposure to the financial, strategic and operational risks to our business arising from climate change. Instead, we seek to manage and mitigate our exposure, undertaking risk management actions to reduce both the impact and likelihood of occurrence. We do this by embedding climate risk management across all of our risk management disciplines.

On page 31 we identify the key climate-related risks that have been identified across our business. Some examples of how these risks are managed include:

- taking actions towards meeting our portfolio climate commitments in order to manage the transition and physical risks associated with our investments. This includes embedding climate considerations in our investment process, engaging with our asset managers and top-emitting investee companies and using our position in the market to influence real change. More detail of these actions can be found on page 18;
- setting clear strategies and taking actions to reduce our operation and value chain emissions; and
- performing customer sentiment research to understand our customers' top climate-related priorities and ensure that our products and business aligns with these where possible, helping us to meet our customer needs and reduce our reputational risk.

Across all risk categories, our risk management primarily focuses on building capabilities by raising awareness of climate-related risks and sharing best practice for managing these across all business areas.

Some of the initiatives that helped grow our internal capabilities and manage climate-related risks to our business throughout 2022 included:

- the collaborative Group Sustainability and Stewardship Forum;
- climate risk education for key stakeholders;
- subject matter support from the Group Sustainability and Stewardship team;
- oversight from Group Risk and Compliance; and
- the development of our climate risk reporting strategy, which seeks to aggregate climate risk reporting across our business from 2023.



# Risks and Opportunities Assessment



## Introduction

We have determined the most material climate-related risks and opportunities to our business using the identification and assessment processes outlined in the Risk Management section of this report. These quantitative and qualitative risks are then used to inform our risk management processes.

### In this section we cover:

- How we have interrogated plausible climate transition pathways to estimate and analyse the possible quantitative impacts of climate scenarios on our business.
- A qualitative assessment of climate-related risks and opportunities that may impact our business in the short, medium and long term.

## Climate change scenario analysis

Climate change scenario analysis helps us to consider the impact that different approaches to addressing climate change globally could have on our financial position. It helps us to better understand our financial exposures to climate-related risks and how they may challenge our business model. This provides us with further insight when we consider how to manage or mitigate these risks and the implications for our customers.

Our 2022 climate scenario analysis built on the Climate Biennial Exploratory Scenario (CBES) analysis we voluntarily undertook during 2021, in which we modelled outcomes from three possible climate pathways based on those developed by the Network for Greening the Financial System (NGFS), as recommended by the Bank of England. We engaged a third party to build our climate scenario models – for more information, please see the Methodology section on page 45.

Our analysis sought to identify the systemic impacts of climate change on the real economy and financial markets through interrogating three possible climate pathways:

- **Paris orderly** – where governments take early policy action to achieve net-zero carbon emissions by 2050.
- **Paris disorderly** – where governments take late policy action to achieve net-zero carbon emissions by 2050.
- **Failed transition** – where governments take no action to achieve net-zero carbon emissions.

Our modelling covered 29 regions, 17 sectors and all of our asset and sub-asset classes. It also accounted for key technologies in emissions-intensive sectors (electricity, steel, home heating and transport). It considered:

- transition risks and impacts on the wider macroeconomy and financial sector, including networked effects on Gross Domestic Product (GDP), sector output, unemployment, interest rates and inflation;
- pricing-in dynamics and sentiment shock, including adjusted risk-return expectations across all asset classes and quantified risk exposures of portfolios; and
- gradual physical and extreme weather impacts on country-level GDP and financial variables.

The following table describes how physical and transition risks may materialise across our three climate pathways and the expected impacts on GDP and financial markets.

	Paris orderly transition	Paris disorderly transition	Failed transition
Global warming	Paris Agreement goals met <ul style="list-style-type: none"> <li>• Average global warming stabilises at 1.5°C</li> <li>• CO<sub>2</sub> emissions ~ IPCC RCP 2.6</li> </ul>	Paris Agreement goals met <ul style="list-style-type: none"> <li>• Average global warming stabilises at 1.5°C</li> <li>• CO<sub>2</sub> emissions ~ IPCC RCP 2.6</li> </ul>	Paris Agreement goals not met <ul style="list-style-type: none"> <li>• Average global warming stabilises at 4°C</li> <li>• CO<sub>2</sub> emissions ~ IPCC RCP 6.0</li> </ul>
Transition risks	Transition risks increase due to <ul style="list-style-type: none"> <li>• Ambitious low-carbon policies</li> <li>• High investment in low-carbon technologies</li> <li>• Substitution away from fossil fuels to cleaner energy sources and biofuel</li> </ul>	Transition risks increase due to <ul style="list-style-type: none"> <li>• Ambitious low-carbon policies</li> <li>• High investment in low-carbon technologies</li> <li>• Substitution away from fossil fuels to cleaner energy sources and biofuel</li> <li>• Abrupt pricing-in of transition risks and sentiment shock</li> </ul>	No impact from transition to low-carbon economy because <ul style="list-style-type: none"> <li>• Economies follow the business-as-usual track continuing current low-carbon policies and technology trends (e.g. significant falls in renewable energy prices)</li> <li>• No additional new policy measures</li> </ul>
Physical risks	<ul style="list-style-type: none"> <li>• Moderate physical impact with regional differences</li> <li>• Impacts are greater than observed today</li> </ul>	<ul style="list-style-type: none"> <li>• Moderate physical impact with regional differences</li> <li>• Impacts are greater than observed today, but still much less than under a Failed Transition pathway</li> </ul>	<ul style="list-style-type: none"> <li>• Severe physical impacts occur, increasing over time as temperatures rise – both gradual physical changes such as agricultural and worker productivity, as well as more frequent and severe extreme weather events</li> </ul>
Impact on GDP	<ul style="list-style-type: none"> <li>• Global GDP lowers</li> </ul>	<ul style="list-style-type: none"> <li>• Global GDP level is slightly lower than in the Paris Orderly Transition pathway due to the sentiment shock</li> </ul>	<ul style="list-style-type: none"> <li>• Global GDP is significantly lower than the baseline in 2010</li> </ul>
Financial market impacts	<ul style="list-style-type: none"> <li>• Transition is assumed to occur as smoothly as possible</li> <li>• The market gradually prices in perceived transition and physical risks over 2021-2025</li> </ul>	<ul style="list-style-type: none"> <li>• Sudden repricing of assets in 2025</li> <li>• Followed by a sudden sentiment shock to the financial system in 2025</li> <li>• Increased volatility in 2024-2026</li> </ul>	<ul style="list-style-type: none"> <li>• Markets price in physical risks up to 2050 by the end of the decade (2026-2030)</li> <li>• A second repricing occurs in the period 2036-2040 as investors factor in the severe physical risks post-2050</li> </ul>

## Results

The results from interrogating our climate pathways suggested that greater temperature rises and/or a disorderly transition could lead to worse economic and social impacts on our business. The model showed the impacts on our capital projections for the Paris orderly and Paris disorderly transitions to be relatively small, with our cover ratio remaining within an acceptable range up to 2027. The Failed Transition showed a more significant adverse impact, but projected capital coverage ratio remained within the target range level.

Our scenario analysis provided us with a projection of the change in value across asset classes under different scenarios up to 2060, under our three climate scenarios. This was used to monitor the risk to our capital position over the period to 2027, in line with our medium-term business planning model. The results implied a negative year-on-year impact to the value of all our asset classes, with the most significant effects being observed in the Failed transition scenario.

We will review the results of our model on an annual basis, keeping the chosen pathways and assumed systemic impacts under review as policy, climate science and industry thinking evolves.

## Modelling limitations

Trying to model the financial impacts of unprecedented levels of climate change is inherently challenging. We acknowledge that there are limitations to the current modelling processes:

- Models are based on known historical relationships between GDP and temperature at a regional level and over a limited timeframe which, when used to estimate the impact of unprecedented global temperature rise, may result in misleading outcomes.
- They typically don't allow for the likelihood, size and timing of transition risks to be modelled or measured reliably, given the reliance on policymaker decisions and market reaction to evolving physical and policy risks. The Climate Financial Risk Forum noted this in its Scenario Analysis guide, stating that "there are large uncertainties regarding the timing, probability and significance of climate transition shocks".
- They do not capture all risks facing our business, such as those arising from changing customer expectations, the competitive environment, or the political and geopolitical landscapes. These non-financial risks may lead indirectly to further financial impacts, including volatility in our capital requirements, shocks to the profitability of existing business and reductions to our new business sales.

Ultimately, climate scenario models do not currently capture the full range of impacts that climate change may have on our business. It is for this reason that we use the outputs of our climate scenario modelling in conjunction with our qualitative risk assessment process: to try to capture those risks which may be missed by climate scenario modelling alone.

