TCFD ALIGNED CLIMATE REPORT

POSITIVELY DIFFERENT

GUINNESS GLOBAL INVESTORS

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For explanations of key terms, please see the glossary on our website

All data is at 31st December 2024 unless otherwise stated.

FOREWORD

2024 marked the hottest year on record [1], as the world continued to experience the impacts of rising global mean temperatures. Driven by higher concentrations of atmospheric greenhouse gases including CO_2, climate change remains a material concern for investors worldwide.

The urgency of tackling climate change is underscored by the Intergovernmental Panel on Climate Change (IPCC), which has projected that global mean temperature rise will exceed 1.5°C above pre-industrial levels within the next two decades. [2] This has far-reaching implications for ecosystems, societies, and economies.

As environmental pressures mount, companies across all sectors are grappling with the operational and strategic challenges posed by climate change. As a long-only active asset manager, we understand the responsibilities we hold to navigate this complex landscape, whilst upholding our fiduciary duty. We recognise the significant risks and compelling opportunities inherent to a changing climate for our operations and our investment portfolios.

The Task Force on Climate-related Financial Disclosures (TCFD) framework highlights the need for clear, comprehensive, and forward-looking information on how climate change is reshaping the corporate and investment landscape. In this report, we consider both the physical risks such as extreme weather and rising temperatures, and the transitional risks tied to regulatory shifts and evolving stakeholder expectations.

Understanding the dual nature of climate risk, both how climate change affects us, and how our operations impact the climate is critical. Embedding climate considerations across our operations and risk frameworks enables us to identify potential vulnerabilities, build resilience against future shocks, and ultimately position our business for long-term sustainability.

Improving transparency and evolving our climate strategy are core to our approach. In doing so, we aim to remain agile in the face of change and play our part in shaping a lower-carbon, more climate-resilient future.

[1] *Source: NASA*
[2] *Source: IPCC*

ABOUT THIS REPORT

In accordance with the Task Force on Climate-related Financial Disclosures (TCFD) framework set out in Figure 1, this document outlines the approach to managing climate-related risks and opportunities employed by Guinness Global Investors.

It aims to provide our perspective on the four TCFD pillars of **Governance**, **Strategy**, **Risk Management**, and **Metrics and Targets** in relation to climate-related issues. The TCFD sets out a practical way of explaining our approach of integrating climate related risks and opportunities across the firm.

We have been a supporter of the TCFD since 2020 and encourage our portfolio companies to disclose in line with TCFD recommendations. In 2024, we supported the call for the widespread adoption of the International Sustainability Standards Board (ISSB) standards – IFRS S1 and S2 – which built on frameworks such as the TCFD. As data evolves, we will continue to improve our disclosures. To that end, we hope you find this report insightful.

Figure 1: Core elements of Recommended Climate-related Financial Disclosure, TCFD Guidance

Source: TCFD

1. Governance - The organisation's governance around climate-related risks and opportunities.

2. Strategy - The impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.

3. Risk Management - The process of identifying, assessing, and managing climate-related risks.

4. Metrics and Targets - The metrics and targets used to assess and manage climate-related risks and opportunities.

ABOUT GUINNESS GLOBAL INVESTORS

Founded in 2003 by our Chairman Tim Guinness, Guinness Global Investors is an independent active fund manager specialising in long-only equity funds and private equity investments in a selection of asset classes and specialist sectors.

We run concentrated portfolios with low turnover, a value discipline and an equal-weight portfolio approach. At heart, Guinness Global Investors is a value (or growth at reasonable value) investor. We seek to identify good businesses whose long-term profitability, sustained by competitive advantage and capital discipline, is undervalued by the market.

We believe in intelligent solutions for long-term investing in a rapidly changing world. This means having a methodology for building portfolios that is logical, robust, repeatable, while remaining consistent with our core investment beliefs and our duty to invest responsibly.

OUR OPERATIONS

Guinness Global Investors is based in Westminster, London, with 79 employees.[3] In 2015, Guinness Global Investors introduced its first Carbon Policy and has since been recording its company-level emissions annually. We continue to evolve our methodology year-on-year and continuously review our operational emissions with the aim to avoid and reduce them where possible.

As an asset manager, we understand that our core climate-related risks arise predominantly from the indirect emissions from the investment portfolios that we manage in-house on behalf of our investors. In turn, we focus efforts on recording, managing, and monitoring these emissions, which we explore further during this report.

UK-DOMICILED FUNDS

Guinness Global Investors provides 17 long-only investment strategies in three areas: Global and Developed Markets, Specialist, and Asian and Emerging Markets.

The focus of this report is on the UK-domiciled funds applying these strategies.

As of 31 December 2024, our eight UK-domiciled funds – shown in Figure 2 – accounted for 4% of our total assets under management.

Figure 2: Guinness Global Investors UK-domiciled fund range
Source: Guinness Global Investors

GLOBAL AND DEVELOPED MARKETS	SPECIALIST	ASIAN AND EMERGING MARKETS
WS Guinness Global Equity Income Fund	WS Guinness Global Energy Fund	WS Guinness Asian Equity Income Fund
WS Guinness Global Quality Mid Cap Fund	WS Guinness Sustainable Energy Fund	
WS Guinness European Equity Income Fund		
WS Guinness UK Equity Income Fund		
WS Guinness Global Innovators Fund		

For further details on individual funds, please see the relevant pages on our website at guinnessgi.com

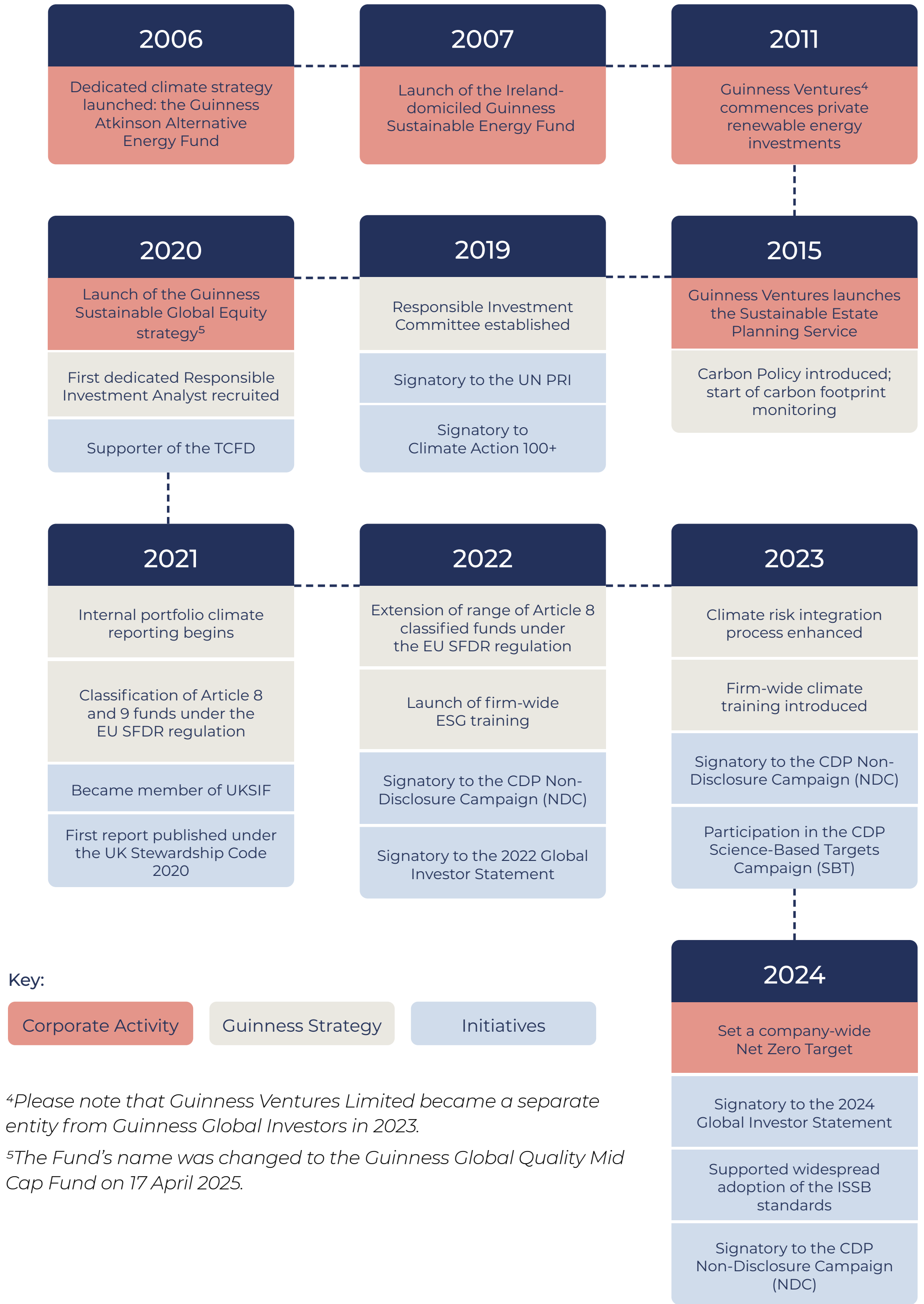
[3]As of 31 December 2024

OUR CLIMATE JOURNEY

We have strong heritage of investing across the energy spectrum and are well placed to consider environmental, social, and governance (ESG) including climate-related issues in the investment process. We believe that this is in our clients' interests. We first launched the Sustainable Energy strategy in 2006.

Ever since, we have accelerated our climate-related activity, improved our resources and increased our capacity, including forming a dedicated Responsible Investment Team. Guinness Global Investors is a member or signatory of several initiatives, including the UN Principles for Responsible Investment (UN PRI), UK Stewardship Code, and CDP (formerly known as the Carbon Disclosure Project).

Figure 3: Timeline of climate-related activity
Source: Guinness Global Investors



[4]*Please note that Guinness Ventures Limited became a separate entity from Guinness Global Investors in 2023.*

[5]*The Fund's name was changed to the Guinness Global Quality Mid Cap Fund on 17 April 2025.*

1. GOVERNANCE

TCFD Recommendation: Describe the board's oversight of climate-related risks and opportunities

TCFD Recommendation: Describe management's role in assessing and managing climate-related risks and opportunities

OVERSIGHT OF CLIMATE-RELATED RISKS AND OPPORTUNITIES

At Guinness Global Investors, we have an established governance structure supported by various committees across the business.

Guinness Global Investors is a privately owned company with a flat organisational structure, which enables close collaboration and shared oversight of material issues, including climate change. Accountability and oversight of climate-related risks and opportunities are held at both board and management level.

We are committed to adopting and implementing responsible investment principles in a manner that is consistent with our fiduciary responsibilities to clients. Ownership of these principles lies with the entire Investment Team across all our investment strategies, supported by our dedicated Responsible Investment Team.

