Pru
part of M&G plc

The Prudential Assurance Company Limited & Prudential Pensions Limited

2023 TCFD Report

This report, covering reporting period 1 January to 31 December 2023, sets out our disclosures in line with the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD) for assets managed and administered by the following entities in accordance with the FCA's Policy Statement 21/24:

- The Prudential Assurance Company Limited (PAC)
- Prudential Pensions Limited (PPL)

The disclosures in this report for the two legal entities, including cross-references to M&G plc group disclosures, fulfil the regulatory requirements under chapters 2.1 and 2.2 of the FCA ESG sourcebook. They outline how PAC and PPL consider climate-related matters when managing or administering assets, encompassing their approach to Governance, Strategy and Risk Management, as well as relevant climate-related Metrics and Targets.

Clive Bolton
Director of PAC and PPL
June 2024

Our climate-related disclosures are consistent with the TCFD recommended disclosures, and also reflect relevant TCFD Annex material ('Guidance for All Sectors' and supplementary 'Asset Owners' guidance). The table below signposts the location of these disclosures for each entity.

Both PAC and PPL are wholly-owned subsidiaries of M&G plc (also herein referred to as 'the Group'). As there is alignment with the Group's broader strategy and approach to climate risks and opportunities, this report relies on and cross-refers to Group-level TCFD disclosures published in the M&G plc 2023 Annual Report and Accounts (ARA), supplemented by entity-specific disclosure where appropriate. As required by the FCA's ESG sourcebook, this report covers the disclosures relevant to the assets managed or administered by PAC and PPL. Decarbonisation of operational activity is managed at Group level – more information can be found in the ARA pages 75-77.

TCFD pillars	Recommended disclosures	For further information, please refer to:		
		M&G plc ARA 2023 section	PAC	PPL
Governance	Board's oversight of climate-related risks and opportunities	Sustainability governance: page 38	This report: pages 4-5	
	Management's role in assessing and managing climate-related risks and opportunities	Sustainability governance: page 39 Our approach to climate change: pages 70-71 Climate risks and opportunities: pages 72-74		
Strategy	Climate-related risks and opportunities the organisation has identified	Climate risks and opportunities: pages 72-74	This report: pages 6-7, 14-17	
	The impact on the organisation's businesses, strategy and financial planning	Our approach to climate change: pages 70-71 Climate risks and opportunities: pages 72-74 Our strategy: pages 15-17		
	Resilience of the organisation's strategy, based on different climate-related scenarios	Climate risks and opportunities: pages 72-74 Scenario analysis: pages 85-88 Financial statements: from page 184 (Notes 1, 15, 17, 31, 37)		
Risk management	Processes for identifying and assessing climate-related risks	Climate risks and opportunities: pages 72-74	This report: page 8	
	Processes for managing climate-related risks	Climate risks and opportunities: pages 72-74 Risk management (Sustainability and ESG): page 61		
	Integration of climate-related risks into overall risk management	Risk management (Sustainability and ESG): page 61		
Metrics and Targets	Metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process (Investments)	Investments emissions metrics: pages 82-84 Supplementary climate metric and modelling information: pages 89-90	This report: pages 9-12	This report: page 13
	Greenhouse gas emissions (Investments)	Investments emissions metrics: pages 82-84	This report: pages 9-12	This report: page 13
	Targets used to manage climate-related risks and opportunities and performance against targets (Investments)	Our approach to climate change: page 71 Investments – implementation strategy: page 79	This report: pages 6-7	

Introduction

PAC offers a range of long-term products spanning life insurance, investment pension products, and pension annuities to retail and institutional (e.g. pension schemes) clients. PPL, a subsidiary of PAC, mainly sells unit-linked products.

PAC and PPL form part of the Group's asset owner business (also herein referred to as 'we', 'our', or 'us'). The assets managed and administered by PAC and PPL are primarily overseen by the Treasury and Investment Office (T&IO) function.

Given that the approach to Governance, Strategy, and Risk management in relation to the management of climate risks and opportunities is consistent across the two entities, we have deemed it appropriate to prepare one combined report, with separate sections provided for each entity's climate-related metrics.

Governance

PAC and PPL have separate boards that are responsible for interpreting and applying the Group sustainability strategy within the context in which they operate. Accountability for setting the Group-wide sustainability strategy rests with the M&G plc Board. The PAC Board receives regular updates on progress against strategic actions and sustainability reporting throughout the year. Illustratively, topics covered include progress against decarbonisation initiatives and updates on TCFD reporting. The PPL Board also receives periodic sustainability-related progress updates, for instance in 2023 the PPL Board was briefed on steps taken to embed PRA's SS3/19 regulatory expectations on climate risk management.

One common director sits on both the M&G plc and PAC boards, and PAC and PPL also share three common board directors, facilitating information sharing on relevant issues and policy decisions.

The entity boards are supported by sub-committees, management-level committees, working groups and teams who oversee day-to-day climate risk integration efforts and execution of associated initiatives and activities.

Key delegations at board sub-committee level are:

- The PAC Risk Committee (with delegated responsibility in respect of PPL) oversees financial and non-financial risks faced by the entities. It is also accountable for overseeing PAC and PPL's compliance with the Group Risk Management Framework, which embeds climate and sustainability considerations, and related policies and practices.
- The PAC Audit Committee (with delegated responsibility in respect of PPL) supports the boards in reviewing material regulatory disclosures in respect of climate and sustainability matters at the entity level including effectiveness of related internal control systems.

The Independent Governance Committee provides independent oversight on sustainability and stewardship policies on behalf of pension policyholders. Similarly, the With-Profits Committee receives sustainability-related updates, as appropriate, for matters relevant to its remit.

Specific climate-related responsibilities have been assigned to management as follows:

- The PAC Executive Committee has responsibility for overseeing progress towards PAC and PPL's strategic business objectives, including tracking the progress of sustainability commitments and delivery and implementation of plan to mitigate climate change risks.
- The M&G Life Executive Investment Committee (EIC) has responsibility for oversight of material ESG risks and stewardship considerations, in line with relevant ESG policies, for the investment portfolios of PAC and PPL.

