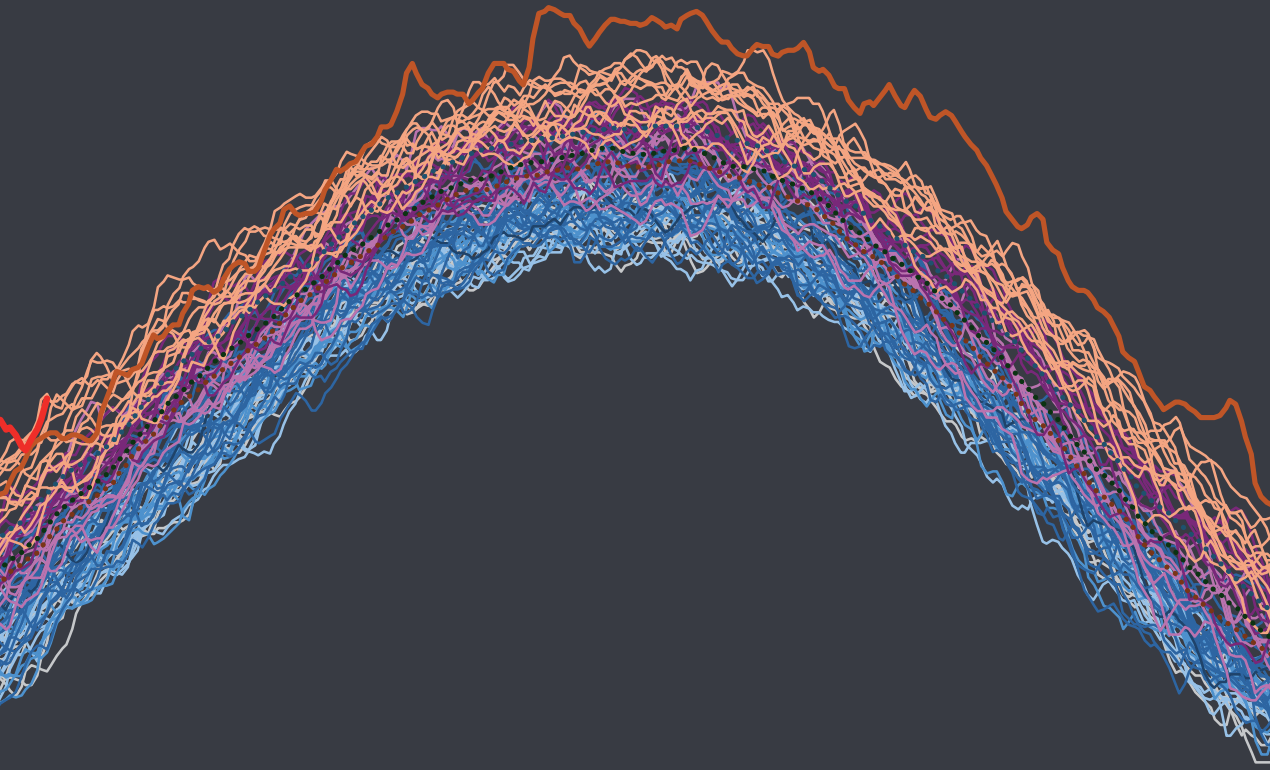




Task Force on Climate-related Financial Disclosures (TCFD) Report

**AT ENTITY LEVEL, AS DEFINED BY THE
FINANCIAL CONDUCT AUTHORITY (FCA) RULES**



FOR THE 12 MONTHS ENDING 31 DECEMBER 2023

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About Ruffer

Ruffer provides investment management services for institutions, pension funds, charities, financial planners and individual investors, in the UK and internationally.

Preserving our clients' capital has been the core purpose of Ruffer since the business was founded in 1994.

Our investment process is designed to protect and then grow the value of our investors' portfolios – avoiding large losses and harnessing the power of compounding over time.

Our twin aims are

- not to lose money in any 12 month period
- to generate returns meaningfully ahead of the return on cash

The business is committed to delivering investment performance that puts clients first. The spirit of service informs everything we do.

For more on what we do and how we do it, please visit ruffer.co.uk

COMPLIANCE STATEMENT

The disclosures from Ruffer LLP, including third party or group disclosures cross-referenced, comply with the requirements of the FCA's Policy Statement PS21/24.

A handwritten signature in white ink that reads "Miranda Best".

MIRANDA BEST

Deputy CEO

Chief Executive's statement

OUR VISION IS TO BE A WORLD-LEADING ALL-WEATHER ASSET MANAGER

We measure our progress towards this vision by our performance through market cycles, over years and decades, aiming to preserve capital first, and then grow it.

Considering climate-related risk and opportunity in our investment strategy is consistent with this vision. We recognise climate as a source of systemic and idiosyncratic risks and opportunities over both the long and the short term.

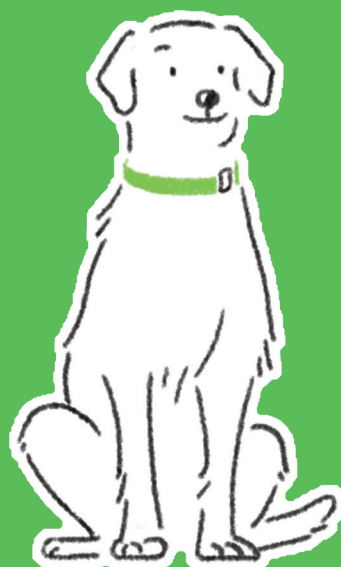
Our macro-led investment process seeks to allocate capital across asset classes to withstand shocks that may come from either known or unknown market-wide factors, whilst generating returns commensurate with our investment objectives. Our fundamental analysis seeks to identify the idiosyncratic risks to which potential investments are exposed – and whether companies (and other entities) can prosper at a time of physical climate change, transition-related innovation and evolving regulation.

During 2023, Ruffer reinvested in systems and processes to increase confidence in the metrics and targets section of this report to meet the requirements of the FCA Environmental, Social and Governance sourcebook.

More broadly, we seek to remain disciplined in our investment approach and to discern investment signals from the market noise, allocating our client and investor capital to deliver upon our vision and investment objectives.

CHRIS BACON

Chief Executive



Ruffer's alignment with the TCFD recommendations

TCFD thematic	Recommended disclosures	Ruffer response
Governance Disclose the organisation's governance around climate-related risks and opportunities.	a. Describe the board's oversight of climate-related risks and opportunities.	Page 6
	b. Describe management's role in assessing and managing climate-related risks and opportunities.	
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning where such information is material.	a. Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term.	Page 9
	b. Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning	
	c. Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	
Risk Management Disclose how the organisation identifies, assesses and manages climate-related risks.	a. Describe the organisation's processes for identifying and assessing climate-related risks.	Page 22
	b. Describe the organisation's processes for managing climate-related risks.	
	c. Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management.	
Metrics and Targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	a. Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	Page 34
	b. Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.	
	c. Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	

1. Governance

Ruffer, as a limited liability partnership (LLP), in effect has a two-tier board structure. The first tier is the Board of Ruffer LLP, which comprises three independent non-executive members of the Board, one of whom acts as deputy chairman, and four executive members of the Board. The second tier is the Executive Committee, which comprises six Ruffer partners, representing the different functions of the business.

DESCRIBE THE BOARD'S OVERSIGHT OF CLIMATE-RELATED RISKS AND OPPORTUNITIES

Ruffer defines responsible investment (RI) as both the integration of environmental, social and corporate governance (ESG) issues into the research process, including consideration of climate-related risk and opportunity, and stewardship activities, which encompass engagement and proxy voting.

The Board has delegated responsibility for development and implementation of an RI strategy to Chris Bacon, Chief Executive, and the Executive Team.

Miranda Best – who is both a member of the Board and a member of the Executive Committee, in her role as Deputy Chief Executive – is the named senior manager responsible for executive oversight of RI.

The Board has an established Risk Committee, composed solely of independent non-executive members of the Board. Its terms of reference is to assist the Board in maintaining sound risk management systems and internal control. It advises the Board on setting the firm's current and future risk appetite and strategy, and it oversees the implementation of risk management policies and the monitoring of the firm's risk exposure. While it considers investment risks on a quarterly basis, the Risk Committee receives select climate-related risk metrics, such as equity portfolio carbon intensity, at various, non-set points during the year. The content is drawn from management-level reporting which flows through the Oversight and Control Committee (OCC), discussed below.

The TCFD report is reviewed and approved for publication by the Board.

DESCRIBE MANAGEMENT'S ROLE IN ASSESSING AND MANAGING CLIMATE-RELATED RISKS AND OPPORTUNITIES

The Chief Executive and the Executive Committee share overall responsibility for ensuring the investment team, which includes the RI team, and the Risk team collectively maintain adequate systems and procedures for assessing and managing climate-related risks and opportunities. Assessing climate-related risk and opportunities relies upon internal research, analysis and stewardship, complemented by tools and research provided by external parties. Managing climate-related risk

and opportunity links to investment decisions which may include overall asset allocation, portfolio construction, security selection and position sizing.

Ruffer's **RI Policy** codifies our approach. This policy sits within our active, unconstrained and global investment strategy, which it supports and complements.

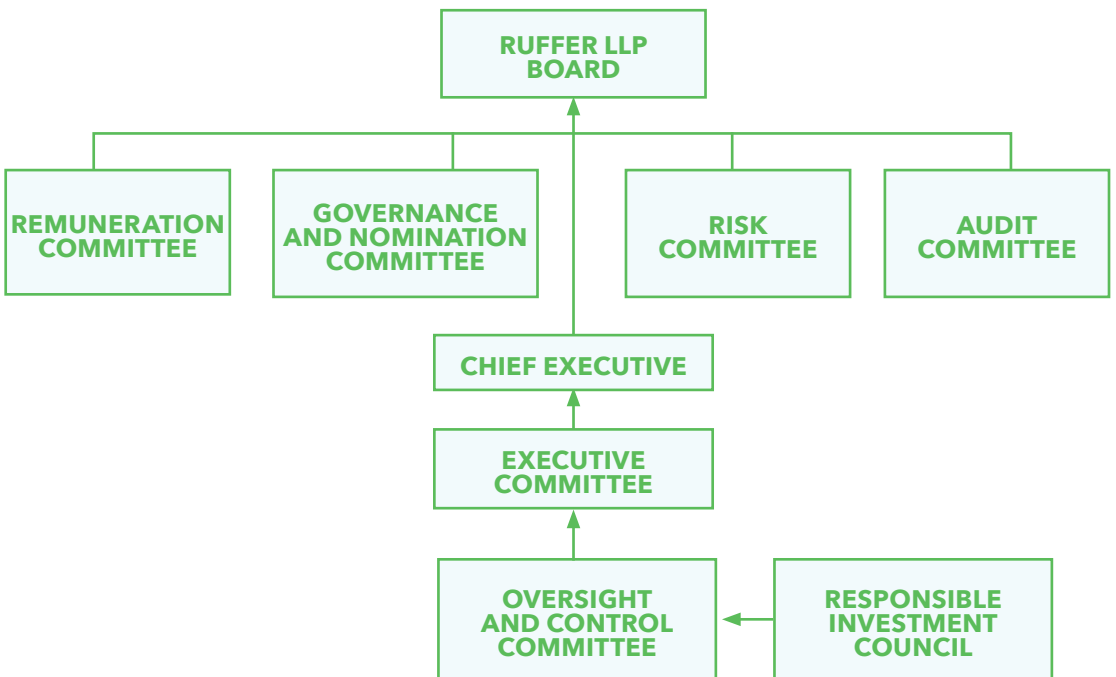
The Co-Chief Investment Officers, Henry Maxey and Neil McLeish, and the Head of Investment Strategy, Teun Draaisma, hold overall oversight for the firm's investment strategy and execution, including its investment risk management approach and scenario analysis.

Climate-related risks and opportunities are assessed and managed on two levels

1. Ruffer's investments on behalf of its clients and investors, where risks and opportunities are integrated into relevant investment decisions, consistent with Ruffer's investment philosophy and objectives.
2. Ruffer LLP, the partnership and management entity, which creates a carbon footprint through its business operations and is exposed to some of the physical and transition opportunities and risks linked to climate.