In 2021, our **Responsible Investment Policy** evolved to integrate climate change issues, in addition to providing details on our climate-related engagement activity. More details can be found in our Responsible Investment Policy and our latest **Responsible Investment Report**. The Responsible Investment Team works in tandem with the wider Investment Team, providing support and resources to portfolio managers and analysts. Complementing our firm-level Responsible Investment Policy, a bespoke 'Approach to Responsible Investment and ESG' paper articulates the particular focus in each area in which we invest and can be found on our website. These explore each strategy's approach to Responsible Investment in further detail.

Collaborative meetings of the Investment, Marketing & Sales teams occur weekly for these teams to monitor and discuss market and global macro movements and serves as an important forum to consider topical climate-related matters. Our Marketing & Sales team manage communications with investors, articulating our Responsible Investment approach to clients and key stakeholders. They present investor feedback to portfolio managers and the wider Investment Team regarding climate-related matters to provide oversight of industry movements and investor preferences.

GOVERNANCE STRUCTURE

Guinness Global Investors Board of Directors (the Board) is the most senior body in our corporate governance structure and has complete oversight of the firm's activities, strategy, and objectives, including our approach to climate issues. As Guinness Global Investors has grown, we have evolved our governance structure and oversight of risk by implementing additional committees involving members from across the business with the relevant skillsets and decision-making abilities. All directors, portfolio managers, and key staff from all departments sit on the **Monthly Management Committee**, our main executive decision-making body, providing broad oversight of material matters. We appointed a **Head of Investment Risk** to further develop and strengthen our oversight and risk management functions. Following this, in 2024 we established an Investment Risk Committee.

In 2019, the Board established the **Responsible Investment Committee** as a forum to monitor and implement our Responsible Investment approach. This committee discusses climate-related considerations with members across the firm to ensure accurate and adequate flows of information. In addition, our **Compliance & Operations Committee** ensures regulatory standards are upheld and communications with investors meet necessary requirements.

Figure 4 (Page 10) depicts the governance structure pertaining to the oversight of climate-related risks and opportunities at Guinness Global Investors.

CLIMATE-RELATED CONSIDERATIONS

At Guinness Global Investors, climate-related considerations are integrated at both an operational and portfolio level.

Aware of growing climate-related scrutiny of companies and evolving regulatory requirements, we spend a significant amount of time across the organisation discussing and evaluating developments in this area. This includes how regulations such as the European Sustainable Finance Disclosure Regulation (SFDR) and the UK Sustainability Disclosure Requirements (SDR) continue to impact our business operations and our portfolios.

Given our operational footprint - as a firm with fewer than 100 employees, based in a single London office - we focus in this report on the climate-related risks and opportunities arising from the investment portfolios we manage for clients.

WITHIN OUR OPERATIONS

Although our investment portfolios represent a sigificant proportion of our climate-related risks and opportunities, we continuously monitor and assess our own operational company-level energy consumption and emissions.

In 2015, Guinness Global Investors developed a Carbon Policy and began measuring its operational carbon emissions. Over time, our reporting has evolved to include more categories from the 15 GHG Protocol Scope 3 emissions accounting framework. In 2020, we added teleworking under Category 7 (Employee Commuting) due to employees working from home during the COVID-19 pandemic, and in 2023 we added additional Scope 3 emissions categories such as hotel stays under Category 6 (Business Travel) to our corporate emissions calculations. We track our emissions year-on-year and aim to include additional material Scope 3 categories as our climate reporting develops. Further details can be found within **Section 4. Metrics and Targets**. In addition, we touch on sustainability risks alongside financial risks within our **Remuneration Policy**.

WITHIN OUR PORTFOLIOS

As an asset manager, Guinness Global Investors' fundamental climate-related risk and opportunities exposure lies within our investment portfolios that we manage on behalf of our investors. Therefore, the responsibility of climate-related matters lies with all members of our Investment Team.

Responsible Investment considerations and ESG incorporation through active stewardship are essential components of our investment decisions. Our Investment Team, comprising of analysts and portfolio managers, use fundamental data to carry out rigorous in-house research on their portfolios, supported by additional analysis from our Responsible Investment Team. This includes considering the impact of ESG factors, which has developed over time as more relevant data has become available. This underpins decisions made by portfolio managers who are responsible for implementing our Responsible Investment approach in their day-to-day activities. Our diligent screening of potential investee companies and ongoing research into current portfolio companies provides us with flexibility to incorporate new ESG data as it evolves. Research is shared among our investment strategies, supported by the Responsible Investment Team, who provide company-wide analysis and materials.

To analyse climate-related risks and opportunities in more detail, climate-related risk scorecards are created by the Responsible Investment Team for each strategy and are presented to each investment strategy team to understand potential and material climate-related exposures at a strategy and portfolio company level. These may inform climate-related stewardship activity by identifying engagement priorities. This is further discussed in our quarterly Responsible Investment Committee meetings. We believe this is the best way to identify and integrate climate-related risks and opportunities into our investment process and is consistent with our investment philosophy. These scorecards are subject to monitoring by Compliance to ensure that the ESG Integration process has been followed.

Figure 4: Guinness Global Investors climate-related governance structure
Source: Guinness Global Investors

Guinness Global Investors Board of Directors

Frequency of meetings: Quarterly

Chair: Chief Executive Officer (CEO)

Composition: Chief Investment Officer (CIO), Guinness Global Investors' Chairman, two directors

Oversight and responsibilities:

- Overall firm strategy and objectives
- All internal processes and external activities
- Approval of material policies e.g. Responsible Investment Policy, Exclusion Polices, UK Stewardship Code Report
- Oversight of climate-related matters and stewardship

Management Committee

Frequency of meetings: Monthly

Chair: Chief Executive Officer (CEO)

Composition: All portfolio managers and key staff from all departments

Oversight and responsibilities:

- The firm's routine business activities, including those involving climate issues

Responsible Investment Committee

Frequency of meetings: Quarterly

Chair: Chief Executive Officer (CEO)

Composition:

- Representatives of the Board
- Responsible Investment Team
- All Portfolio Managers and Investment Analysts
- Key members of of Marketing, Sales, Compliance and Risk teams
- Representatives of Guinness Ventures

Oversight and responsibilities:

- Highlight climate risks and opportunities
- Integrate ESG into processes and decisions
- Review and approve reports and policies
- Discuss required standards from industry regulators, clients, and wider stakeholders
- Monitor progress of portfolio companies against their climate targets
- Review ESG and climate data providers
- Oversee stewardship activity and policies
- Review participation in current and prospective industry initiatives

Compliance Committee

Frequency of meetings: Minimum of six times a year

Chair: Chief Executive Officer (CEO)

Composition: Compliance & Risk, and Operations teams

Oversight and responsibilities:

- Alongside the Responsible Investment Committee, the Compliance Committee observes the development of climate-related regulations, implements regulations and monitors compliance with the regulations across the firm
- Development and monitoring of policies and procedures to ensure adherence to regulations
- Review and approve marketing material and client communications relating to Responsible Investment
- Completion of monthly and quarterly ESG integration monitoring reports to assess whether the ESG process as described in the relevant fund disclosures has been followed
- Articulates findings with the Board and Investment Team

2. STRATEGY

TCFD Recommendation: Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term

CLIMATE-RELATED RISKS AND OPPORTUNITIES OF OUR INVESTMENT STRATEGIES

At Guinness Global Investors, we have long-term investment horizons. Therefore, we are aware of the risks to our operations and portfolios in the short, medium, and long-term and these are embedded into our investment decisions.

We are aware that climate-related risks and opportunities will have an impact across the investments we make and acknowledge that some of our strategies may be more at risk than others due to the breadth of sectors and geographies our portfolios cover.

With an emphasis in our investment philosophy on the quality characteristics of the companies in which we invest, we pay close attention to their activities and exposures. Our concentrated portfolios, constructed with an equal-weight approach, allow our experienced portfolio managers to understand each one of our portfolio companies in rigorous detail, making us well placed to mitigate any potential climate-related risks (Figure 5) and make the most of climate-related opportunities.

Figure 5: Climate-related risks, TCFD Guidance
Source: TCFD

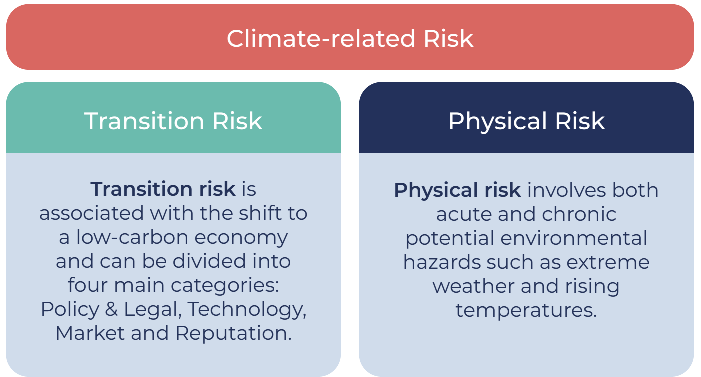


Figure 6 on the following pages depicts the climate-related risks and opportunities identified at Guinness Global Investors. We discuss these potential risks and how these are mitigated in our operations and portfolios.

Details of the risk identification, assessment, and management process at Guinness Global Investors can be found in **Section 3. Risk Management**.

Figure 6: Identified climate-related risks and opportunities at Guinness Global Investors
Source: Guinness Global Investors

Transition Risk - Policy & Legal

***Examples** (Source: TCFD)*

- Increased pricing of GHG emissions
- Enhanced emissions-reporting obligations
- Mandates on and regulation of existing products and services
- Exposure to litigation

Operations

Navigating regulatory changes entails costs and risks, including potential non-compliance repercussions and risks associated with greenwashing allegations. We understand the implications non-compliance may have in the immediate and long term.

To address these challenges, Guinness Global Investors' compliance team is dedicated to ensuring adherence to existing and forthcoming regulations. The Compliance team proactively monitor regulatory developments through horizon scanning and ensure emerging risks and obligations are assessed and addressed promptly and communicated to the Investment team.

Emerging regulations, such as the UK Sustainability Disclosure Regime (SDR), and climate-related directives including the TCFD, are closely monitored and discussed in our Compliance & Operations Committee meetings as well as Monthly Management Meetings and Responsible Investment Committee meetings. Our involvement in industry working groups such as UKSIF (where our Responsible Investment Lead sits on the Industry Development Committee, and another member of our Investment Team sits on the Membership Committee) and the CFA UK Sustainability Community Champions Group provides forums for us to consult, discuss and stay informed of regulatory updates and best practice.

Portfolio

For the companies in which we invest, heightened scrutiny could lead to litigation, fines, or reputational harm where relevant standards have not been met. In turn, failure to comply with regulations can impact a company's valuation, leading to fines and allegations of greenwashing, which pose immediate risks.