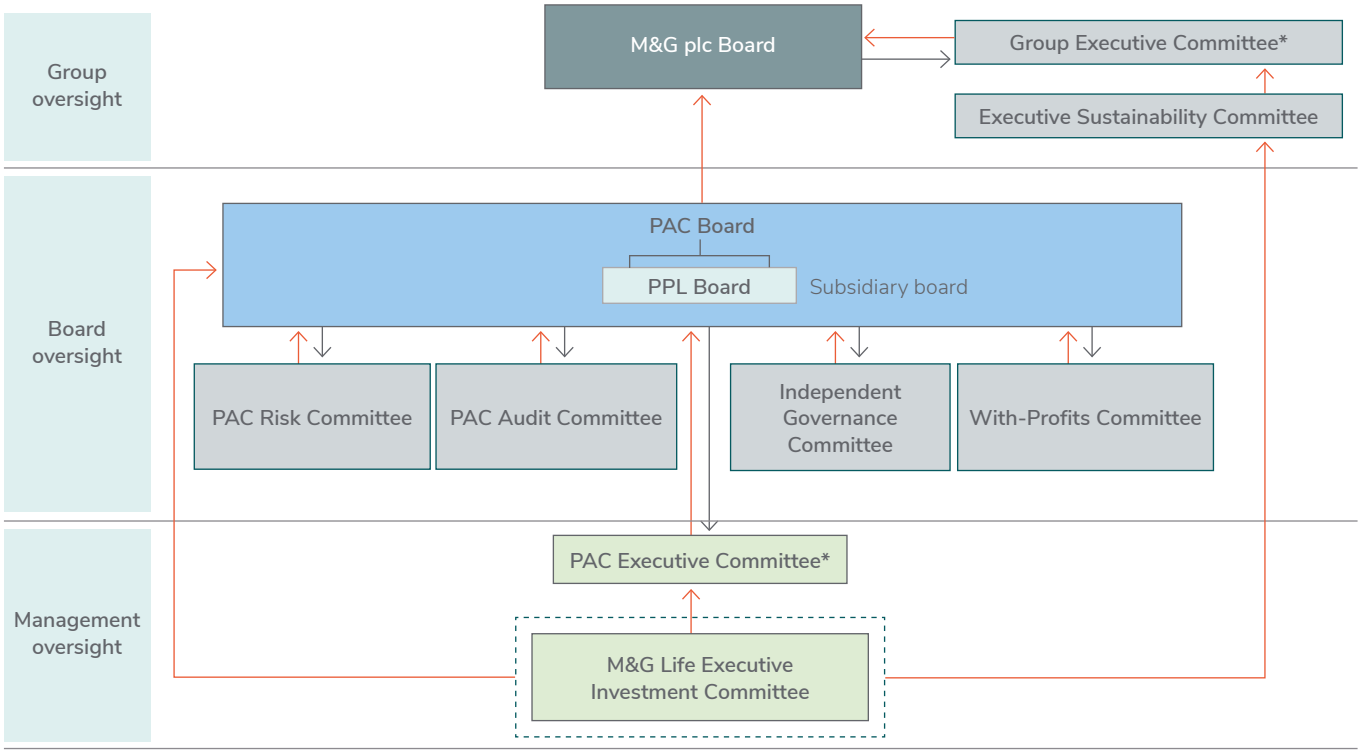
The EIC is supported by Treasury and Investment Office (T&IO) teams who have responsibility for ESG investment strategy and related policies and standards, as well as selection and ongoing oversight of investment managers.

The T&IO have established an ESG Working Group to drive operational coordination of key sustainability activities; its remit includes for example, review of initiatives in accordance with the PAC ESG Investment Policy.

Ongoing communication is key in driving consistency with the Group-level approach to sustainability. This is supported by cross-committee membership, with the CEO of the M&G Life business (of which PAC and PPL are a significant part) who chairs the PAC Executive Committee also being part of the M&G plc Group Executive Committee and Executive Sustainability Committee (ESC).

The ESC, chaired by the Group Chief Sustainability Officer, is responsible for supporting the successful execution of the Group's sustainability strategy and oversees the delivery of public commitments and targets. EIC and T&IO representatives also attend ESC meetings and provide regular updates through a standing business update agenda item.

The chart below summarises the governance structure:



This overview only shows key relevant reporting lines for entities in scope. It does not show all legal entities within M&G's asset owner business.

↑ Reporting

↓ Delegation – in some instances, as indicated by *, designated accountable executives have certain responsibilities for sustainability and are supported by the executive committee in discharging their responsibilities

Treasury and Investment Office, the in-house investment strategy manager for PAC

Strategy

PAC and PPL's net zero ambitions support the Group's pledge to achieve net zero carbon emissions across investment portfolios by 2050, in line with the Paris Agreement.

At a PAC level, climate commitments are supported by interim decarbonisation targets set as part of our membership of the Net Zero Asset Owners Alliance (NZAOA), which are now informing our investment policy and asset allocation decisions for the With-Profits Fund and the pension savings and annuity books. Our interim targets cover listed equity, corporate bonds and direct real estate portfolios over which PAC and PPL have investment decision making authority, with specific targets for carbon-intensive sectors (as outlined on page 7). We are also evolving our approach to climate strategy and decarbonisation in line with changing best practice, and may, as a result, review the actions we take to align with the climate transition.

The T&IO sets the ESG investment strategy for PAC and related subsidiary entities (including PPL) by implementing a suite of policies, approaches and exclusion criteria to steer investee companies towards more sustainable practices and ensure alignment with our sustainability priorities and commitments.

Our strategy is focused on positive real-world change, using the levers[1] available to us to support the climate transition, and help our clients manage the risks and opportunities brought by climate change. The three key levers relating to our investment activity are:

1. **Investment strategy:** enabled through portfolio management and product design.