The effective assessment of key investment risks and opportunities and the management of the overall portfolio contribute to delivering upon our investment objectives, which is crucial to successful client outcomes. Strong client relationships supported by long-term investment performance mean Ruffer LLP can invest in people and systems to further enable delivery of our investment objectives.

OVERSIGHT AND GOVERNANCE AT RUFFER LLP



As an asset manager, Ruffer has determined that its exposure to climate-related risks and opportunities comes primarily through the investment of client funds. It is the financed emissions of our portfolio which represent the majority of Ruffer's carbon footprint.

Ruffer's Executive Committee has established the OCC, which is a formal sub-committee. The Responsible Investment Council (RIC), which is a Partner-level body and is not a formal sub-committee of the Executive Committee, was formed as a strategy oversight body and reports regularly to the OCC. The Executive Committee formally reviews the TCFD entity-level report and, if satisfied, recommends that the Board approves its publication.

The OCC comprises members of the Executive Committee, who attend to matters across the business, including those related to RI. For example, amendments or changes to the RI Policy will be considered and approved by the OCC. In relation to climate-related risk, on a quarterly-basis the OCC considers performance against the Net Zero Asset Management (NZAM) initiative targets and select climate-related risk metrics, such as equity climate value at risk (equity climate VaR).

The RIC has three voting members, comprising Partners from across the business. It may draw on management input, depending on the circumstance. Its purpose is to consider – from legal, compliance, investment or relationship perspectives – whether Ruffer should undertake certain RI or climate-related activities. Activities may include joining collaborative engagements, agreeing to sign a publicly available letter, escalating a proxy vote or attending and making a statement at a portfolio company annual general meeting (AGM).

Two formal management meetings consider climate-related risks and opportunities as part of their broader investment risk monitoring and oversight function.

The monthly risk meeting is attended by the Co-CIOs and the Head of Investment Strategy, and other participants by invitation. This meeting is to review a broad set of risks to which the Ruffer portfolio is exposed.

A paper on climate-related risk and opportunity is prepared and tabled, which summarises performance against numbers one, two and three of the Net Zero Asset Managers initiative (NZAM) targets. Metrics are calculated using a proprietary workflow based upon data collected from Ruffer's engagement tracker and third party sources, such as the Science Based Targets initiative (SBTi).

The quarterly scenario meeting is attended by the Co-CIOs and the Head of Investment Strategy, and other participants by invitation. This meeting is to identify and assess the key sources of risk and address any changes to investment strategy or asset allocation.

Attendees consider a broad suite of macro data, information and risk metrics. They discuss a paper containing a summary of climate-related risk for the prior quarter. This report includes quantitative metrics, primarily climate scenario analysis for the equity component of the portfolio sourced from MSCI ESG Research, supplemented by additional data points and internal research, as well as qualitative commentary.

Collectively, these reports form an input into the view of the Co-CIOs, the Head of Investment Strategy and the macro team on the direction of markets and economies and into any consequent changes to the firm's asset allocation.

2. Strategy

Ruffer actively manages unconstrained multi-asset-class portfolios with twin aims: not to lose money in any 12 month period, and to generate returns meaningfully ahead of the return on cash.

Our strategy seeks to position the portfolio to perform, whatever the market conditions. To that end, we look for assets (such as sovereign bonds and derivatives) that we expect to maintain their value or, in the case of select derivatives, to contribute positively to returns, in chronic or acute market-wide shocks. We also look for those assets we expect to increase in value over the long term, predominantly equities.

Climate-related risk is often construed as a systematic risk, meaning it is difficult to diversify away. However, we believe climate-related opportunities are more idiosyncratic. Identifying them requires a combination of fundamental analysis coupled with factor-based approaches.

Ruffer's investment philosophy is based upon positioning the portfolio to be resilient against regime or system changes, looking to achieve the firm's investment objectives in all market conditions. Climate change and the energy transition may represent just such a regime change for investors.

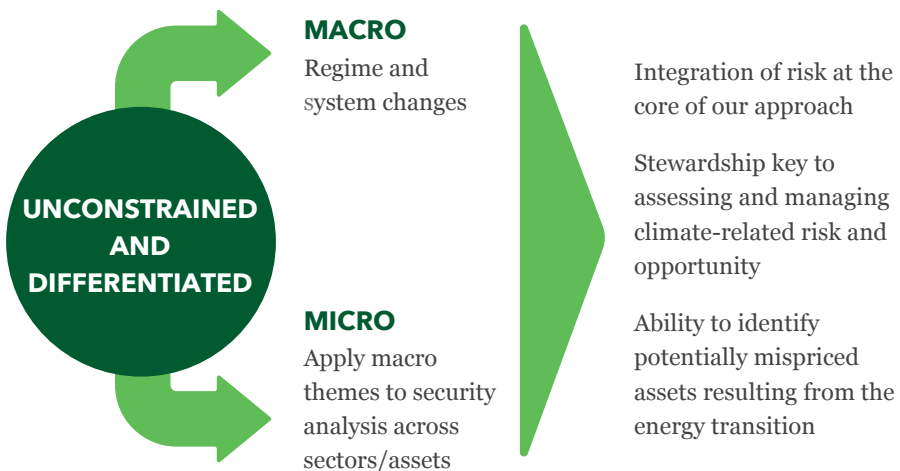
Ruffer's investment strategy is predicated on combining our appreciation of such macro regime changes with bottom-up research to create a portfolio of offsetting assets. Capital is allocated to asset classes including listed equities, sovereign bonds, derivatives, gold and precious metals and corporate fixed income. We seek to invest in the most appropriate individual securities to protect against the relevant risks and capture the resulting opportunities.

Our fundamental approach to equity security selection allows us to qualify, and where possible quantify, climate-related risks and to identify potential climate-related investment opportunities. We look for companies which are actively managing transition and physical risks through their business strategy, human capital, capital allocation or profitable investment in green alternatives or technologies which contribute to a lower-carbon economy. This does not mean we ignore the incumbents on a transition pathway or only focus on potential disruptor technologies focused on clean technologies, products or services. We form an opinion on the credibility, ambition and potential for value creation of a company's energy transition strategy.

Our approach to investing in sovereign bonds is driven by our macroeconomic views. These views determine our allocation to sovereign issuers (and, by default, currency exposure) and positioning across the yield curve. Ruffer has developed a proprietary sovereign bond issuer ESG rating framework, as an input to country selection. This model includes indicators such as emissions, energy source and exposure to sea-level rise. In a scenario of severe climate-related shocks, akin to other economy-wide shocks such as the global financial crisis or the covid-19 recession, we expect the safe-haven assets of sovereign bonds, particularly US issuance, and our positioning in derivatives and gold bullion to provide capital protection.

We acknowledge that significant uncertainty and many assumptions are embedded in this statement. Capital markets have never witnessed or responded to a global, economy-wide climate-related shock. Hence, we look to economy-wide shocks which have impacted investment markets at this scale for historical asset-class performance, asset allocation guidance and risk modelling.

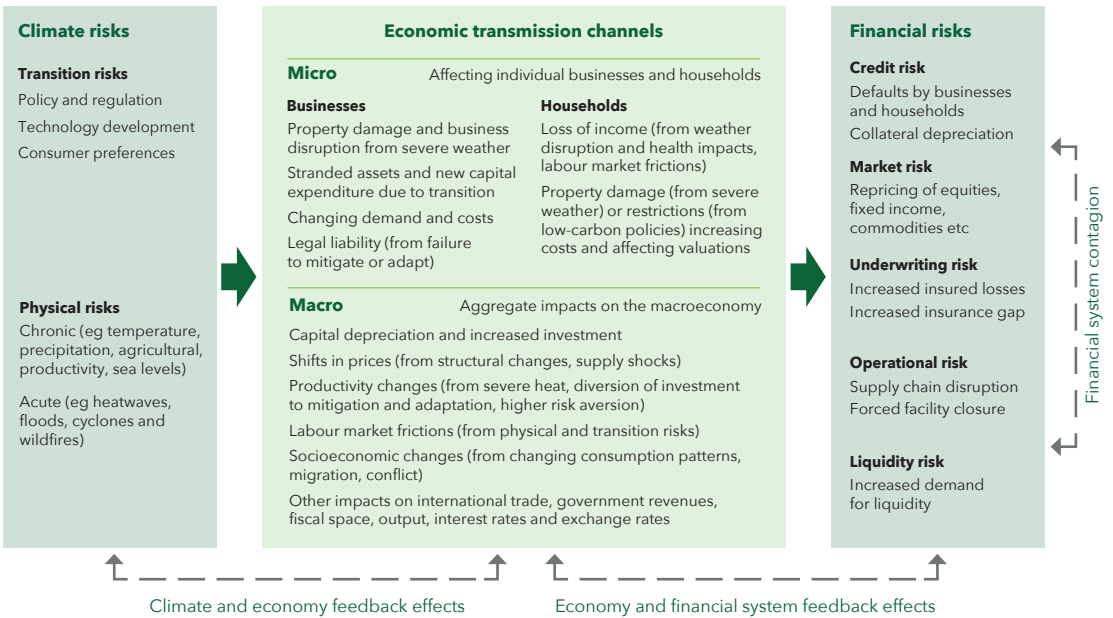
COMBINING MACRO AND MICRO ANALYSES IS KEY TO OUR INVESTMENT STRATEGY



CLIMATE RISKS TO FINANCIAL RISKS

There is an imperfect relationship between observable climate-related risks and opportunities, financial materiality and asset class performance – such as risk (measured as standard deviation), estimated returns and correlation (between and within asset classes) – at system-wide or macro level. From a top-down perspective, the effects of climate change translate indirectly into capital markets, given that most carbon emissions are priced either inadequately or not at all. We are mindful of perverse or unexpected outcomes.

CLIMATE RISKS (AND OPPORTUNITIES) COULD AFFECT THE ECONOMY AND FINANCIAL SYSTEM THROUGH A RANGE OF TRANSMISSION CHANNELS



Climate-related risks and opportunities may be observed in the risk categories typical of and well understood by financial and capital markets: credit, market, liquidity, currency, interest rate, operational and reputational risk. However, climate risks are complex and interconnected, driving four systemic risks: extreme heat stress; food system security; water security; and emerging infectious diseases. These systemic risks' impact on traditional risk categories and investment returns may be indirect, inter-related and uncertain.

Regulation and the policy environment represent a transition risk. Examples of policies or regulations that are either already in force or being implemented include the US Inflation Reduction Act (IRA), the EU Green Deal Industrial Plan, the EU Carbon Border Adjustment Mechanism, the UK's Climate Change Act 2008 (2050 Target Amendment) Order 2019 and its 2023 *Powering Up Britain: The Net Zero Growth Plan* and Australia's Long Term Emissions Reduction Plan. These impose incentives in the form of subsidies, penalties in the form of potential carbon taxes or tightening regulatory standards.

These regulations may have significant implications for sovereign competitiveness and flows of capital (both financial, in the form of public subsidies and private investment, and human or intellectual) which may distort segments of the economy or create macro-level consequences, such as adding to inflationary pressure. These regulatory responses highlight where sovereign-level (or macro) policy, which seeks to address the market failure associated with climate change, may have economy-wide implications. We are watchful for these shifts.

OUR FOSSIL FUEL POLICY

Ruffer follows a pragmatic fossil fuel strategy which prioritises delivering our investment objectives with a desire for decarbonisation in the real world.

This means Ruffer does not exclude companies or securities involved in the exploration, production, extraction, marketing, trading or sale of fossil fuels and related products. Rather, we may choose to not invest in certain companies, sectors or securities where we estimate the return for the given risk (loss of capital or reduced income) does not justify investment, either in isolation or for portfolio construction reasons. This process is not limited to the fossil fuel sector.