As regulatory frameworks evolve, the disclosure of climate-related information is becoming mandatory for many of our portfolio companies. In our climate-related risk scorecards, we use third-party tools to assess exposure to regions with high carbon regulatory risk and track metrics such as revenue exposure, emissions intensity, and target alignment. This is supported by ongoing controversy monitoring and engagement with our portfolio companies to set absolute emission reduction targets and demonstrate regulatory readiness. We believe this helps to reduce the potential impact of these medium and longer-term risks.

Importantly, alongside these risks, we also see material upside. For example, the US Inflation Reduction Act (IRA) has been a key driver of clean energy investment, offering substantial incentives for renewable energy, electrification, and low-carbon technologies. While we anticipate a dynamic policy landscape in the short term, many of the IRA's provisions are already being implemented and factored into long-term corporate strategies. The Guinness Sustainable Energy strategy is well positioned to benefit from these incentives while staying attuned to shifts in the regulatory landscape.

Figure 6 (continued): Identified climate-related risks and opportunities at Guinness Global Investors
Source: Guinness Global Investors

Transition Risk - Technology

***Examples** (Source: TCFD)*

- Substitution of existing products and services with lower-emission options
- Unsuccessful investment in new technologies
- Costs to transition to lower emissions technologies

Operations

Our London office was refurbished in 2017 and benefits from modern and efficient electrical equipment. Therefore, we believe the technology transition risk to our operations is considered de minimis in the short and medium term.

Portfolio

Our portfolio companies may face adverse effects that stem from changes in consumer demand or technological advancements. This may potentially diminish growth opportunities for companies with exposure to incumbent technologies, thereby reducing profitability. However, some companies may capitalise on these shifts, particularly those involved in green technology innovation. These outcomes may materialise over all time horizons. We believe we are well positioned to hedge our exposure to these risks through our strategies such as the Guinness Sustainable Energy strategy, which aims to benefit from the transition to a low-carbon economy.

Across our Global and Developed Markets, Specialist, and Asian and Emerging Markets strategies, our company ESG reviews often focus on evaluating the opportunities presented by lower-emissions technologies for current and prospective portfolio companies where deemed material. An ESG integration case study of glass fibre insulation provider, Owens Corning, is available in our latest Responsible Investment Report.

Figure 6 (continued): Identified climate-related risks and opportunities at Guinness Global Investors
Source: Guinness Global Investors

Transition Risk - Market

Examples *(Source: TCFD)*

- Changing consumer behaviour
- Uncertainty in market signals
- Increased cost of raw materials

Operations

Rising market costs may influence what we pay for our energy usage, which is considered in all time horizons, due to the potential volatility of power prices. We have engaged with our building landlord to encourage a transition to renewable energy tariffs, which could help mitigate the impact of fossil fuel-related supply shocks.

Portfolio

Like our operations, challenges such as increased volatility and rising input prices could impact our portfolio companies and affect their revenue. This could particularly affect equities in the energy, materials, and industrials sectors that are influenced by commodity prices. Further, consumer staples stocks which could be impacted by climate change through the effect on yields and supply chains of raw materials, thus increasing their costs. We view this risk in the medium to long term.

Our dedicated sustainable strategy, the Guinness Sustainable Energy strategy, has a distinct approach to identifying companies that the portfolio managers believe will benefit from changing consumer preferences. The Guinness Sustainable Energy strategy intentionally screens for companies delivering the products and services which will help to deliver the transition towards a low-carbon economy. The strategy is not limited to 'pure plays', opening its universe up to some companies with existing hydrocarbon-based fuel exposure, but this must be aligned with a commitment to transitioning their business models towards sustainable energy sources. Further, the multi-themed portfolio of the Guinness Global Innovators strategy includes clean energy and transition to a more sustainable economy as one of its nine core innovation themes used to assemble the broad universe of potential investments. Within this, it includes sub-themes of electric vehicles, the circular economy, and resource efficiency. These multiple themes, which are reviewed annually, act to diversify risk across the portfolio.

Figure 6 (continued): Identified climate-related risks and opportunities at Guinness Global Investors
Source: Guinness Global Investors

Transition Risk - Reputation

Examples *(Source: TCFD)*

- Shifts in consumer preferences
- Stigmatisation of sector
- Increased stakeholder concern or negative stakeholder feedback

Operations

Non-compliance risks, brand value, positioning, greenwashing, and consumer preferences for 'green' credentials are key concerns of Guinness Global Investors both operationally, and of our portfolio companies. This is a risk we consider in the short, medium, and long term. We are conscious that the operation of dedicated sustainable strategies poses additional reputational risks vis-à-vis our other investment product offerings.

Safeguarding our reputation is paramount and evolving consumer preferences require strategic solutions. To enhance transparency, we disclose our operational and portfolio sustainable activities within our Responsible Investment Report, Stewardship Report, and strategy-level papers (including their Approach to Responsible Investment & ESG) are available on our website's literature pages. We have also introduced Responsible Investment Factsheets as a simplified summary of fund-level ESG integration and annual stewardship activity.

We ensure compliance with existing regulations such as the EU SFDR and the UK SDR, rigorously monitoring progress through our quarterly Responsible Investment Committee meetings, Compliance and Risk Committee meetings and weekly team meetings. The Compliance team continuously monitors compliance with regulations and reports findings to the Responsible Investment Committee, the Monthly Management Committee and the Compliance Committee, as well as external parties where required. This enhances oversight of material issues to reduce any potential reputational risks of non-compliance.

Portfolio

We have robust monitoring mechanisms in place to ensure alignment with our strategy policies. We routinely screen companies for controversies, undertake ESG reviews, and perform a monthly check for our exclusions criteria to maintain integrity. Access to third-party tools and ratings providers further strengthens our due diligence processes across the Investment Team.

All our funds classified as Article 8 or Article 9 products under EU SFDR are required to invest solely in companies which follow good governance practices. As outlined in our Good Governance Policy, in assessing good governance, among other factors, we consider management structures, employee relations, staff remuneration, and tax compliance. Where relevant, good governance practices are encouraged via direct engagement and proxy voting activity.

We understand the immediate nature of reputational damage and its long-term implications when considering this transition risk.

Figure 6 (continued): Identified climate-related risks and opportunities at Guinness Global Investors
Source: Guinness Global Investors

Physical Risk - Acute & Chronic

Examples *(Source: TCFD)*

Acute
- Increased severity of extreme weather events such as cyclones and floods

Chronic
- Changes in precipitation patterns and extreme variability in weather patterns
- Rising mean temperatures
- Rising sea levels

Operations

Chronic climate change poses potential operational challenges for companies, including our own. Whilst our office in Westminster, London, is less susceptible to extreme weather hazards such as cyclones, the UK Government Environment Agency Flood Planning Tool identifies our office location as having a high probability of flooding from rivers and the sea due to our proximity to the River Thames. We lease the third floor of our office facilities with limited fixed physical assets on site. Therefore, we have the flexibility to relocate if physical climate risks begin to impinge on our direct operations. We operate with a flexible working structure, allowing our employees to work from home and avoid being affected by potential flooding of the office building. We acknowledge the potential financial costs in the short term, and likelihood of this risk increasing in the long term.

Rising global temperatures over an extended period could affect our operations, leading to heightened electricity consumption for amenities like air conditioning and building maintenance, increasing expenditure. This could amplify emissions and strain power costs, potentially impairing the company's profitability. We assess and monitor our own corporate footprint and aim to reduce our operational emissions and avoid where possible. We note at present the financial costs of these risks are negligible in relation to our organisational expenditure.

Portfolio

Our investments are not immune to these challenges. Like our own facilities, they may encounter similar consequences from rising mean temperatures and increased likelihood of extreme weather variability.

When conducting ESG analysis on portfolio holdings, we assess the materiality of physical climate risks on a company-by-company basis. We have conducted analysis at a strategy-level to pinpoint material physical risk issues by understanding the proportion of fund revenues derived from operations located in regions vulnerable to physical climate change risk factors. Analysis can be furthered by mapping locations of core manufacturing sites of a company in relation to areas most exposed to physical risks.

We conduct carbon footprint assessments across all investee companies and engage actively on emissions reduction targets, including external verification as science-based where relevant and/or appropriate.

We encourage portfolio companies to adopt TCFD-aligned disclosures through our stewardship activities, and advocate for annual disclosure to the CDP Climate Change questionnaire, which aligns with the IFRS S2 Climate-related Disclosures Standard. We believe these are foundational frameworks that support companies in assessing, monitoring, and mitigating acute and chronic physical climate risks.

TCFD Recommendation: Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning

Although we recognise the operational climate-related risks depicted in Figure 6 (Page 12-16), our primary focus is on the risks and opportunities affecting the portfolios we manage on behalf of our clients. Since investment management is our core business activity, the following pages discuss the impacts of climate-related risks and opportunities on the investment process of our strategies.

CLIMATE-RELATED IMPACTS OF OUR INVESTMENT STRATEGIES

In our investment areas of Specialist, Global and Developed Markets, and Asian and Emerging Markets we seek long-term investment returns for our clients. Understanding potential climate-related risks and opportunities is important to our ability to fulfil this investment mandate. Risk mitigation and scoping of opportunities is integrated into the investment process for all our strategies. During 2024, we continued to work on developing our analysis of the impact of remuneration, portfolio climate sensitivity, and positive impact analysis. Governance factors such as shareholder rights, committee structures, and overboarding (a director perceived to be sitting on an excessive number of boards, diminishing their ability to serve the organisation effectively) risks are also considered and assessed. Our investment strategies have exposure to different key themes, geographies, and sectors, diversifying the risk of climate-related issues, which will impact regions and industries differently.

We assess corporate management of climate related-risks and opportunities through our climate-related risk scorecards, which are discussed in more detail in **Section 4. Metrics & Targets**, by tracking board oversight and incentivisation of climate-related issues. As the transition to a low-carbon economy unfolds, we anticipate more companies integrating transition planning metrics into their executive incentivisation. Portfolio managers encourage investee companies, where they deem appropriate, to incentivise climate-related metrics. In the Guinness Sustainable Energy strategy, for example, we might ask companies to consider linking pay to sensible ESG targets, or align company pay to sustainable growth (on metrics such as return on invested capital (ROIC)), growing their positive impact (green sales / reducing customer CO_2 emissions) or reducing negative impact (CO_2 emissions reduction). Further case studies of companies within our other strategies can be found in **Section 3. Risk Management**.

Coverage for climate-reporting in our Specialist and Global and Developed Markets strategies is comprehensive across most of the jurisdictions we invest in. Beyond this, we are encouraged by the significant improvements in coverage across Asian and Emerging Market strategies over recent years. For instance, 77% (23/30) of Guinness China A Share Strategy portfolio companies now provide Scope 1 and 2 emissions disclosures, up from 23% (7/30) in 2020[7]. High-quality disclosures enable us to track companies' progress on material climate-related risks and their movement towards emission reduction targets to support themselves through the transition to a low-carbon economy. Quality reporting practices are often associated with better climate-risk management; however, we note they do not in themselves mitigate the challenges of climate change, as previously identified (Figure 6). We continue to engage with companies that do not report to CDP, which is expanded upon in **Section 3. Risk Management**.