As our understanding of climate change continues to evolve, both as a company and within the wider financial sector, we will continue to consider the results of any climate-impact financial modelling appropriately and in full view of its limitations, relative to more established financial modelling practices.

## Considerations for 2023

In 2023 we have continued to explore how we can better quantify and understand the emergence of climate-related risks over time.

As we refresh our scenario modelling methodology in the future, we will seek to improve upon our previous modelling by taking the following steps:

- applying stresses over the duration of relevant modelling periods, as opposed to applying them as an initial shock;
- considering and analysing a range of possible modelled outcomes, as opposed to taking the median of outcomes; and
- expanding our modelling to include downside stress scenarios, to better understand the financial and strategic risks posed across a wider time horizon.

We are also working towards expanding our interrogation of climate scenario outputs beyond capital impact assessments and strategic asset allocation stress testing. We will focus on using the analysis to consider the impacts that climate-related risks will have on our longer-term business strategy and opportunities in 2023, and aim to report a quantitative analysis in future reporting periods.

For our 2022 Own Risk and Solvency Assessment (ORSA), we focused our analysis on a five-year time horizon, to align with our business planning term. Although elements of transition risks may crystallise in the short to medium term, the worst effects of the physical impacts from the climate crisis are not likely to be felt for decades. Therefore, we see the need to expand this assessment across a wider time horizon.

We will continue to review new and emerging methods for performing climate scenario modelling in a bid to be as holistic as possible in our consideration of the impacts of climate-related risks to our business.

## Qualitative risks and opportunities assessment

The tables below show our qualitative assessment of the climate-related risks and opportunities that may impact our business. Each climate-related risk that we identify is assigned one or multiple timeframes – short- (S, up to one year), medium- (M, one to five years) or long-term (L, over five years) – as an indicator of when we expect that risk to impact our business. This supports our risk management response, prioritisation and mobilisation.

Risk category	Risk impact	Sub-category	Potential impact	Timeframe
Strategic	Transition	Reputation	Reputational damage to our brand may lead to loss of new business and increased lapse rates or outflows.	S, M, L
		Market	We may lose market share if we fail to modify propositions to adapt to changing consumer sentiment.	M, L
		Policy	Government or regulatory policy developments designed to address the physical and transitional impacts of the climate crisis may impact the viability of our propositions.	S, M, L
Financial (Investment)	Transition	Policy	Action from Regulators and Government to meet the Paris Agreement targets and respond to public sentiment may lead to significant market repricing of asset values and increase the risk of counterparty default.	S, M, L
		Market	Disruptive green technologies may provide a competitive advantage to our peers if we fail to anticipate them in our funds.	M, L
	Physical	Primary	Our investment portfolios contain significant direct investments in physical assets, including property and asset-backed securities, which may be directly impacted by the physical effects of climate change.	M, L
		Secondary	Indirect physical effects from the climate crisis may impact the value of assets in our portfolio, for example due to: supply chain disruption; mass migration; and political instability.	M, L
Financial (Insurance)	Physical	Primary	An increase in average UK/Irish temperatures, resulting in more regular extreme weather and temperature fluctuations may lead to material inaccuracies in our assumed rates of mortality and morbidity.	M, L
		Secondary	Temperature changes resulting from the climate crisis may increase the frequency of global infectious disease pandemics, in turn impacting the accuracy of our mortality and morbidity assumptions.	M, L
		Secondary	Political instability, resource shortages and mass migration resulting from climate change may negatively impact levels of mortality, morbidity and expense inflation.	M, L
Operational	Physical	Primary	Weather-related business disruption may become more frequent due to the climate crisis, as a result of: direct impacts to our offices or data centres and those of our key suppliers; and/or impact to travel between our offices.	M, L
	Transition	Market	Our ability to recruit and retain talent may be negatively impacted if Royal London's response to the climate crisis is perceived as inadequate by current and potential future colleagues.	S, M, L

Opportunity category	Opportunity impact	Sub-category	Potential impact	Timeframe
Insurance	Physical	Primary	Life expectancy may decrease as a result of more extreme temperature fluctuations within UK and Ireland, resulting in increased profitability in annuities book. Conversely, life expectancy may increase and morbidity risk decrease in the event of a successful transition to a low-carbon economy, resulting in increased life assurance/protection profitability.	L
Strategic	Transition	Market	Positive impact on market share as a result of successful development of new propositions or modifying existing ones to meet the growing demand for products which are perceived to have positive (or neutral) impact on combating climate change.	M, L

# Metrics and Targets

In recognition of our role in moving fairly to a sustainable world, we have set ourselves ambitious targets to decarbonise our business and investments. We use emissions metrics to measure our progress towards meeting these targets, whilst also monitoring our exposure to physical and transition climate-related risks.

In this section we discuss:

- The targets we have set ourselves to meet net zero carbon emissions across our investments and operations.
- The metrics we use to track our progress and monitor risks.





## Pathway to net zero



## Our climate commitments

### The basis and assumptions underlying our climate targets and metrics

Our climate targets are based on the expectation that governments and policymakers will deliver on commitments to achieve the goal of the Paris Agreement, and that the actions we take do not contravene Royal London's fiduciary duties. Our operational emissions targets include emissions arising: directly from operations controlled by the Company ('Scope 1'); and indirectly via consumed energy ('Scope 2'). Our value chain targets include our non-investment related emissions arising indirectly through the Company's value chain ('Scope 3'). The baseline year for our operational and value chain emissions targets is 2019. We disclose separately the emissions ('Scope 3') from the companies in which we invest as our 'portfolio emissions'.

### Our portfolio emissions assumptions

The portfolio emissions targets we have set include assets that are controlled by the Royal London Mutual Insurance Society Limited (RLMIS) and are managed on its behalf by RLAM. This includes the regulated investment funds managed by RLAM. It excludes segregated mandates managed by RLAM on behalf of its external clients. Royal London's portfolio emissions targets are measured against a 2020 baseline and are being tracked using Scope 1 and 2 financed emissions metric (tCO<sub>2</sub>e/\$m invested). We also track our emissions using weighted average carbon intensity (WACI) metric. This approach facilitates a consistent measure of Royal London's carbon emissions intensity over time, unaffected by business growth. The measure also enables stakeholders to make more direct comparisons across companies and funds. This year we have recalculated our 2020 baseline to move from Market Capitalisation to Enterprise Value Including Cash (EVIC) as the attribution factor for our portfolio emissions calculations in line with best practice as recommended by the Partnership for Carbon Accounting Financials (PCAF).

### The limitations of emissions data

Not all companies that we invest in consistently disclose their emissions. Where disclosures are made, there is a time lag in the underlying data as emissions figures only become available after the reporting cycle and these are often restricted to their Scope 1 and 2 emissions. For some companies their Scope 3 emissions are material, for example where the emissions arising from the use of a company's products exceed the emissions created during the production process. Furthermore, not all our investments are in companies and where this is the case emissions data can be even harder to quantify. For 2022, we can disclose the Scope 1 and 2 emissions associated with 92% of our listed equity and corporate fixed income holdings. These asset classes make up 66% of our total assets. We also disclosed emissions for our sovereign debt and property holdings. Our disclosures will improve as data quality improves and we will be transparent about the quality and coverage of our emissions disclosures. We use MSCI as our data provider; it calculates carbon emissions metrics based on both reported and estimated emissions from investee companies. The currency used for allocation is US dollars (\$). Its full methodology is available online at [www.msci.com](http://www.msci.com).

## Portfolio emissions

### Portfolio emissions metrics

The table below shows the portfolio emission metrics we use to monitor progress against our targets and exposure to climate-related risks.