However, Ruffer is aware of the need to reduce societal reliance on fossil fuels (non-renewable) energy sources. Therefore, Ruffer extends its investment due diligence to assess company transition plans and, may employ our stewardship approach, including escalation as appropriate, seeking to influence change where we see gaps, weaknesses or a lack of ambition in these transition strategies. Disinvestment, or the sale of company shares, is the last step in our escalation approach and will be used sparingly and only where engagement has failed, coupled with a view that risk assumed outweighs potential return.

As these regulations affect both the real economy and the sovereigns and companies in which we invest, we focus our efforts on fundamental analysis in our investment process. At times, our macro insights and analysis may identify attractive sectors or asset classes. However, it is our fundamental research process which identifies the companies or securities we invest in.

RESPONSIBLE INVESTMENT AND CLIMATE-RELATED STRATEGY

Ruffer's strategy for integration and stewardship of climate-related factors references external frameworks and guidance documents, industry initiatives and proprietary analysis. The table below shows where we may be able to credibly deploy our stewardship activities, which asset classes are in scope for Net Zero, where we have climate-related metrics and which asset classes are covered by the Net Zero Investment Framework (NZIF) developed by the Institutional Investors Group on Climate Change (IIGCC).

A key evolution in our analysis of climate risk and opportunity has been joining NZAM. The initiative, and the targets we have formulated covering the in-scope asset classes, provide a framework for our approach to assessing the transition to Net Zero. More detail on our Net Zero strategy is available at ruffer.co.uk/responsible-investing, and our performance against the NZAM targets is disclosed in the metrics and targets section of this report.

Ruffer remains cognisant of industry developments and initiatives, contributing to their development as appropriate. Before implementing or changing our approach to climate-related integration and stewardship, we will consider whether these developments or initiatives align with our fiduciary duty to investors, any possible implications for our investment process and whether we have sufficient resources to consider and implement any proposed changes.

RESPONSIBLE INVESTMENT, NZAM ALIGNMENT, CLIMATE DATA AND METRICS

Asset class*	Responsible investment					
	Proxy voting	Engagement	Integration	In scope [†]	Metrics	Coverage
Equities	Yes	Yes	Yes	Yes	Yes	Yes
Sovereign bonds	Not applicable	Limited	Limited	Not yet	Limited	Yes
Commodities [‡]	Limited	Limited	Limited	No	Limited	No
Derivatives	Not applicable	No	Limited	No	No	Yes [§]

* As defined by the NZIF

[†] Ruffer includes listed equity and corporate bonds (credit) as its Net Zero in-scope asset classes

[‡] Ruffer includes gold bullion and precious metals, gained through equities of companies involved in mining and processing, as well as financial instruments such as futures and exchange-traded commodities (ETCs) which hold metals and minerals as their underlying, including but not limited to gold, copper and oil, within the commodities asset class.

Engagement activities are primarily limited to listed equity securities

[§] IIGCC Derivatives and Hedge Funds Guidance (January 2024) applies to select equity, credit and ETFs and futures, forwards, options and swaps

The NZIF, published by the IIGCC Paris Aligned Investment Initiative (PAII), provides a common set of recommended actions, metrics and methodologies through which investors can maximise their contribution to achieving Net Zero global emissions by 2050 or sooner. The NZIF is the dominant industry guidance for use by investors who seek to maximise their impact in driving real world decarbonisation. Launched in 2021 and initially covering the major asset classes (sovereign bonds, listed equity, corporate fixed income and real estate), the framework is updated and amended from time to time with additional or revised guidance.

Whilst we believe climate change is the major contributor to systemic risk, climate risk and opportunity is only one of many ESG factors investors (including Ruffer) need to consider from a macro and micro perspective. Our overall framework for responsible investment is outlined on the following pages.

OUR FRAMEWORK



This depicts the circularity of our investment process. As Ruffer is a macro-driven asset manager, our main consideration is deciding our allocation to different asset classes. Our positioning within these asset classes follows on from that. Our micro or fundamental analysis, including integration of ESG and climate factors, forms the basis of security selection (decisions to buy, sell or hold individual securities). Stewardship is captured within our RI policy. In this context, stewardship refers to voting and engagement (independent or collaborative) specifically related to climate-related risk and opportunity. Finally, there are our stakeholders, such as our clients, regulators and industry associations, to whom we recognise our duty to deliver our investment strategy consistent with regulations and to contribute to policy development.

1. MACRO

- a. Climate-related risks, at a portfolio level, are considered in a formal quarterly scenario meeting.
- b. Climate-related scenarios are drawn from a third party.
 - i. For our equity holdings, Ruffer has selected the Network for Greening the Financial System (NGFS) Regional Model of Investment and Development Model of Agricultural Production and its Impacts on the Environment (REMIND-MAgPIE) model, developed by the Potsdam Institute for Climate Impact Research
 - ii. Inputs are sourced from MSCI ESG Research and Bloomberg with calculations completed internally based upon Partnership for Carbon Accounting Financials (PCAF) methodology.
- c. Performance against Ruffer's NZAM targets is considered monthly at our internal risk meeting.

2. MICRO (OR FUNDAMENTAL)

- a. Identification of climate-related opportunities (such as those which support the Net Zero transition) is shared between the research analyst (security level analysis) and the Responsible Investment team.
- b. Climate-related risks (securities exposed to transition, physical or market risks and Net Zero transition analysis for listed equities) are the responsibility of the analyst, with support from the RI team.
 - quantifying the climate exposure of equities is enhanced through footprint data and company strategy (sourced from the company or the CDP) and metrics such as equity climate VaR (sourced from MSCI ESG Research)
 - quantifying the climate exposure of Ruffer's sovereign bond allocation and other asset classes is a challenge, given the asset class fundamentals, data availability, applicable methodology and lesser ability to influence change

3. STEWARDSHIP

- a. Proxy voting: Ruffer takes active proxy voting decisions on climate-related resolutions.
- b. Independent engagement: we engage directly with companies on climate-related disclosure, risks and opportunities, transitioning of businesses and target setting.
- c. Collaborative engagement: Ruffer is a founding investor signatory of Climate Action 100+ and engages with companies to progress the initiative's goals for climate-related governance, reduction of greenhouse gas emissions and disclosure.
- d. Collaborative policy advocacy: we advocate for policy action through the industry bodies we support, such as the IIGCC, Investment Association and Personal Investment Management and Financial Advice Association (PIMFA).

4. STAKEHOLDERS

- a. Internally, selection and oversight of climate-related data and data providers, and their metrics and analyses, are provided by the RIC, using resources from our client and distribution, investment and business enablement teams.
- b. External stakeholders include regulatory bodies, MSCI ESG Research, SBTi, IIGCC, the IFRS Foundation, trade associations, clients and non-governmental organisations (NGOs).

RUFFER PRODUCTS WHICH DIFFER IN STRATEGY FROM OVERALL ENTITY APPROACH

Ruffer offers investors two products which differ from our core funds: Ruffer LLP's Daily Dealt, Article 8 Fund and Ruffer AIFM Ltd's UK Charity Fund. We do not consider these products to be materially different (as defined by clause 2.2.1(2) of the FCA ESG 2: Disclosure of climate related financial information sourcebook) to our overall entity level approach to governance, strategy, risk management or targets. By nature of the portfolio holdings, climate-related metrics may differ. For transparency reasons, we outline below the key differences.

UK CHARITY FUND

The fund's responsible investment policy has been shaped by the concerns of many charities. It imposes strict restrictions on investment in alcohol, armaments, gambling, pornography, tobacco, oil sands and thermal coal. It also follows a proactive voting and engagement approach with companies held within the fund. The fund is monitored against the United Nations Global Compact principles and MSCI ESG Research metrics, and the managers also monitor the fund's carbon metrics.

For clarity, this Fund is not considered a product within the Ruffer LLP entity as defined by the FCA sourcebook.

DAILY DEALT, ARTICLE 8 FUND

It complies with the European Union's Sustainable Finance Disclosure Regulation (SFDR) Article 8 rules and was established as an undertaking for collective investment in transferable securities (UCITS) fund designed to cater for the specific needs of investors looking for daily liquidity and a fund which promotes, among others, environmental or social characteristics, or a combination of those characteristics, provided that the companies in which the investments are made follow good governance practices. Specifically, the fund promotes environmental and social characteristics, but will not make any 'sustainable investments' (as defined in Article 2(17) of SFDR).

CONSIDERATION OF THE UK'S COMMITMENT IN THE CLIMATE CHANGE ACT 2008 (2050 TARGET AMENDMENT) ORDER 2019

Ruffer LLP is authorised and regulated by the UK Financial Conduct Authority. Ruffer is aware of the UK government's Net Zero target and policy settings.

For Ruffer LLP, we disclose in our annual report and consolidated financial statements an estimate of our carbon emissions under the Streamlined Energy and Carbon Reporting (SECR) legislation. We are currently revising our transition plan. Given the criticism of voluntary carbon markets, and number 9 of our NZAM targets, we are trying to collect better data to estimate our carbon footprint and develop a strategy to reduce and offset these emissions.

With respect to Ruffer funds, we are a signatory to the NZAM initiative, and climate transition analysis (of equities) is a key part of our RI strategy. NZAM does not override our fiduciary duty to investors and is one factor which may influence an investment decision. Ruffer holds fiduciary duties to our investors, and our investment strategy is based upon an actively managed, unconstrained approach: placing restrictions on the investment universe would be counter to our investment philosophy.

DESCRIBE THE CLIMATE-RELATED RISKS AND OPPORTUNITIES IDENTIFIED OVER THE SHORT, MEDIUM AND LONG TERM

Ruffer acknowledges anthropogenic climate change is happening now – witnessed in physical effects such as excessive regional heat, rising sea surface temperature, wildfires and floods – but posits that these events do not easily translate directly or symmetrically into investment risk (or returns). The historical trends are indisputable, in terms of rising concentration of carbon dioxide in the atmosphere and increasing ocean and atmospheric temperatures. In fact, 2023 was the hottest year on record, at 1.48°C warmer than the 1850-1900 pre-industrial level and briefly surpassed pre-industrial levels by more than 2°C. To breach the Paris Goals, the average global temperature rise measured over 30 years must be above 1.5°C of warming.

Climate Action Tracker forecasts a temperature increase of +2.2°C to +3.4°C, with a midpoint of 2.7°C, by 2100, assuming government policies and actions – as codified in nationally determined contributions (NDCs) – are delivered. Society is not on track to meet the Paris Goals.

Ruffer implements its investment strategy on a tactical (or short-term) view, seeking to position the portfolio to avoid permanent loss of capital, and on a strategic (or medium to long-term) view, to grow assets over time. In the metrics and targets section, we provide an estimate for equity climate VaR. Equity climate VaR is a single figure estimate of possible loss, representing the summation of forecast transition risk and opportunities (from policy and technology) and physical risks. MSCI ESG Research models these on a 15-year time horizon out to 2100¹.

¹ MSCI ESG Research, Climate VaR: Model Validation Support Document, October 2023

The long-term physical and transition risks depend on the actions taken to reduce, or remove from the atmosphere, GHG emissions in the short and medium term. Public and private investments made in adaptation and mitigation signal actions taken to manage climate-related risk.

The short and medium-term opportunity is in the incentives (such as the subsidies within the US IRA) and regulatory settings (EU Fit for 55) which facilitate investment in, and actual committed capital to, mitigation and adaptation products, technologies and services. The short and medium-term risk is that GHG emissions cross the planetary boundary, meaning non-linear changes to climate and weather patterns. These non-linear changes may impact the economic system as it is today, from agricultural supply chains through to property and infrastructure.

DESCRIBE THE IMPACT OF CLIMATE-RELATED RISKS AND OPPORTUNITIES ON THE ORGANISATION'S BUSINESSES, STRATEGY AND FINANCIAL PLANNING

Ruffer is a limited liability partnership, as we believe this organisational structure best aligns our interests with those of our clients. Because our senior staff share in the long-term profitability of Ruffer, they are interested in nurturing client relationships through ongoing communication and by delivering upon our investment objectives. We offer clients and investors an absolute return strategy which seeks to achieve our twin investment aims: not losing money in any 12 month period, and generating returns meaningfully ahead of the return on cash.