[7]As of 31 December 2024. Please note the Fund was launched on 9 March 2023. The coverage figure for 2020 is based on historic disclosures from the companies held in the Fund as of 31 December 2024.

Across our strategies we assess whether any past or current controversies could have meaningful investment implications in the future. A key feature of our qualitative ESG assessment involves analysing the carbon transition risk of our portfolio companies. In some instances, where material, we examine portfolio companies' historical emissions and conduct stress tests on key financial metrics such as margins, earnings, return on equity, and net debt-to-equity under varying carbon price scenarios. As part of our carbon intensity review, we also look at the company's initiatives to reduce its carbon footprint and its governance oversight of these issues.

GUINNESS SPECIALIST STRATEGIES

The Guinness Sustainable Energy and Guinness Global Energy strategies lean on over 20 years of energy investing experience. They may face greater climate-related risks and opportunities than our other thematic strategies due to their sector concentration. The potential impacts of these risks and upsides from climate-related opportunities are acknowledged and worked into our investment processes.

THE GUINNESS SUSTAINABLE ENERGY STRATEGY

The Guinness Sustainable Energy strategy is positioned to benefit from many of the long-term themes associated with the transition towards a lower-carbon economy and of sustainable energy generation via investment in companies with activities that are economic with limited or zero government subsidy and which are profitable. The strategy does not limit itself to 'pure plays', opening the universe up to some companies with existing hydrocarbon-based fuel exposure, but this must be allied with a commitment to transitioning their business models towards sustainable energy sources. The strategy applies additional exclusions to Guinness Global Investors' firm-wide exclusions: companies that feature on the Norges Bank Exclusion List and companies with over 5% revenue exposure to the exploration and production of oil or gas.

The strategy invests in around 30 companies selected from a proprietary investment universe. The investment universe comprises around 250 companies which are classified into four key areas:

Displacement	Electrification	Installation	Generation
Companies involved in the displacement or more efficient usage of existing hydrocarbon-based energy.	Companies involved specifically in the switching of hydrocarbon-based fuel demand towards electricity, especially for electric vehicles.	Companies involved in the manufacture of equipment for the generation and consumption of sustainable energy.	Companies involved in the generation of sustainable energy, either pure-play or transitioning from hydrocarbon-based fuels.

THE GUINNESS SUSTAINABLE ENERGY STRATEGY IMPACT OPPORTUNITIES

Since 2019, the investment team has published an **Impact Report** to demonstrate how the companies the strategy invests in are helping to deliver the low-carbon transition. They believe that when companies and consumers buy heat pumps, electric vehicles, or renewable energy, rather than their fossil fuel equivalents, they contribute towards the global effort to combat climate change.

The Team focuses on CO_2 equivalent (CO_2e) greenhouse gas emissions displaced (positive impact) by the products and services of their investee companies. This is increasingly being described in the industry as Scope 4 emissions. In addition, they assess some of the areas of negative impact and controversy within the portfolio, which feeds into our risk identification and assessment.

In 2024, they published the strategy's sixth Impact Report, which maps company activities to the Sustainable Development Goals (SDGs), outlines their engagement efforts, and describes their positive impact methodology. The Team is mindful that impact measurement and reporting is developing and there is room for discussion around the approaches adopted. They continue to improve their methodology and processes to assess the impact of climate-related risks and opportunities.

THE GUINNESS GLOBAL ENERGY STRATEGY

The Guinness Global Energy strategy is designed to provide investors with exposure to growth opportunities in energy equities, such as oil and gas companies. These have inherently higher climate-related risks than companies in other sectors due to high emissions intensities related to fossil fuels. We continuously monitor our portfolio companies for controversies and measure their greenhouse gas exposures year-on-year in our internal climate-related risk scorecards. This enables us to highlight key areas of focus to engage with our investee companies to drive change. As active shareholders, we believe engagement is more beneficial than divestment to mitigate these risks as divestment could lead to high-emitting companies falling into the hands of less responsible owners. Further information on our risk management through active ownership can be found in **Section 3. Risk Management**.

GUINNESS GLOBAL AND DEVELOPED MARKETS STRATEGIES

Guinness Global and Developed Markets strategies include Guinness Global Equity Income, Guinness Global Innovators, Guinness European Equity Income, and Guinness Global Quality Mid Cap. The strategies utilise a bottom-up ESG framework, developed in-house, to assess quantitatively the sustainability risk associated with current and potential underlying investments. Using the SASB materiality framework, the strategies employ an internal scorecard that is used to evaluate a company based on various industry-specific ESG criteria. 'Materiality' and 'transparency' are two key components of the scorecard: the materiality component ensures the key risk factors to a company's operations are assessed, and the transparency component informs the team of the drivers of ESG scores at a granular level.

The strategies supplement this with a rigorous qualitative review, which features assessments of material risks and opportunities, good governance, executive remuneration, carbon transition, and exposure to negative externalities. This is complemented by strategy-level climate-related risk scorecards which are discussed in more detail in **Section 4. Metrics and Targets**.

GUINNESS ASIAN AND EMERGING MARKETS STRATEGIES

The Team employs climate assessments and monitoring in our Asian and Emerging Markets strategies. Coverage of climate-related risks and opportunities disclosures tends to be less comprehensive in Asia and Emerging Markets due to relatively lower regulatory pressures. As global sustainability disclosure standards increase, this gap has narrowed. This makes evaluating the impact of climate-related risks of companies within this strategy more difficult than for other strategies as portfolio companies are less likely to publicly disclose data and align reporting with global frameworks. Consequently, the team emphasise the importance of disclosure to platforms such as CDP. However, they factor deficiencies of public disclosure into their overarching firm strategy by travelling to meet companies face-to-face to build and develop strong stakeholder relationships. This enables the team to better understand climate-related risks and opportunities of portfolio companies, discuss their risk mitigation mechanisms currently in place, and encourage disclosures directly.

Accordingly, the investment team completed trips to East Asia to discuss a variety of strategic and ESG-related topics with investee companies. The team have found when building in-person relationships with companies that they were receptive to the perspectives of foreign shareholders, especially on ESG topics including climate. Recognising that meaningful dialogue often evolves over time, they are committed to maintaining open dialogue and have factored future trips into their financial planning to support this ongoing engagement. For more on their recent ESG-related engagement in China, please see our latest Responsible Investment Report.

CLIMATE-RELATED OPPORTUNITIES OF OUR INVESTMENT STRATEGIES

Across our strategies, we may invest in companies whose products, services, or innovations are aligned with the global transition to a low-carbon economy. These businesses are often well positioned to benefit from trends such as electrification, energy efficiency, renewable energy adoption, and the broader decarbonisation of industry and infrastructure. Below are examples of portfolio holdings that illustrate these climate-related opportunities.

CASE STUDY: Schneider Electric

Strategy: Guinness Sustainable Energy, Guinness Global Equity Income, Guinness Global Innovators, Guinness European Equity Income

Schneider Electric is a French company and global leader in energy management and automation solutions, enabling customers to improve efficiency, reduce emissions, and accelerate the transition to electrification. The company provides integrated hardware and software systems that support smart grids, energy storage, and industrial automation, all essential for a low-carbon future. The company aims to 'create Impact by empowering all to make the most of our energy and resources, bridging progress and sustainability for all,' and has been named in the Corporate Knights top 100 most sustainable companies in the world for fourteen consecutive years in a row, most recently being titled the only company to rank first in the Global 100 twice. Schneider's core focus on energy efficiency and digital solutions positions it well to benefit from increasing regulatory and corporate demand for decarbonisation and resilience across buildings, data centres, and infrastructure.

CASE STUDY: Infineon

Strategy: Guinness Sustainable Energy, Guinness Global Innovators

Infineon is a semiconductor company specialising in power electronics and sensor technologies that are critical to advancing climate solutions, particularly in electromobility, renewable energy, and energy-efficient appliances. Its semiconductors play a key role in improving the generation, transmission, storage and use of energy. A recent example of Infineon's sustainable product innovation is a new type of energy saving silicon carbide (SiC) module, which enhances the efficiency of high-performance electrical applications such as solar and wind power plants, as well as train drives. The module also facilitates the efficient electrification of large drives such as those found in agricultural and construction machinery, ships and aircraft. For instance, a single electric locomotive equipped with the new drive system can save around 300 megawatt hours per year, equivalent to the annual consumption of approximately 100 single-family homes. As the global economy accelerates towards electrification and net-zero targets, Infineon is well positioned to benefit from sustained growth in clean transport and renewable energy infrastructure.

CASE STUDY: Hongfa Technology

Strategy: Guinness Greater China, Guinness China A Share

Hongfa Technology is the largest electric relay manufacturer in the world and is well positioned to benefit from electrification and energy transition structural growth drivers. The increasing adoption of renewable energy sources and ongoing grid modernisation are tailwinds for relay demand, as wind, solar, and energy storage systems all require high-reliability relays for switching, integration, and circuit protection. The growing penetration of electric vehicles (EVs), particularly in China where Hongfa is headquartered, has supported demand for its high voltage direct current (HVDC) relays. These relays play a critical safety role within EV battery packs, by protecting circuits from sudden electrical surges - which can occur during charging, vehicle start-up, or under fault conditions. Hongfa supplies HVDC relays to global EV leaders, including Tesla and BYD, and is estimated to hold over 40% of the global HVDC relay market. Complementing its HVDC product range, Hongfa also benefits from rising automotive relay content per vehicle in EVs compared to internal combustion engine (ICE) vehicles. Automotive relays act as switches for a broad range of electrical components and are increasingly required as EVs incorporate more advanced features, such as adaptive lighting technologies, autonomous driving systems, and heated seats and steering wheels.

TCFD Recommendation: Describe the resilience of the organisation’s strategy, taking into consideration different climate-related scenarios, including a 2ºC or lower scenario

CLIMATE RESILIENCE

We believe in intelligent solutions for long-term investing in a rapidly changing world. Whilst we see our operational strategy as generally stable across potential climate scenarios, we recognise the growing importance of climate-related considerations at a product level for our portfolios.

Climate change is a global issue that poses risks to all companies and sectors to varying extents. It is imperative that as a long-only fund manager we track companies’ exposure towards climate-related risks and identify companies well positioned to benefit from the transition to a low-carbon economy (climate-related opportunities).

Responsible investment is integrated throughout our investment process across all strategies. Whilst environmental concerns may not be deemed material for every portfolio company, we view ESG assessments as crucial to understanding material risks and opportunities of a company and how well they are managed. This also allows us to understand a company’s contribution to global climate change and financial resilience amid evolving regulations and policies.

