M&G Investments

M&G Southern Africa: Task Force on Climate-related Financial Disclosures Report

Year end 2022

Invest in **consistency**

Contents

Introduction from the CEO

Chris Sickle
Chief Executive Officer

We are pleased to present our inaugural report for our M&G Southern Africa (MGSA) business as aligned with the recommendations set out by the Task Force on Climate-related Financial Disclosures (TCFD).

As part of a global savings and asset management business with more than five million retail clients operating in 28 markets, our operations in Southern Africa provide us with a platform to provide local solutions within a global investment organisation.

As a newly consolidated component of the M&G business, MGSA was incorporated into the global M&G plc annual TCFD Report and is considered in the M&G plc Sustainability Report published in July 2023. This report represents the fulfilment of a commitment to publish a separate TCFD report for MGSA for the period January 2022 to December 2022.

This report is grounded on the local context of our Southern African operations and investment activities, and the broader consolidation of MGSA that is occurring within M&G plc Group. This aims to integrate and scale the opportunities of our existing local services with support from M&G plc Group investment, operational systems and processes. Notably, this operational and investment integration will deliver consistency across disclosures and importantly, paves the way for a single global approach to TCFD reporting for the group. This report references M&G plc Group commitments and local activities to ensure a cohesive picture is conveyed to the reader of our MGSA climate journey.

The South African government, along with international partners from the public and private sector, are coordinating an energy decarbonisation investment framework for South Africa. At time of writing, South Africa is undergoing significant loadshedding (rolling brown-outs) of the electricity supply which is proving extremely challenging and detrimental to South African growth. We recognise there is so much at stake to support a transition to a less carbon-intensive future and that we are facing real world climate impacts today that require us to play our part.

Sincerely,

Chris Sickle

Our M&G plc Group approach to climate change

Introduction

Our M&G plc group approach to climate change is taken from the M&G plc TCFD report (found in the 2022 M&G Annual Report and Accounts) and the M&G 2022/23 Sustainability Report . References are made here to explicit climate commitments and the broader context of the M&G plc group to inform the reader.

Climate change is a global problem beset by huge complexity, uncertain timing and economy-wide impacts. The scientific community has given us a clear idea of the many interconnected effects of a warming planet, with extreme events already affecting lives and livelihoods across the world. Adding to the urgency, there are signs that we are moving closer to planetary tipping points – thresholds beyond which change could become irreversible. While it is widely recognised that there has been progress on many fronts, not least when it comes to renewable energy, decarbonisation is not happening at the scale and pace needed to keep the global temperature rise within 1.5°C. Moving from commitments and incremental change to transformational action will require greater action across the global economy and much stronger policy and regulatory signals from governments. The transition to carbon net zero is about reshaping the whole economy to operate within planetary boundaries.

At M&G we want to help advance private and public action, playing our part by using the levers we have to drive positive real-world change. This includes communicating clear transition expectations to investees and stakeholders, as well as financing and enabling solutions, to support our clients on their climate journey. Focus is on implementation, collaboration and advocacy, while constantly asking ourselves if we are doing enough.

Group Climate Objectives

- To reach net zero emissions by 2050 at the latest, following Paris-aligned decarbonisation pathways for both our investments and operations
- Contributing to real-world positive impact by scaling investment in climate solutions
- Supporting a just transition and advocating for economy-wide change

Group Climate Priorities

- Progressing our climate stewardship activities, with a focus on our highest emitters
- Identifying climate solutions and just transition opportunities
- Increasing assets in scope of our interim climate commitments
- Strengthening our data and scenario analysis capabilities, with a focus on transition-relevant information
- Engaging with our supply chain to encourage ambitious transition plans and reduce our indirect operational emissions

For MGSA we are particularly cognisant of the need for decarbonisation pathways to recognise the local context and investment levers we can deploy. A whole economy transition is required within a local, just transition context for Southern African economies and communities.

Our MGSA Climate Journey

MGSA has for several years undertaken operational climate and engagement activities to both reduce the use of fossil fuels and to play our part in decarbonising our investment impacts. This journey can be evidenced in the below timeline, from our initial investments in our own operational installation of solar panels at our Cape Town headquarters through to the emerging investment, engagement and sustainability policy activities.

2016
Solar Panels Cape Town Office

2016
First Responsible Investment Policy

2018
First formal ESG Climate and Carbon Engagements

2019
ESG responsibilities to Social, Ethics and Transformation Committee

2019
Investment Risk Oversight Committee includes climate risk considerations

2022
Committment by MGSA to report on TCFD

2022
Climate Tool Integration Begins

2023
MGSA TCFD Report

To ensure coherence and clarity with the M&G plc group management of climate-related risks and opportunities we have provided, as set out in the table below, cross-references to a number of areas of the M&G plc Annual Report and Accounts (ARA) 2022. Our approach to the management of climate-related risks and opportunities is largely consistent across the M&G plc group.

TCFD Pillars	Recommended disclosures	For further information, please refer to	
		M&G plc ARA 2022	This report
Governance	Board's oversight of climate-related risks and opportunities	Sustainability Governance – p36	MGSA Board and Management – p10
	Management's role in assessing and managing risks and opportunities	Management's role – p37; Climate governance and strategy – p69; Climate risks and opportunities – p70	MGSA Board and Management – p10
Strategy	Climate-related risks and opportunities the organisation has identified	Climate risks and opportunities – p70 – 73	Climate Risks and Opportunities – p12
	The impact on the organisation's businesses, strategy and financial planning	Climate governance and strategy – p69; Climate risks and opportunities – p70 – 73; Our strategy – p10	Climate Risks and Opportunities – p12
	Resilience of the organisation's strategy, based on different climate-related scenarios	Climate risks – p 70 – 71; Scenario analysis – p84; Financial statements – p180	Climate Risks and Opportunities – p12 Scenario Analysis – p31
Risk Management	Processes for identifying and assessing climate-related risks	Climate risks and opportunities – p70 – 73	Climate Risks and Opportunities – p12
	Processes for managing climate-related risks	Climate risks and opportunities – p70 – 73; ESG risk management – p37	Climate Risks and Opportunities – p12
	Integration of climate risks into overall risk management	Risk management – p61	Climate Risks and Opportunities – p12
Metrics and Targets	Metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process	Climate metrics – p82 – 83	Climate Metrics – p28
	GHG emissions	Climate metrics – p82 – 83	Climate Metrics – p28
	Targets used to manage climate-related risks and opportunities and performance against targets	Objectives – p68; Climate metrics – p82 – 83	Climate Metrics – p28

Climate strategy and governance

Strategy

Our M&G plc group climate strategy is to use the climate transition levers available to drive real-world decarbonisation and support the transition to a net zero economy. This in turn will allow management of transition risk as a business, generating profitable growth in the future, in line with our purpose.

From an investment perspective, decarbonisation can be influenced through two principal channels: investment strategies (making changes to our investment portfolios and supporting climate solutions) and stewardship (engaging issuers to implement ambitious transition plans).