BUSINESS: we have invested in systems, human capital and third party provision of data, metrics and information to assist in identifying and managing risk and opportunity for our client funds, which we view as a material risk to Ruffer. Ruffer LLP undertakes corporate social responsibility (CSR) activities.

STRATEGY: our investment philosophy and investment objectives have remained unchanged since the firm's inception. As climate risk becomes more pressing, we seek ways to execute a coherent strategy which integrates climate risk and opportunity consistent with our investment philosophy. Ruffer's RI Policy articulates how we, as a firm, consider ESG integration and stewardship activity as part of our investment strategy.

FINANCIAL PLANNING: the financial performance of Ruffer LLP is inherently related to the performance of the client funds we are privileged to manage. Effectively managing risks and opportunities, including those presented directly or indirectly by climate, across our clients' assets is critical.

DESCRIBE THE RESILIENCE OF THE ORGANISATION'S STRATEGY, TAKING INTO CONSIDERATION DIFFERENT CLIMATE-RELATED SCENARIOS, INCLUDING A 2°C OR LOWER SCENARIO

We define resilience in this context as Ruffer's ability to deliver upon our investment objectives, whatever happens in financial markets, under any climate-related scenarios and despite any changes in economic conditions. Resilience has two interlinked strands: Ruffer's organisational skills, knowledge and capabilities (systems, people and culture); and how the portfolio is structured and re-structured in order to deliver our investment objectives.

Organisational strategy, which we interpret as investment strategy, refers to our implementation of an actively managed, unconstrained and multi-asset-class investment approach to deliver upon our investment objectives.

The dynamic nature of our portfolio – coupled with limitations on data availability (and carbon metrics) across sovereign bonds, commodities and derivatives, and the uncertainty over how climate change will play out in the long run (2035 and beyond) – presents a challenge when modelling climate scenarios. We model 3°C (hothouse world), 2°C (disorderly and orderly) and 1.5°C (orderly) temperature pathways for the equity portfolio (using MSCI ESG Research data, NGFS scenarios and proprietary software), which provides us with some insight into how the equity component of the portfolio might behave.

These scenarios are theoretical but nonetheless important in estimating a range of outcomes. As an unconstrained active manager with an absolute return target, we are not bound to own the market like a universal owner (a sovereign wealth or pension fund). Our approach seeks to anticipate investment risks, including climate risk, and change our asset allocation or portfolio construction to mitigate potential adverse impacts on portfolio outcomes.

It is our opinion, given the mechanisms through which climate-related events may translate into financial market performance, that our use of derivatives should offer protection from unanticipated shocks whilst our position in sovereign bonds of the largest developed economies should provide a level of stability with respect to long-term and less volatile events.

We have reviewed the MSCI ESG Research methodology for sovereign bond climate VaR but, at this time, consider the model outputs do not fairly reflect the sovereign bond portfolio as at 31 December 2023 or Ruffer's approach to managing sovereign bonds. Climate VaR methodology is not available for cash, derivatives and commodities, nor is it available at a consolidated portfolio level. Whilst we will further investigate the solution for sovereign bonds, other asset classes may require a different approach and Ruffer will monitor and where possible contribute to the development of solutions.

Given the inability to duplicate the climate VaR process for all asset classes consolidated at entity level, it's currently not possible to quantify entity-level portfolio resilience in these terms.

3. Risk management

AT RUFFER, RISK MANAGEMENT IS MORE THAN A SECOND LINE OF DEFENCE; IT IS CENTRAL TO THE WAY WE INVEST

Our approach focuses on seeking to understand, both quantitatively and qualitatively as appropriate, the risk exposures associated with the current portfolio, when and how risks are likely to appear over the investment horizon and what their impact on the strategy's ability to meet its investment objectives could be. This requires judgement, an investment thesis and a willingness to act on new information.

Our primary risk management technique is scenario analysis. We are students of economic history, with a database extending back to the beginning of the 20th century. This allows us to identify historical market shocks such as oil price spikes, inflationary periods or other events which led to significant market losses. We apply these scenarios to the current portfolio and economic conditions, giving an indication of how the portfolio might behave were those prior conditions repeated.

We use a similar approach to test the portfolio against a number of prospective market scenarios, principally our view of potential threats to which the portfolio is exposed. We test the portfolio against changes in correlations between and within the asset classes we use to build a portfolio of offsetting assets. The different scenarios can be either actual historical events or stress tests designed by our macro and risk teams. For avoidance of doubt, scenarios may or may not be climate-related – rather, they will reflect the macro team's observation of the market cycle and over-the-horizon or nearer-term risks.

During 2023, Ruffer supplemented scenario analysis with climate transition analysis of selected equity securities, generally those considered energy intensive or operating in hard to abate sectors. This analysis focuses on disclosure in annual financial, sustainability and CDP reports. It considers financial metrics, such as gearing, margins, capital allocation, hurdle rates, research and development spending and, where relevant, proven reserves. It also looks to non-financial metrics, such as human capital, business strategy, published carbon emissions targets and climate transition plans. This approach guides our understanding of the array of risks to which the portfolio is exposed, helping us to position the portfolio to best withstand vulnerabilities whilst inputting to our stewardship activities, which may include climate-related voting and engagement.

DESCRIBE THE ORGANISATION'S PROCESSES FOR IDENTIFYING AND ASSESSING CLIMATE-RELATED RISKS

Ruffer manages a multi-asset-class portfolio. At any time, we may invest in or hold on behalf of our investors: cash and sovereign bonds (which may include our view on foreign exchange rates), listed equities and derivatives, and may have exposure to commodities, gold bullion and precious metals.

Carbon footprint metrics are backward-looking by definition and not a measure of climate risk (or opportunity) in financial terms (risk of capital loss). Whilst forward-looking metrics like implied temperature rise (ITR) and climate VaR are available, we consider these insufficient as an investment decision tool, given issues with data reliability, model assumptions and estimation.

LISTED EQUITIES

Our processes include

1. Company (or security) level carbon data and transition analysis, which may inform security selection, position size and stewardship activities.
2. Scenario analyses (REMIND NGFS 1.5°C, 2°C, 3°C) to identify climate-related exposure under different temperature and policy pathways. These scenarios were chosen as they meet the FCA's Environmental, Social and Governance sourcebook requirements and are available from MSCI ESG Research.
3. Portfolio carbon footprint data to identify assets with a potentially greater financed emission contribution relative to their weight in the portfolio.

SOVEREIGN BONDS

Our processes include

1. Portfolio carbon footprint data expressed in terms of production, imported and consumption emission estimates.
2. For sovereign issuers, Ruffer has developed a proprietary ESG model, incorporating several climate-related metrics, to rank sovereign issuers systematically based upon an array of ESG factors. The ranking informs whether the issuer, rather than the specific issue, potentially presents an ESG risk. For the avoidance of doubt, as at 31/12/2023, Ruffer held bonds issued by the world's largest developed market economies being Japan, United States of America and the United Kingdom.

CASH (INCLUDING FOREIGN EXCHANGE), COMMODITIES, GOLD BULLION AND PRECIOUS METALS, DERIVATIVES, CORPORATE DEBT

Due to data and model limitations, Ruffer is currently unable to generate carbon footprint metrics or run scenario-based climate risk analyses – like the approach used for the equity portfolio – for these asset classes.

Cash is the risk-free rate of return and is the basis upon which returns from other asset classes is estimated. One may posit that, in the event of a major climate-related shock, central banks will cut interest rates to stimulate the economy (assuming they have the capacity to do so). A methodology for estimating the carbon emissions of cash as a standalone asset class is yet to be developed. However, per PCAF guidance for equity securities, enterprise value including cash (EVIC) is used as the denominator for estimating ownership of an entity's emissions.

Futures are financial instruments allowing participants to gain exposure to the price movement of a particular commodity or group of commodities. They do not confer ownership. Certain metals and minerals are essential to facilitate the energy transition (given their use in magnets, solar photo-voltaic panels or electric vehicles) and pricing may benefit from tighter climate-related policies or higher carbon prices. We look to guidance from the International Energy Agency, such as their 'critical minerals data explorer', for the metals and minerals essential to the energy transition.

Derivatives are an array of instruments and securities used to manage or mitigate specific risks or to capture return. We do not hold derivative instruments specifically to manage exposure to climate-related risks or opportunities.

Gold bullion is a physical asset and, depending on where it is stored, the facility may arguably be exposed to weather-related risks. However, as a store of value, gold tends to appreciate in value at times of geopolitical stress.

Given the historical correlation between corporate debt and listed equities, one may expect corporate debt to be exposed to similar risks to equity securities. However, at present, Ruffer does not hold corporate debt securities.

Ruffer is unaware of an agreed and robust methodology for estimating carbon metrics or value at risk which provides adequate coverage across all securities in which Ruffer invests.

DESCRIBE THE ORGANISATION'S PROCESSES FOR MANAGING CLIMATE-RELATED RISKS

The formal channel for presenting climate risk information is the quarterly scenario meeting. This meeting considers climate-related risk analysis for the equity portfolio. It is prepared using MSCI ESG Research tools and internal research. High-level risk estimates are decomposed into the sources of risk (by sector and security), key metrics over time and scenario analysis (primarily equity climate VaR). Internally generated metrics include a summary of progress against our NZAM targets (presented to the OCC starting in the first quarter of 2023) and various financial ratios which compare accounting or economic performance with carbon intensity.

The risk information is discussed in this meeting, potentially informing decisions on asset allocation. If, in the analysis of climate risk, the meeting considers the portfolio is unintentionally or overly exposed to transition or physical risk, the senior members of our investment team may agree to change our positioning at either macro (asset class) or micro (security) level.

It is security-level analysis where most climate-related risks are managed, and this analysis is focused on equity securities. The process includes completion of an ESG tear sheet and a high-level analysis of the company's climate transition plan. This indicates key material ESG risks, including climate risk and transition opportunities. For larger positions in terms of absolute invested capital or percentage ownership of the company, for top contributors to the portfolio's carbon footprint (financed emissions) and for companies we deem potentially controversial but where climate risk is not or may not be material to the investment case, we undertake additional enhanced ESG research and analysis, supported by a deep dive on the company or sector if climate risk is a material issue.

In both cases, stewardship – voting and engagement – activities are central to our process for identifying, managing and potentially mitigating climate-related risks. Our [2023 Stewardship Report](#) provides greater detail on our process and examples.

Climate-related stewardship examples

As at 31 December 2023, the three case studies below represent the three highest financed emissions within the Ruffer entity-level equity portfolio

ARCELORMITTAL

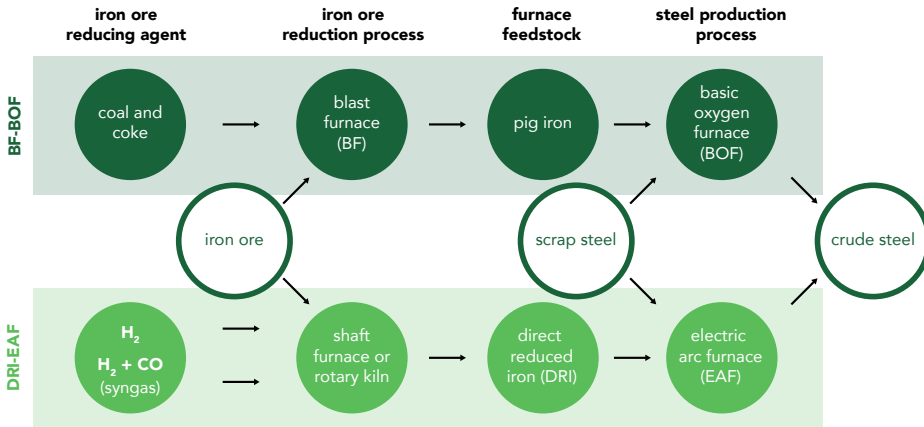
ArcelorMittal SA engages in steelmaking and mining activities.