We believe that portfolio companies that have started to identify their climate-related risks and opportunities are better equipped to deal with the associated challenges and are therefore more resilient. We actively engage with our portfolio companies to improve climate-related disclosures, such as to CDP, and have in turn participated in the three consecutive annual CDP Non-Disclosure Campaigns (NDC).

Alongside disclosure, we monitor portfolio companies’ efforts to reduce emissions and advocate target setting with the aim of keeping global temperature rise below 1.5°C. We encourage portfolio companies to set science-based emission reduction targets and register them with the Science Based Targets Initiative (SBTi) to improve future resilience and mitigate transition and physical risks. Over 2023 and 2024, we conducted follow-up engagements with several portfolio companies covered by the 2023 CDP Science-Based Targets (SBT) Campaign. Following the Campaign’s conclusion, we now undertake target-related engagements with portfolio companies.

In addition to disclosure and target setting, we discuss remuneration strategies with our portfolio companies and endorse the use of environmental metrics within their short and long-term incentive plans. Case studies detailing our engagements with portfolio companies regarding these topics can be found on pages 33-37.

IMPLIED TEMPERATURE RISE (ITR) SCENARIOS

As part of our climate-related risk and opportunity assessments, we utilise tools such as ITR estimates from third-party providers. We use these in combination with qualitative analysis to form an independent view. In our experience, available tools to simulate temperature rise cases for scenario analysis do not give accurate assessments of transition risks and opportunities for our portfolios. We have found that different methodologies and data providers provide significantly divergent outcomes for the same company. Some companies well placed to aid the transition to a low-carbon economy, such as solar module producers, perform worse with these metrics than traditionally high-emitting companies that derive much of their revenue from ‘brown’ sources such as fossil fuel generation and extraction. Whilst we challenge the quality of this type of metric, its underlying data and methodologies, we consider this within our climate assessments in the absence of better metrics and continue to seek improved data and tools.

3. RISK MANAGEMENT

TCFD Recommendation: Describe the organisation's processes for identifying and assessing climate-related risks

TCFD Recommendation: Describe the organisation's processes for managing climate-related risks

RISK IDENTIFICATION, ASSESSMENT AND MANAGEMENT

At Guinness Global Investors, we consider climate-related risks and opportunities across our business, both operationally and to our portfolios.

WITHIN OUR OPERATIONS

At an operational level, we identify key potential climate-related risks by understanding our biggest operational exposures, such as business travel and commuting, highlighted in Figure 13 (page 39). We record all business trips and hotel stays through our finance department and survey our employees to understand how they commute to work and how often they work from home.

We calculate and record our company-level scope emissions to determine the activities that contribute the most to our emissions and have the most potential to affect our climate-related risks. We track our progress year-on-year and continuously look at ways we can reduce, and where possible, avoid operational emissions (Figure 7).

Guinness Global Investors encourage greener approaches both through business operations and staff activity. We have several procedures in place to improve the environmental footprint of the company, including recycling initiatives, energy efficient lighting, and electrical vehicle leasing and cycle to work schemes for employees.

Annual Responsible Investment training is delivered firm-wide. This covers:

- Education on what Responsible Investment is
- Consideration of Responsible Investment factors within the investment process
- Responsible Investment activity
- Stewardship activity
- Corporate responsibility
- Our Carbon Policy
- Operational scope emissions
- How to improve our carbon footprint, including raising awareness of the employee electrical vehicle leasing scheme and other internal initiatives

This allows us to ensure all employees are familiar with the Responsible Investment and ESG activity that is conducted across the firm.

MANAGING OUR OPERATIONAL FOOTPRINT

We believe it is important to apply the high standards we expect of our portfolio holdings to our own activities.

Our office is located on one floor of an office block in London. The building benefits from modern, efficient mechanical and electrical equipment which was installed in 2017 when the entire building was refurbished. This helps minimise operational climate-related risk exposure in the near term.

Since 2015, Guinness Global Investors has had a Carbon Usage Policy. We calculate and report our carbon emissions to create an annual carbon usage report to monitor our operational carbon emissions. Office energy consumption, business travel, and commuting are the greatest contributors to our operational carbon footprint and remain our key areas of focus. Working with our service providers to understand the opportunities to improve our carbon usage is a priority, and we encourage our employees to reduce the emissions they generate in their working lives.

Figure 7 depicts other measures in place to reduce our operational carbon footprint across electricity usage, water and waste, and travel and commuting.

Figure 7: Guinness Global Investors operational emission reduction measures

Source: Guinness Global Investors

ELECTRICITY USAGE

- Improving operational efficiencies and investing in technological innovation, such as energy-efficient and motion-activated LED lights installed throughout the office.
- The office has an open workspace layout, which requires fewer lights and other appliances than separate cubicles.
- Staff are encouraged to switch off electronic devices overnight.

WATER & WASTE

- We encourage conservation of water and other resources.
- No office waste goes to landfill. We recycle all paper and plastics and have a food and compostable bin in the office. General waste is incinerated.
- Internal documents are printed double-sided whenever possible to save paper and employees are encouraged to avoid unnecessary printing.
- Electronics are usually re-used or recycled.

TRAVEL & COMMUTING

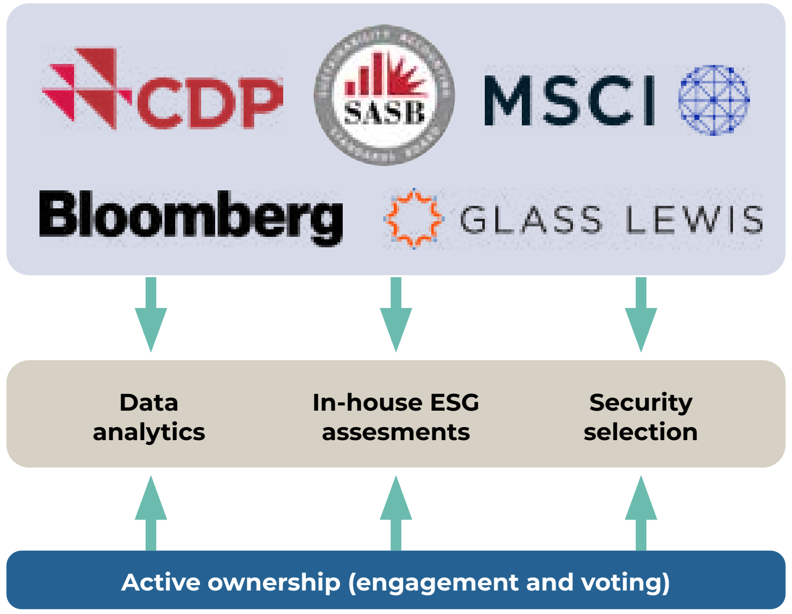
- A 'cycle to work' scheme to encourage employees to use low-carbon transport. The vast majority of our employees use public transport or bicycles to commute to work, which minimises individual employee emissions.
- A salary sacrifice scheme to encourage employees to lease or buy zero-emission vehicles.
- We regularly use video calling to avoid unnecessary travel and associated carbon emissions.
- Staff are encouraged to use public transport when attending external meetings outside of the office premises.

WITHIN OUR PORTFOLIOS

Climate-related risks are predominantly derived from our investment portfolios that we actively manage on behalf of our clients. Our concentrated portfolios allow us to pay close attention to the activities of our individual portfolio companies and track their climate-related risk mitigation and progress towards climate goals.

We use several third-party ESG data and research sources (Figure 8). As active managers, we believe that building our own holistic methodology to identify and assess ESG factors, including climate-related risks and opportunities, is better than relying solely on third-party scores or using an exclusionary criterion.

Figure 8: Incorporation process of ESG factors and stewardship activity
Source: Guinness Global Investors



Portfolio managers are empowered to tailor their processes to the geographic and sectoral focus of their strategies. ESG analysis, both qualitative and quantitative, is embedded into our investment process. The consideration of ESG issues, including those relating to climate, is a pragmatic part of our day-to-day activities as investors. It helps to form our understanding of the business model of a company, its potential to create long-term return on capital, and its mitigation of risk.

We use public sources of information, including annual reports, sustainability (or similar) reports, press releases, NGOs, proxy research from Glass Lewis and company presentations in addition to broker research and media sources. ESG research providers also help us determine the material risks and opportunities a company is faced with and how it addresses and reports on them.

Quantitatively, third-party data is integrated into our in-house valuation models and climate-related risk scorecards, which are discussed in more detail in **Section 4. Metrics and Targets**.

Our qualitative reviews involve an in-depth analysis of the material ESG risks of a company – considering what the company itself, third-party ESG data providers (Figure 8), and the SASB materiality framework deem material, along with our own knowledge of the company.

PORTFOLIO CLIMATE-RELATED RISK MANAGEMENT FRAMEWORK

Our framework for identifying, assessing, and managing ESG and climate-related risks is summarised in Figure 9. Across the firm, we have developed our analysis to assess portfolio climate sensitivity considering metrics including, but not limited to, the Weighted Average Carbon Intensity (WACI) of our funds in absolute terms and relative to their benchmarks. This is consolidated into climate-related risk scorecards which are presented to the portfolio managers and investment analysts for each strategy. More information on our climate-related risk scorecards can be found in **Section 4: Metrics & Targets**.

Figure 9: Guinness Global Investors portfolio climate-related risk management framework
Source: Guinness Global Investors

RISK IDENTIFICATION

- Portfolio managers and investment analysts are responsible for identifying potential risks for companies in their investment universe.
- Frameworks such as the SASB materiality standards are used as a starting point to map our portfolio companies to understand our material exposures.
- The Responsible Investment Team supports the wider investment team and conducts weekly controversies screening to identify any reported issues. The Team also track portfolio alignment to Guinness Global Investors' exclusions criteria and monitor portfolio companies' credentials.

RISK ASSESSMENT

- The Investment Team conduct quantitative and qualitative ESG reviews, identifying and assessing the material risks and opportunities of a company, including those relating to climate, which may impact business models and valuations. This allows us to form a complete and meaningful investment decision.
- Climate-related risk scorecards are created by the Responsible Investment Team. This allows us to track companies' carbon exposures including their carbon footprint, their carbon intensity, whether they report to CDP, and if they have set science-based targets (SBT) and registered it with the SBTi. We then aggregate this data at portfolio level to calculate each fund's carbon footprint and weighted average carbon intensity (WACI).