The M&G plc Board is ultimately responsible for setting M&G plc group's sustainability strategy, including climate change. The Board and its sub-committees consider climate-related risks, opportunities and other issues.

MGSA Board and Management

Within MGSA's South African regulatory framework, the businesses' "environment, health and public safety, including the impact of the company's activities and of its products or services..." fall under the Social Ethics and Transformation (SET) Committee. This is a function of the South African Companies Act and Regulations ((Regulation 43 (5), and Section 72 (4) of Act 71 of 2008)), making the SET Committee a formal and legislated subcommittee of the MGSA Board of Directors.

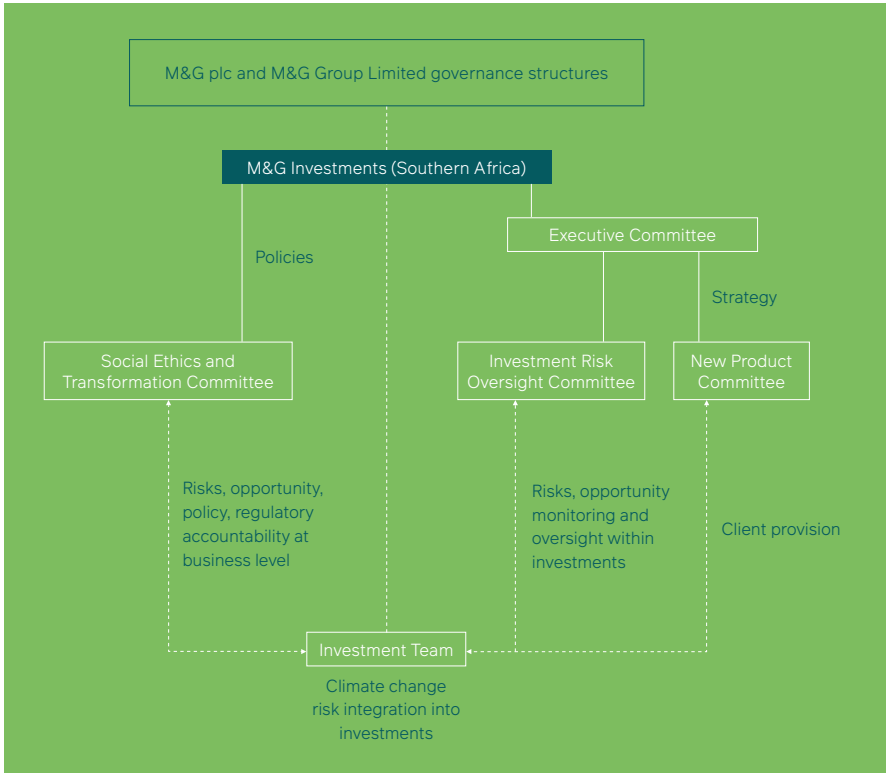
The Terms of Reference (ToR) for the SET Committee assigns the accountable officer as the Chief Executive Officer (of MGSA). The SET Committee is required to be chaired by an independent director, and comprises the CEO as a member, as well as a shareholder representative and attendees comprising senior management. The SET Committee has oversight of MGSA's climate risk, climate reporting, climate change strategy, and the company's climate commitments. In this way, the MGSA Board has ultimate responsibility and oversight of climate-related risks, opportunities and strategies, primarily through the SET Committee as legislated.

While primary reporting at MGSA remains through the local reporting line to the MGSA CEO, the M&G plc group provides oversight and governance through various channels. MGSA is a subsidiary of M&G Group Limited (MGG), which forms a significant part of the Asset Management segment of the M&G plc group. The MGSA CEO reports to the CEO of the M&G plc Asset Management business . Three M&G plc nominees currently sit on the MGSA Board, including the Chief Investment Officer (CIO) of Equities, Multi-Asset and Sustainability. Further alignment is achieved through reporting lines for the heads of each MGSA function to their respective heads within MGG.

Climate risk identification

Climate change is an area that touches many areas of our MGSA business. As reflected in Figure 1, we also have an Investment Risk Oversight Committee, which is a sub-board Executive Committee. Management of actions and opportunities regarding our investments arising from the assessment of ESG risks (including climate) are discussed within the Investment Risk Oversight Committee on a quarterly basis, with the ESG specialist and risk teams formally reporting into this committee. In terms of product development and accommodation of the climate change risks and client needs, these fall under the New Product Committee.

Figure 1 M&G Southern Africa (MGSA) Governance Structure



Within MGSA, and as reflected under the Governance: Oversight and Accountability section above, risk management plays out in three key areas:

(i) Social Ethics and Transformation Committee

This formal sub-committee of the main Board of Directors carries the regulatory oversight function related to climate risk, and receives quarterly reports from the ESG Specialist, inclusive of climate risk aspects.

(ii) Investment Risk and Oversight Committee

The Investment Risk and Oversight Committee is a sub-committee of the Executive Committee, and meets and receives quarterly reports on ESG risks and aspects that impact the investment portfolios of MGSA and its clients, including those of climate risk.

(iii) Investment Team

Climate risks are integrated into the investment process through 1) the accountability of analysts (formally through the Responsible Investment Policy); 2) practical accounting of climate risks into the investment process in their modelling work (where possible) and using the inhouse integration system. These include existing and those under development and trial; 3) presentations to their peers in the investment team for voting on stocks and issues; and 4) monitoring and control functions on these risks. This process is discussed in more detail in Section 4 of the MGSA Sustainability Report.

(iv) New Product Committee

The New Product Committee manages climate-related risks to the business by ensuring our product suite remains relevant and responsive to the unique needs of our clients and other stakeholders. It also helps track new global developments and advances to improve the quality and extent of climate-related solutions, in concert with M&G's global expertise. This committee reports into the Executive Committee.

MGSA's Client Services teams are responsible for communicating with clients on their climate-related risk views, policies and requirements in the approach to climate risks.

Climate risks and opportunities

Climate risk overview

Climate change is a critical aspect of sustainability and is a principal risk for the M&G plc group; it is a key area of oversight for our organisational structures, as already referenced. Consideration and prioritisation of climate risk is built into decision-making and governance processes, and is a requirement of key strategic Board risk assessment papers for the M&G plc group.

Climate scenario analysis is an important tool in the identification, assessment and management of climate change risk. M&G plc as a group have continued developing the Group's in-house climate risk modelling capability. This is a priority for further improvement and application across our business, including MGSA as identified in the Annual Report and Accounts and within the M&G plc group Sustainability Report.

Risk identification

M&G plc, as a group, combines a range of approaches to help identify, understand and articulate climate risk, including academic research, industry-shared learning, scanning tools and relevant data sources, scenario analysis and best practice guides.

The scenarios, which use the Network for Greening the Financial System (NGFS) phase 2 scenarios as a base, have been assessed over short- and longer-term time horizons, covering both an orderly and disorderly transition to a low-carbon economy, and a 'Hot House' scenario where the transition is limited and physical risks dominate. The M&G plc group have also undertaken more granular, asset-by-asset climate modelling to support integration across group investment teams, of which Southern Africa will stand to benefit from going forward.