Metrics	Units	Asset class	Purpose
Total financed emissions	tCO <sub>2</sub> e	Corporate Fixed Income Listed Equity Property Government Bonds	Monitors our carbon footprint and progress against our carbon reduction targets. This metric is a suitable measure of our current position. However, since this metric may increase as a result of portfolio growth or an increase in carbon data coverage, we use it in conjunction with other metrics to track our progress towards climate targets.
Financed emissions	tCO <sub>2</sub> e/\$m invested	Corporate Fixed Income and Listed Equity	Monitors our carbon footprint and progress against our carbon reduction targets. It is our primary metric for measuring progress against our targets. This metric normalises emissions, which enables comparisons over time. However, it is sensitive to share price and market forces.
Weighted Average Carbon Intensity ("WACI")	tCO <sub>2</sub> e/\$m revenue	Corporate Fixed Income and Listed Equity	Monitors our current exposure to climate risk and our carbon footprint. This is an alternative measure of intensity to financed emissions that is not as sensitive to share price, however this metric is sensitive to other factors, such as inflation.
Data Coverage	% coverage	-	Monitors the portion of assets for which we have emissions information.
Government Bond WACI	tCO <sub>2</sub> e/\$m GDP nominal	Government Bonds	Monitors our current exposure to climate risk within our government bond assets. The metric reflects the sovereign emissions associated with the country territory per Gross Domestic Product (GDP).
Implied Temperature Rise	°C	Corporate Fixed Income and Listed Equity	Estimates the implied global temperature rise of a company or portfolio, if all companies and portfolios globally were assumed to emit the same amount of CO <sub>2</sub> e relative to their share of a global carbon budget as that company or portfolio does. This helps us to monitor our alignment to global climate targets and the trajectory of our emissions over time.
Companies with SBTi-approved targets	% of portfolio	Corporate Fixed Income and Listed Equity	Monitors the alignment of our portfolio with Royal London's and global net zero targets.
Companies with targets across all scopes	% of portfolio	Corporate Fixed Income and Listed Equity	
Climate Value at Risk (C-VaR)	% of market value	Corporate Fixed Income and Listed Equity	Estimates the possible impacts of transition and physical climate risks on the value of our portfolio under a range of plausible climate scenarios.

Further details on the formulae and methodology adopted to calculate these metrics can be found in the appendix.

### Portfolio emission metrics

#### Our approach

We calculated emissions metrics for our Corporate Fixed Income (CFI), Listed Equity (LE), Property and Government Bond holdings, which accounts for over 85% of our portfolio. For CFI, LE and Government Bonds, our data is sourced from MSCI.

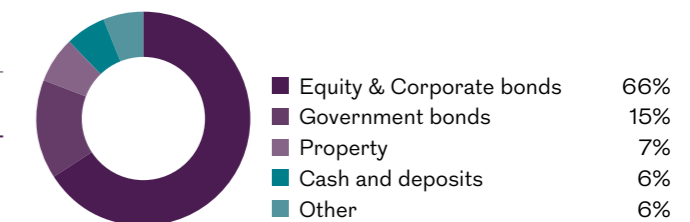
MSCI calculates carbon emissions metrics based on both reported and estimated emissions. The currency used for allocation is the US dollar (\$). Further details on the methodologies adopted by MSCI are found in the Appendix.

For CFI and LE, we have reported Scope 1, 2 and 3 investment emissions where data is available.

Emissions metrics for our property assets are calculated by RLAM, which manages 100% of our property assets. The methodology adopted by RLAM can be found in its TCFD report [here](#).

We recognise there are significant limitations associated with calculating portfolio emissions, including availability of data, methodology gaps across different asset classes, lack of consistency across the industry, data quality and transparency. These limitations are provided in more detail in the Appendix. We will strive to increase the quality of our emissions data over time, as data availability increases and methodologies are refined.

#### RLMIS portfolio asset class breakdown (31 December 2022)



Other includes Futures, Investment Funds/Collective Investment Undertakings and Structured Notes

## Analysis

During 2022, the value of our internal assets reduced from £124bn to £108bn. The total Scope 1 and 2 financed emissions (MtCO<sub>2</sub>e) from our corporate fixed income and listed equity portfolios have decreased, both year-on-year and since our baseline year (2020). Our Scope 1 and 2 financed emissions (MtCO<sub>2</sub>e/\$m invested) have increased by 5% since last year, although this was in part caused by a reduction in value of assets we invest in. The WACI (tCO<sub>2</sub>e/\$m Sales) of our investments (Scope 1 and 2), which is not sensitive to share price movements, has decreased by 8% year-on-year, providing further insight into how the emissions profile of our portfolio has changed over time.

Whilst the reductions observed in our emissions metrics are positive, there continues to be material constraints in the quality, quantity and timing of data and asset class coverage. In addition, there are other external factors that will impact our portfolio emissions such as market volatility, fluctuations of exchange rates and an increase in activity following

## Scope 3 emissions

Monitoring and disclosing Scope 3 financed emissions is important as they are the largest proportion of our portfolio emissions. Reported emissions are the preferred basis for our metrics. However, Scope 3 emissions are less commonly reported by underlying investee companies, and therefore a significant proportion of these emissions are estimated by MSCI. Estimated emissions are less accurate and there is a lack of consistency on the methodology being adopted across the industry for these estimates. As a result, Scope 3 emissions can vary significantly across different data providers, are less decision-useful, and should not be used for comparison across different portfolios.

Covid-19 lockdowns. As a result of these factors, we do expect to see both total carbon emissions and emission intensity metrics fluctuate over time, albeit with a downward trajectory as we transition to a low-carbon economy.

This is the first year we have reported on our Government bonds carbon intensity and property portfolio emissions, and therefore it is not possible to analyse how it has changed since the 2020 baseline.

### Restatement of financed emissions

To reflect current best practice, in 2022 we updated our methodology for calculating financed emissions metrics, which resulted in the recalculation of our 2020 (baseline) and 2021 comparators. We have changed how we measure the value of the corporate issuers within our portfolio, from Market Capitalisation to Enterprise Value Including Cash (EVIC) as the denominator in the calculation. EVIC more fairly attributes emissions across all contributors to capital for each holding in the portfolio as it also includes short-term and long-term debt, minorities' interests and any cash or cash equivalents on the company's balance sheet. It is the most widely used measure of capital issuer value for the purpose of calculating financed emissions metrics.

We replicated our 2022 EVIC-based calculations on a market capitalisation basis to better understand the differences of the two attribution factors. The financed emissions (tCO<sub>2</sub>e/\$m invested) calculated using market capitalisation increased from 67 tCO<sub>2</sub>e to 82 tCO<sub>2</sub>e since last year (23%) and fell from 103 tCO<sub>2</sub>e (original baseline) showing a 20% reduction, reflecting the volatility of market capitalisation. We will continue to use the most appropriate carbon emissions metrics and methodology, in line with best practice, to ensure relevant and transparent reporting.

## RLMIS Portfolio Emissions Disclosure

	Units <sup>3</sup>	Year ended 2022	Year ended 2021	Year ended 2020 (baseline)	Year-on-year change <sup>2</sup>	Change against baseline
RLMIS AUM <sup>1</sup>	£bn	108	124	114	-13%	-5%
<b>Corporate fixed income &amp; listed equity</b>						
AUM	£bn	71	78	70	-9%	-1%
<b>Scope 1&amp;2 emissions<sup>5</sup></b>						
Total financed emissions	MtCO <sub>2</sub> e	3.82	4.18	4.05	-9%	-6%
Data coverage <sup>4</sup>	%	78%	71%	67%	10%	17%
<b>Scope 1&amp;2 intensity metrics<sup>5</sup></b>						
Financed emissions intensity	tCO <sub>2</sub> e/\$m invested	48	46	54	5%	-11%
Weighted Average Carbon Intensity (WACI)	tCO <sub>2</sub> e/\$m sales	96	104	117	-8%	-17%
<b>Scope 3 emissions<sup>5</sup></b>						
Total Financed Emissions <sup>3</sup>	MtCO <sub>2</sub> e	31.58	-	-	-	-
Financed Emissions	tCO <sub>2</sub> e/\$m invested	398	-	-	-	-
Weighted Average Carbon Intensity	tCO <sub>2</sub> e/\$m sales	749	-	-	-	-
Data coverage <sup>4</sup>	%	78%	-	-	-	-
<b>Government Bonds<sup>6</sup></b>						
AUM	£bn	16	-	-	-	-
WACI <sup>5</sup>	tCO <sub>2</sub> e/\$m GDP nominal	164	-	-	-	-
Financed emissions <sup>5</sup>	MtCO <sub>2</sub> e	3.20	-	-	-	-
Data coverage	%	95%	-	-	-	-
<b>Property<sup>6</sup></b>						
AUM	£bn	8	-	-	-	-
<b>Scope 1&amp;2 emissions<sup>7</sup></b>						
Total emissions	MtCO <sub>2</sub> e	0.01	-	-	-	-
Financed emissions intensity	tCO <sub>2</sub> e/m <sup>2</sup>	0.004	-	-	-	-
<b>Scope 3 emissions<sup>7</sup></b>						
Total emissions	MtCO <sub>2</sub> e	0.13	-	-	-	-
Financed emissions intensity	tCO <sub>2</sub> e/m <sup>2</sup>	0.053	-	-	-	-

1. Represents the overall amount of the RLMIS's investments excluding assets managed on behalf of third parties and including assets of the Group's pension schemes. The data includes assets from Royal London Ireland which makes up less than 1% of our AUM as at 31 December 2022.