   Addressing thermal coal is an important component of our strategy because of its global emissions impact and the risk of stranded assets as the transition gathers pace. In adherence to the Group's thermal coal position, PAC's approach to thermal coal sets thresholds and screening criteria for public assets investments within PAC and PPL portfolios. Since 2021, this has resulted in coal-related exclusions across our shareholder annuity and with-profits businesses. As an asset owner, propositional development and climate solutions exposure is important too. M&G's Catalyst investment strategy, backed by PAC's With-Profits Fund, invests in assets that contribute to a sustainable economy – this is achieved by investing in companies that act to avoid harm, benefit stakeholders and contribute to solutions. From a propositions perspective, PAC's PruFund Planet range offers policyholders the opportunity to access solutions which have positive environmental and societal objectives, as well as the same smoothing mechanism and risk profile as PruFund.

2. **Stewardship:** we aim to use our financial ownership to influence behaviour and foster positive ESG practices.

   We rely on appointed asset managers to exercise direct climate engagement and responsible stewardship in line with our policies and objectives. Overall, we expect engagement processes and actions to be aligned with the PAC ESG Investment Policy, Shareholder Engagement Policy and Voting Standard, as well as the agreed-upon mandate. If there is persistent misalignment, engagement will be stepped up where appropriate to enable further assessment and a decision on divestment and exclusion. We view the exclusion of any company from a portfolio due to their carbon emissions as an action of last resort, only to be taken if we are certain that engagement will not lead to meaningful strategic and operational change. Case studies on engagement with investee companies at broader PAC level can be found in the PAC Stewardship report, the latest version of which is available on the 'Responsible investing' section of our **website**.

   Under the NZAOA framework, we are also required to set engagement targets for the highest emitting companies in our portfolios – over 2023, we have progressed engagement efforts with the top 40 emitters.

   Although engagements are executed by our asset managers, we hold them accountable for the interactions they have with investee companies, and engage with them to deliver our desired results. Having a robust approach and process in place to engage with asset managers is key to ensure the best outcomes for our policyholders and clients. Our expectations for ESG integration are communicated

[1] The levers outlined do not rely on services or products supplied by third parties or delegates.

through the investment mandates awarded by the T&IO, which disclose the time horizon, target return and desired risk levels for each asset manager. Key ESG and stewardship requirements and restrictions are also specified and embedded within the investment mandates for which we have control, especially where a product may have an explicit ESG focus and/or strategy. T&IO conducts due diligence to assess managers' ability to deliver the expected investment performance or outcome for a fund over the long term. Some of the mechanisms which support the due diligence process include quarterly portfolio screenings and the ESG Due Diligence Monitoring Questionnaire, which aims to assess managers' stance on key ESG issues and priorities.

3. **Advocacy:** we recognise that the climate transition will not reach the necessary pace and scale without the right public policy frameworks, and remain committed to advocacy and industry collaboration, to create a more supportive environment for ambitious climate action. As an example, T&IO team members participate in the Association of British Insurers (ABI) climate change working group which for instance, led to the development of a roadmap outlining the industry's role in supporting the delivery of the UK's Net Zero strategy.

Financial planning is conducted at a Group level, and includes inputs from PAC (including PPL). The plan includes income or expenditure related to our climate actions where we have a reasonable estimate of the value that is expected to materialise over the plan period (three years).

M&G plc's ARA (pages 72-74) sets out how climate risks and opportunities are being addressed by the wider business, including considerations of time horizons.

PAC's interim commitments as part of NZAOA

Engagement

Engaging with the 40 biggest contributors to our financed emissions, to encourage them to set net zero targets that meet best-practice criteria

Public equity and corporate debt

50% reduction in emissions intensity (tCO_2e/$m invested) for each asset class by 2030*

Real estate

36% reduction in emissions intensity ($kgCO_2e/m^2$) within our directly owned real estate portfolio by 2030*

Sectoral decarbonisation

Reducing emissions intensity (tCO_2e/$m invested) by the amount below by 2030*, across the named sectors.

Utilities	Oil, gas and coal	Materials, steel
60%	50%	40%
Transport, road	**Transport, aviation**	**Transport, shipping**
50%	25%	25%

* Target covers Scope 1 and 2 emissions against 2019 baseline.

Risk management

Identifying and managing the risks of climate change is crucial to minimise or mitigate the impacts on the risk profile and performance of investment portfolios. The identification, assessment and management of climate-related risks, along with other ESG-related risks, is embedded into the ESG Risk Management Framework, in line with the wider Group. Various frameworks and processes structured under the three lines of defence model support implementation of the risk management approach.

From a first line perspective, the T&IO function plays an essential role in supporting the identification and assessment of climate risks relevant to client portfolios.

Horizon scanning supports climate risks identification, ensuring relevant ESG factors are considered when setting investment manager agreements. The PAC ESG Investment Policy outlines a set of key principles that further enable the identification and management of key ESG, and broader relevant systemic risks. This is supplemented by assessment criteria applied when approaching specific topics, such as coal-related investments in line with PAC's thermal coal approach.

Climate scenario modelling at an asset level helps identify how a range of plausible climate change pathways may impact investments over time, and broadens understanding of the dynamics driving long-term investment opportunities across asset classes and markets. However, we do recognise climate scenario analysis is subject to inherent limitations, and the impacts modelled are not intended to be predictive forecasts.

Our Risk and Compliance functions serve as a key part of the second line of defence, responsible for reviewing and challenging risk management practices by the first line and providing guidance.

In addition to the scenario analysis performed at a portfolio level, as part of the Own Risk and Solvency Assessment (ORSA) annual exercise, we have used our in-house climate modelling expertise to develop climate stress test scenarios that support the assessment of capital adequacy at PAC level. The climate scenarios used in 2023 are based on the Network for Greening the Financial System (NGFS) phase 3 scenarios. The results of our 2023 modelling indicate that a hot house scenario continues to have the most significant impact on our balance sheet, while disorderly scenarios are more adverse than an orderly transition. The likelihood of an orderly transition appears to be falling, due to the gap between global action and Paris-aligned pathways. As a result we have strengthened our focus on disorderly outcomes. In 2023 we explored the impacts of an additional disorderly scenario (divergent net zero), which assumes that the transition diverges across countries and sectors. Our investment portfolios are the main driver of exposures to the financial risks of climate change – a key lever in the management of these risks is therefore investment portfolio decarbonisation.