RISK MANAGEMENT

RISK MANAGEMENT

- Consideration of potential climate-related risks is embedded throughout decision making at Guinness Global Investors and they are discussed at committees including the quarterly Responsible Investment Committee meetings.
- Our climate-related risk scorecards are discussed in detail with portfolio managers and analysts for all strategies to highlight potential exposures.
- The Responsible Investment Team performs ongoing exclusion checks to ensure portfolios comply with exclusion policies and ESG score analysis to monitor risks.
- Our ESG reviews support the identification of engagement priorities for portfolio companies on an ongoing basis. Further, they inform voting activities and at their discretion, portfolio managers will escalate issues where they deem it appropriate.
- The Compliance team conducts monthly and quarterly ESG monitoring reviews to assess whether the ESG process as described in the relevant fund disclosures has been followed. The findings are reported to the Responsible Investment Committee, the Monthly Management Committee, the Compliance Committee and external parties where required.

RISK MANAGEMENT IN STOCK SELECTION

Risk management is fully integrated into the investment process performed by portfolio managers. Negative factors (such as oil spills) can cause a sharp correction in a share price once in the public domain, and therefore, lead to a long-term negative reputation for the company. This is in contrast to positive factors (such as improving climate governance or management alignment), which can materialise over long time horizons. It is for this reason that we believe investment managers who actively engage with investee companies to help improve their management of ESG factors, including climate-related risks and opportunities, can leverage a potential competitive advantage over those that do not.

ENERGY INSIGHT: CLIMATE-RELATED RISK AND ESG INTEGRATION

By its nature, the energy industry is one of the most exposed sectors to global climate-related risks and opportunities.

Across our Specialist strategies, our analysis uses both a bottom-up and top-down approach. In addition to oil and gas price sensitivities, understanding the key macro drivers of energy markets is integral to our process. This holistic approach allows us to take long-term views on different energy technologies and identify climate-related risks and opportunities.

Key to our micro analysis and stock selection is the assessment of risk adjusted value in the equity of each company. Good ESG behaviours from our companies (e.g. robust risk management and long-term planning; allocating capital wisely; or integrating well with the communities in which they operate) are important components in defining future return on capital employed and future equity value. However, we will consider owning a company that has some weaker ESG characteristics if, after these considerations, we see an attractive risk adjusted valuation and a positive direction of travel with respect to these issues. Forming part of the due diligence we undertake when selecting investments, this process encompasses a detailed review of a company's strategy, financial and nonfinancial performance and risk, and capital structure.

Top-down factors at play in our global energy transition model include government incentives, subsidies, urban pollution, energy security, as well as carbon pricing and taxation. Many of these are as important as economic factors in forming a view on the winners and losers in the energy transition. For example, we must understand the environmental, social and political drivers behind renewable power generation taking market share from fossil fuel power sources as carbon costs increase.

Using bottom-up analysis, we capture quantifiable effects of these issues on company valuations through our in-house model which enables us to flex various operating and financial assumptions to account for the effect of ESG issues and to assess their impact on valuation.

QUANTITATIVE ANALYSIS INCLUDES:

- Flexing the cost of capital in our discounted cash flow (DCF) models (for example to allow for geopolitical, social and governance risk around emerging market companies).
- Flexing our target multiples (potentially using higher multiples for better 'quality' companies, including those that have better ESG characteristics).
- Flexing carbon costs (or credits) to assess potential impacts on operating costs associated with energy saving or de-carbonising activities (or carbon emissions for companies that have carbon-emitting operations).

RISK MANAGEMENT

TCFD Recommendation: Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management

CLIMATE-RELATED RISK INTEGRATION

As responsible investors, we incorporate ESG factors, including climate-related risks, into our investment process. Through ESG integration, we can identify material issues that we attempt to mitigate via active ownership and stewardship, which includes proxy voting and one-to-one or collaborative engagements with our portfolio companies.

The process of exclusions screening helps to identify and remove companies with high embedded climate-related risks from our investible universes. Implementation of exclusion policies is overseen by the Responsible Investment Team and Compliance Team. In 2024, a new Head of Investment Risk role was created to help further systemise our risk management functions and evolve our risk integration processes.

Our ESG reviews and climate-related risk scorecards provide an assessment of risks that are discussed with all members of the Investment Team for their relevant strategies to understand their climate-related exposures and how this may affect their portfolios. Further, climate-related risks are integrated through our governance structures including the **Responsible Investment Committee**, which ensures climate-related risks are a standing item at each quarterly meeting and members are responsible for integrating these considerations in their daily practices.

Managing risk through ESG education, among other topics, ensures all relevant personnel are aware and updated on processes. Moreover, our annual firm-wide ESG session ensures all employees are aware of material issues and the integration of ESG into our operational and investment processes are understood. Guinness Global Investors encourages further training and development, supporting its employees if they wish to undertake further ESG education such as the CFA Sustainable Investing Certificate, which several members of the Investment Team and wider company have completed.

Active ownership and stewardship, namely through proxy voting and engagement activity, create an open dialogue between us and our portfolio companies, which can help to manage risks we have identified and assessed through our ESG incorporation processes. We engage with investee companies for a number of reasons including influencing investee companies proactively on ESG issues (including those relating to climate), encouraging improved or increased ESG disclosure, and to gain a greater understanding of their ESG strategy. We view proxy voting as an important element of investment management and our voting philosophy reflects our values, our long-term perspective and our focus on sustainable returns.

We outline our processes of exclusions screening, as well as our active ownership and stewardship activity. Case studies of our one-to-one and collaborative engagements can be found on the following pages.

EXCLUSIONS

CORPORATE-LEVEL

An alternative way to address climate and other ESG risks is through the exclusion of specific activities from portfolios. We believe that excluding activities that present the most harm to society and the environment is appropriate when there is no pathway to transition. Accordingly, under the remit of climate, our Corporate-Level Exclusion Policy systematically excludes companies that generate more than 30% of revenues via thermal coal extraction or thermal coal power generation.

Figure 10: Corporate-level exclusions at Guinness Global Investors
Source: Guinness Global Investors

Thermal Coal Extraction

Controversial Weapons

Thermal Coal Power Generation

STRATEGY-LEVEL

Relevant strategies including Guinness Sustainable Energy, Guinness Global Quality Mid Cap, Guinness Global Innovators, and Guinness Global Equity Income have additional exclusionary criteria to our corporate-level exclusions. More details can be found in each strategy's **exclusion policy** on our website.

QUANTITATIVE CLIMATE ASSESSMENTS AND PROGRESS MONITORING

We have in-house modelling capability that assesses the carbon footprint, and therefore **carbon-related risk** exposure, of our portfolios. These inform **climate-related risk** scorecards which are produced by the Responsible Investment Team for all strategies, who are a dedicated resource with climate analysis expertise. These are presented to the wider investment team to understand risks at the portfolio and individual company level. Further, our Global and Developed Markets and Specialist investment strategies have in-house methodologies to flex **climate-related assumptions** into the valuation models of companies. We track our portfolio companies' approach to climate issues and net-zero on an ongoing basis. Their disclosures, targets, and incentives are recorded and monitored, which helps to identify engagement priorities.

STEWARDSHIP

We embrace the stewardship responsibilities we assume as investment managers. We produce an annual Stewardship Code Report, in response to the **Stewardship Code 2020**. The Stewardship Code requires investors to be transparent about their investment processes, with a set of 12 'comply and explain' principles for asset managers. We conduct proxy voting and engage with portfolio companies on a wide range of issues, including climate-related matters such as disclosures, target setting, and governance and incentivisation.

RISK MANAGEMENT

PROXY VOTING

Our portfolio managers are empowered to make voting decisions which they believe are in the best interest of our underlying clients, based on their own research informed by (but not delegated to) third-party research providers.

We may decide to vote against the election of directors, remuneration reports and policies, or other management resolutions if we are dissatisfied with a company's approach or addressal of climate-related risks. This forms an integral component of our active stewardship at Guinness Global Investors.

CLIMATE CONSIDERATION WITHIN VOTING

The Specialist Equity team integrates climate considerations into its proxy voting. For example, if a company in a carbon-intensive industry does not complete the CDP survey or does not produce TCFD-aligned disclosures, the team may vote against the company's reports and accounts. If a company held in the Global Energy strategy receives the lowest score possible for its decarbonisation strategy under Climate Action 100+'s benchmark assessment, the team may vote against the re-election of the company's Chair. If the company receives this score for two years in a row or more, they may escalate this to vote against the re-election of the Chair and CEO. Furthermore, if a company has no carbon reduction targets in place, they may abstain on the CEO's re-election.

PROXY VOTING CASE STUDY: China Petroleum and Chemical Corporation ("Sinopec")

China Petroleum and Chemical Corporation ("Sinopec"), a holding in our Global Energy Fund, is a major integrated national energy company.

In 2024, we voted against Sinopec's Accounts and Reports because the company fails the Carbon Tracker Climate Accounting and Audit Assessment. The company also does not report to CDP.

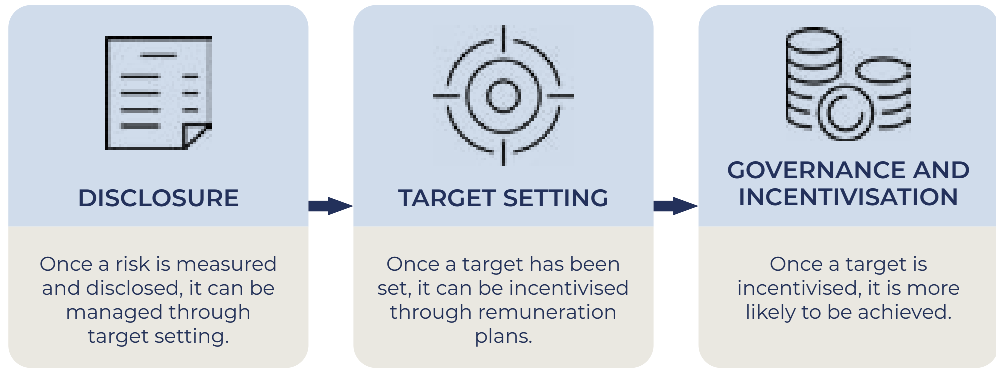
As part of our escalation, we also voted against its President, Zhao Dong, because the company failed to meet any criteria under the CA100+ decarbonisation strategy indicator. This has been the case for several years, and suggests the company provides insufficient disclosure around how it plans to achieve its medium- and long-term greenhouse gas reduction targets.

ENGAGEMENT

In addition to fundamental analysis, a core approach to managing climate-related risks across our strategies is through engagement. Each investment strategy team at Guinness Global Investors conducts one-to-one engagements on issues material to their respective portfolio companies, including those related to climate change.

Our climate-related engagement framework typically revolves around three pillars, as shown in Figure 11.

Figure 11: Guinness Global Investors' climate-related engagement framework
Source: Guinness Global Investors



Engagement is a two-way conversation, where dialogue and progress often take place over several years. The following pages depict examples from the Investment Teams on their engagement activity regarding emissions **disclosures**, **target setting**, **governance and incentivisation**.