2. Year-on-year change represents the percentage change in the year ended 2022 metric from the year ended 2021 metric.

3. tCO<sub>2</sub>e represents estimated emissions in the previous year, measured in metric tons of carbon dioxide equivalent. MtCO<sub>2</sub>e represents one million metric tonnes of carbon dioxide equivalent.

4. Portion of CFI & Equity assets used in carbon metric calculations using reported and estimated emissions.

5. Calculated by MSCI using methodology as explained online at [www.msci.com](http://www.msci.com).

6. This is the first year we have reported these metrics, therefore, there are currently no comparison metrics.

7. Investment property reporting period is 1 October 2021 to 30 September 2022, due to the timing of data availability.

## Forward-looking climate metrics

### Climate Value-at-Risk (C-VaR)

C-VaR indicates how much the physical and transition risks of climate change could impact the future returns of a portfolio. By evaluating potential policy impacts, technology opportunities and climate physical risk under different global warming scenarios, the metric provides insight into the potential stress on market valuations and translates climate-related costs into possible valuation impacts.

We observed our C-VaR through four possible climate change transition pathways, based on those developed by the Network for Greening the Financial System (NGFS):

- **Disorderly 1.5°C** – A disorderly transition to 1.5°C warming, where divergent policy action takes place;
- **Disorderly 2°C** – A disorderly transition to 2°C, where delayed policy action takes place;
- **Orderly 2°C** – An orderly transition to below 2°C, where early policy action takes place, which gradually becomes more stringent; and
- **Hot house 3°C** – No policy action, resulting in 3°C warming (known as the ‘hot-house world’ scenario), where global efforts are insufficient to stop global warming.

We used MSCI data to assess the total impacts on the value of our CFI and Equity assets from the years 2022 to 2100 for each transition risk pathway. We considered two physical risk pathways, corresponding to the average and aggressive scenarios detailed in the 6<sup>th</sup> Assessment Report from the Intergovernmental Panel on Climate Change (IPCC). Based on this assessment, we have identified exposure, across a range of possible futures, to the physical and transition risks of climate change within our portfolios.

### Implied Temperature Rise (ITR)<sup>1</sup>

ITR is a portfolio alignment metric. It seeks to estimate the global warming outcome from the projected emissions of a company, if the global economy followed the same trajectory. Each company is allocated a carbon budget based on sector emission reductions pathways that achieve the Paris agreement goals. The projected cumulative company emissions, based on the company’s most recent Scope 1, 2 and 3 emissions and its targets, are then assessed against its carbon budget. The percentage over- or undershoot from the allocated budget is then expressed in degrees Celsius (°C), using the Transient Climate Response (TCRE) factor. The TCRE is published by the IPCC and is derived from the linear relationship between cumulative emissions and global temperature increase.

By using data provided by MSCI, we can estimate the percentage of our CFI and Equity holdings that have ITRs aligned to global warming of below 2°C and 1.5°C respectively:

- 60% of our CFI and Equity asset classes have ITRs that are aligned<sup>2</sup> to the goal of limiting temperature increase to below 2°C.<sup>3</sup>
- 31% of our CFI and Equity asset classes have ITRs that are aligned<sup>2</sup> to the goal of limiting temperature increase to below 1.5°C.<sup>3</sup>

We continue to seek investment and engagement opportunities that support our climate commitments and will monitor our ITR to help assess our progress.

### Binary target measurement<sup>1</sup>

We have considered the following binary metrics to track the alignment of our portfolio with net zero targets.

- **Companies with targets across all scopes (%)** – what percentage of the companies in our CFI and Equity asset classes have published climate targets across all emission scopes (Scopes 1, 2 and 3).
- **Companies with Science Based Targets initiative (SBTi)-approved targets (%)** – what percentage of the companies in our CFI and Equity set classes have had their climate targets approved by the SBTi.

44% of our CFI and Equity holdings have published climate targets across all scopes, with 29% of our holdings having SBTi-approved targets. This means that 56% of our holdings across these asset classes have not published climate targets across all scopes.

When appropriate, we will consider divesting from companies which are unwilling, or unable, to put in place a credible net zero strategy. Whilst we believe that tracking the alignment of our portfolio with SBTi is useful, we do not believe that SBTi approval is the sole mark of a credible net zero target. This is why we monitor the percentage of our investee companies with targets across all scopes as well as those explicitly with SBTi-approved targets.

1. Based on 78% portfolio coverage.

2. Aligned in this case means the model projects that emissions reductions will be reduced sufficiently to meet Paris Agreement goals for 2°C and 1.5°C respectively.

3. ITR metrics are based on data extracted from MSCI in April 2023 and holdings data as at year-end 2022

Forward-looking metrics are underpinned by uncertainties and subjective choices. The limitations of these metrics are set out on page 37 and further detail is set out on page 48.

## Limitations

Forward-looking metrics are underpinned by uncertainties and subjective choices. They exclude widely accepted material climate risks that cannot be modelled (including the impacts from external policy decisions, market sentiment and climate tipping points) and rely on material subjective assumptions (including viability of investee net zero plans and assumed sector-level transition pathways).

As such, we do not solely rely on quantitative climate data and modelling outputs when establishing the materiality, likelihood, and timing of our climate risk exposure.

We observe several fundamental limitations with the use of C-VaR as a forward-looking climate metric:

- **Scope** – C-VaR tends to neglect much of the broader social, environmental and economic impacts of climate change and is limited in its ability to consider long-term risks. As such, it does not capture the full range of longer-term foreseeable risks that may arise from climate change.
- **Comparability** – comparability between data providers, across different years and between financial institutions is limited, as the methodology underpinning C-VaR continues to evolve and data providers and financial institutions take different approaches to its calculation.
- **Usefulness** – C-VaR does not support the user to determine the best course of action for mitigating and managing their climate risk inherently.

Like C-VaR, ITR is narrow in its scope and, in isolation, lacks comparability and usefulness. For example, we found that whilst more than half of our investment value is assessed as having a below-2°C trajectory, the majority of our emissions come from companies not aligned to this trajectory.

Although simple and easy to understand, binary target measurements are also limited in their usefulness. They provide limited detail regarding the climate targets that our investee companies have set, other than whether or not they have set these targets and if they are SBTi-approved. Companies contributing positively to these metrics may still have a significant carbon footprint. They do not capture the broader sustainability or social impact of an investment or portfolio and they may not account for the dynamic nature of climate change and the need for ongoing adaptation and mitigation efforts. A company that is currently considered “aligned” may not remain so in the future if it does not adapt to changing climate conditions or if the regulatory landscape shifts.

A specific limitation to the ‘Companies with SBTi-approved target’ metric is that SBTi approval is not a necessary requirement of a credible net zero target – companies may have credible net zero targets while choosing not to align with SBTi. Conversely, MSCI’s ‘Companies with targets across all scopes’ metric is susceptible to including companies that have set weak or immaterial targets in its count. By using both binary metrics in conjunction, we hope to be as holistic as possible in our judgement of the alignment of our investments with net zero targets while considering the limitations of each metric individually.

While temperature alignment metrics can be a useful tool to provide a high-level assessment of alignment with the goals of the Paris Agreement, we must use them alongside more granular and comprehensive assessments to provide a more accurate picture of a company’s sustainability performance. We outlined our concerns surrounding forward-looking metrics in MSCI’s open consultation in Q1 2023 and welcome its response to implement a range of enhancements to C-VaR and ITR in Q3 2023. We will continue to assess the decision-usefulness of forward-looking climate metrics going forward.

## Considerations looking ahead

We will continue to improve our approach to data and aim to use the most appropriate portfolio emissions metrics and methodologies available, inline with best practice. We recognise government and policymaker activity will impact future changes in our portfolio emissions.

In future we plan to:

- improve our approach to calculating portfolio emissions;
- address any inconsistencies in our portfolio metric methodologies against the recommendations set out by PCAF in the GHG Protocol;
- expand our capability to analyse the drivers of emission reductions across our portfolio over time;
- expand our portfolio emissions analysis to other asset classes as data and methodologies become available;
- create an internal policy for the consistent and reliable recalculation of historical emissions where appropriate; and
- continually review best practice and use the most appropriate, reliable and decision-useful metrics and targets.

## Operational Emissions

### Our operational targets

We recognise the contribution of our own operations and value chain to the climate crisis. Inline with our portfolio emissions target, we have committed to reaching net zero across our Group level operational emissions by 2050, with Scope 1 and 2 emissions reaching net zero by 2030.