During the year, greenwashing risk controls were assessed, with mandatory anti-greenwashing training being developed and rolled out.

The Group's Internal Audit function represents the third line. It supports the entity boards and senior management by providing independent assurance over the first and second lines of defence. This includes assessment of governance arrangements, risk and controls practices as they relate to climate risk and thematic reviews such as evaluation of external climate disclosures.

Metrics

Emissions metrics across our portfolios have been calculated based on the Partnership for Carbon Accounting Financials (PCAF) principles. Measurement methodologies, including PCAF, are continually evolving and we will consider updated guidance as it is issued. This year we are including a data quality score covering public equities, public corporate bonds, and sovereign debt asset classes. The data quality score, based on PCAF methodology, indicates the quality of the source data used to derive emissions for individual issuers – the score ranges from 1 to 5, where 1 represents the highest data quality and 5 is the lowest.

In our analysis, 'coverage' refers to the proportion of in-scope assets under management and administration (AUMA) for which we have all environmental, financial, or other such data required in the calculation of the given metric (reported or estimated). In-scope asset classes include public equities and corporate bonds, sovereign debt and real estate. We have increased coverage in the year for public assets as a result of adding a new third party data source, and expect further improvements as availability of data improves, and industry guidance extends to a broader range of asset classes. Asset classes such as cash, derivatives, and asset-backed securities (ABS) are not currently included, reflecting a lack of either climate accounting standards or mature data sources for these types of assets. Private asset analysis is limited to real estate only, with other private asset classes excluded due to data limitations or on a materiality basis.

The metrics presented for PAC and PPL relate to assets managed internally within the Group – PAC and PPL assets invested with third-party investment managers are not included. The levels of coverage reflect the availability of data for in-scope assets, and we aim to increase the scope of assets included over time through sourcing of data for externally managed mandates.

All figures presented reflect the annual emissions calculated with reference to in-scope AUMA of each asset class as at 31 December for each year.

We use a range of metrics to identify and assess climate-related risks and opportunities across investment portfolios. Scope 1 & 2 greenhouse gas (GHG) emissions are used to inform the asset allocation process and our overall response to climate change. While we monitor Scope 3 emissions as a proxy for risk exposure to inform targeted actions, there are notable challenges related to data quality and disclosure of this emissions category, which makes it less reliable for decision making.

Information on definitions of metrics reported and limitations relating to data used are detailed in the Group's 2023 Environmental Metrics Basis of Reporting ('Basis of Reporting'), published on M&G plc's **website**. In particular, it should be noted that we use data sourced from third party data providers (e.g. MSCI and Bloomberg) to calculate the emissions metrics. While we perform high-level checks on the data received, we are reliant on the accuracy of source data received from these external vendors.

We have restated certain metrics for the year ended 31 December 2022, in line with the policy set out in our Basis of Reporting. Further details of the restatements and the impact on the previously presented metrics are set out in the relevant sections below.

Climate metrics (PAC)

PAC's in-scope portfolio assets that we report on span public equities, corporate bonds, sovereign debt and real estate investments.

Public equities and corporate bonds

The table below presents emissions metrics relating to PAC's public equities and corporate bonds.

Public equities and corporate bonds						
	2023		2022 (restated)		2022 (previously presented)	
	Value	Coverage	Value	Coverage	Value	Coverage
AUMA in-scope for metrics presented (£bn)	**83.8**	**N/A**	80.2[2]	N/A	80.4[2]	N/A
Financed carbon emissions (FCE) Scope 1 & 2 ($ktCO_2e$)	**6,365**	**86%**	6,445	84%	5,179	71%
Data quality score – Scope 1 & 2	**2.2**	**N/A**	N/A	N/A	N/A	N/A
Financed carbon emissions (FCE) Scope 3 ($ktCO_2e$)	**35,431**	**82%**	41,962	81%	30,788	71%
Data quality score – Scope 3	**2.2**	**N/A**	N/A	N/A	N/A	N/A
Carbon footprint Scope 1 & 2 (tCO_2e/£m invested)	**89**	**86%**	96	84%	91	71%
Carbon footprint Scope 3 (tCO_2e/£m invested)	**513**	**82%**	650	81%	541	71%
Weighted average carbon intensity (WACI) Scope 1 & 2 (tCO_2e/£m sales)	**164**	**83%**	182	82%	182	82%
Weighted average carbon intensity (WACI) Scope 3 (tCO_2e/£m sales)	**1,030**	**82%**	1,015	79%	1,091	79%

Analysis of 2023 compared with restated 2022 metrics

For 2023, despite an increase in coverage we have seen a fall in Scope 1, 2 and 3 FCE due to a lower carbon footprint of the portfolio, as holdings in issuers with a high emissions intensity were reduced. For Scope 1 and 2, this was offset by a small underlying increase in real-world emissions of investee companies in the portfolio.

Restatement of 2022 metrics previously presented

In 2023 we changed our data hierarchy for the use of third party emissions data for public equities and corporate bonds to include Bloomberg as a secondary source with a view to increasing coverage – further details on our data hierarchy are set out in the Basis of Reporting. As a result of this change, we have restated the 2022 metrics previously presented to include the additional source. The increase in coverage has resulted in a rise in reported absolute emissions for these public assets. The increase in absolute emissions for the re-stated 2022 figures is larger than the relative increase in coverage, reflecting a number of high-emission intensity issuers being captured within the additional coverage. This can also be seen through the increased carbon footprint of the assets in the restated 2022 figures.

We have also made a refinement in the year to our methodology for the emissions data used for green bonds, to base this on the estimated emissions of the project funded by the bond rather than the emissions of the issuers, where the data is available. Green bonds account for a small proportion of the in-scope portfolio and therefore this revision has had minimal impact on the restated metrics.