In 2023, Ruffer continued to co-lead the Climate Action 100+ group engaging with ArcelorMittal (MT). Whilst the engagement focused on climate and transition strategy, we also addressed issues such as health and safety. In the 2022 TCFD report, we said MT was working with the SBTi on developing a sectoral decarbonisation approach for the steel sector, we mentioned the possibility of a 'say on climate' resolution at the 2023 AGM, and said we expected an update of the 2021 Climate Action Report and wanted to see greater transparency on its lobbying activities.

With respect to the SBTi and its steel sector decarbonisation methodology, in early 2024 SBTi removed the MT commitment from its 'companies taking action' page. MT signalled as much during our engagement, arguing that the SBTi methodology is science-based but not pragmatic. That is, the methodology established a pathway aligned with 1.5°C of warming which did not allow for regional or country dynamics, such as the availability of renewable electricity, green hydrogen or regional economics. MT retains its membership of the Mission Possible Partnership and its [Making Net-Zero Steel Possible: an industry-backed, 1.5°C-aligned transition strategy](#). It is also committed to a group target of a 25% reduction in carbon dioxide equivalent (CO₂e) emissions intensity by 2030 (Scopes 1 and 2), a Europe target of a 35% reduction in CO₂e emissions intensity by 2030 (Scopes 1 and 2) and a long-term target of Net Zero by 2050.

In its 2021 Climate Action Report, MT presented its five levers to transition to Net Zero: a steelmaking transformation, shifting from a blast furnace-basic oxygen furnace (BF-BOF) to a direct reduced iron-electric arc furnace (DRI-EAF) process; an energy transformation, switching to hydrogen, using waste gases and carbon capture and storage; increased use of scrap (recycling); sourcing clean electricity (renewable power); and offsetting residual emissions (voluntary carbon markets). These levers are relevant across the business.

BF-BOF / DRI-EAF STEEL MAKING PATHWAYS



Source: US Energy Information Administration

The company did not publish an updated Climate Action Report for the group. However, it did publish a [2024 Climate Action Report](#) for the MT/Nippon Steel India joint venture. India is a growth market for steel, due to the country’s infrastructure needs. It is also a challenge to decarbonise, given the low availability of renewable energy, the comparative economics of coal-fired power and other barriers (such as grid stability and availability of scrap).

At the 2023 AGM, whilst the agenda did not include a ‘say on climate’ or a climate transition action plan resolution, the [minutes](#) show investors (including the CA100+) tabled various questions related to MT’s climate action and transition strategy, to which the company provided responses. One question asked MT to improve transparency on climate lobbying activities beyond Europe and Canada. MT responded with commentary around its engagement with trade associations and other membership organisations and its activities with “...policymakers and other key stakeholder groups (such as investors, the steel industry, trade associations, trade unions, communities, customers, suppliers, public organisations, and NGOs) to share our thoughts and experience on how to facilitate and accelerate a smooth transition to a low-carbon economy in a way that brings environmental, social and economic benefit for all.”

MT recently confirmed that its 2021 forward guidance of a US\$10 billion (gross, including government support) capital expenditure budget for decarbonisation remains untouched and unchanged. There is plenty of evidence these funds are being deployed. The company’s 2023 annual report listed investments as diverse as: acquiring a ferrous scrap metal recycling business based in the Netherlands; entering into a joint venture partnership to develop a 554 MW wind power project in Brazil; and successfully starting production of Steelanol (ethanol from captured carbon monoxide digested using proprietary enzymes from LanzaTech).

In 2024, we plan to follow up with ArcelorMittal on various aspects of its transition strategy, which may include a ‘say on climate’ resolution at its 2025 AGM, an updated Climate Action Report and evidence the company is generating shareholder value as it invests in DRI-EAF, hydrogen, energy storage and renewable energy.

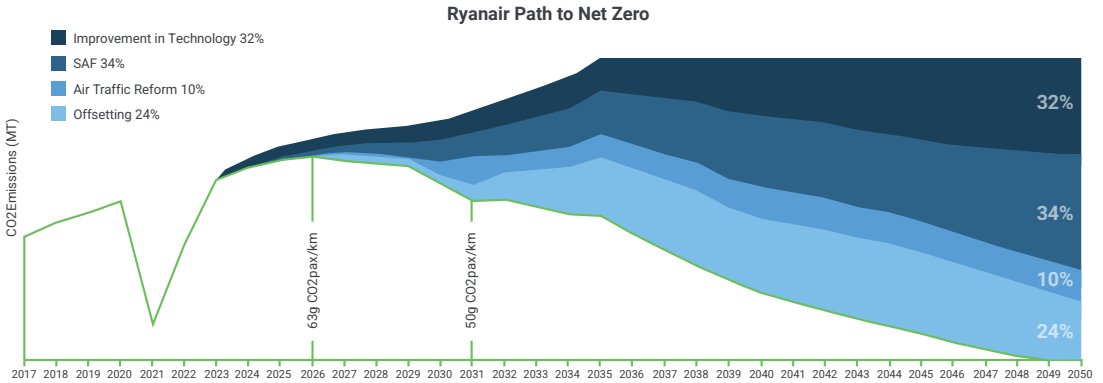
RYANAIR

Since we started analysing Ryanair through our transition risk framework in late 2022, our view has been that the aviation industry's transition imperatives will reinforce Ryanair's fundamental advantages over its peers. Our continuing engagement with the company has only strengthened this view.

On our dashboard of key financial metrics, Ryanair stands out for its operational strength, financial flexibility and robust balance sheet. We believe these qualities are only partly reflected in the share price premium over its European peers. Whilst several key abatement levers are dependent on suppliers and regulators, Ryanair has direct control over some important ones, which could lead to a competitive advantage. The company's lower carbon intensity can be attributed to its business model, load factor and relatively young fleet. The more people on – and the more fuel efficient – any given plane, the lower the company's carbon intensity.

The adoption of sustainable aviation fuel (SAF) is a critical element that will nudge Ryanair closer to the path to Net Zero. Given SAF's importance as an abatement lever, our engagements with Ryanair have centred on the company's efforts to secure sufficient supply, through memorandums of understanding (MOUs) in particular. This supply should enable Ryanair to meet EU requirements and, more significantly, its own demanding 2030 goals. We are encouraged to see agreements already in place to cover 75% of its 2030 target for SAF. These agreements will allow SAF to be 12.5% of all fuel used to fly its planes. As the fleet is upgraded and SAF is delivered, we have also been encouraged to see the company lower its carbon intensity target for 2031, with a new interim target set for 2026.

The use of SAF is forecast to deliver around only one third of emissions reduction by 2050. Technology improvements, which rely on the aircraft and engine manufacturers, are anticipated to deliver around the same reduction. Airlines are incentivised to work with their airframe and engine suppliers as greater fuel efficiency means lower operating expenditure. Meanwhile, regulatory change is expected to contribute a 10% reduction. Offsetting in the form of carbon credits or direct air capture is expected to net the remaining carbon emissions.



Source: Ryanair 2023 Sustainability Report

As EU emissions regulation tightens, we intend to follow the company’s progress through our SAF tracker. Crucially, to support our thesis on Ryanair’s competitive advantage, we are looking for decarbonisation to be accompanied by strong financial performance, both in absolute terms and relative to peers. To that end, we will continue to follow many key performance indicators for SAF, such as its percentage of fuel consumed, cost premium, lifecycle greenhouse gas intensity and availability across locations. These will be monitored alongside key financial performance metrics.

Through the lens of our transition risk framework, we see Ryanair as both willing and able to take a leadership role in the decarbonisation of aviation. We believe active collaboration across the value chain is needed for the industry to develop the intellectual property required for cost-effective emissions reduction. Airlines will have to work with airframers and suppliers, engine manufacturers, fuel producers and academic institutions. And these actors will need to work with policymakers to shape the regulatory landscape in a way that supports fuel-switching efforts.

We look to Ryanair to continue providing a positive impulse to this endeavour across the ecosystem. We think its robust balance sheet and resilient operating model give it the firepower to invest in abatement levers such as fuel efficiency and SAF, whilst its strong customer base should underpin upstream investment into developing and scaling solutions. Ryanair is one of the few passenger airlines that has demonstrated the ability to generate positive economic profit, and its approach to transition risk could become another key pillar of its competitive advantage.

BP

BP is part way through its strategic shift from an integrated oil company to an integrated energy company. Ruffer sold down its position given the strong rally in its share price following the covid-19 recovery and subsequently started to buy again on oil and share price weaknesses later in 2023.

Quite apart from the recent change of CEO and prior adjustments (Net Zero aims 1-5, below) to its transition strategy, BP has held onto a Scope 3 downstream aim. Its American peers, such as [ExxonMobil](#), have decided against setting Scope 3 targets. In addition, BP has indicated flat oil and gas production and said it will allocate substantial capital to non-oil and gas businesses such as bioenergy, hydrogen, wind and EV charge points (or convenience). We think the market is worried that BP will destroy economic value by winding down its oil activities too quickly whilst allocating capital to projects that sit away from its perceived competitive strengths and provide relatively low rates of return, rather than returning capital to shareholders. In short, the market wants reassurance that these investments will pay off.

FIVE AIMS TO GET BP TO NET ZERO - PROGRESS SUMMARY

Aims	Measure/coverage	2019	2023 update	2025 target	2030 aims	Aims for 2050 or sooner
① Net zero operations ★ Scope 1 and 2	Scope 1+2	Baseline 54.5 ^a MtCO ₂ e	41% ^b cumulative reduction in emissions against 2019 baseline	20% ^b	50% ^b	Net zero ★
② Net zero production ★ Scope 3	Scope 3	Baseline 361 MtCO ₂	13% ^b cumulative reduction in emissions against 2019 baseline	10-15% ^b 20%	20-30% ^b	Net zero ★
③ Net zero sales ★ Average lifecycle carbon intensity ^g	Average lifecycle carbon intensity ^c	Baseline 79 ^d gCO ₂ e/MJ	3% ^{d,e} cumulative reduction in carbon intensity against 2019 baseline	5% ^e	15-20% ^e	Net zero ★
④ Reducing methane	Methane intensity★	0.14% ^f	0.05% ^f	0.20% ^g	50% ^h reduction	
⑤ More \$ into transition	Transition growth investment★	\$634m	\$3.8bn	\$6-8bn	\$7-9 bn	

Source: BP Net Zero Progress Update

We view BP's energy transition strategy through our three-part framework of ambition, credibility and potential for value creation. We have been engaging with the company to get a clearer understanding of both the credibility and the scope for value creation of its transition plan. Our engagement is now focused on improving the granularity of financial disclosures to help give both us and hopefully the market comfort on the potential for value creation, and thereby the credibility of BP's climate targets.

If BP can alter the perception that its transition strategy may create rather than destroy economic profit, its pursuit of new energy and transition engines may be rewarded by a rising share price. We believe this opportunity makes for an interesting investment case, especially since our model indicates the shares do not price in any economic value creation.

Our recent engagements with BP have addressed this key question: how can the company sharpen disclosure to convince the market and shareholders that its transition growth engine investments are on track to generate positive economic profit over the long term? We have focused on segment hurdle rates and how they compare with the cost of capital. We want to understand how management considers the cost of capital in its investment decisions, how project risk may affect hurdle rates, and if buffers are used when setting hurdle rates above the cost of capital. In essence, we are trying to determine the level of capital allocation discipline exercised with respect to over- or under-investment across all the company's segments.

Over time, we would also like more granular financial disclosure beyond current reporting segment breakdowns, so that we can see how rapidly capital is being reallocated and track the trajectory of return on incremental invested capital. In our view, high-resolution disclosure and overall quality of financial accounting are requirements for the market to value BP's strategy properly.

If a company can't generate a return above the project hurdle rate (the cost of capital plus a margin for risk) that the market deems appropriate, then the share price will likely suffer, signalling the market's preference for that capital to be returned to shareholders via dividends or buybacks. But tension may arise when the company is using a different hurdle rate to the one implied by the market.