Whilst our portfolio emissions targets have been set specifically for RLMIS, our operational emissions targets have been set at a Group level. Therefore, all operational emissions metrics have been disclosed at a Group level.

During 2022, we developed our non-investment related Scope 3 net zero commitments, publishing our target to be net zero by 2050 with a 50% reduction by 2030. All this while continuing to work toward reaching net zero Scope 1 and 2 emissions by 2030, which includes purchasing 100% renewable energy for Scope 2 electricity. Through implementing further energy-saving initiatives, our Scope 1 and Scope 2 location-based emissions have reduced by 2,312 tCO<sub>2</sub>e (-72%) against the baseline year (2019).

The strategy we have adopted to meet these targets, along with more detail on our short- and long-term targets can be found in the strategy section of this report on page 20.

Group target	Metric	Unit	Progress to date
Reach net zero direct operational emissions (Scopes 1 & 2) by 2030	Total Scope 1 & 2 emissions	tCO <sub>2</sub> e	91% reduction from the baseline (market-based) 72% reduction from the baseline (location-based)
Reach net zero direct value chain emissions (Scopes 3 NI) by 2050 with a 50% reduction by 2030	Total Scope 3 non-investments emissions	tCO <sub>2</sub> e	29% reduction from the baseline (2019)
Purchase 100% renewable energy for operations (Scope 2) by 2025	Total energy consumption	kWh	97% of our energy (Scope 2) is sourced from renewable sources

1. Total Scope 1 & 2 emissions refers to those arising from those sites which we own, or where we have financial control.

2. Scope 2 emissions calculated using a “market-based” method refers to emissions from electricity companies have chosen purposefully.

3. Scope 2 emissions calculated using a “location-based” method refers to the average emissions intensity of the grids the energy is consumed from.

### Operational carbon metrics

#### Our approach

Mitie Energy, our external consultant, was appointed to carry out our 2022 GHG emissions calculation. This was conducted in line with the GHG Protocol Corporate Standard. For Scope 3 non-investment carbon emissions, where data was not available, estimates were applied.

The methodology used to calculate each category of emissions is provided in the appendix.

#### Reporting boundary

The reporting boundary for our operational carbon emissions is “financial control”, meaning carbon emissions arising from those sites which we own, or where we have financial control, are categorised as Scope 1 and 2. Where we lease properties and do not have financial control over electricity and gas supply (e.g. when this is controlled by the landlord), carbon emissions are categorised as Scope 3 (value chain) emissions.

In addition, carbon emission sources for non-stationary assets, such as vehicle fuel, have also been allocated using the financial control approach. Where vehicles are owned or controlled by us and we are the payer of fuel or electricity, emissions will fall under Scope 1 and 2. Where vehicles are not owned by us, emissions are categorised as Scope 3 (value chain) emissions.



We will reduce our internal paper use by 90% and external paper usage by 50% by 2025.



We continue to send zero waste to landfill and will reduce our total waste by 50% by 2025.



We are working in partnership with Mitie to reduce our waste and energy use even further.



In 2020 we achieved carbon neutrality in our operational energy use through carbon offsetting. We have an action plan to reduce our need to offset year-on-year.



We are now sourcing 97% renewable electricity across our offices, well ahead of target.



We will halve our company car emissions by 2025, through travelling less and switching to all-electric vehicles.



We have reduced our total business travel emissions by 61% from the 2019 baseline year, including rail and air.

## Operational and value chain metrics

Our 2022 operational and value chain emissions, and other environmental metrics, are shown in the table below against equivalent measurements over the previous year, 2021, and our baseline year, 2019.

	2022 <sup>1</sup>	2021	2019 (baseline year)	Change against baseline year	Target
<b>Scope 1 GHG emissions (tCO<sub>2</sub>e)</b>	<b>254</b>	420	1,210	-79%	60% absolute reduction by 2025 and net zero by 2030
<b>Scope 2 GHG emissions (tCO<sub>2</sub>e)</b>					
Market-based	16	94	1,802	-99%	Purchase 100% renewable energy for electricity by 2025
Location-based	645	752	2,001	-68%	
<b>Scope 1 and 2 GHG (market-based) per FTE<sup>2</sup> (tCO<sub>2</sub>e)</b>	<b>0.08</b>	0.13	0.71	-89%	
<b>Scope 1 and 2 energy consumption (kWh)</b>	<b>4,519,309</b>	5,575,472	13,240,157	-66%	
<b>Scope 3 GHG (value chain) emissions (tCO<sub>2</sub>e)<sup>5</sup></b>					
Category 1. Purchased goods & services	2,940	3,336	4,014	-27%	
Category 2. Capital goods	48	7	41	17%	
Category 3. Fuel & energy-related activities	615	586	1,035	-41%	
Category 4. Upstream transportation & distribution	7	2	12	-45%	
Category 5. Waste generated in operations	17	11	41	-58%	
Category 6. Business travel	994	207	2,537	-61%	
Category 7. Employee commuting & homeworking	2,385	2,967	2,552	-7%	
Category 8. Upstream leased assets <sup>3</sup>	643	654	214	200%	
Category 13. Downstream leased assets <sup>4</sup>	0	0	253	-100%	
<b>Scope 3 GHG (value chain) emissions (tCO<sub>2</sub>e)</b>	<b>7,649</b>	7,770	10,699	-29%	Reduction of 50% by 2030 and net zero by 2050
<b>Paper use<sup>6</sup></b>					
Total (t)	631	945	1,111	-43%	
Internal paper per policy (g)	0.81	0.98	6	-87%	Reduction of 90% per policy by 2025
External paper per policy (g)	102	154	192	-47%	Reduction of 50% per policy by 2025
<b>Waste (t)<sup>7</sup></b>					
Total	358	338	727	-51%	Reduction of 50% per FTE by 2025 and continue to send zero waste to landfill
Per FTE <sup>2</sup>	0.06	0.05	0.15	-60%	
<b>Water consumption (cubic metres)<sup>7</sup></b>					
Total	9,263	8,761	31,916	-71%	Reduction of 15% per FTE by 2025
Per FTE <sup>2</sup>	1.5	1	6	-75%	

### Footnotes for Operational and value chain metrics table

- Our Scope 1, 2 and 3 emissions from 1 January 2022 to 31 December 2022 shown in the operational and value chain metrics table have been assured by ERM CVS, an independent external assurance provider, to a limited level of assurance. This assurance included a review of activity data and the calculation of emissions. Full details of the scope, activities, limitations, and conclusions of ERM CVS's assurance engagement are included in its Assurance Statement [www.royallondon.com](http://www.royallondon.com). The 2019 baseline figures have been adjusted following review and further data becoming available. We have changed our approach from an operational control to a financial control approach. This change resulted in a re-categorisation of emissions from the consumption of natural gas and electricity at our London, Alderley Park and Liverpool offices from Scope 1 and 2 to Scope 3 (category 8). We have applied this change in approach back to our 2019 baseline year. Police Mutual Assurance Society data and energy data from Wealth Wizards is included from acquisition.
- Full-time equivalent.
- The significant increase against the baseline is due to our move from our old Wilmslow estate (Scope 1 and 2) to our new Alderley Park Office (Scope 3, Category 8).
- There were no Royal London Group downstream leased assets in 2021 and 2022.
- The data excludes Wealth Wizards. Categories 9, 10, 11, 12 and 14 of Scope 3 are not applicable to Royal London. Category 15 (Investments) emissions data is disclosed on page 36.
- Paper data is based on actual volumes from suppliers. The 2019 baseline figures and subsequent years have been adjusted due to further data becoming available. The data excludes third-party service providers and Wealth Wizards.
- Waste and water data is based on actual volumes where available, estimations and invoice data. Data excludes Wealth Wizards and offices where provision is covered by service charge.

## Analysis

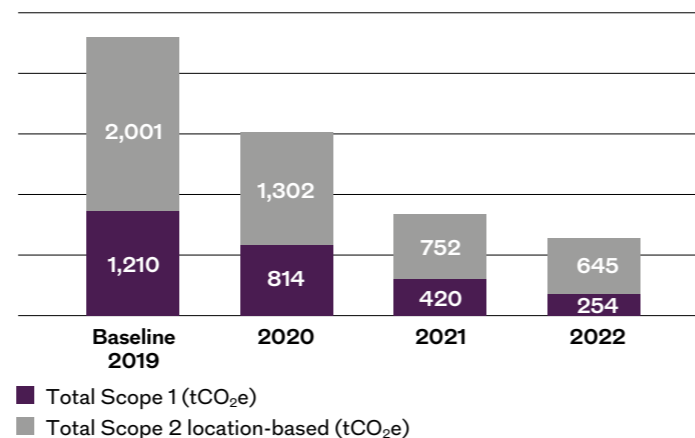
Our Scope 1 and 2 operational emissions reduced in 2022, with location-based and market-based emissions falling 23% and 47% respectively over the year. This saw a total reduction in emissions since our 2019 baseline of 72% for location-based and 91% for market-based. Our main source of energy was purchased electricity, 97% of which was renewable.