[2] In-scope AUMA has been restated due to a re-classification of bonds from corporate bonds to sovereign debt in the year.

Climate metrics (PAC) – Sovereign debt

In the table below, we have included financed domestic production and consumption emissions, and their respective weighted average intensities. The presentation has been updated this year to show metrics both as including and excluding Land Use, Land Use Change and Forestry (LULUCF).

Sovereign debt									
	2023			2022 (restated)			2022 (previously presented)		
	Value		Coverage	Value		Coverage	Value		Coverage
	incl. LULUCF	excl. LULUCF		incl. LULUCF	excl. LULUCF		incl. LULUCF	excl. LULUCF	
AUMA in-scope for metrics presented (£bn)	17.0		N/A	5.6[2]		N/A	5.3[2]		N/A
Financed sovereign production emissions Scope 1 ($ktCO_2e$)	4,095	3,934	99.4%	1,122	1,154	98.6%	1,360	1,377	99.9%
Data quality score – Scope 1	1.9	1.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Financed sovereign consumption emissions Scope 1,2,3 ($ktCO_2e$)[3]	4,440	4,282	99.2%	1,328	1,361	98.6%	3,181	3,198	99.9%
Data quality score – Scope 2 & 3[4]	4.0	4.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Weighted average sovereign production intensity Scope 1 (tCO_2e/PPP-adj GDP (USDm))	0.19	0.18	99.4%	0.17	0.17	98.6%	0.3	0.3	99.9%
Weighted average sovereign consumption intensity Scope 1,2,3 (tCO_2e/Capita)[3]	9.9	10.2	99.2%	11.0	11.5	98.6%	23.0	23.2	99.9%

Analysis of 2023 compared with restated 2022 metrics

In 2023, sovereign emissions increased in line with the increase of in-scope AUMA. This increase is largely driven by larger allocations to gilts and treasuries, through new bond funds being brought into scope, and also partly from market movements – with bond values having a strong end to 2023. The production emissions intensity of the portfolio is also higher after the additional assets brought into scope of the reporting.

[2] In-scope AUMA has been restated due to a re-classification of bonds from corporate bonds to sovereign debt in the year.

[3] 2023 and 2022 (restated) exclude exported emissions whereas 2022 (previously presented) includes exported emissions. Refer to section on 'Restatement of 2022 metrics previously presented' for further details.

[4] The data quality score for Scope 2 and 3 metrics are based on economic activity-based emissions from the OECD, which attracts a lower score than emissions based on reported or physical activity-based data.

Restatement of 2022 metrics previously presented

We have reviewed our methodology for sovereign debt emissions against PCAF's Financed Emissions Standard and as a result have restated the 2022 sovereign debt emissions for the following methodology changes:

i. The calculation of sovereign production emissions relies on the determination of an attribution factor, using data on the sovereign's gross domestic product (GDP) adjusted for the purchasing power parity (PPP) rates in international $. Previously this was converted using the World Bank's PPP conversion factor for the UK and used along with the investment holding in GBP to determine the attribution factor. We have updated our methodology to determine the attribution factor using PPP-adjusted GDP (international $) and the sovereign bond market value (USD). The change in production emissions following restatement is primarily as a result of this change. Financed sovereign production emissions have also been recalculated using a higher quality data source where this source is available for the assets in-scope.

ii. In addition to the changes above, financed sovereign consumption emissions are now reported excluding exported emissions. Previously no adjustment was made for exported emissions, which is the main driver for the change in restated consumption emissions. There has also been a change in the indicator used from our data vendor for imported emissions which are included in the overall calculation.

The restatements set out above in relation to the absolute values of emissions have resulted in the restatement of weighted average intensity metrics for production and consumption metrics. There has been no other changes to methodology to produce these metrics.

Climate metrics (PAC) – Real estate

The table presents emissions metrics relating to PAC's real estate portfolio.

Private assets – Real estate						
	2023		2022 (restated)		2022 (previously presented)	
	Value	**Coverage**	Value	Coverage	Value	Coverage
AUMA in-scope for metrics presented (£bn)	**14.4**	**N/A**	15.5	N/A	15.5	N/A
Financed carbon emissions Scope 1 & 2 ($ktCO_2e$)	**30.3**	**97%**	34.4	100%	42.3	100%
Financed carbon emissions Scope 3 ($ktCO_2e$)	**265.9**	**97%**	266.3	100%	272.3	100%
Carbon footprint Scope 1 & 2 (tCO_2e/£m invested)	**2.2**	**97%**	2.2	100%	2.7	100%
Carbon footprint Scope 3 (tCO_2e/£m invested)	**19.1**	**97%**	17.2	100%	17.6	100%

Real estate assets recorded a decrease in absolute emissions over the year primarily due to a reduction of in-scope AUMA, as some assets were sold in the year combined with lower market values. Scope 3 carbon footprint has increased due to a higher energy consumption across the assets occupied and run by tenants as activity has continued to pick up post COVID. Real estate emissions have been restated in the year to reflect that some emissions for certain assets were included twice in 2022.

Climate metrics (PPL)

This is the first time that we have presented results for PPL, so we have not reported prior year figures. The methodology applied to the PPL metrics below is consistent with that of the PAC metrics for 2023. PPL funds primarily operate in public markets, so do not have material exposure to private assets. The in-scope AUMA presented for public equities and corporate bonds below does not include PPL's exposure to funds where we have not been able to source look-through data.