In 2022, M&G plc continued to invest in and develop new capabilities in climate analytics, drawing on expertise across the business (including technology, investment and risk professionals). In 2023, M&G plc plans to further integrate these new capabilities across the group, including MGSA, into decision-making and risk oversight processes.

M&G plc Group Transition and physical risks

M&G plc approaches climate risks through multiple lenses, considering both the potential effects on the business and the degree to which we, directly and indirectly, are generating impacts.

A failure to align with the climate transition poses significant business risk, principally through the investments we manage on behalf of clients, but also from operational and reputational perspectives.

Given how far the world is from meeting the Paris Agreement temperature goals, there is increasing risk of a disorderly transition outcome, where policy intervention and repricing of assets happen abruptly rather than in an orderly fashion. Our climate risk analysis is therefore heavily focused on transition-relevant metrics and information, helping us assess the degree of alignment with rapid, science-based decarbonisation.

From a physical risk perspective, impacts will continue to worsen due to historical emissions and the world's current decarbonisation trajectory, making investment in adaptation and resilience critical. The ability to assess vulnerability and exposure to acute physical risk and extreme weather is improving, but long-term chronic physical risk could manifest in complex and less obvious ways: for example, food and water insecurity driving mass movement of people; increased conflict and inflationary pressures; or changing disease patterns, including exposure to novel viruses.

We are aware that traditional risk management techniques, such as diversification, are likely to be less effective in a worst-case runaway temperature scenario where the wider economy is impacted. We therefore recognise the importance of collaboration and policy change to drive ambitious decarbonisation as well as adaptation.

Climate risk as a business

As a business, we are impacted by both the physical and transition risks of climate change. We are exposed to physical and transition risks in our operations and through our supply chain, both of which could have an impact on our costs. The M&G plc Workplace Solutions team based in London actively monitors the Group operational footprint, mitigating against the risks arising, and assists us with interpreting our collated data in the Southern African operations. We are also aware of reputational risk to our business, such as not meeting our targets or overstating our work. Additionally, we need to ensure we are holding ourselves to account, and to be an example to others.

MGSA Climate risk as an asset manager

As an asset manager we use a range of information, including portfolio alignment data and scenario modelling, to identify exposure to climate risk across our clients' portfolios. Our in-house ESG integration system also acknowledges the qualitative nature of many environmental and social considerations. Our analysis feeds into our climate stewardship efforts, which is the main way we seek to reduce exposure to transition and physical risks.

MGSA Climate Transition and Physical Risk Monitoring and Management

Both transition and physical risks have the potential to impact the value of the assets we manage on our clients' behalf, which directly influences our revenue and assets held on our balance sheet. We understand that climate-related risks can overlap and interact, creating compounding and cascading impacts, and that the precise timing and sequence is very hard to predict. De-risking involves pulling our levers – investment strategy, stewardship, advocacy and operational change – to ensure that the portfolios we manage, and our operations, are aligned with the transition, and resilient to physical impacts.

Our first-line risk management approach is engagement with our investments that are key emitters of Greenhouse Gases (GHG), particularly those that are prominent in our narrow investment universe in Southern Africa. We are willing to accept some time-bound transition risk exposure, as long as we can build confidence that investees are on sufficiently ambitious decarbonisation trajectories. Physical risk is more prominent for some of the asset classes we manage, such as listed real estate, and involve location-specific assessments of existing and new assets. In terms of our business operations, we are managing transition risks, for example through our renewable energy solutions (such as rooftop solar).

The above efforts are also about protecting our reputation, as stakeholders increasingly differentiate between climate leaders and laggards.

MGSA Climate Risk Opportunities

Aligning our investments and operations with the transition also means identifying opportunities that arise from it. Decarbonisation is a long-term growth theme that is ultimately driven by necessity. To meet the world's remaining 1.5°C carbon budget, climate action has to accelerate and decouple from swings in the economy. The global energy transition alone requires a huge scaling up of investment (around $4 trillion annually by 2030 according to the International Energy Agency).

Opportunity for MGSA lies partly at a product level: offering investment strategies that meet clients' evolving sustainability needs and preferences. This is a particular focus within the board of M&G plc group, and the Southern African operations are actively engaging our clients to explore our global offerings in this space.

MGSA Climate transition alignment and profitable growth

As part of the M&G plc Group that is a joint global asset manager and asset owner with significant capabilities across both public and private markets, MGSA is in a strong position to identify climate-related opportunities and directly support the deployment of solutions that help the world mitigate and adapt. We believe this is key to future-proofing MGSA and driving profitable growth. The transition is not solely product-specific – it has to happen across our investment strategies, although the pace of change will be different between sectors and countries.

The Southern African Climate Context

South Africa has two emitters that contribute over 50% of the country's total GHG emissions. The reliance on the two emitters is a unique situation globally and highlights the need for a forward-looking approach to managing whole of economy approaches to decarbonisation.

- Eskom, the national electricity supplier and issuer of listed debt, and electricity supplier to neighbouring nations such as Namibia, and

- Sasol, a key petroleum provider and prominent entity in the economy.

We have extensive discussions with both entities on their abilities, challenges and resources to achieve net zero, and these engagements are frequently reported on to clients, and the subjects of webinars and articles. The context for these entities is that the state is reliant on their activity and they are considered as nationally significant service providers. The South African government, along with international partners from the public and private sectors, are coordinating an energy decarbonization investment framework for South Africa.
At time of writing, South Africa is undergoing significant loadshedding (rolling brown-outs) of its electricity supply, which is proving extremely challenging and detrimental to South African growth.