Scope 1 and 2 carbon emissions intensity by the total gross internal area decreased by 90% location-based and 68% market-based compared to the baseline year.

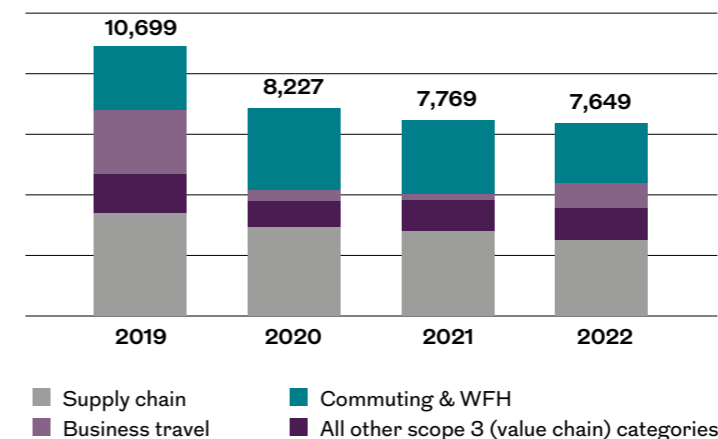
## Value chain emissions

Scope 3 (value chain) emissions decreased by 2% in 2022, with the total reduction since the baseline year of 2019 equalling 29%. This was mainly driven by a 12% reduction in emissions in the purchased goods and services category, which is the largest contributor to our non-investment Scope 3 emissions. The impact of changes in colleagues' activities following the Covid-19 pandemic, where colleagues returned to spending more time in our offices, was evident in the emissions data. Commuting emissions and those associated with business travel have increased, while emissions associated with working from home decreased albeit not back to the levels seen prior to Covid-19.

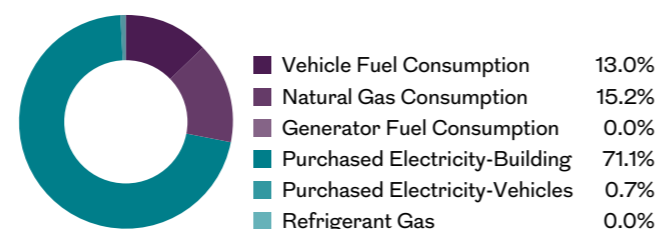
## Scope 1 and 2 emissions



## Scope 3 (value chain) emissions



## Scope 1 and 2 emissions split by source





# Glossary of terms

Term	Definition
Climate Biennial Exploratory Scenario (CBES)	A stress-testing exercise run by the Bank of England to assess the resilience of the business models of the UK's largest banks, insurers and the wider financial system to the physical and transition risks from climate change. (Source: Bank of England)
Climate Financial Risk Forum	The Climate Financial Risk Forum (CFRF) is an industry forum jointly convened by the Prudential Regulation Authority and the Financial Conduct Authority to build capacity and share best practice. The CFRF aims to reduce the barriers faced by firms to implementing the forward-looking, strategic approach necessary to minimise climate-related financial risks by developing practical tools and approaches. (Source: Bank of England)
Climate Physical Risk	Physical risks resulting from climate change can be event driven (acute) or longer-term shifts (chronic) in climate patterns. Physical risks may have financial implications for organisations, such as direct damage to assets and indirect impacts from supply chain disruption. Organisations' financial performance may also be affected by changes in water availability, sourcing and quality; food security; and extreme temperature changes affecting organisations' premises, operations, supply chain, transport needs and employee safety. (Source: TCFD)
Climate risk	Climate risks can arise from potential impacts of climate change as well as human responses to climate change. In the context of climate change impacts, risks result from dynamic interactions between climate-related hazards with the exposure and vulnerability of the affected human or ecological system to the hazards. In the context of climate change responses, risks result from the potential for such responses not achieving the intended objective(s), or from potential trade-offs with, or negative side-effects on, other societal objectives, such as the Sustainable Development Goals (see also risk trade-off). (Source: IPCC)
Climate Scenario modelling	Climate scenario modelling is a forward-looking projection of risk outcomes that provides a structured approach for considering potential future risks associated with climate change. (Source: Financial Stability Oversight Council)
Climate transition risk	Transitioning to a lower-carbon economy may entail extensive policy, legal, technology and market changes to address mitigation and adaptation requirements related to climate change. Depending on the nature, speed, and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organisations. (Source TCFD)
Global warming	Global warming is the long-term warming of the planet's overall temperature. Though this warming trend has been going on for a long time, its pace has significantly increased in the last hundred years due to the burning of fossil fuels. Fossil fuels include coal, oil, and natural gas, and burning them causes what is known as the "greenhouse effect" in Earth's atmosphere.
Greenhouse Gas (GHG) Protocol	GHG Protocol establishes comprehensive global standardised frameworks to measure and manage greenhouse GHG emissions from private and public sector operations, value chains and mitigation actions. Building on a 20-year partnership between World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), GHG Protocol works with governments, industry associations, NGOs, businesses and other organisations. (Source: GHG Protocol)
Greenhouse gases (GHG)	The seven gases included in the United Nations Framework Convention on Climate Change (UNFCCC) as drivers of climate change: carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O), hydrochlorofluorocarbons (HCFCs), ozone (O <sub>3</sub> ), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF <sub>6</sub> ) and nitrogen trifluoride (NF <sub>3</sub> ).
Intergovernmental Panel on Climate Change (IPCC)	IPCC is the United Nations' body for assessing the science related to climate change. The IPCC was created to provide policymakers with regular scientific assessments on climate change, its implications and potential future risks, as well as to put forward adaptation and mitigation options.
Net Zero Asset Managers Initiative	The Net Zero Asset Managers initiative is an international group of asset managers committed to supporting the goal of net zero greenhouse gas emissions by 2050 or sooner, in line with global efforts to limit warming to 1.5°C ; and to supporting investing aligned with net zero emissions by 2050 or sooner. (Source: NZAM)
Network for Greening the Financial System (NGFS)	The Central Banks and Supervisors Network for Greening the Financial System (NGFS) is a group of Central Banks and Supervisors willing, on a voluntary basis, to exchange experiences, share best practices, contribute to the development of environment and climate risk management in the financial sector, and to mobilise mainstream finance to support the transition toward a sustainable economy. Its purpose is to define and promote best practices to be implemented within and outside of the Membership of the NGFS and to conduct or commission analytical work on green finance. (Source: NGFS)

Term	Definition
Paris Agreement	The United Nations Framework Convention on Climate Change's Paris Agreement was signed in December 2015. Nearly 200 governments agreed to strengthen the global response to the threat of climate change by "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C". (Source: TCFD)
Paris Aligned Investment Initiative (PAII)	The PAII is a collaborative investor-led global forum enabling investors to align their portfolios and activities to the goals of the Paris Agreement. (Source: PAII)
Partnership for Carbon Accounting Financials (PCAF)	PCAF is a financial industry-led partnership with the aim of facilitating transparency and accountability through the standardisation of the assessment and disclosures of greenhouse gas emissions associated with loans and investments. (Source:PCAF)
Scope 1 emissions	All direct company greenhouse gas (GHG) emissions from owned or controlled sources. Other greenhouse gases such as methane or nitrous oxide are converted to carbon dioxide hence reporting is under tCO <sub>2</sub> e, where the e stands for equivalent and t for metric tonnes. This follows the Greenhouse Gas Protocol, the most widely used accounting standard for emissions. (Source: GHG Protocol)
Scope 2 emissions	Indirect company emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company. Other greenhouse gases such as methane or nitrous oxide are converted to carbon dioxide hence reporting is under tCO <sub>2</sub> e, where the e stands for equivalent and t for metric tonnes. This follows the Greenhouse Gas Protocol, the most widely used accounting standard for emissions. (Source: GHG Protocol)
Scope 3 emissions	Indirect company emissions that occur in a company's value chain both upstream (before their production) and downstream (after the sale of their products). Other greenhouse gases such as methane or nitrous oxide are converted to carbon dioxide hence reporting is under tCO <sub>2</sub> e, where the e stands for equivalent and t for metric tonnes. This follows the Greenhouse Gas Protocol, the most widely used accounting standard for emissions. (Source: GHG Protocol)
Stewardship	Stewardship is the responsible allocation, management and oversight of capital to create long-term value for clients and beneficiaries leading to sustainable benefits for the economy, the environment and society. (Source: Financial Reporting Council)
UK Stewardship Code 2020	The UK Stewardship Code 2020 is a voluntary set of principles that sets high expectations for how investors, and those that support them, invest and manage money on behalf of UK savers and pensioners, and how this leads to sustainable benefits for the economy, the environment and society. There are 12 Principles for asset owners and asset managers, and a separate set of six Principles for service providers – investment consultants, proxy advisers, data providers and others. These Principles cover the policies, processes, activities and outcomes of effective stewardship. (Source: FRC)
United Nations Principles for Responsible Investing (UN PRI)	The PRI, a UN-supported network of investors, works with its international network of signatories to put the six Principles for Responsible Investment into practice. Its goals are to understand the investment implications of environmental, social and governance issues and to support signatories in integrating these issues into investment and ownership decisions. (Source: UN PRI)
Value chain	The value chain is the series of stages involved in producing a product or service that is sold to consumers, with each stage adding to the value of the product or service.