Public equities and corporate bonds	2023	
	Value	Coverage
AUMA in-scope for metrics presented (£bn)	2.5	N/A
Financed carbon emissions Scope 1 & 2 ($ktCO_2e$)	177	93%
Data quality score – Scope 1 & 2	2.5	N/A
Financed carbon emissions Scope 3 ($ktCO_2e$)	656	87%
Data quality score – Scope 3	2.4	N/A
Carbon footprint Scope 1 & 2 (tCO_2e/£m invested)	78	93%
Carbon footprint Scope 3 (tCO_2e/£m invested)	309	87%
Weighted average carbon intensity (WACI) Scope 1 & 2 (tCO_2e/£m sales)	120	90%
Weighted average carbon intensity (WACI) Scope 3 (tCO_2e/£m sales)	659	89%

Sovereign debt	2023		
	Value		Coverage
	incl. LULUCF	excl. LULUCF	
AUMA in-scope for metrics presented (£bn)	0.9		N/A
Financed sovereign production emissions Scope 1 ($ktCO_2e$)	142	141	100%
Data quality score – Scope 1	1.1	1.1	N/A
Financed sovereign consumption emissions Scope 1,2,3 excl. exported emissions ($ktCO_2e$)	180	179	100%
Data quality score – Scope 2 & 3[4]	4.0	4.0	N/A
Weighted average sovereign production intensity Scope 1 (tCO_2e/PPP-adj GDP (USDm))	0.1	0.1	100%
Weighted average sovereign consumption intensity Scope 1,2,3 excl. exported emissions (tCO_2e/Capita)	8.2	8.2	100%

[4] The data quality score for Scope 2 and 3 metrics are based on economic activity-based emissions from the OECD, which attracts a lower score than emissions based on reported or physical activity-based data.

Scenario analysis

In addition to backward-looking metrics, which indicate the current emissions profile of an asset or portfolio, we also use forward-looking metrics to assess transition alignment and potential impacts on asset values over time by leveraging scenario analysis tools.

The key forward-looking metrics that we monitor for public assets are:

- Implied temperature rise (ITR): this metric allows a user to quickly gauge if a portfolio and issuer's GHG emissions' trajectory is aligned with the Paris Agreement through sub-industry and regional benchmark comparisons. It is a simplified tool allowing us to assess the transition profile of the companies we invest in and their progress toward driving down greenhouse gas emissions, while also measuring the effect of any changes we make to our portfolios during the year.
- Climate adjusted value (CAV): this metric is equivalent to value at risk (VaR), but is calculated on a bottom-up basis, by assessing the impact of different climate scenarios on an issuer's financial position, which we disclose by industry.

We use Aladdin Climate to model CAV across our public equities, corporate bonds and sovereign debt portfolios and ITR across public equities and corporate bonds portfolios. It assesses the financial impact of climate change based on three Network for Greening the Financial System (NGFS) scenarios: orderly, disorderly and hot house, with orderly and disorderly being based on transition impacts and hot house being based on physical impacts. Aladdin Climate was updated in 2023 to better reflect the latest scientific developments, as well as new data sets, including issuer net zero target information (e.g. Science Based Targets initiative and CDP data).

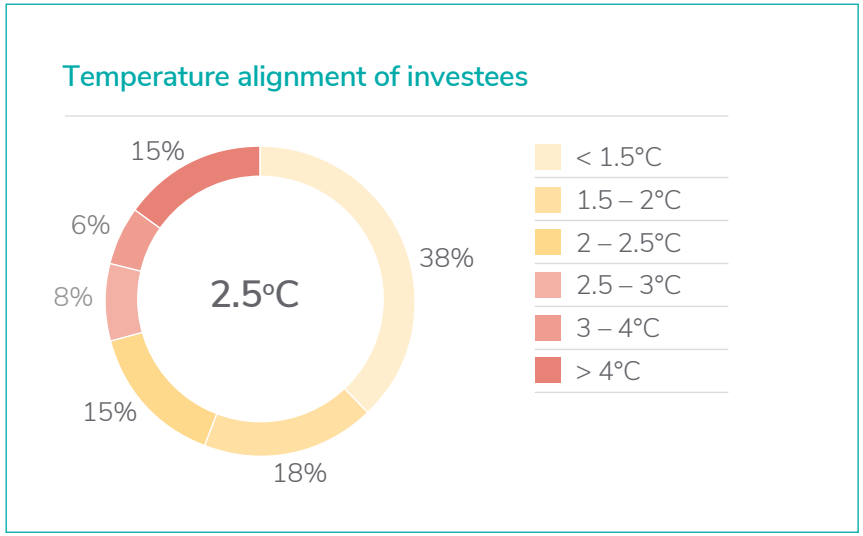
For private assets, we engaged risk advisory firm Marsh to assess our real estate exposure to physical climate risk. Marsh uses XDI, a climate risk analysis platform, which quantifies the cost of extreme weather and climate change impacts to physical assets, taking into account asset-specific information. The scenarios used in this model are based on Representative Concentration Pathway (RCP) 2.6 and 8.5, as produced by the IPCC. These broadly align to the public asset orderly and hot house scenarios.

As with any model, the scenario analysis results are heavily influenced by the assumptions made. We recognise that the climate models are based on stylised scenarios, and attempt to capture the possible future interplay between physical climate impacts, policy and regulation, and consumer behaviour at a global scale. The scenarios are not predictive, but rather help us explore a range of potential outcomes and act as a useful tool for interrogating and understanding how climate-related developments could impact the assets we manage and administer.

Scenario analysis results are presented at a PAC level, with the results capturing PPL's portfolio as a subsidiary entity. Real estate assets modelling is shown for PAC, reflecting its largest private asset class for which emissions can be calculated.

Implied temperature rise

As part of our modelling, we have calculated the implied temperature rise (ITR) for each individual issuer where data is available covering 86% of public equities and corporate bonds for PAC, as at 31 December 2023. The chart below shows our relative ITR exposure based on portfolio weightings to a range of temperature levels.



The analysis shows that the investee companies are aligned to a broad range of temperature outcomes. While 56% of the modelled AUMA is projected to achieve alignment with a 2°C world by 2030, 21% of modelled assets exceed 3°C. The weighted average warming potential across modelled issuers is 2.5°C. This represents a small decrease in the overall portfolio's temperature alignment from 2022 (2.7°C).

While the average across our modelled assets is higher than the Paris Agreement goals, this is consistent with the broader economy and therefore not surprising at this stage in the climate transition. We would expect the figure to improve as we work to meet our 2030 targets for in-scope assets and continue to carry out climate engagements with investees as part of our stewardship.