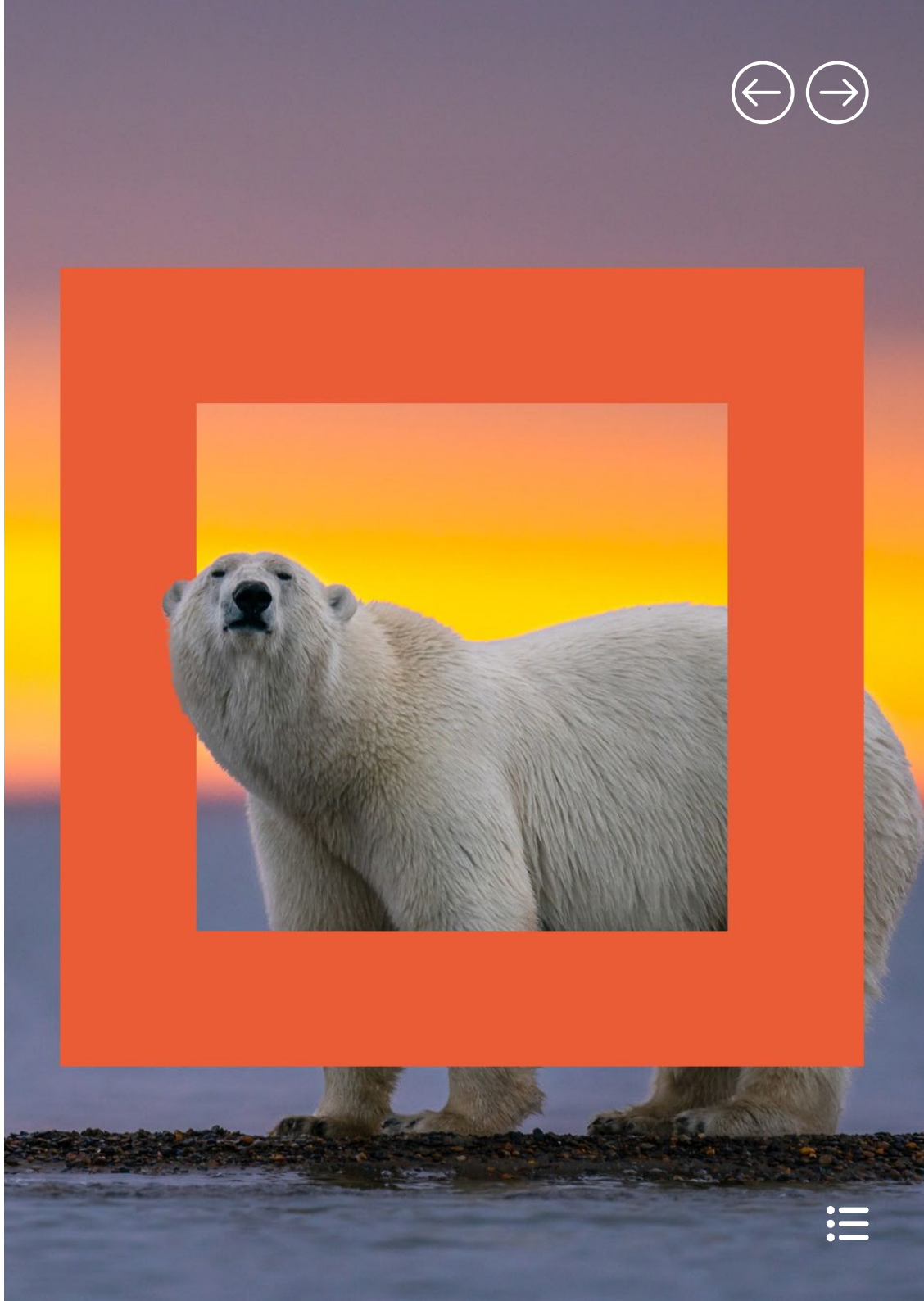
Climate change and our operations

We recognise that all of our corporate activities have a climate impact, and therefore need to be considered in our operational decision-making. Our M&G plc group-wide corporate operations sustainability strategy addresses this across three key themes:

- Our Places: reducing our emissions from our offices and travel.
- Our People: engaging our colleagues so they understand how they can support a reduction in emissions.
- Our Partnerships: working with our suppliers and service providers to reduce our indirect emissions.

Implementation strategy

The carbon emissions from our corporate operations are relatively small compared with our investment portfolio, but we actively seek to minimise emissions where we have direct control. For our corporate operations footprint, MGSA corporate operations data is disclosed by M&G plc group and includes defined Scope 1 & 2, and selected Scope 3 emissions, all of which have been assured by a third-party.



Our M&G Group approach to offsets

The use of carbon credits or offsets is not a substitute for reducing our emissions, and while M&G plc group has purchased offsets in 2022 across the group, including for the Southern African operations, for selected Scope 3 emissions, we remain committed to continuing our efforts to reduce our environmental and carbon emissions footprint from corporate operations. The use of offsets is currently part of the Group's transition process to achieve net zero corporate emissions, and it intends to do so through supporting high-quality offset projects, which can be valuable to help tackle climate change, protect biodiversity, support local communities and act as carbon sinks.

MGSA Renewable energy

In 2016 MGSA installed a solar system on the roof of the building we operate in Cape Town, taking up as much of the roof space as possible– which ultimately enabled a maximum 66 kW system. This has enabled us to supplement our electricity supply for this regional head office with renewable energy and has avoided over 300 tonnes of CO2 emissions over its current lifetime.

MGSA Waste and water management

The South African office building has extensive water-saving capacity built into it, including water saving ablutions, borehole supplementation for air conditioning units, and water storage capability. Staff received training during the Cape Town water crisis of 2017, and much of the processes implemented remain in place, with water saving advice and notices remaining in office. M&G in South Africa has extensive paper recycling, with almost 100% of printer paper used and consumed media being recycled.

In our Southern Africa operations, we have for over a decade and a half been donating computers and office equipment to underprivileged schools. This is equipment coming out of its office life cycle (and are not bought back by staff). This includes office furniture such as desks, chairs and laptop and desk top computers, and occasionally hand-held devices and tablets. Given the high specification of our computer equipment, this remains more than capable for purpose of school use. This not only makes a material difference to the schools, giving learners exposure to such technology, but can play a very crucial role in enabling teachers and administrators to more efficiently manage the schools. This practice was interrupted temporarily by Covid, but is now in operation again.

MGSA Colleagues

We support our colleagues in making sustainable choices in our offices by providing lower-carbon commuteopportunities, such as ensuring provision of secure cycle storage, shower rooms, and locker cupboards for colleagues who are within commuting range to our regional head office in Cape Town.

MGSA and M&G plc Group Enforcement actions

No fines or regulatory actions have occurred during the year for environmental incidents, either from the Southern Africa operations, or across the broader group.

MGSA Business Operations - Emissions

Below are our greenhouse gas (GHG) emissions for our MGSA business corporate operations for the reporting year 01 January 2022 to 31 December 2022 (this excludes emissions from investment activity: scope 3, category 15). We apply the 'operational control' approach as a boundary for reporting our environmental data as defined by the Greenhouse Gas Protocol.

MGSA uses a third-party reporting platform for the calculation of its energy consumption and GHG emissions. The Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard (2015 revised edition) is used as the methodology.

South Africa	Scope 1 (tCO2e)	Oil (generators)	5.23
	Scope 2 (tCO2e) Location based	Electricity, Purchased heat and steam	533.09
	Scope 2 (tCO2e) Market based	Electricity, Purchased heat and steam	0.00
	Scope 3 (tCO2e)	Water*	0.23
Namibia	Scope 1 (tCO2e)	Oil (generators)	0.00
	Scope 2 (tCO2e) Location based	Electricity, Purchased heat and steam	3.97
	Scope 2 (tCO2e) Market based	Electricity, Purchased heat and steam	0.00
	Scope 3 (tCO2e)	Water	0.002

* Exclusive of water usage for our Johannesburg Tyrwhitt Avenue office due to data availability.

Emissions factors:

- Scope 1 and 3: UK BEIS 2022 GHG Conversion Factors
- Scope 2, Location-based: IEA 2022 Edition of the CO2 Emissions from Fuel Combustion (including CH4 and N20)
- Scope 2, Market based: supplier emissions factors are used where we have evidenced the consumption of electricity is from green energy tariffs or energy attribute certificates have been purchased.