In principle, we would support the return of capital to shareholders if BP couldn't meet the cost of capital in its transition growth engines (or its traditional energy businesses). But, to make this judgement, we need to evaluate return on capital (both current and prospective) robustly over a reasonable time horizon. The level of returns is important, as is risk to those returns, of course. But, even if today's returns seem unattractive, being a first mover in the energy transition space could pay off in spades if climate policy or customer demand shifts faster than expected.

Not every company can be – or, indeed, wants to be – the green leader or should try its hand at integrating 'new' businesses into its existing corporate footprint. And companies certainly shouldn't deploy capital without a clear strategy. We seek to identify companies' competitive strengths by parsing corporate disclosures, conducting quantitative peer benchmarking and engaging with management. This analysis helps us determine what type of climate contribution companies should make – and conversely what activities companies should leave to better-placed operators.

DESCRIBE HOW PROCESSES FOR IDENTIFYING, ASSESSING AND MANAGING CLIMATE-RELATED RISKS ARE INTEGRATED INTO THE ORGANISATION'S OVERALL RISK MANAGEMENT

- 1. IDENTIFY:** the TCFD framework provides guidance on the broad categories of climate-related risk and opportunity. We use MSCI ESG Research to estimate physical and transition risk elements of climate-related risk. We supplement this with fundamental analysis and proprietary research, which includes a review of company disclosures related to climate and the energy transition.
- 2. ASSESS:** we disclose metrics and targets as required by the FCA's Environmental, Social and Governance sourcebook (with exceptions documented), as recommended by TCFD guidance and to align with our NZAM targets.
- 3. MANAGE:** Ruffer LLP is an active manager and is not constrained by benchmarks. In terms of managing climate risk, we seek to understand the climate data, and the climate risks we are exposed to via our security holdings, on a mostly fundamental basis. In essence, we are seeking to satisfy ourselves that clients will be adequately compensated for holding these risks. For equities in hard to abate or high emitting sectors, we assess whether, in our opinion, company boards and executive management have the skills, experience and knowledge to execute strategies we believe will generate value whilst lowering their carbon footprint, despite the anticipated or unanticipated risks to which they are exposed.

4. Metrics and targets

Carbon and climate related metrics can be represented in

1. Absolute terms, such as Scope 1, Scope 2 and Scope 3 GHG emissions in tons
2. Relative (or efficiency) terms, where tons of GHG are reported as a ratio of tons of carbon dioxide equivalent (tCO_{2e}) per unit of revenue (sales), market capitalisation or EVIC
3. Forward-looking metrics, such as implied temperature rise, portfolio warming potential or equity climate VaR

Whether backward-looking or forecasting, all emissions metrics have limitations (model errors or unreliable input data) and assumptions (such as the organisational carbon boundary for carbon accounting). And it is crucial not to conflate metrics with investment risk.

Over 2022, we selected climate-related targets under the NZAM initiative which are applicable to an unconstrained, multi-asset-class, actively managed strategy. Our guiding philosophy: we prioritise real world emissions reduction over portfolio emissions optimisation.

The core goal of NZAM is reducing emissions in the sectors its signatories invest in. Only through achieving this can real world emissions be lowered in line with the goals of the Paris Agreement.

This approach is very different to building a green portfolio. Investing in a portfolio of low emission stocks and avoiding carbon intensive sectors may well achieve superficial decarbonisation within the portfolio. But it may have little or no impact on reducing real world emissions. We posit that naively lowering direct portfolio emissions is not the best approach to protect the portfolio from climate-related risks – or, importantly, to capture opportunities. And certainly not to reduce real-world carbon emissions.

All elements of the economy, including both the consumers and the producers of carbon intensive goods and services, have a role to play in reducing emissions. In Ruffer's view, real progress can be achieved only by acknowledging this and working with all sectors, even those that are hard to abate. Divestment is not the answer. We must engage with companies, issuers and other stakeholders, in order to understand the challenges, opportunities and risks which may enable decarbonising the economy through releasing innovation, capital flows and economic growth.

The metrics and targets below refer to Ruffer LLP entity-level reporting, as defined by the FCA's Environmental, Social and Governance sourcebook. This includes assets in UK funds managed by Ruffer LLP and its segregated mandates. Product level reports are available upon request.

Unless otherwise stated within this report, for the year ending 31 December 2023, metrics and data were estimated for 29 December 2023 and calculated on 17 May 2024. For comparability year on year (given the entity-level technology was not in place for 2022), for the year ending 31 December 2022, metrics and data were estimated for 30 December 2022 and calculated on 17 May 2024.

RUFFER ASSET ALLOCATION AT ENTITY LEVEL

Asset class	31 Dec 2023		31 Dec 2022	
	Market value £m	%	Market value £m	%
Equities*	4,938.8	21.5	3,884.6	15.2
Sovereign bonds	13,491.8	58.7	15,226.2	59.4
Commodity exposure	1,416.4	6.2	785.4	3.1
Gold and precious metals exposure	12.4	0.1	513.1	2.0
Derivatives†	576.2	2.5	1,484.5	5.8
Cash	1,727.6	7.5	2,943.4	11.5
Other ‡	817.0	3.6	788.2	3.1
Total	22,980.3	100.0	25,625.3	100.0

Source: Ruffer LLP. Percentage totals may not equal 100, due to rounding.

* Equities includes listed companies involved in the extraction of minerals and metals (including gold)

† Derivatives are backed by cash

‡ Other includes multi asset class and convertible securities

DISCLOSE THE METRICS USED BY THE ORGANISATION TO ASSESS CLIMATE-RELATED RISKS AND OPPORTUNITIES IN LINE WITH ITS STRATEGY AND RISK MANAGEMENT PROCESS

The climate-related metrics Ruffer currently measures and monitors are aligned with the recommendations of the TCFD and the FCA's Environmental, Social and Governance sourcebook. We monitor

1. The possible impact on the equity portfolio of several climate scenarios: hothouse world, disorderly transition and orderly transition
2. The carbon footprint and carbon exposure metrics of our listed equity and sovereign bond portfolio, using a set of TCFD-aligned metrics to analyse portfolio carbon footprint, including weighted average carbon intensity (WACI), total carbon emissions, carbon intensity or production, consumption and imported emissions
3. A variety of country-level factors that may impact a sovereign bond issuer's credit quality
4. Performance against NZAM targets

IMPLIED TEMPERATURE RISE – EQUITIES

For this report, Ruffer has not provided an estimate of implied temperature rise for equities. MSCI ESG Research provides the inputs and methodology to calculate this metric. ITR is an estimate of misalignment with 2°C of warming. The MSCI model assumes Scope 1, Scope 2 and Scope 3 emissions need to be Net Zero by 2070 and is based on the carbon budget theory. This theory implies there is a limit (or budget) on total global greenhouse gases that can be emitted to limit warming to 2°C.

We consider this metric potentially misleading. The Ruffer equity portfolio (both in terms of constituents and absolute weight at entity level) may change materially over this period, making the point estimate irrelevant. As global emissions have not yet peaked and **although Net Zero is more likely by 2070 than by 2050**, humanity may exceed the theoretical carbon budget, rendering the ITR inaccurate. In the metrics and targets section below, we calculate the data coverage and data quality score for Scope 3 emissions which we suggest are largely estimated and unreliable from an investment perspective.

Ruffer will monitor and, where relevant, contribute to industry and research provider innovation related to calculations of the ITR metric.

Source: MSCI ESG Research, Implied Temperature Rise Methodology, June 2023

DISCLOSE SCOPE 1, SCOPE 2 AND, IF APPROPRIATE, SCOPE 3 GHG EMISSIONS AND THE RELATED RISKS

EQUITIES

The equity component of the Ruffer portfolio accounted for 21.5% of the total portfolio on 31 December 2023, compared with 15.2% on 31 December 2022. In calculating the below carbon metrics, we exclude holdings for which we do not have either revenue, EVIC or Scope 1 and 2 emissions data. This approach results in metrics based on 81.1% of the equity portfolio on 31 December 2023 and 85.3% of the equity portfolio on 31 December 2022. We review the omitted holdings as part of our data quality control checks and, over time, we plan to develop a methodology for filling in data gaps, such as using sector averages to enhance these metrics.

CARBON FOOTPRINT METRICS

Metric	Units	31 Dec 2023	31 Dec 2022
Scope 1 emissions*	Tons of CO ₂ e [†]	470,971.3	618,473.3
Scope 2 emissions*	Tons of CO ₂ e	109,059.2	104,127.3
Total carbon emissions (Scopes 1 and 2)*	Tons of CO ₂ e	580,030.5	722,600.6
Scope 3 emissions*	Tons of CO ₂ e	1,964,011.2	2,670,855.7
Carbon footprint	Tons CO ₂ e per £m invested	144.8	218.0
Carbon intensity*	Tons CO ₂ e per £m revenue	164.3	293.4
Weighted average carbon intensity	Tons CO ₂ e per £m revenue	204.1	353.8

Source: Ruffer LLP, MSCI ESG Research

* Calculated on an EVIC basis

† Tons of CO₂e = tons of carbon dioxide equivalent

Estimates are based on PCAF methodology, using data sourced from Ruffer LLP, Bloomberg and MSCI ESG Research.

PCAF DATA QUALITY SCORE*

Metric	31 Dec 2023	31 Dec 2022
Scope 1	2.1	2.0
Scope 2	2.1	2.0
Scope 3	2.3	2.3

Source: Ruffer LLP, MSCI ESG Research. Refer to glossary for definition of PCAF data quality score
* For the subsection of the portfolio used to calculate carbon metrics.

DATA COVERAGE

Metric	31 Dec 2023 %	31 Dec 2022 %
Scope 1 emissions	83.0	88.0
Scope 2 emissions	83.0	88.0
Scope 3 emissions	74.8	76.8
EVIC*	83.0	88.2
Revenue	84.6	92.9
Market capitalisation	72.8	84.1
Scope 1 quality score	82.6	86.5
Scope 2 quality score	82.6	86.5
Scope 3 quality score	82.6	86.5

Source: Ruffer LLP, MSCI ESG Research. Data coverage is calculated as a proportion of portfolio market value

* Enterprise Value including Cash

EMISSIONS DATA SOURCE

Source	31 Dec 2023 %		31 Dec 2022 %	
	Scope 1	Scope 2	Scope 1	Scope 2
Reported	79.3	76.9	83.6	82.5
Estimated	3.7	6.1	4.4	5.5
No data	17.0	17.0	12.0	12.0

Source: Ruffer LLP, MSCI ESG Research. Scope 1 and Scope 2 are estimated as a proportion of portfolio market value

EQUITY CLIMATE VALUE AT RISK

If we scale the 1.5°C (orderly, average) scenario estimate by the proportion of the portfolio that is equities (ignoring any portfolio correlation or covariance relationships or the behaviour of protection strategies), we get a -6.0% climate VaR equity contribution at portfolio level for 31 December 2023, compared with -5.2% for 31 December 2022. This climate VaR estimate is a theoretical and assumption-heavy calculation with questionable relevance to an unconstrained active strategy which can mitigate risk through changes to its asset allocation.

Ruffer is cautious in its interpretation of equity climate VaR for several reasons. Firstly, it is a rules-based methodology which, amongst other factors, may ignore the possibility the market has already priced carbon risk into the company's valuation. Secondly, the climate model itself may be limited in that it does not allow for climate tipping points (or worst case scenario physical risks), so the climate VaR metric would be highly misleading.

Ruffer has calculated this metric using the MSCI ESG Research equity climate VaR methodology.

Temperature pathway	Climate model	Transition risk	Physical risk	Aggregated climate VaR	
				31 Dec 2023 %	31 Dec 2022 %
1.5°C	REMIND NGFS	Orderly	Average	-28.1	-34.2
2°C	REMIND NGFS	Orderly	Average	-10.2	-13.3
2°C	REMIND NGFS	Disorderly	Average	-16.3	-20.8
3°C	REMIND NGFS	Current policies	Aggressive	-16.7	-20.0

Source: Ruffer, MSCI ESG Research

Equity climate VaR is estimated by applying the weighted average climate VaR for the proportion of the portfolio which has data (physical risk, transition risk) available, to the proportion of the portfolio which does not have data. For the year ending 31 December 2023, the coverage ratio by market value is 83.1%, meaning 16.9% by market value is estimated using the weighted average climate VaR estimate. For the year ending 31 December 2022, the coverage ratio by market value is 87.5%, meaning 12.5% by market value is estimated using the weighted average climate VaR estimate. Equity climate VaR at security level is capped at a value of -100% (implying 100% of market value is at risk).