When undertaking climate-related engagements, we commonly ask companies to produce an ESG report, produce TCFD-aligned disclosures, disclose their emissions, complete the CDP climate survey. Where applicable we may also ask them to disclose green product revenues or estimate the carbon emissions avoided through the use of their products by customers.

When we engage on target setting, we often ask companies to set carbon reduction targets and register them with the Science Based Targets initiative (SBTi) where appropriate. Where relevant, we may also ask companies to set targets to phase out fossil fuels from their generation mix or set a target for green product sales. When we engage with companies on incentivisation, we request companies provide transparent disclosure on which metrics they use to incentivise management. Where portfolio managers deem relevant, we encourage climate-linked metrics to be included in the incentive plan.

RISK MANAGEMENT

CASE STUDY: Public Bank Berhad

Strategy: Guinness Asian Equity Income

Engagement topic: Disclosure

Public Bank Berhad is a Malaysian financial group offering banking and financial services across Malaysia and the broader Asia-Pacific region.

In June 2023, we contacted the company as part of the CDP Non-Disclosure Campaign (NDC), encouraging them to improve climate-related transparency by reporting to CDP's annual questionnaire. Although the company did not submit a response that year, we re-engaged in 2024, emphasising the value of CDP disclosure in aligning with international best practices and demonstrating climate risk awareness to investors. We were pleased to see that Public Bank Berhad reported to CDP in 2024, a positive step toward enhanced environmental disclosure and accountability.

CASE STUDY: Itron

Strategies: Guinness Sustainable Energy

Engagement topics: Target Setting and Incentivisation

Itron is a leading global provider of advanced metering infrastructure and software used by utilities to optimise the delivery and use of electricity and gas for end customers. In our review in 2021, we noted that disclosures were improving and that the company was planning to set new emissions reduction targets in 2022.

In June 2022 the company committed to achieving a 50% reduction in Scope 1 and 2 emissions by 2028, carbon neutrality by 2035, and net zero by 2050 or sooner. In the same month, we arranged a call to congratulate management on these comprehensive targets and asked whether they had considered incorporating them into executive remuneration. We were told that this had been discussed, but that the board believed a focus on revenue, profitability and cashflow was more important in the near term.

In December 2022, we held a meeting with members of the board to discuss the company's climate governance and incentivisation further. We asked the Chair of the Remuneration Committee and the Chair of the Board directly whether they would consider linking Itron's climate commitments to CEO pay. Once again, they told us that their current focus was on profitability and cashflow. Understanding that the business was in a cyclical trough, we accepted the near-term prioritisation of financial metrics and came away feeling that the board had heard our requests and would seek to incorporate ESG metrics into executive compensation once profitability had improved.

In March 2024, after five consecutive quarters of profit margin improvement, Itron released its 2024 proxy statement, updating its long-term incentive plan to include a 10% link to the company's GHG reduction targets.

RISK MANAGEMENT

CASE STUDY: Enphase Energy

Strategies: Guinness Sustainable Energy, Guinness Global Quality Mid Cap

Engagement topic: Disclosure

Enphase Energy ("Enphase") is a leading supplier of microinverters for solar modules in US residential solar systems. As of 31 December 2023, the company had shipped over 73 million microinverters since its inception, contributing to an estimated 56 million tCo2e in emissions avoided. We engaged with the company in 2022, encouraging them to expand their Scope 3 reporting categories and submit to CDP.

In their 2023 ESG report, published in May 2024, Enphase disclosed emissions accounting for Scope 3 categories 1, 4, 6, and 9, representing significant progress from its 2021 report, which only covered Category 6 (business travel). This broader reporting provides a more accurate reflection of the company's total carbon footprint and complements its established Scope 4 reporting. We also welcomed the company's first submission to CDP in 2023, a step which positions Enphase well to meet with evolving global regulatory standards.

CASE STUDY: Canadian Natural Resources

Strategy: Guinness Global Energy

Engagement topics: Incentivising production

Canadian Natural Resources ("Canadian Natural") is an integrated energy producer. We identified executive remuneration as a key engagement priority on the grounds that the company's executive LTIP directly incentivised production and overemphasised TSR. Our primary engagement objective was to remove reserves growth as a metric, with TSR reduction as a secondary objective.

We typically do not support executive remuneration at oil and gas companies which incentivises production growth and would rather see return on capital metrics or emissions reduction incorporated.

Ahead of the 2024 AGM, we engaged with Canadian Natural, highlighting that we would not support the advisory vote on executive compensation under the 2023 structure. While we were pleased to see the removal of the 33.33% weighting to reserves growth per share at the 2024 AGM, it was reallocated to relative TSR, which did not fully address our concerns. As such, we did not support the resolution and will continue to encourage the company to integrate return on capital metrics or emissions reduction into the LTIP.

CASE STUDY: KLA Corporation

Strategies: Guinness Global Innovators

Engagement topics: Target setting

KLA is a leading provider of equipment and services for the semiconductor industry. The company first announced its commitment to reducing Scope 1 and 2 GHG emissions by 50% by 2030 from a 2021 baseline, alongside a goal to source 100% renewable electricity across its global operations by 2030. Additionally, KLA began modelling efficiency metrics and product roadmaps to establish a Scope 3 emissions reduction target. Subsequently, the company committed to reducing Scope 3 emissions from the use of sold products by 52% per billion transistors inspected, measured, or processed by customers operating KLA equipment at their manufacturing sites, using a 2021 baseline.

We first engaged with KLA in 2023, encouraging the company to submit its emissions targets to the Science Based Targets initiative (SBTi). We also co-signed a letter sent to the company by CDP encouraging a SBTi submission and followed up by directly emailing Investor Relations to reinforce the merits of this commitment.

We were pleased to see that in August 2024 KLA received SBTi verification for its near-term science-based GHG emissions targets, including its new Scope 3 target. We see this as a significant step forward in KLA's sustainability journey and an important milestone towards achieving its 2050 Net Zero ambition for Scope 1 and 2 emissions.

COLLABORATIVE ENGAGEMENT

Our climate-related risk analysis has fed into our engagement activity and has had an influence on our collaboration with external initiatives. We believe working collaboratively with other investors and investor groups allows us to achieve better outcomes in some instances, both for the market and our individual clients. One collaborative engagement programme in which we participate is Climate Action 100+ (CA100+), a leading engagement group on the issue of greenhouse gas emissions. More details are provided in the following case study.

We regularly engage with our portfolio companies to understand how they manage their relevant risks over time. This feeds into discussions regarding investment decisions and stock selections. As climate-related issues intensify, we appreciate the significance of transparent climate-related disclosures and tangible targets for reducing greenhouse gas emissions. We ask our portfolio companies to report to CDP (formerly known as the Climate Disclosure Project), and participate in the CDP Non-Disclosure Campaign, to enhance transparency of disclosures. In 2023 we also participated in the CDP Science Based Targets (SBT) campaign to encourage companies to set approved science-aligned targets and register them with the Science Based Targets Initiative (SBTi). We encourage companies that make significant contributions to global greenhouse gas emissions to adapt their business models to align with the transition to a low-carbon economy.

CASE STUDY: Climate Action 100+

Since 2019, we have been members of **Climate Action 100+**, the world's largest-ever investor engagement initiative on climate change. In 2023, the initiative transitioned to its second phase. We shifted our engagement focus from Devon Energy to Imperial Oil, an integrated Canadian energy producer, after the former was removed from the initiative's updated focus list of engagement companies.

In 2024, our engagement efforts focused on ensuring robust board oversight of Imperial Oil's decarbonisation strategy. This included co-signing a letter to two of the Imperial's longest-serving independent directors, engaging them on Board and Audit Committee-level oversight of decarbonisation plans. We are advocating for a flexible approach here, recognising the key role anticipated for carbon capture and storage (CCS) infrastructure in reducing emissions.

We anticipate discussing a range of topics with the company in 2025, including Canada's regulatory emissions frameworks, methane reduction strategies, and the incentivisation of medium-term emissions intensity targets.

CASE STUDY: CDP NDC and SBT Campaigns

We participate in the **CDP Non-Disclosure Campaign (NDC)**, which aims to drive further corporate transparency around climate change, deforestation and water security. In 2024, we were the lead signatory for letters sent to 27 portfolio companies as part of the CDP Non-Disclosure Campaign (NDC). We were responsible for managing the correspondence on behalf of both ourselves and a range of other investors involved in the campaign, requesting that the companies disclose to the CDP Climate Change questionnaire. We were pleased to see Malaysian financial group, Public Bank Berhad, and Chinese electronic component manufacturer, Xiamen Faratronic, submit to the 2024 CDP reporting cycle.

In 2023, we also joined the **CDP Science-Based Targets (SBT)** Campaign, to encourage portfolio companies to commit to and set 1.5°C-aligned science-based targets. We co-signed a variety of letters sent to companies by CDP and followed up directly with several relevant portfolio companies in the Global and Developed Markets, Specialist, and Asian and Emerging Markets investment strategies. Whilst the campaign did not run again in 2024, we continue to engage with portfolio companies on SBTi where deemed appropriate.

4. METRICS & TARGETS

TCFD Recommendation: Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management processes

PORTFOLIO CLIMATE-RELATED METRICS

We are aware that as an asset manager, our principal emissions are derived from the Greenhouse Gas Protocol's Scope 3 'Category 15: Investments', from our portfolios that we manage on behalf of our clients.

Since 2021, we have developed our climate accounting methodology to analyse climate-related metrics at the fund level, allowing us to examine the underlying portfolio companies to understand our climate-related risk and opportunity exposures.

We create climate-related risk scorecards (Figure 12) using company-reported and CDP emissions data where it is available, and emissions estimates from a third-party where it is not, to form a holistic view of our portfolio's climate risks and opportunities and track year-on-year progress. These climate-related risk scorecards are used internally.

Our climate-related risk scorecards assess the portfolio's exposure to these risks and opportunities at a company and aggregated portfolio level, using metrics listed below. We monitor these factors, identify laggards and highlight engagement priorities for portfolio companies including:

- Carbon emissions measures including Total Carbon Footprint and Weighted Average Carbon Intensity (WACI)
- The proportion of fund revenues derived from regions highly vulnerable to carbon regulatory risk and physical climate risks
- Green vs brown revenues
- Board and executives of companies have oversight and incentives related to climate issues
- Companies' targets and timelines in place to reduce their emissions

The carbon metrics listed are in line with those recommended for asset managers by the TCFD. We have calculated our carbon exposures for our UK-domiciled funds (Figure 2 - page 5), within our strategies of Global and Developed Markets, Specialist, and Asian and Emerging Markets.