Investments – implementation strategy

Real-world focus

MGSA apply a 'whole-of-system' lens to the climate transition, and believe it is critical to distinguish portfolio emissions reductions caused by capital allocation from those that result from real-world action by investees. M&G plc group as an asset manager and asset owner are focused on the latter, through effective stewardship and climate advocacy. We also want to support the deployment of climate solutions, which present a major structural growth opportunity. For the transition to happen at pace, we believe stronger policy and regulatory signals are needed. We also believe it is critical that the transition is just, with costs and benefits shared fairly between generations, communities and regions. This approach forms the basis of M&G plc's position on a just transition to a sustainable world.

M&G plc Group Net zero actions

M&G has committed to Net Zero by 2050 as a group. It's transition implementation strategy focuses on four actions:

- Engaging with investees to ensure they have net zero targets, ideally verified by SBTi
- Engaging with clients to encourage a move towards Paris-alignment of mandates and fund objectives
- Increasing capital directed to climate solutions, companies and projects
- Transitioning portfolios, or if unsuccessful, divesting

M&G plc Group Climate integration

M&G plc does not take a linear approach to portfolio decarbonisation, in order to avoid creating negative, unintended consequences: for example, passing the problem on to someone else through divestment, and missing out on transition-related opportunities. We believe encouraging intensive emitters to formulate robust transition plans and invest in climate solutions is a more effective approach. M&G plc and MGSA produce a range of metrics to identify and assess climate-related risks and opportunities, and track progress against our targets. This information helps our investment teams understand the climate profile and trajectory of a fund, and integrate climate considerations into our capital allocation and stewardship decisions.

MGSA Net Zero Actions

In South Africa we provide support through:

- Engaging with investees to ensure they are well informed of the need to transition, and the Southern African context in which this needs to occur
- Actively raising awareness of the acute situation in South Africa, the impacts of a failure to transition, through seminars, webinars, articles and engagement
- Supporting clients seeking global solutions better aligned with the transition
- Collaboration and individual engagement with entities who are key emitters, understanding their dependencies on coal, ability and timelines to pivot from such dependencies and supporting such initiatives, and accounting for the risks of any failures.

Approach to coal

Coal is a global priority because of its major emissions impact, and the significant risk of stranded assets. The Group position, as set out in March 2021, is that thermal coal needs to be phased out by 2030 in OECD and EU countries, and by 2040 in developing countries. This approach is considered a forward-looking approach to enable real-world, positive change, and currently does not include the MGSA investment business as explained in subsequent sections of this report.

M&G Southern Africa lends support to and engagement with entities that are key to a Just Transition in the South African market, where there are socioeconomic dependencies on coal.

MGSA Data and analysis

The Southern Africa quantitative teams have undertaken in-house work and liaise with those in the broader M&G plc Group, and are leveraging off their in-house systems to provide additional resources to our Southern Africa operations. Our investment teams have access to a range of proprietary tools to help them identify, assess and monitor climate risks for different types of assets, drawing on our ESG database.

These include the following M&G plc Group tools for rollout within MGSA in 2023:

- We are working with our colleagues in M&G plc to make use of the internal Portfolio Analytics Tool (PAT), which incorporates Net Zero Investment Framework (NZIF) metrics, and will allow our investment teams to monitor and visualise climate data, enabling them to track progress against relevant benchmarks. In 2022, the PAT was updated to reflect the latest climate science and bring the NZIF in line with relevant IIGCC guidelines.

- M&G climate tools allow the Group to view how portfolios and benchmarks are positioned against the Asset Manager Thermal Coal Investment Policy, and we are liaising with M&G plc group on our portfolios against these outcomes, noting that the policy does not apply to MGSA.

In 2023, MGSA will continue to strengthen climate analytics capabilities, through the expanded coverage and access to group climate tools and resources.

Investments – engagement strategy

M&G plc Group - Shared urgency on Climate

The overarching objective of our climate engagement is to ensure investee and stakeholder alignment with the need for effective action in harmony with the Paris Agreement. M&G plc aim to establish a shared sense of urgency and focus on implementation and solutions. We partly gauge progress through data, published plans and actions to implement these. However, we also need confidence that the Boards and management teams of investee companies have the knowledge and commitment needed to navigate the momentous change that lies ahead. As an asset manager, our engagements help us make this judgement. Likewise, as an asset owner, we need to ensure that the asset managers appointed, including ourselves as a subsidiary and an asset manager, are aligned with climate commitments and able to demonstrate genuine climate stewardship.

Stewardship, through engagement and shareholder voting, is how we communicate our expectations to investees. We do this in a spirit of collaboration and knowledge sharing, mindful of the complex challenges presented by climate change, but we are also aware of the very tight timelines for Paris-aligned action. We believe all companies should prioritise climate-proofing their business models and operations for the future.

MGSA Engagements

Table 1 highlights the Climate Engagements, as defined by specific measurable targets and actions centred around climate aspects, undertaken during 2022 relative to the Financed Carbon Emissions (FCE) and our AUM. The engagement data evidences the focus on higher MGSA investment emitters.

Table 1 MGSA Climate Engagements

Climate Engagements % AUM - M&G Southern Africa	26.9%
Climate Engagements % FCE - M&G Southern Africa	70.7%

Collaborative engagement

Collaboration is critical to accelerate the transition. Part of this is seen through M&G plc's active participation in the Climate Action 100+ (CA100+) initiative, which targets the world's major GHG emitters. M&G plc represent the over 700 members of CA100+ as co-leads on three specific engagements, targeting investee companies in the mining, chemicals and energy sectors. M&G plc also sits on the CA100+ Corporate Programme Advisory Group, Escalation Working Group and Net Zero Stewardship Working Group, and are active members of six additional company-specific working groups. The CA100+ project is entering its second phase in 2023, following a consultation on its net zero company benchmark. This will strengthen the indicators used to assess the credibility of companies' climate actions, to close data gaps and promote greater real-world impact.

MGSA's ESG team proposed and has assisted Standard Bank in hosting Eskom, listed in the Climate Action 100+, in a collaborative discussion with leading asset managers, engaging the head of its JET (Just Economic Transition) Plan in the second half of 2022.

MGSA Client engagement

In South Africa, where the economic environment has a strong coal dependency, we seek to keep our clients informed, and actively participate in engagements with industry bodies, most recently discussing the Just Transition in webinars with BATSETA, a key representative of pension and provident funds, in April 2023.

We recognise the critical importance of economy-wide change to tackle climate change and that this requires stronger policy and regulatory signals, as well as collaboration with peers to promote best practice and support practical implementation across the financial services industry.

MGSA Policy and Industry advocacy

In South Africa we are members of ASISA (Association for Savings and Investments South Africa), with members of our ESG team on their Responsible Investing Sub Committee. As part of M&G plc group's ongoing active memberships of the Investment Association, Principles for Responsible Investment, the Investor Forum and IIGCC, among others, the group continues to participate in a range of meetings and discussions, with climate change being a key focus.