We acknowledge that ITR is subject to a range of inherent limitations, including the absence of a commonly accepted calculation approach, and sensitivity to sector and geographical emission assumptions. We do not use ITR in isolation but believe it provides useful indications of alignment when viewed in conjunction with other information. For a more detailed overview of ITR limitations, please refer to M&G plc's ARA (page 86).

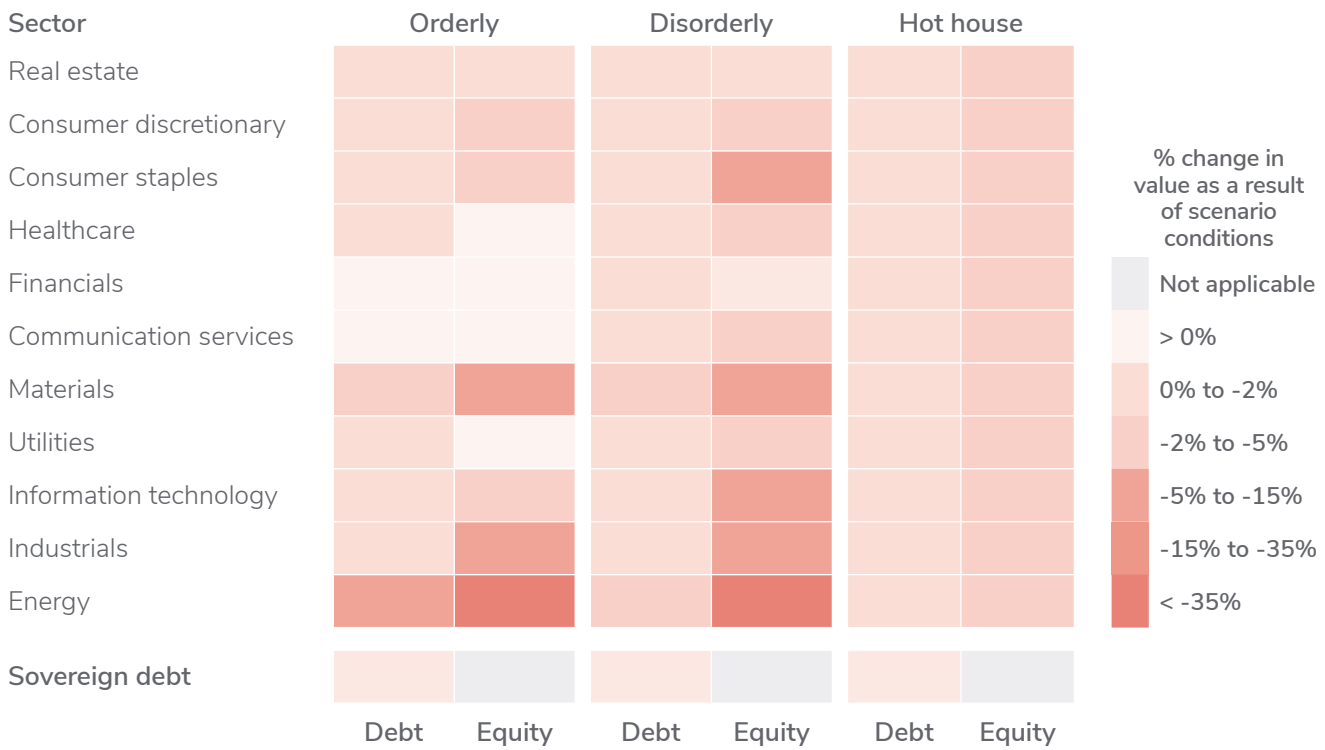
Climate adjusted value

As part of our forward-looking analysis we model our public asset portfolios (public equities, corporate bonds and sovereign debt) against three scenarios to help us quantify the relative financial impacts of climate change across different outcomes. This assessment is based on a bottom-up approach, and provides estimates of the financial impact on all issuers modelled, as well as the impact on asset valuations. The adjusted value is calculated separately for physical and transition risks as part of the scenario model that we use across our public portfolios (Aladdin Climate). The orderly and disorderly scenarios presented in the heatmap reflect transition risk impacts only, with a coverage of 85%, and the hot house scenario reflects physical risk impacts only, with a coverage of 86%.

We recognise that the outputs from this analysis are subject to limitations, and the results should be interpreted with these in mind. The underlying NGFS scenarios do not include all relevant factors that may impact outcomes, for example so-called climate tipping points and nature-related impacts, which could significantly impact the results presented. The outputs should not be treated as forecasts but as an iterative process and exploration of possible futures. They are best viewed in conjunction with other data and qualitative information.

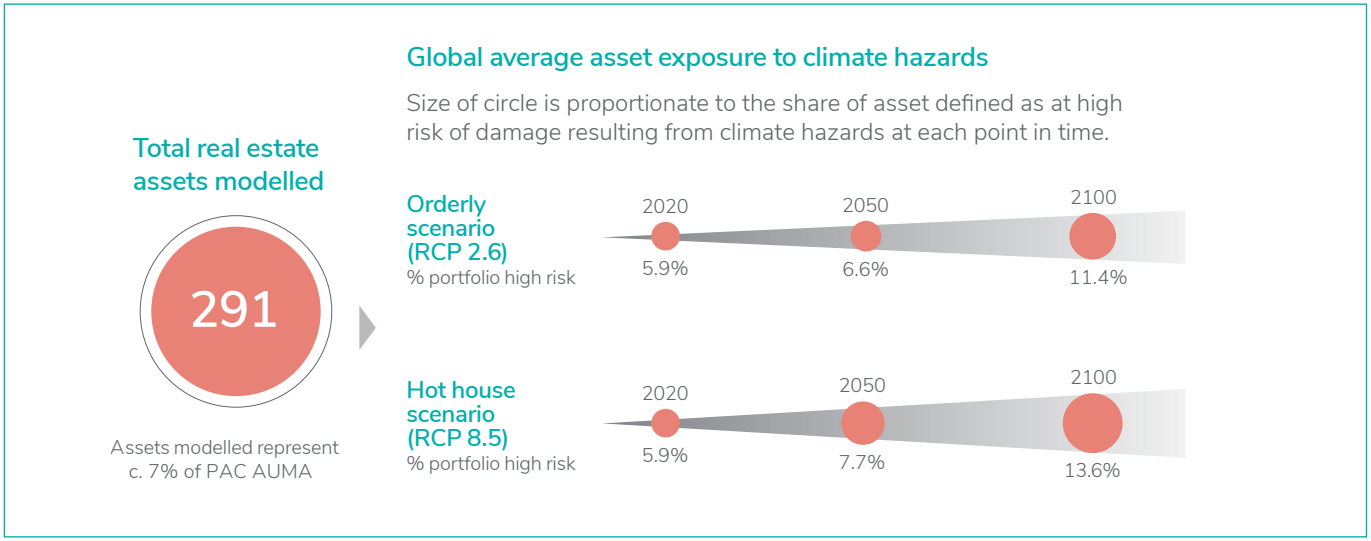
The results show that the orderly and disorderly scenario impacts are most pronounced in the energy, materials and industrials sectors (where significant change is required to decarbonise and align with the transition). By contrast, under the hot house scenario – physical impact only – asset valuations are impacted fairly evenly across all sectors.