Figure 12: Climate-related risk scorecards example
Source: Guinness Global Investors

TCFD Recommendation: Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks

TCFD Recommendation: Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets

OPERATIONAL CARBON FOOTPRINT

Figure 13: Emissions associated with Guinness Global Investors' operational activities
Source: Guinness Global Investors

2024 Carbon Usage Summary		
Guinness Operational Activities	**Location-based (tCO_2e)**	**Market-based (tCO_2e)**
Scope 1		
Gas Usage	16.1	16.1
Total Scope 1 emissions	**16.1**	**16.1**
Scope 2		
Electricity usage	9.2	6.0
Total Scope 2 emissions	**9.2**	**6.0**
Scope 3		
Business travel	133.5	133.5
Commuting	21.2	21..2
Working from home (teleworking)	21.8	21.8
Total Scope 3 emissions	**176.5**	**176.5**
Total Estimated Carbon Usage (tCO_2e)	**201.8**	**198.7**
Total Estimated Carbon Usage per employee (tCO_2e)*	**2.52**	**2.48**
**Based on 80 employees*		

Please note Figure 13 exhibits Guinness Global Investors' operational footprint only, as of 31 December 2024, and does not depict scope 3 emissions associated with our investment portfolios.

The estimates for Scope 1 and 2 are based on the utility bills provided by our landlord. Our Scope 2 emissions are reported using both location-based and market-based methodologies. The location-based approach uses the average emissions intensity of the UK electricity grid, whereas the market-based method uses the energy mix of the relevant energy providers.

The GHG Protocol defines 15 categories of Scope 3 emissions. In Figure 13, we have calculated estimates of our Scope 3 Category 6 (Business Travel) and Category 7 (Employee Commuting and Teleworking) emissions. In 2023, we introduced accounting for the emissions associated with hotel stays for the first time (within Category 6: Business Travel).

Increased domestic and international travel by our sales and investment teams accounted for a significant portion of the increase to our operational Scope 3 emissions in 2024 (at present this does not include emissions from Scope 3 Category 15: Investments), compared to respective 2023 figures. The increased business travel arises from investment team trips to East and South-East Asia to meet and engage with investee companies.

During 2024, we updated our Commuting survey for all permanent employees on their commuting patterns and working arrangements. We have a flexible working structure within the organisation, although we have seen an increased number of employees return to the office since the COVID-19 pandemic. Commuting figures (Scope 3) are estimated using the results of the survey, determined by the frequency of office attendance, distance travelled, and modes of transport used.

Please note our carbon usage summary is made on a best-efforts, unaudited basis, using internal estimates derived from the **Government's Greenhouse Gas Reporting: Conversion Factors**. This activity is completed on an annual basis when data becomes available.

We announced our 2030 corporate Net Zero Target in our 2024 Responsible Investment Report. We have recorded our company-level scope emissions for the past 10 years and our related reporting is growing. We are currently investigating methods to reduce our corporate Scope 1 and Scope 2 emissions and developing our forward-looking strategy. We will prioritise reducing real-world emissions and may purchase high-quality carbon credits to offset any residual emissions.

PORTFOLIO EMISSIONS

We monitor the carbon intensity of portfolio companies and funds relative to their Enterprise Value and Revenue. This involves examining both direct emissions (Scope 1 & 2) and emissions across the value chain (Scope 3). Figure 14 shows the internally calculated emissions and carbon metrics of our UK-domiciled funds. The methodologies behind Figure 14 can be found in Appendix 1.

While companies are increasingly reporting on Scope 1 and 2 emissions, reporting on Scope 3 emissions is still evolving. Many companies either do not disclose any Scope 3 emissions or provide partial disclosures covering one or two of the 15 categories, often missing categories material to them. Whilst disclosure is slowly improving, incomplete data makes Scope 3 analysis challenging. Data quality is also questionable due to the following:

- Some categories are material but not yet calculated;
- Different companies may use different methodologies for similar categories;
- Different companies rely to different extents on supply chain partner data;
- There can be significant swings in calculations from year to year; and
- Third party estimates can vary materially.

The carbon metrics listed are in line with those recommended for asset managers by the TCFD. We have calculated our carbon exposures for our UK-domiciled funds (Figure 2 - page 5), within our Global and Developed Markets, Specialist, and Asian and Emerging Markets strategies.

Figure 14: Guinness Global Investors UK-domiciled fund carbon metrics
Source: Guinness Global Investors, CDP, MSCI
Data as at 31st December 2024

2024 Portfolio Carbon Metrics		Total Carbon Emissions (tCO_2e)		Carbon Footprint (tCO_2e/US$M invested)	Weighted Average Carbon Intensity (tCO_2e/US$M sales)
	AUM (USD)	Scope 1 & 2	Scope 3	Scope 1 & 2	Scope 1 & 2
WS Guinness Global Equity Income Fund	$296mn	2,055	111,480	7	26
% AUM Coverage		*100%*	*100%*	*100%*	*100%*
WS Guinness Global Quality Mid Cap Fund	$0.7mn	4	114	5	19
% AUM Coverage		*96%*	*96%*	*96%*	*96%*
WS Guinness European Equity Income Fund	$0.8mn	8	400	10	15
% AUM Coverage		*100%*	*100%*	*100%*	*100%*
WS Guinness UK Equity Income Fund	$1.2mn	37	1,340	30	23
% AUM Coverage		*100%*	*100%*	*100%*	*100%*
WS Guinness Global Innovators Fund	$17mn	76	3,602	4	21
% AUM Coverage		*100%*	*100%*	*100%*	*100%*
WS Guinness Global Energy Fund	$62mn	24,651	186,638	400	381
% AUM Coverage		*100%*	*100%*	*100%*	*100%*
WS Guinness Sustainable Energy Fund	$8mn	910	6,441	119	244
% AUM Coverage		*100%*	*100%*	*100%*	*100%*
WS Guinness Asian Equity Income Fund	$1.0mn	17	310	16	44
% AUM Coverage		*97%*	*97%*	*97%*	*97%*

APPENDIX 1

Table 1: TCFD-recommended common carbon footprinting and exposure metrics for the financial sector
Source: Task Force on Climate-related Financial Disclosures

Metric	Supporting Information	
Total Carbon Emissions	*Description*	The absolute greenhouse gas emissions associated with a portfolio, expressed in tonnes CO2e.
	Formula	$\sum_{n}^{i}\left(\frac{\text{current value of investment}_i}{\text{issuer's market capitalization}_i} \times \text{issuer's Scope 1 and Scope 2 GHG emissions}_i\right)$
	Methodology	Scope 1 and Scope 2 GHG emissions are allocated to investors based on an equity ownership approach. Under this approach, if an investor owns 5 percent of a company's total market capitalisation, then the investor owns 5 percent of the company as well as 5 percent of the company's GHG (or carbon) emissions. While this metric is generally used for public equities, it can be used for other asset classes by allocating GHG emissions across the total capital structure of the investee (debt and equity).
Carbon Footprint	*Description*	Total carbon emissions for a portfolio normalised by the market value of the portfolio, expressed in tons CO2e/$M invested.
	Formula	$\frac{\sum_{n}^{i}\left(\frac{\text{current value of investment}_i}{\text{issuer's market capitalization}_i} \times \text{issuer's Scope 1 and Scope 2 GHG emissions}_i\right)}{\text{current portfolio value (\$M)}}$
	Methodology	Scope 1 and Scope 2 GHG emissions are allocated to investors based on an equity ownership approach as described under methodology for Total Carbon Emissions. The current portfolio value is used to normalize the data.
Weighted Average Carbon Intensity (WACI)	*Description*	Portfolio's exposure to carbon-intensive companies, expressed in tonnes CO2e/$M revenue.
	Formula	$\sum_{n}^{i}\left(\frac{\text{current value of investment}_i}{\text{issuer's market capitalization}_i} \times \frac{\text{issuer's Scope 1 and Scope 2 GHG emissions}_i}{\text{issuer's \$M revenue}_i}\right)$
	Methodology	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 (as described under methodology for Total Carbon Emissions). Gross values should be used.

APPENDIX 2 - INDUSTRY INITIATIVES

We value opportunities to be involved in the development of good practice in responsible investment. We participate in a range of industry groups in order to gain the opportunity to collaborate on, influence, and obtain enhanced knowledge of ESG issues and challenges within the industry.

We are a member of **CDP**, which allows us access to environmental data for all companies that report to CDP. Through our membership, we participate in collaborative engagements, such as the CDP Non-Disclosure Campaign (NDC). The NDC aims to drive further corporate transparency around climate change, deforestation and water security by encouraging companies to respond to CDP's disclosure requests.

CFA UK's mission is to build a better investment profession serving the public interest by educating investment professionals and by promoting and enforcing ethical and professional standards. A member of the investment team at Guinness is part of the Sustainability Community Champions group.

Since 2019, we have been members of **Climate Action 100+**, the world's largest-ever investor engagement initiative on climate change. We collectively engaged with a US-listed oil & gas producer across a wide range of topics including remuneration and methane reduction.

The **Independent Investment Management Initiative (IIMI)** aims to contribute effective financial regulation and promote client-centred models of investment management. Our CEO sits on the board of IIMI.

As the trade body for the UK investment management industry, the **Investment Association (IA)** seeks to represent industry interests and improve the investment landscape through thematic initiatives which highlight topics such as diversity and inclusion and by developing standards and best practice.

We became signatories to the **UN PRI** in 2019, which provides external assurance on our stewardship approach broken down by activity.

The **UK Stewardship Code** 2020 sets high stewardship standards for those investing money on behalf of UK savers and pensioners. It comprises a set of 12 'apply and explain' principles for asset managers and asset owners to demonstrate their stewardship role and practice.

The **UK Sustainable Investment and Finance Association (UKSIF)** aims to support its members to grow sustainable and responsible finance in the UK. It also seeks to influence policymaking that promotes the growth of sustainable finance. Our Responsible Investment Lead is a member of the Industry Development Committee, and another member of the investment team serves on the Membership Committee.

IMPORTANT INFORMATION

This document is provided for information only. All the information contained in it is believed to be reliable but may be inaccurate or incomplete; it should not be relied upon. It is not an invitation to make an investment, nor does it constitute an offer for sale.

References to specific securities are included for the purposes of illustration only and should not be construed as a recommendation to buy or sell these securities.

The documentation needed to make an investment, including the Prospectus, the Key Investor Information Document (KIID) and the Application Form, is available from our website: guinnessgi.com.

The funds invest mainly in shares, and the value of these may fall or rise due to a number of factors, including the performance of the company and general stock market and exchange rate fluctuations. The value of your investment may rise or fall, and you could get back less than you invest. Past performance is not a guide to future performance. Further information about risks can be found in the Prospectus.

Issued by Guinness Global Investors, a trading name of Guinness Asset Management Ltd.

The Investment Manager, Guinness Asset Management Ltd, is domiciled in the United Kingdom and is authorised and regulated by the Financial Conduct Authority.

WS Guinness Investment Funds, the umbrella fund with the WS Guinness sub-funds, is domiciled in the United Kingdom and is authorised and regulated by the Financial Conduct Authority as a UCITS fund.

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