MGSA has been engaging with members of the Presidential Climate Commission through forums, dialogues, and establishing collaborative engagements during 2022 and through early 2023. We have also engaged with the South African staff of the UK Foreign Commonwealth and Development Office during 2023 to better understand their role in JET (Just Economic Transition) plans and funding, and project progress in renewable energy in which the UK is involved, and lending capacity and expertise to the South African government and related organisations.

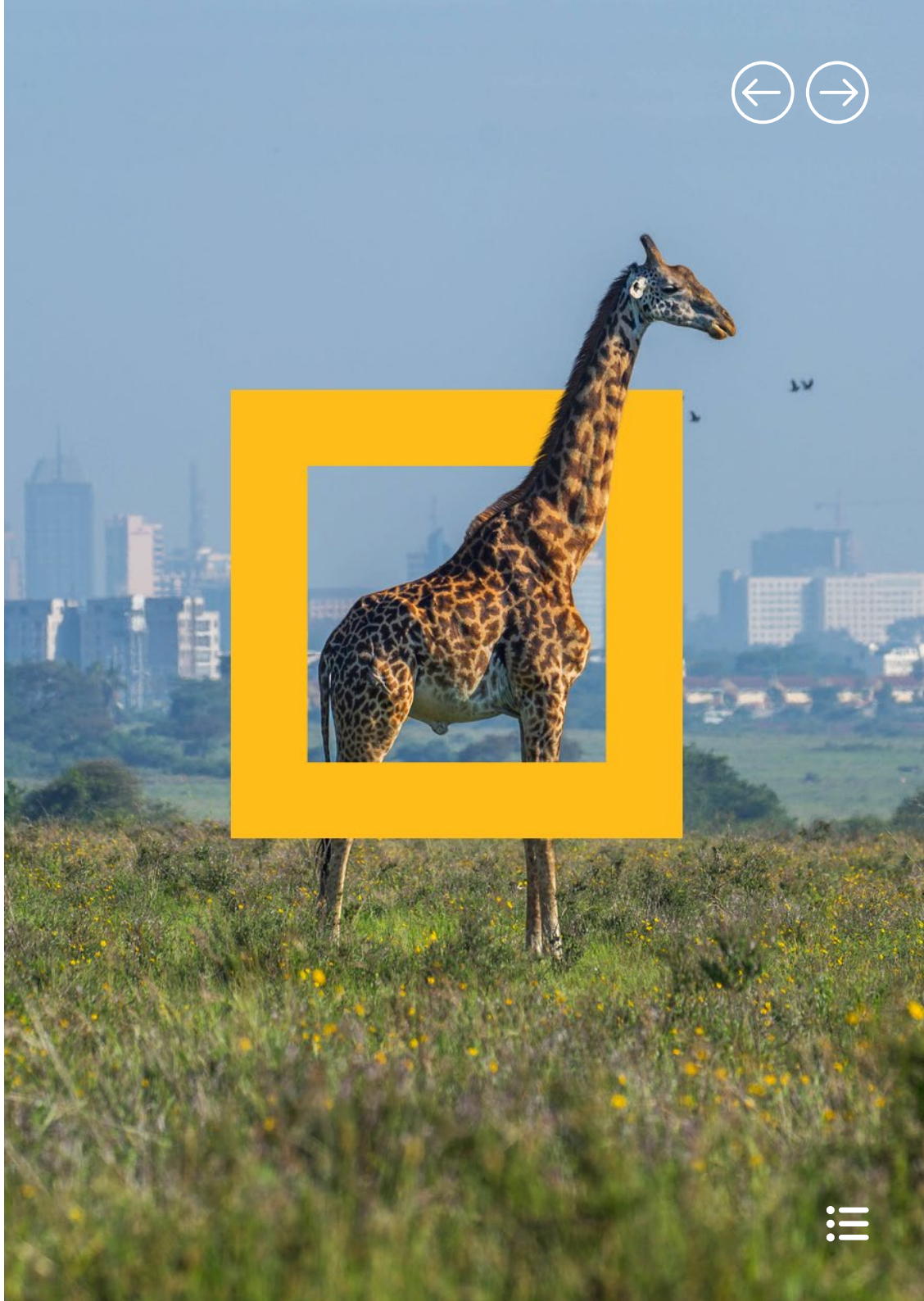
Climate metrics

Introduction

M&G plc use a range of metrics to identify and assess climate-related risks and opportunities, and track progress against our plc targets. This includes absolute metrics as well as intensity-based indicators that enable comparison across different issuers, portfolios and transition scenarios. In addition to backward-looking data, which indicates the current emissions profile of an asset or portfolio, MGSA are working with M&G plc group resources to use forward-looking metrics to assess transition alignment and risk exposures over time. The key backward-looking metrics used across all our internal and external reporting are financed carbon emissions (FCE), carbon footprint, and weighted average carbon intensity (WACI). Details of these metrics can be found on page 33.

For example, we assess FCE change at portfolio level to monitor our overall portfolio emissions exposure, while we monitor carbon footprint (a measure of economic emissions intensity) to assess progress against our interim targets. WACI is used to understand our portfolio exposure to carbon-intensive issuers. We currently rely on Scope 1 & 2 GHG emissions to inform investment decisions. While we monitor Scope 3 emissions to inform targeted actions, such as engaging companies on transition plans, data quality and disclosure of this emissions category remains poor, which makes it less reliable for decision-making.

For the M&G plc group wide TCFD report, please refer to the report which can be found here.



MGSA Public assets (equities and corporate fixed income)

The table below presents emissions metrics relating to public equities and corporate fixed income managed (total AUMA of ZAR204.5 billion). Underlying emissions data is sourced from MSCI. Data in the table below represents 2022 coverage and AUMA.

MGSA's high emissions intensity is largely due to a heavy reliance on coal-fired power generation in the region. The Just Energy Transition Partnership announcement at COP26 in 2021 highlighted the issues faced by South Africa and many developing countries, which need support to navigate the infrastructural challenges of adding low-carbon power generation capacity at a scale and pace to phase out use of coal, while maintaining supply to meet the needs of a growing population and support the economy. We appreciate this need for a just transition and view this as an opportunity, and continue to engage with government departments, local companies, and industry bodies to support initiatives that reduce the fossil-fuel dependence of the Southern African economy.

Metric	Unit	FY2022 (M&G Southern Africa)	
		Overall	% Coverage
Public Assets (Equities & Corporate Debt)			
Carbon Footprint metrics			
AUM (ZARm)	ZARm	204576	NA
Financed Carbon Emissions Scope 1 and 2	(000s tCO2e)	3,496	91,20%
Financed Carbon Emissions Scope 3	(000s tCO2e)	22430	90,10%
Carbon Footprint Scope 1 and 2	tCO2e/ZARm invested	19	91,20%
Carbon Footprint Scope 3	tCO2e/ZARm invested	122	90,10%
Weighted Average Carbon Intensity Scope 1 and 2	tCO2e/ZARm sales	48	93,30%
Weighted Average Carbon Intensity Scope 3	tCO2e/ZARm sales	188,8	92,00%

MGSA Sovereign debt

Sovereign debt emissions data is reported per Partnership for Carbon Accounting Financials (PCAF) guidance. In the below table, we have included financed domestic production and consumption emissions, and their respective weighted average intensities. LULUCF stands for Land Use, Land Use Change and Forestry. Data in the table below represents 2022 coverage and AUMA.