TOP TEN EQUITIES BY FINANCED EMISSIONS

Ruffer has chosen to report financed emissions (part of our NZAM targets) rather than our allocation to “concentrated exposures or high exposures to carbon intensive sectors”. Whilst the FCA sourcebook doesn’t provide prescriptive definitions for these terms, a carbon intensive sector would traditionally include steel, aluminium, concrete, chemicals, aviation, marine shipping and heavy trucking. A concentrated or high exposure could be measured in terms of either absolute weight in the portfolio or estimated contribution to total portfolio financed emissions.

Electricity and heat production are the largest contributors to global emissions. This is followed by transport (diesel and petrol vehicles), manufacturing (aluminium), construction (largely cement and similar materials) and agriculture.

Company name	NACE* sector name	Engagement status	Financed emissions %	Instrument weight %†
ArcelorMittal	Manufacturing	Engaged	19.8	0.7
BP	Manufacturing	Engaged	14.4	8.2
Ryanair	Transportation and storage	Engaged	8.3	2.4
Alcoa	Manufacturing	Not engaged	4.2	0.2
Barrick Gold	Mining and quarrying	Not engaged	4.2	3.3
Glencore	Mining and quarrying	Engaged	3.8	1.6
Jet2	Transportation and storage	Engaged	3.4	0.8
Titan Cement	Manufacturing	Engaged	3.3	<0.1
Kinross Gold	Mining and quarrying	Engaged	3.0	2.3
Westgold Resources	Mining and quarrying	Not Engaged	2.6	0.8

Source: Ruffer LLP, MSCI ESG Research, The data above represents the companies' share of portfolio financed emissions and our respective position sizes as a percentage of holdings for which we have a complete set of data, as noted in the Equity Carbon Metrics section

* Nomenclature statistique des activités économiques dans la Communauté européenne.

† Instrument weight is the weight of the market value of the security as a % of the market value of the TCFD in-scope equities.

The table above implies 20.3% of the equity portfolio by market value is responsible for 67.1% of portfolio financed emissions. We have engaged with seven companies, which make up 56.1% of the portfolio's financed emissions. We consider a company engaged if we have met with them in the prior 12 months and specifically discussed climate-related issues (including targets, disclosure, strategy, financial strength, risk and transition plans).

SOVEREIGN BONDS

Sovereign bonds accounted for 58.7% of the total Ruffer portfolio as at 31 December 2023, compared with 59.4% as at 31 December 2022.

For sovereign bonds (bonds issued by countries), we are currently limited to providing portfolio-level carbon footprint data. We treat its efficacy with caution, as the boundaries between company-level emissions and sovereign-level emissions are somewhat blurred, posing a real risk of double-counting. We have not yet implemented a scenario analysis for the sovereign bond portion of the portfolio.

We are presently not calculating a sovereign warming potential (SWP) or a climate VaR metric for sovereign bonds. We believe the limitations and assumptions of the MSCI ESG Research methodology for both SWP and climate VaR (summaries of which are provided below) mean disclosing a metric would be potentially misleading, unfair and unclear.

CARBON FOOTPRINT METRICS

Metric	Units	31 Dec 2023	31 Dec 2022
Production emissions (excluding LULUCF)	Tons of CO ₂ e	3,241,608.9	3,672,991.8
Production emissions (including LULUCF)	Tons of CO ₂ e	3,007,750.7	3,411,970.2
Imported emissions	Tons of CO ₂ e	1,235,952.3	1,328,070.1
Consumption emissions (excluding LULUCF)	Tons of CO ₂ e	3,783,899.2	4,182,017.4
Consumption emissions (including LULUCF)	Tons of CO ₂ e	3,550,041.0	3,920,995.8

Source: Ruffer LLP, MSCI ESG Research. Production emissions is equivalent to Scope 1 emissions. Imported emissions is the sum of Scope 2 and 3 emissions. Consumption emissions is equal to production emissions plus imported emissions minus exported emissions. Land use, land use change and forestry (LULUCF) is defined as GHG emissions and removals resulting from direct human-induced land use such as settlements and commercial uses, land-use change and forestry activities

PCAF DATA QUALITY SCORE

Metric	31 Dec 2023	31 Dec 2022
Production emissions (excluding LULUCF)	4.0	4.0
Production emissions (including LULUCF)	4.0	4.0
Scope 2 emissions	4.0	4.0
Scope 3 emissions	4.0	4.0
Exported emissions	4.0	4.0

Source: Ruffer LLP, MSCI ESG Research

SOVEREIGN BOND CLIMATE VAR

During 2023, MSCI ESG Research released a climate VaR methodology for sovereign bonds. Ruffer modelled the sovereign bond portfolio through the tool. We have not published the results in this report, for several reasons. MSCI uses NGFS economic scenarios. These scenarios are converted into a forecast yield curve change (from a baseline) which, from our observations, relies upon a ‘normal’ yield curve. Currently, the yield curve is inverted. Further, MSCI methodology employs ‘the 30-year projections for the one-year and ten-year interest rate for each sovereign issuer’ for its scenario variables, and only for nominal bonds. It does make inflation assumptions. Ruffer holds both nominal bonds (currently at the short end of the curve) and inflation-linked bonds (at the long end). We use various derivative instruments (swaptions) to manage the duration (or interest rate risk) of the portfolio.

On balance, we consider the estimates provided by the sovereign bond climate VaR model as irrelevant to our investment decisions as it neither adjusts for duration change linked to our use of derivatives nor extends to the tenor of the bonds we hold. Therefore, as a point estimate, we consider it potentially misleading as an estimate of value at risk to our clients and investors and the portfolio.

Source: MSCI Sovereign Bond Climate Value-at-Risk Methodology, April 2022, Ruffer LLP

SOVEREIGN WARMING POTENTIAL

The SWP (or sovereign implied temperature rise) metric seeks to correlate 2030 emission intensity targets (NDCs and business as usual) set by sovereigns to a temperature rise out to 2100. The methodology has three inputs: 2030 NDC emission targets; 2030 population estimates; and the UN Emissions Gap Report. A logarithmic line of best fit between per capita intensities and associated temperatures is combined with the UN Emissions Gap Report (which links total global atmospheric emissions in 2030 to corresponding global temperature rise by 2100) to give a model estimate of warming. Warming potentials are calculated for each country's per capita intensity in the BAU and NDC scenario, and capped between 1.3°C and 6.0°C.

Ruffer has elected not to calculate SWP for the sovereign bond portfolio. In our opinion, a single metric would be potentially misleading for two reasons. Firstly, extrapolating a logarithmic line of best fit out to 2100 (without confidence limits) might be indicative but is not useful for investment decisions as it cannot capture either the willingness or the ability to pay, with follow-on implications for total return. Secondly, as an active manager without a benchmark which uses derivatives to shorten or extend duration (ie adjust interest rate risk exposure) and may materially shift country weights or our capital allocation to sovereign bonds, we think a line of best fit out to 2100 based upon limited data points is not relevant to our investment decisions and not informative to our clients and investors.

Source: MSCI ESG Research Sovereign Warming Potential – Methodology (June 2021)

COMMODITIES

These may include futures instruments and exchange traded commodities linked to the price of commodities such as gold, oil, silver or copper, as well as equities of companies involved in gold mining and production (which are included in the equity for carbon metrics and CVaR). Currently, there are no agreed metrics or methodology to estimate, assess or analyse climate risk or opportunity for commodity futures.

OTHER ASSET CLASSES

In addition to conventional assets, we invest directly in securities and instruments designed to protect against falling equity markets, an increase in financial market volatility or a widening of credit spreads. The main instruments used to protect against a widening of credit market spreads are credit default swaps (CDS). To protect against other risks, such as adverse currency or interest rate movements, we use financial instruments, including index-linked forwards, futures and options.

In January 2024, the IIGCC published its 'Derivatives and Hedge Funds Guidance' paper as a component of its Net Zero Investment Framework. Whilst the guidance applies to equity, credit and exchange traded funds and other financial instruments that offer exposure to these underlying asset

classes and covers various types of derivatives (futures, forwards, options, and swaps), our review of the paper identified two issues. Firstly, the guidance largely applies to single-name derivatives rather than index-based derivatives, which Ruffer tends to use. Secondly, Ruffer holds volatility and interest rate-linked derivatives, which are not covered by the guidance. On balance, Ruffer considers applying the guidance to the derivatives portfolio would yield misleading results and an inaccurate picture of overall portfolio climate-risk exposure.

Currently, these securities are not covered by MSCI in its climate database, and the industry standard is not entirely applicable to the Ruffer derivative strategies.

DESCRIBE THE TARGETS USED BY THE ORGANISATION TO MANAGE CLIMATE-RELATED RISKS AND OPPORTUNITIES AND PERFORMANCE AGAINST TARGETS

For our NZAM target submission, Ruffer chose the PAII NZIF methodology. Selected targets are presented below. Our NZAM targets were established at the firm level rather than the entity level, as defined by the FCA Environmental, Social and Governance sourcebook. Our progress against these targets, as shown below, is calculated at the firm level. As a result, the portfolio decarbonisation target metrics below and the entity-level data shown above are calculated on a different portfolio basis.

PORTFOLIO COVERAGE TARGET

By 2030, 80% of assets under management (AUM) in scope will be considered Net Zero, aligned with Net Zero or aligning with a Net Zero target.

Target 1	31 Dec 2023 %	31 Dec 2022 %
Aligned	0.4	0.8
Aligning	19.5	17.6
Not aligned	10.1	14.2
Not covered	70.0	67.4

Source: Ruffer LLP, MSCI ESG Research, SBTi

ENGAGEMENT TARGET

By 2025, at least 70% of financed emissions in material sectors will be either Net Zero, aligned with Net Zero or the subject of engagement action. The engagement threshold will increase to at least 90% by 2030 at the latest. The below table shows that 59.9% of financed emissions in material sectors are either aligned or under engagement for the year ending 31 December 2023, increasing from 27.5% for the year ending 31 December 2022.

Target 2	31 Dec 2023 %	31 Dec 2022 %
Aligned	0.0	0.0
Not aligned but under engagement	24.1	22.2
Not covered but under engagement	35.8	5.3
Not aligned/covered and not under engagement	10.7	44.1

Source: Ruffer LLP, MSCI ESG Research, SBTi

PORTFOLIO DECARBONISATION REFERENCE TARGET

Emissions intensity will be reduced by 50% by 2030, adjusting the baseline to reflect shifts in asset allocation.

Target 3	Units	31 Dec 2023	31 Dec 2022	31 Dec 2021
Carbon intensity of baseline portfolio	Tons CO2e per £m revenue			197.6
Carbon intensity of 2022 portfolio	Tons CO2e per £m revenue		286.0	355.5
Carbon intensity of 2023 portfolio	Tons CO2e per £m revenue	164.8	174.4	213.8
Rebased carbon intensity*	%	77.1	80.5	100.0

Source: Ruffer LLP, MSCI ESG Research *Indexed to 100 as at 31 December 2021. A value >100 implies the portfolio has a higher carbon intensity

Estimated by calculating the carbon intensity of the portfolio at the prior reporting period by applying date stamped carbon data at that date to the portfolio as at the most recent reporting period.

ABOUT OUR TARGETS

The prioritisation of the portfolio coverage target keeps the focus on whether the companies we hold are aligning with Net Zero emissions, rather than a simple focus on reducing the emissions of the portfolio (which may change with asset allocation).

Complementing this with an engagement target means our stewardship activities will be deployed to hold companies accountable for progress on their real-world emissions reduction plans.