## Metrics descriptions and methodologies

Metric	Unit	Description and methodology
Climate Value-at-risk (C-VaR)	%	<p>Climate value-at-risk (Climate VaR) model aims to provide an assessment on how climate change may affect the investment return in portfolios based on conditions associated with global temperature trajectories (e.g. 1.5, 2, 3°C). By evaluating policy impact, technology opportunities and climate physical risk, under different scenarios associated with those temperature trajectories, the metric provides insights into the potential stress on market valuation, translating climate-related costs into possible valuation impacts.</p> <p>Our C-VaR was calculated by MSCI. Further details on MSCI's methodology can be found at: <a href="#">ClimateVaR_Brochure.pdf (msci.com)</a></p>
Financed carbon emissions	tCO <sub>2</sub> e/\$m invested	<p>Allocated emissions to all financiers normalised by \$m invested. Financed carbon emissions measures the carbon emissions for which an investor is responsible, proportioning company emissions by the EVIC value relative to the value of our investment in the investee company.</p> <p>Our financed carbon emissions were calculated by MSCI using the formula below.</p> $\frac{\sum (\frac{\text{current value of investment}}{\text{issuer's EVIC}} \times \text{issuer's Scope 1 and Scope 2 GHG emissions})}{\text{Current portfolio value (\$m)}}$
Implied temperature rise	°C	<p>Implied temperature rise aims to measure the warming the emissions from a company would drive by year 2100, if the whole economy had the same over- or undershoot level of greenhouse gas emissions. It is based on the company's most recent Scope 1, 2 and 3 emissions, projecting these to the future and incorporating the company's targets. It is expressed in °C.</p> <p>Further details on MSCI's methodology can be found at: <a href="#">Implied Temperature Rise Methodology – Executive Summary (msci.com)</a></p>
Sovereign Debt WACI	tCO <sub>2</sub> e/ \$m GDP nominal	<p>Sovereign debt WACI measures a portfolio's exposure to carbon-intensive economies, defined as the portfolio weighted average of sovereigns' GHG Intensity (emissions/GDP).</p> <p>Our sovereign debt WACI was calculated by MSCI using the formula below.</p> $\sum (\frac{\text{current value of investment}}{\text{Current portfolio value}} \times \frac{\text{sovereign issuer's GHG emissions}}{\text{sovereign issuer's \$m GDP}})$

**Metrics descriptions and methodologies *continued***

<b>Metric</b>	<b>Unit</b>	<b>Description and methodology</b>
Sovereign Debt emissions	tCO <sub>2</sub> e	Sovereign debt is calculated by multiplying the sovereign debt WACI by the total value of our government bond holdings. This was completed using the formula below:  Sovereign debt WACI x current value of government bonds investments
Property emissions intensity	tCO <sub>2</sub> e/m <sup>2</sup>	Property emissions intensity was calculated by dividing the total emissions for the investments by the square metres of the properties. The emissions were provided by our internal asset manager, RLAM. This was completed using the formula below.  $\frac{\text{Property GHG emissions}}{\text{square metre area of property portfolio}}$
Total financed carbon emissions	tCO <sub>2</sub> e	Total financed carbon emissions are allocated emissions to all financiers. They measure the total carbon emissions for which an investor is responsible for, proportioning company emissions by the company EVIC value relative to the value of our investment.  Our total financed carbon emissions were calculated by MSCI using the formula below.  $\sum \left( \frac{\text{current value of investment}}{\text{issuer's EVIC}} \times \text{issuer's Scope 1 and Scope 2 GHG emissions} \right)$
Weighted Average Carbon Intensity (WACI)	tCO <sub>2</sub> e/\$m sales	The WACI is a portfolio's exposure to carbon-intensive companies, expressed in tCO <sub>2</sub> e /\$M revenue. Scope 1 and Scope 2 GHG emissions are divided by companies' revenues, then multiplied based on portfolio weights (the current value of the investment relative to the current portfolio value). This follows the recommended methodology by the Task Force on Climate-related Financial Disclosures.  Our WACI was calculated by MSCI using the formula below.  $\text{WACI} = \sum \frac{\text{company emissions}}{\text{company \$m revenue}} \times \frac{\text{current value of investment}}{\text{current portfolio value c}}$

## Climate scenario analysis – methodology

We engaged Ortec Finance (a leading consultancy) to develop our climate change scenarios. The macroeconomic model used (E3ME) was built in conjunction with Cambridge Econometrics. It provided three scenarios which can be compared to the scenarios used within the Climate Biennial Exploratory Scenario (CBES). These were:

- Paris Orderly Transition.
- Paris Disorderly Transition.
- Failed Transition.

To understand how investment portfolios might be impacted under each scenario, these scenarios were translated into possible business model impacts using top-down scenario analysis. This was done by:

- determining the level of GHG emissions associated with certain temperature increases;
- mapping this to a set of policy and technology assumptions;
- estimating the financial costs of physical warming;
- using these assumptions and estimated costs to estimate the impact on GDP at a regional level; and
- assessing the likely impact of the GDP change on asset class returns.

The impacts of mortality and longevity were further considered. A reduction in life expectation, set at 60% of a 1-in-200 year event that is akin to 2.5 years for policyholders aged 60 now, was introduced on top of the Failed Transition scenario. For the two Paris aligned scenarios, this mortality impact was appropriately scaled via the equity scalar to reflect a proxy for the impacts.

The reduction in yields per annum for selected asset benchmarks under the climate scenarios were provided, and these drags were then converted to equivalent time zero shock parameters.

The reductions to rate of returns of asset benchmarks over the period up until 2060 were analysed. This included the impact of modelled discontinuity over years 2036-2040 under the Failed Transition scenario (arising from an assumed market reprice of assets in reaction to increased recognition of climate risk over the second half of the century). This assumed longer-term reprice leads to a further hit on returns, increasing shock parameters when compared to the CBES exercise calibration. The change in parameters is indicative of the uncertainty of potential outcomes under the climate change scenarios and reflects the wide range of subjectivity in converting these scenario pathways into tangible modelled scenarios.



## Operational emissions methodology

Metric	Description and methodology
Scope 1 GHG emissions (tCO <sub>2</sub> e)	<p><b>Company facilities – natural gas:</b></p> <p>Natural gas was recorded in kilowatt hours (kWh). Where meter readings were provided as volume of natural gas (m<sup>3</sup>) consumed, it was converted to energy (kWh). This was then converted to tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e). Where estimates were required, they were calculated using one of three methods (in order of preference): direct comparison, pro-rata extrapolation and benchmarking.</p> <p><b>Company vehicles (owned or controlled by the Group using fossil fuels):</b></p> <p>Energy, kilowatt hours (kWh), and tCO<sub>2</sub>e were calculated using the distance-based method using vehicle mileage obtained via expense claims and the emission factors for vehicle size, fuel type and the appropriate year.</p>
Scope 2 GHG emissions (location-based) (tCO <sub>2</sub> e)	<p><b>Purchased electricity (location-based)</b></p> <p>Electricity purchased from the national grid or an alternative third-party generation source was recorded in kWh. This was then converted to tCO<sub>2</sub>e. Where estimates were required, they were calculated using one of three methods (in order of preference): direct comparison, pro-rata extrapolation and benchmarking.</p> <p><b>Company vehicles (owned or controlled by the Group utilising electric charging)</b></p> <p>This methodology applied to electric and plug-in hybrid vehicles. Energy in kilowatt hours (kWh), and emissions were calculated using the distance-based method, which used vehicle mileage obtained via expense claims and the emission factors for each vehicle size, fuel type and electricity used for charging.</p>
Scope 2 GHG emissions (market-based) (tCO <sub>2</sub> e)	<p><b>Purchased electricity (market-based)</b></p> <p>Electricity purchased from the national grid, or an alternative third-party generation source. Energy sourced from certified renewable sources via the Renewable Energy Guarantees of Origin (REGO) scheme (UK) or Guarantee of Origin scheme (GOs) scheme (Republic of Ireland) is currently classified as carbon neutral and therefore does not generate emissions that fall into Scope 2. Confirmation of REGO and GOs electricity supplies is obtained and retained as evidence.</p> <p>The remaining carbon emissions related to non-renewable electricity was calculated using the methodology for Scope 2 GHG emissions – purchased electricity (location -based)</p>