Metric	Unit	FY2022 (M&G Southern Africa)	
		Overall	% Coverage
Sovereign debt			
Financed Sovereign production emissions (Scope 1 excluding LULUCF)	(000s tCO2)	2818	100,00%
Financed Sovereign consumption emissions (Scope 1,2,3 excl. exported emissions, excl. LULUCF)	(000s tCO2)	5102	95,70%
Weighted Average Sovereign production intensity (Scope 1 incl. LULUCF)	(000s tCO2)/£m GDP PPP	0,04	100,00%
Weighted Average Sovereign consumption intensity (Scope 1,2,3 excl. exported emissions, excl.. LULUCF)	tCO2/ Capita	17,12	95,70%

Scenario analysis

Methodology and limitations

The scenario analysis presented covers assets managed by ourselves as an asset manager. The majority of the analysis covers public equities, fixed income, and sovereign debt. This work has been conducted on our assets by M&G plc, who use climate models that have sufficient coverage across key funds and M&G plc's largest issuers, while covering our most significant asset classes: equities, corporate and sovereign debt.

Recognising the different strengths and weaknesses of climate models, M&G plc has licensed a new scenario model in 2022 (Aladdin Climate) to complement their existing suite of scenario-modelling outputs. They have also expanded their modelling to cover new asset classes such as sovereign bonds. We rely on two modelling partners to provide us with portfolio, sector, and asset-level output data, including:

- future GHG emissions
- emissions intensity
- physical climate damages
- energy flows
- energy demand
- technological capabilities

This data is provided at an issuer, sector, and portfolio level. The data points are aggregated to calculate a climate-adjusted valuation metric and temperature-alignment metric for the portfolio. With these results the group seeks to improve the systematic approach to identifying and evaluating climate related risks.

As with any model, the 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. This analysis is a useful tool for interrogating and understanding how climate-related developments could impact the assets we administer and manage.

Another key observation is that the data that underpins climate-scenario modelling is reported by companies at a lag relative to financial data. We have used the most up-to-date information available in all cases. However, for a subset of our analysis, the GHG emissions used in the scenario modelling represents data from prior years.

For public listed equities, corporate debt securities and sovereign debt, we assess the financial impact of climate change based on three Network for Greening the Financial System (NGFS) scenarios:

- An orderly scenario, predicting a temperature rise of less than 2°C by 2100 as a result of immediate climate action.
- A disorderly 2°C scenario, in which climate action is not taken until 2030.
- A hot house scenario, which predicts an average temperature change in excess of 4°C by 2100, assuming no global response to climate change.

Forward-looking metrics

The key forward-looking metrics that our asset manager and asset owner monitor across public assets are:

- Implied temperature rise: 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.
- Climate-adjusted value: 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 a company's financial position. 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).
- Binary science-based targets: this data shows the proportion of issuers who have committed to setting science-based targets, or had their targets validated by the Science Based Targets initiative (SBTi).

Implied temperature rise

As part of our modelling, we have calculated the implied temperature rise (ITR) for our firm wide holdings. ITRs are a fairly intuitive way to assess transition alignment, by estimating an issuer's relative share of the remaining global carbon budget consistent with the Paris Agreement. In simple terms, it shows what the global temperature rise would be if the whole economy followed the same emissions pathway as the company, or portfolio, analysed.

Due to their simplicity, ITRs are inherently limited and we recognise the following:

- There is no commonly accepted approach to temperature alignment calculations, which makes comparisons across different model outputs problematic.
- The methodology we have used allocates a carbon budget to each company, and compares that company's progress and expected future emissions against that budget. The calculation is sensitive to sector and geographical emission assumptions.
- It is based on carbon intensity (emissions per unit of revenue for each investee), and on projections of future GHG emissions which are subject to significant uncertainties.
- The portfolio ITR is calculated as the weighted average of individual company ITRs.
- We do not use ITR in isolation, due to the limitations mentioned, but believe it provides useful indications of alignment when viewed in conjunction with other information.

MGSA ITR analysis shows that issuers are aligned to a broad range of temperature outcomes, but on current trajectories the MGSA portfolios are in the 3.3 degree range when factoring in emissions targets, and in the 3.4 degree range omitting these targets.

Temperature alignment - with emission targets	ºC	3.30
Temperature alignment - without emission targets	ºC	3.40
Temperature alignment (coverage as a % of AUMA)	%	68.8%

These numbers reflects South Africa's high coal dependency in our electricity supply, on which our economy is currently entirely dependent as an input to continue to function. This is the key complexity to the Just Transition – the power supply company, Eskom, which amounts for a large proportion of total South African emissions, is operating at overloaded capacity on an aged coal power fleet, and, at time of writing, the country is experiencing rolling brown outs of up to 11 or 12 hours on days, with this expected to worsen. Removing existing coal stations and replacing them with sustainable energy in an economy of a developing nation in this current position requires urgent funding to enable this pivot. By contrast, by denying funding the electricity crisis will worsen, putting the entire economy in jeopardy, and further removing funding and capability to pivot into a transition to decarbonise.

Supplementary climate metric and modelling information

Metric definitions

Financed Carbon Emissions (FCE) represent the total financed greenhouse gas emissions associated with a portfolio of investments. For public corporate assets, in line with PCAF guidance (see formula below), we use enterprise value including cash (EVIC) to apportion ownership across the equity and debt parts of issuers' balance sheets. Financed emissions are partly a function of asset size, so can grow or shrink due to changes in M&G's AUMA.

$$\sum_{n}^{i}\left(\frac{\text{Invest . value}_{i}}{\text{EVIC}_{i}} \times \text{GHG}_{i}\,(tCO_2e)\right)$$

Carbon footprint refers to financed emissions normalised by portfolio value (GHG emissions per million pounds of investment). This indicator is particularly useful for comparative purposes, but sensitive to factors that do not relate to decarbonisation, such as financial market movements which influence portfolio value (the denominator). Carbon footprint is used to monitor progress against our net zero interim targets.

$$\frac{\sum_{n}^{i}\left(\frac{\text{Invest . value}_{i}}{\text{EVIC}_{i}} \times \text{GHG}_{i}\,(tCO_2e)\right)}{\text{Portf. value (£million)}}$$

Weighted Average Carbon Intensity (WACI) is a measure of the carbon intensity of the portfolio, calculated as the weighted average sum of carbon emissions per million pound of issuer sales. It is not based on emissions' ownership (EVIC), like the above mentioned metrics, but is widely used to compare the climate profiles of investment portfolios.

$$\sum_{n}^{i}\left(\frac{\text{GHG}_{i}\,(tCO_2e)}{\text{Sales}_{i}\,(£)} \times \frac{\text{Invest . value}}{\text{Portf. value}}\right)$$

Other emission-related metrics we calculate include carbon intensity (GHG emissions per million pounds of sales) for public assets, and total GHG emissions for private assets.