Rebasing our emissions reduction target to a normalised 100 baseline as of 31 December 2021 means that it assesses the emissions reduction performance of the portfolio we are holding at any moment in time. This is crucial to account for our active approach, to prevent portfolio optimisation through simply selling the highest emitting holdings and to enable investment in companies that are contributing to the energy transition, even if their emissions starting point is higher. As Ruffer is an active asset manager with the potential for significant asset allocation changes, this removes sector allocation as an option for meeting targets. We think this approach is essential in order to align our approach with the objective of real-world emissions reduction.

Our emissions reduction target is based on Scope 1 and 2 emissions only. Scope 3 emissions will not initially be included in the emissions reduction target, due to concerns about the quality and availability of data. Scope 3 emissions may be considered when assessing alignment and engagement objectives and may be factored into decision making where appropriate.

The complete list of targets, metrics, policy and limitations we will be monitoring as part of our NZAM commitment is available [on our website](#).

To help us measure performance against these targets, we have built a proprietary software tool which captures data points (sourced from various organisations and data providers) associated with each of these targets and stores them in a time-stamped database. This allows us to create a time series linked to stewardship activities (engagement and voting), enabling Ruffer to objectively measure performance against these targets. These targets relate to measuring real world decarbonisation for equities and credit securities held by the portfolio, rather than directly quantifying climate-related risk and opportunity. Stewardship is a key component of our NZAM strategy.

Glossary

CARBON DIOXIDE EQUIVALENT (CO2E)

A measure used to compare the emissions from various greenhouse gases – carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride – on the basis of their global warming potential (GWP). It does so by converting amounts of other gases to the equivalent amount of carbon dioxide with the same GWP. For example, the GWP for methane is 25 and for nitrous oxide 298. So emissions of 1 million metric tons of methane and nitrous oxide would be equivalent to emissions of 25 million and 298 million metric tons of carbon dioxide, respectively.

CARBON FOOTPRINT

Total carbon emissions for a portfolio normalised by the market value of the portfolio, expressed in tons CO_{2e}/\$m invested. Scope 1 and Scope 2 GHG emissions are allocated to investors based on an equity ownership approach (for this methodology, see the below definition for total carbon emissions).

CARBON INTENSITY

Volume of carbon emissions per million dollars of revenue (carbon efficiency of a portfolio), expressed in tons CO_{2e}/\$m revenue; Scope 1 and Scope 2 GHG emissions are allocated to investors based on an equity ownership approach (for this methodology, see the below definition for total carbon emissions). The company's (or issuer's) revenues are used to adjust for company size to provide a measurement of the efficiency of output.

EQUITY CLIMATE VALUE AT RISK (CLIMATE VAR)

Provides a forward-looking and returns-based impact metric for investors. The development of this metric by MSCI leveraged an integrated approach, considering the latest academic findings from climate science as well as inputs from the financial services industry.

Climate VaR can be used to inform actions, such as to diversify, divest or engage. MSCI assesses each individual impact in terms of the potential financial impact on the company's operation, from a business interruption and corresponding loss in productivity and therefore revenue to an acute extreme weather event which damages assets and renders them inoperable. Costs from increasingly stringent legislation – to decarbonise and meet national targets in the countries of operation – are factored into this calculation process and model potential future revenues and profits arising from low-carbon innovation.

ENTERPRISE VALUE INCLUDING CASH

The sum of the market capitalisation of ordinary shares at fiscal year end, the market capitalisation of preferred shares at fiscal year end and the book values of total debt and minorities' interests. No deductions of cash or cash equivalents are made, to avoid the possibility of negative enterprise values. EVIC is used as a base to allocate companies' emissions to investment portfolios and thus enable analysis of both equity and corporate bond portfolios.

FINANCED EMISSIONS

The GHG emissions linked to the investment and lending activities of financial institutions like investment managers, banks and insurers.

IMPLIED TEMPERATURE RISE (ITR)

Attempts to estimate a global temperature rise associated with the GHG emissions of a single entity (eg a company) or a selection of entities (eg those in a given investment portfolio, fund or investment strategy). Whilst ITR can be used as an impact metric or communication and engagement tool, its disclosure could also provide insight on climate-related risks and opportunities associated with select assets to better inform capital allocation decisions. However, the ITR metric is new and still evolving. There are several technical and methodological challenges in calculating ITR, no commonly agreed terminology to refer to the metric and little understanding of advances that would be needed to improve the usefulness of ITR disclosures.

INTEGRATED ASSESSMENT MODEL (IAM)

Tools that bring together different types of information (eg knowledge about climate, economics, ecology) in a coherent framework for researchers and decision makers. For climate change, integrated assessment considers the social and economic factors that drive the emission of greenhouse gases, the biogeochemical cycles and atmospheric chemistry that determines the fate of those emissions and the resultant effect of GHG

emissions on climate and human welfare. IAMs can provide a framework for understanding the climate change problem and for informing judgments about the relative value of options for dealing with climate change.

NET ZERO ASSET MANAGERS INITIATIVE (NZAM)

The Net Zero Asset Managers initiative, launched in December 2020, aims to galvanise the asset management industry to commit to a goal of Net Zero emissions in order to mitigate financial risk and maximise the long-term value of assets.

PHYSICAL RISK

Can be acute (driven by an event such as a flood or storm) or chronic (arising from longer-term shifts in climate patterns such as drought, reduced rainfall or heat), presenting increasing financial risks such as damage to assets, interruption of operations, lower productivity and disruption to supply chains. For example, the Rhine, an important supply route through Germany for manufactured goods, is largely fed by meltwater from the European Alps. As snowfall patterns change, the reduction in run-off feeding the river system is placing this supply chain at risk.

PARTNERSHIP FOR CARBON ACCOUNTING FINANCIALS (PCAF) DATA

The PCAF data quality score facilitates data transparency and encourages improvements to data quality in the medium and long term. It provides the user with an estimate of data reliability. Scores range from 1 (most reliable) to 5 (least reliable).

Data quality	Options to estimate the financed emissions	When to use each option
Score 1	Option 1: Reported emissions	1a Outstanding amount in the company and EVIC are known. Verified emissions of the company are available.
Score 2		1b Outstanding amount in the company and EVIC are known. Unverified emissions calculated by the company are available.
	Option 2: Physical activity-based emissions	2a Outstanding amount in the company and EVIC are known. Reported company emissions are not known. Emissions are calculated using primary physical activity data of the company's energy consumption and emission factors specific to that primary data. Relevant process emissions are added.
Score 3		2b Outstanding amount in the company and EVIC are known. Reported company emissions are not known. Emissions are calculated using primary physical activity data of the company's production and emission factors specific to that primary data.
Score 4	Option 3: Economic activity-based emissions	3a Outstanding amount in the company, EVIC and the company's revenue are known. Emission factors for the sector per unit of revenue are known (eg tCO ₂ e per euro or dollar of revenue earned in a sector).
Score 5		3b Outstanding amount in the company is known. Emission factors for the sector per unit of asset (eg tCO ₂ e per euro or dollar of asset in a sector) are known.
		3c Outstanding amount in the company is known. Emission factors for the sector per unit of revenue (eg tCO ₂ e per euro or dollar of revenue earned in a sector) and asset turnover ratios for the sector are known.

REMIND-MAGPIE

Two IAMs developed at the Potsdam Institute for Climate Impact Research (PIK) over a decade ago and continually being improved to provide up-to-date scientific evidence.

Regional Model of Investment and Development (REMIND) generates projections for the future evolution of the world's economies, with a special focus on the development of the energy sector and the implications for the climate. The goal of REMIND is to find the optimal mix of investments in the economy and the energy sectors of each of the 12 model regions given a set of population, technology, policy and climate constraints. It also accounts for regional trade characteristics on goods, energy fuels and emissions allowances. The most relevant GHG emissions due to human activities are represented in the model.

Model of Agricultural Production and its Impacts on the Environment (MAGPIE) is a global land use allocation model, which is in turn connected to the grid-based dynamic vegetation model Lund-Potsdam-Jena managed Land (LPJmL) to simulate the interactions between the land surface and the atmosphere, as well as the impact of human activities on the environment. As a partial equilibrium model, the objective function of MAGPIE is the fulfilment of agricultural demand for each region at minimum global costs considering the biophysical and socioeconomic constraints. The MAGPIE results are consolidated to the

12 REMIND regions through a process called spatial aggregation or regional harmonisation. This process involves grouping or merging the individual regions into larger, more manageable units for analysis and modelling. The specific method of consolidation can vary depending on the specific requirements of the modelling framework and the research objectives. Common approaches include geographical proximity, economic similarities, administrative boundaries and model requirements.

SCOPE 1, SCOPE 2 AND SCOPE 3 CARBON EMISSIONS

SCOPE 1: direct emissions coming directly from things such as company vehicles, buildings and facilities.

SCOPE 2: indirect emissions coming from purchased electricity (and steam, heating and cooling) for the firm's own use.

SCOPE 3: coming from two sources: upstream activities such as employee commuting, business travel and supply chain activities; and downstream activities such as investments and all activities relating to customers and product(s).

SHARED SOCIOECONOMIC PATHWAYS (SSPs)

Future carbon prices differ according to each IAM but can also differ within an IAM, depending on the SSP deployed during a model run. The key elements of an SSP aim to characterise a global socio-economic future for the 21st century as a reference for climate change analysis. Five SSPs were designed, to represent different climate change mitigation and adaptation challenges.

Their resulting storylines and quantifications span a wide range of different futures. The narratives relate to sustainability, regional rivalry, inequality, fossil-fuel-based development and a middle of the road pathway.

TOTAL CARBON EMISSIONS

The absolute greenhouse gas emissions associated with a portfolio, expressed in tons CO₂e. Scope 1 and Scope 2 GHG emissions are allocated to investors based on an equity ownership approach which can be based on either market capitalisation or EVIC. Under this approach, if an investor owns 5% of the company, then it 'owns' 5% of the company's GHG (or carbon) emissions.

TRANSITION RISKS

May occur when moving towards a less polluting or greener economy. Such transitions could mean that some sectors of the economy face big shifts in asset values or higher costs of doing business. For example, if economies were to internalise the social cost of carbon emissions, that could materially push up consumer prices for certain products, goods or services, so consumers would either seek substitutes or consume less, all being equal.

WEIGHTED AVERAGE CARBON INTENSITY

The absolute GHG emissions associated with a portfolio, expressed in tons CO₂e. Scope 1 and Scope 2 GHG emissions are allocated based on portfolio weights (the current value of the investment relative to the current portfolio value), rather than the equity ownership approach described under total carbon emissions above.

Contact us

**MIRANDA BEST**

Deputy CEO

Joined Ruffer in 2005 after graduating from Durham University with a first class honours degree in economics. She became a CFA charterholder in 2009. She began managing Ruffer's illiquid strategies in 2011, became Head of Specialist Funds in 2016, and Head of Investments in 2020. Miranda is a member of the Board and Executive Committee and became Deputy CEO in January 2022.

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Joined Ruffer in 2017, having graduated with a master's degree in physics from the University of Edinburgh. Previous roles in Ruffer's Responsible Investment and UK charities teams, and he is now responsible for Ruffer's LGPS investors. He is a member of the CISI and a CFA charterholder.



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Joined Ruffer in 2021 from an ESG Investment Specialist role at the BP Pension Fund. Previous roles include Investment Director at Project Snowball, Senior Analyst, Responsible Investment at USSIM and Portfolio Manager, Equities at VicSuper, Australia. Has a Bachelor of Economics and a Bachelor of Science (forestry) (ANU), a Master's of Environment (University of Melbourne), a Graduate Diploma in Applied Finance and Investment and is a Member of the Institute of Directors.

FURTHER INFORMATION

The following documents are available at
ruffer.co.uk/responsible-investing

Quarterly Responsible Investment Reports

Responsible Investment Policy

Our response to the UK Stewardship Code

Our voting summary

A selection of articles on responsible investment topics

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Cover image: Daily global surface air temperature, [Climate Reanalyzer](#)