Metric	Description and methodology	
Scope 3 – GHG (Value Chain) emissions (tCO <sub>2</sub> e)	<p><b>Category 1: Purchased goods and services and Category 2: Capital goods</b></p> <p>Procurement categories for fuel, fleet, electricity, gas and water were disregarded to prevent double counting of emissions which were covered in other elements of Scope 3. Three methodologies were used for the calculation of category 1 and 2 Scope 3 emissions:</p> <ol style="list-style-type: none"> <li><b>Supplier-Specific Method:</b> Using data from the CDP, a supplier-specific carbon factor (tCO<sub>2</sub>e/£) was created for each supplier based on their total annual Scope 1 and 2 emissions and annual turnover. The factor was applied to the total annual spend on each supplier to obtain the carbon emissions (tCO<sub>2</sub>e).</li> <li><b>Spend-Based Method:</b> When suppliers were not covered by CDP, industry carbon factors were used from EEIO (Environmentally Extended Input-Output) data. The factor was applied to the total annual spend on each supplier to obtain the carbon emissions (tCO<sub>2</sub>e).</li> <li><b>Hybrid Method:</b> In some instances, both supplier-specific and spend-based models were used.</li> </ol> <p><b>Category 3: Fuel and energy related activities</b></p> <p>This category includes emissions due to the loss of energy during transmission and distribution.</p> <ol style="list-style-type: none"> <li><b>Transmission and distribution losses</b> from fuel and energy purchases were converted from kWh to CO<sub>2</sub>e.</li> <li><b>Well-to-tank (WTT):</b> Carbon conversion factors were applied to the annual electricity, natural gas, other fuel consumption, and mileage travelled in various transport modes. This was used to calculate WTT emissions from transmission and distribution.</li> </ol> <p>Some estimates were applied for category 3 emissions.</p> <p><b>Category 4: Upstream transportation and distribution</b></p> <p>This category includes water supply emissions, which were converted from m<sup>3</sup> water consumption to CO<sub>2</sub>e using a water supply factor. 78% of water consumption was estimated using the BBP REEB Water Benchmark.</p>	<p><b>Category 5: Waste generated in operations</b></p> <p>Waste tonnage from all sites and waste streams was converted from tonnes to CO<sub>2</sub>e using a waste carbon factor. Wastewater was converted from m<sup>3</sup> to CO<sub>2</sub>e using a wastewater treatment carbon factor. 17% of waste tonnage and 78% of water consumption was estimated.</p> <p><b>Category 6: Business Travel</b></p> <ol style="list-style-type: none"> <li><b>Rail and air carbon emissions</b> were calculated using a rail and air carbon factor and data including travelled distance, mode of transport, haul and class of service.</li> <li><b>Expensed travel (road, non-company cars) emissions</b> were calculated using data including vehicle mileage, engine size and fuel type used.</li> <li><b>Taxi travel emissions</b> were calculated using taxi spend data (converted to mileage) and the percentage of electric vehicles.</li> <li><b>Hotel stays emissions</b> were calculated using hotel stay destination information and the number of nights.</li> </ol> <p>1% of business travel emissions were estimated.</p> <p><b>Category 7: Employee Commuting &amp; Homeworking</b></p> <ol style="list-style-type: none"> <li><b>Employee commuting:</b> The employee travel survey results, office occupancy and FTE data was used to calculate the carbon emissions. The results from the optional travel survey, which had a 25% response rate, were extrapolated for the total FTE of the company.</li> <li><b>Working from home:</b> Results from the working from home survey, office occupancy and FTE data were used to calculate the carbon emissions. The methodology in the Eco Act homeworking whitepaper was used. The working from home survey had a 25% response rate.</li> <li><b>Shuttle bus:</b> Bus mileage, passenger numbers and working days were used to calculate the carbon emissions for the shuttle bus between the train station and office in Alderley Park.</li> </ol> <p>8% of office occupancy, FTE data and passenger number data was estimated</p> <p><b>Category 8: Upstream leased assets and Category 13: Downstream leased assets</b></p> <p>Purchased natural gas and electricity from leased assets paid by the landlord were converted from kWh to CO<sub>2</sub>e on a monthly basis.</p> <p>88% of electricity consumption data was provided by meter readings, with 9% sourced from invoices and the remaining estimated.</p> <p>77% of gas consumption was provided by meter readings, with 7% from invoices and the remaining estimated.</p>

## Methodological and data assumptions, limitations and disclaimers

We recognise there are currently limitations to the reliability and usefulness of climate data due to the emerging nature of climate data applications and methodologies in finance. All data is supplied for information purposes only and should not be relied upon for investment decisions. We have identified four areas where limitations are most evident.

### Accuracy and availability of emissions data

Not all companies disclose their emissions. The level and accuracy of disclosure varies across geographies and industry sectors, and where disclosures are made, they are typically subject to less rigorous auditing processes than financial data. The accuracy of data is reduced further through “subsidiary mapping”, where subsidiaries are mapped back to their parent company when subsidiary emissions data is not available. Where emissions data is still not available, our data provider applies its estimation methodology to allow for higher overall coverage.

Of our total investments approximately 66% are invested in CFI and LE. In these asset classes we have approximately 78% coverage across multiple metrics for Scope 1 and 2.

Very few companies are currently reporting their Scope 3 emissions resulting in our data provider estimating most of our holdings’ Scope 3 emissions. There is a lack of consistency on the methodology being adopted across the industry to estimate these emissions. As a result, Scope 3 emissions can vary significantly across different data providers, and in the subsequent reporting across our peers.

### Timeliness of emissions data reporting

The data reported will not include the most recently reported emissions from all our underlying holdings. The timing of carbon disclosures varies across different companies. MSCI makes regular updates to their database following company disclosures, but still do not always report the most recent carbon emissions for all companies. This results in carbon data often being out of date. This could be by 12-24 months.

MSCI make ongoing updates to their database therefore the carbon emissions reported for our portfolio can vary from one day to the next. Using our underlying holdings data as at the end of our financial reporting year (31 December), we extract our emissions data within ten business days each year. This provides some consistency with the data from the previous periods.

### Asset class coverage

We have included a sovereign emissions intensity metric (emissions by GDP), which represents the carbon intensity of our government bonds. This metric is not comparable to the intensity of our CFI and LE holdings due to the methodology used. In addition, a small portion of our government bonds are invested in supranational or municipal bonds, for which there is currently no standard methods for calculating emissions. Whilst calculated emissions are based on coverage of 78% of CFI & LE assets, these are scaled up to 92% by MSCI. Government bonds’ emissions calculations are based on 95% coverage and have been scaled up to 100%

There are some asset classes where emissions data or methodologies to calculate proxies are not readily available, and therefore these are excluded from our analysis. This includes private markets and derivatives.

Whilst these make up a relatively small proportion of our portfolio, we will aim to report emissions for these asset classes as they become available in the future.

### Forward-looking statements

Forward-looking metrics are underpinned by many uncertainties and subjective choices. They:

- exclude widely accepted material climate risks that cannot be modelled, including the impacts from external policy decisions, market sentiment and climate tipping points; and
- rely on material subjective assumptions, including viability of investee net zero plans and assumed sector-level transition pathways.

We choose to avoid an overreliance on purely quantitative climate data and modelling outputs when establishing the materiality, likelihood, and timing of our climate risk exposure.

Despite ongoing enhancements by data providers such as MSCI, modelling limitations look set to persist in the short term. We will continue to encourage enhancements by MSCI and other data providers and will strive to use and report the most logical and decision-useful data available. We have analysed the methodology adopted by MSCI and engaged with the data provider when it suggested proposed enhancements to the methodology of C-VaR and ITR in 2023. This approach will be kept under review as the quality of climate data and quantitative modelling outputs improves and as decision-makers become more familiar with the basis and limitations of climate metrics.



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