Climate adjusted value impact by sector (current to 2050)



Real estate

The analysis below presents the proportion of PAC's directly owned real estate equity portfolio impacted by high physical climate risk.



Under each scenario assets were rated low, medium or high risk (high risk meaning at least 1% of an asset's value being at risk of damage per year). The results of the physical climate risk analysis have remained similar to last year's levels, identifying only a relatively small proportion of assets that are at high risk from future climate conditions, and draws the following conclusions:

- Under an orderly scenario between 6.6% and 11.4% of assets will be rated high risk by 2050 and 2100, respectively; and
- Under a hot house scenario, these percentages increase to 7.7% and 13.6%.

Similar to other analysis above, we recognise that the outputs from this analysis are subject to inherent limitations and do not consider second-order impacts which could affect asset values beyond what is modelled. The output of this model is limited to the identification of risk level and reinstatement value at risk, partly due to the fact that the model assesses only direct climate risk and partly due to the nature of the investments.

Glossary

Term	Definition
Association of British Insurers (ABI)	The ABI is the leading trade association for insurers and providers of long-term savings in the United Kingdom.
Aladdin Climate	Aladdin Climate is a BlackRock software application which enables investors to measure the physical risk of climate change and the transition risk to a low-carbon economy on portfolios with climate-adjusted security valuations and risk metrics.
Carbon footprint	Carbon footprint refers to financed emissions normalised by the market value of a portfolio (GHG emissions per million pounds of investment). This indicator is particularly useful for comparative purposes, but similar to FCE is sensitive to financial factors that do not relate to decarbonisation.
Disorderly scenario	The disorderly scenario used in this report broadly aligns with Representative Concentration Pathway (RCP) 2.6 and predicts a temperature rise lower than 2°C by the end of century. However, climate action to achieve this is not taken until 2030, which delays transition impacts and makes them more drastic.
Financed carbon emissions (FCE)	Financed carbon emissions represent the absolute greenhouse gas emissions associated with a portfolio of investments, where there is available reported data or estimates. Financed emissions are influenced by change in financial factors such as market movements and portfolio values, which are separate to real world emissions.
Financed scope 1 emissions	Financed scope 1 emissions include direct emissions from an issuer's owned or controlled sources, e.g. emissions associated with fuel combustion in boilers, fleet vehicles.
Financed scope 2 emissions	Financed scope 2 emissions include indirect emissions from purchased or acquired energy, e.g. electricity, steam, heat, or cooling, that is generated off-site and consumed by an issuer.
Financed scope 3 emissions	Financed scope 3 emissions are all other indirect emissions (not included in Scope 2) that occur in the value chain of an issuer, including both upstream and downstream emissions.
Greenhouse gases (GHG)	Greenhouse gases are gases that trap heat from the sun in our planet's atmosphere, keeping it warm. The main greenhouse gases released by human activities are carbon dioxide, methane, nitrous oxide, and fluorinated gases used for cooling and refrigeration.
Hot house scenario	The hot house scenario used in this report broadly aligns with Representative Concentration Pathway (RCP) 8.5 and predicts an average temperature change above 3°C by the end of the century, assuming no global response to climate change beyond what has already been committed to.
Intergovernmental Panel on Climate Change (IPCC)	The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change. It provides policymakers with regular scientific assessments on climate change, its implications and potential future risks, as well as puts forward adaptation and mitigation options.

Term	Definition
Network for Greening the Financial System (NGFS)	The NGFS is a group of central banks and supervisors committed to sharing best practices, contributing to the development of climate and environment-related risk management in the financial sector and mobilising mainstream finance to support the position toward a sustainable economy.
Net-Zero Asset Owner Alliance (NZAOA)	The UN-convened Net Zero Asset Owner Alliance (NZAOA) is a member-led initiative of institutional investors committed to transitioning their investment portfolios to net-zero GHG emissions by 2050.
Orderly scenario	The orderly scenario used in this report broadly aligns with Representative Concentration Pathway (RCP) 2.6 and predicts a temperature rise below 2°C by the end of the century, in line with the Paris Agreement.
Own Risk and Solvency Assessment (ORSA)	The ORSA is a self-assessment of an organisation's risk management and capital adequacy and is mandatory for insurers under Solvency II regulation.
Paris Agreement	The Paris Agreement is an agreement within the United Nations Framework Convention on climate change, dealing with greenhouse gas emissions mitigation, adaptation, and finance. Its overarching goal is to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.
Weighted average carbon intensity (WACI)	Weighted average carbon intensity provides a single metric summing the individual emissions intensities (by million pounds of issuer sales) of companies in a portfolio based on their weightings, indicating a portfolio's exposure to carbon-intensive issuers.

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