In addition to backward-looking metrics that are focused on emissions, we monitor a range of indicators that provide information on whether an asset, or portfolio, is exposed to higher climate- related transition risks or opportunities.

These include:

- Exposure to fossil fuels: these metrics show our portfolio exposure to issuers with revenues derived from the whole value chain of oil, gas and coal, with a separate metric for issuers that generate revenue from fossil fuel-based power generation. These metrics indicate transition risk, given the necessity of phasing out fossil fuels to meet the Paris Agreement goals.

- EU Taxonomy-aligned: this is an estimate of the proportion of AUMA invested in issuers that are generating revenues aligned with the sustainability categories in the EU Taxonomy (including climate mitigation and adaptation). It does not include climate solutions investments in our private funds such as Catalyst or Infracapital.

- Climate commitment of issuers: We monitor net zero alignment across 'committed' and 'targets set' SBTi categories and green exposure. These metrics are helpful in monitoring our overall position at portfolio level and form the criteria for some of the NZIF categories.

High level methodology

We have licensed two different climate models from third-party providers to undertake scenario analysis at the asset/ issuer level: Aladdin Climate for financial assets (the 'equities and bonds model' covering public listed equities, corporate and sovereign public debt); and Marsh for assessing the private portfolio's real estate and infrastructure exposure to physical climate risk. Physical climate risk of the private portfolio is modelled by Marsh using XDI which quantifies the cost of extreme weather and climate change impacts to physical assets, taking into account asset-specific information – how different types of assets in a specific location will perform in different physical conditions.

Both models are leveraging the extensive expertise and experience from third-party providers with strong capabilities in climate scenario modelling, and were selected following extensive proof-of-concept exercises. However, climate change scenario modelling is an inherently complex area and so the results presented on pages 84-87 are influenced by assumptions, judgements and limitations.

These include the nature of scenario modelling itself, data limitations and specific model limitations from our modelling counterparties. The results should be interpreted with this in mind. The models provides outputs based on the following scenarios:

- Exposure to fossil fuels: these metrics show our portfolio exposure to issuers with revenues derived from the whole value chain of oil, gas and coal, with a separate metric for issuers that generate revenue from fossil fuel-based power generation. These metrics indicate transition risk, given the necessity of phasing out fossil fuels to meet the Paris Agreement goals.

- An orderly scenario, which is aligned with Representative Concentration Pathway (RCP) 2.6 and predicts a temperature rise in the order of 1.5°C by the end of the century, aligned with the Paris Agreement. Important context for this scenario is that the world currently remains significantly off target in restricting the temperature rise to below 2°C, yet the industry often refers to this as a 'best case' and it provides a valuable reference point against other scenarios.

- A disorderly scenario, which is aligned with 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. This scenario is limited in that it assumes coordinated policy action at a global level by 2030. This scenario is useful to explore transition risk dynamics, and is only applicable to the equities and bonds model.

- A hot house scenario, which is aligned with RCP 8.5 and predicts an average temperature change in the order of 4.3°C by the end of the century, assuming no global response to climate change beyond what has already been committed to. There are concerns about the credibility of this scenario. However, it is widely used in industry to represent a 'worst-case' outcome and provides a valuable comparison with the RCP 2.6 scenario as an unlikely high-risk future.

Key assumptions: transition risk

As countries around the world increase energy demand and transition to greener energy sources, a key assumption is the energy requirements and mix in each region under each of the three scenarios. Projections include both energy reduction and change in the energy mix, and show the high-level requirement of a complete phase-out of coal in the transition assumptions, as well as significant reductions in gas, replaced primarily by renewables such as wind, solar and hydro energy. These impacts – notably emissions trajectories, energy demand and supply mix, carbon prices and electrification assumptions - drive major model results.

Key assumptions: physical risk

For the equities and bonds model, macro-level assumptions about how physical risks will impact GDP pathways are applied across all sectors, essentially allowing for implicit estimation of second-order impacts (e.g. supply chain impact). By contrast, for the real estate and infrastructure model, physical risk data from Marsh, using XDI, calculate direct impacts at specific location, meaning that outputs of the model represent the projected impact due to direct physical damage to each asset, and do not take into account second-order financial impacts (e.g. business interruption).

Data limitations of scenario analysis

There are three aspects of data limitations impacting our scenario analysis, reflecting the current industry- wide challenges of climate modelling.

The first aspect is the input data since for most assets modelled, we have used company-specific data sourced from third parties such as Aladdin, Evora or Bloomberg. Many publicly listed companies are measuring and reporting their emissions, which is a required data point for the calculation of climate-related metrics. However, among smaller and privately owned companies, this data is not commonly reported.

The second aspect of data limitation relates to lack of high-quality, comprehensive and reliable data upon which the model assumptions are based.

Examples are the lack of high-resolution physical hazard data (at a 5mX5m grid level) or the gaps in data relating to supply-chain reliance, which prohibit models from building explicit intra-company dependencies. Models are developed using proxies where data gaps are present, to ensure conclusions are based on the widest coverage possible.

The last aspect of data limitations relates to the lack of historical data points to calibrate and validate the model outputs. In particular, the lack of historical data on the relationship between climate risks and financial outcomes makes it difficult to interpret modelled outcomes far into the scenario horizon with confidence.

Despite these limitations, scenario analysis provides us with useful information that can inform asset class and portfolio level decision-making.

Limitations of the public assets climate change model

At the counterparty and portfolio level, the model assumes a constant balance sheet with full foresight. While such assumptions are necessary for model feasibility, they do impact on the reliability of the results. One of the other limitations of the equities and debt model is the timeline. The scenario analysis provides outputs up to 30 years in the future, and while this helps to provide an estimate of the adjustment in valuation by 2050, there are aspects of the scenario interplay beyond 2050 that are not explored.

Importantly, the current version of the equities and bonds model provides separate assessments of physical and transition risks, which reduces our ability to assess the interdependencies across those climate risk transmission mechanisms.

This transition module in particular only takes into account Scope 1 & 2 GHG emissions. There are some industries, such as automotive, that are known to be significant climate contributors owing to high Scope 3 emissions, yet these impacts are not explicitly explored. Measurement and reporting of Scope 3 emissions is expected to improve and will be incorporated into the analysis in future as scenario analysis matures.

When assessing physical risk, the geographic distribution of a company's financial activity and dependencies is crucial. In the absence of such information, the model follows a top-down approach in determining climate shocks at sectoral level through macroeconomic pathways.

While this modelling approach implicitly allows for second-order impacts from climate change, it is less suitable for distinguishing between outliers and better performers at an asset level.

As a result of these limitations, the model results need to be interpreted taking the following caveats into consideration:

- Being a static asset portfolio, we have not modelled likely investment or asset allocation actions to mitigate against climate-related impacts. For example, in a disorderly scenario we would likely have to carry out significant reallocation across both asset classes and geographies to align with rapidly changing policies.
- We recognise the transmission pathway interdependencies across physical and transition risks, so the model results need to be interpreted taking this limitation into consideration.

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