

BAILLIE GIFFORD

Baillie Gifford Managed Fund

TCFD Climate Report for the year ending 31 December 2022

Prepared using the Task Force on Climate-related Financial Disclosures (TCFD) recommendations.



Introduction

The Managed Fund invests in equities, bonds and cash. It has a high allocation to equities, typically 75 per cent, and its objective is to achieve capital growth over rolling five-year periods. More information on our philosophy, process, performance and other insights can be found on the Baillie Gifford website.

This report explains the Managed Fund's approach to addressing climate-related risks and opportunities through our investment process and describes a current view of how they may impact the portfolio. It also includes data and metrics to provide useful additional information. We produced the report using the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), and we expect the content, format and data to evolve in future versions.

Our governance of climate-related risks and opportunities

Details of Baillie Gifford's oversight and management of climate-related risks and opportunities across the firm can be found in our entity-level TCFD-aligned Climate Report on the Baillie Gifford website. At the portfolio level, the assessment and management of such risks and opportunities is the responsibility of the individual investment team.

Implications of climate change for our strategy

Global efforts to address the emissions responsible for climate change and its physical impacts pose potential 'transitional' and 'physical' risks and opportunities for every portfolio company. Transitional factors include the introduction of new policies, regulations or technologies, while physical factors stem from chronic changes to climate patterns, sea level rise, or more acute severe weather events. Although the Managed Fund does not seek specific climate outcomes as part of its investment objectives we factor climate change into our investment strategy as part of our belief that considering broader environmental, social and governance factors is integral to our active, long-term investment style.

We believe climate change could materially influence the returns we generate for clients. However, assessing the significance and scale of this influence versus other factors over different timeframes is challenging. We expect our views to evolve as we gain better insight and understanding.

Below we share a current assessment of the climate-related risks and opportunities the portfolio may face over the short, medium and long term under different climate scenarios. This assessment is based on Baillie Gifford's qualitative analysis of the Network for Greening the Financial System's (NGFS) 'orderly', 'disorderly' and 'hothouse world' scenarios.

'Orderly transition' scenarios assume climate policies are introduced early and become gradually more stringent, reaching global net zero emissions around 2050 and likely limiting global warming to below 1.5-2 degrees Celsius on pre-industrial averages. 'Disorderly transition' scenarios assume climate policies are delayed or divergent, requiring sharper emissions reductions achieved at a higher cost in order to limit temperature rise to below 1.5-2 degrees Celsius on pre-industrial averages. 'Hothouse world' scenarios assume only currently implemented policies are preserved, current commitments are not met and emissions continue to rise, with high physical risks and severe social and economic disruption and failure to limit temperature rise.

Short-term risks and opportunities (0-3 years)

Over the next few years, climate-related risks for most portfolio holdings are more likely to be transitional than physical. Although evidence shows climate change is already making weather events more erratic and severe, it is unlikely this will reach a systemic level of impact across the portfolio within a three-year timeframe, even under a hothouse world scenario. That said, direct impacts could be significant for some companies.

However, this timeframe is much more significant for the trends in technology, policy and markets shaping the transition. Under both orderly and disorderly transition scenarios, we expect significant opportunities for holdings that are directly helping to drive the decarbonisation of the economy through their core products or services (for example, Tesla, Nexans and NIBE). Companies in the portfolio showing other forms of climate leadership (such as Atlas Copco, Netflix and Hello Fresh) should also benefit. They may avoid regulatory penalties, gain access to advantaged technologies and reinforce their brands.

Conversely, both orderly and disorderly scenarios increase the transitional risks for holdings that make a significant contribution to the portfolio's weighted average carbon intensity (WACI) through their direct or indirect emissions, although the timing may vary in different markets. These include holdings such as Ryanair and Cemex, which may face higher costs to operate or other restrictions as emissions regulations tighten and the costs of carbon increase.

Under hothouse world scenarios the risks and opportunities noted above may not accrue over this time horizon. Indeed, there may be comparative cost penalties to climate leadership. That might allow high emitters and those with carbon-intensive value chains to defer investment or diversification and benefit from near-term cashflows and returns.

Medium-term risks and opportunities (3-10 years)

Over the medium term, which overlaps the typical period that we expect to hold new portfolio additions (five to ten years), the impact of an orderly versus disorderly transition may become more divergent. Under an orderly transition, there are likely to be significant opportunities for companies providing climate solutions and those that can reduce their emissions substantially this decade. However, under a more disorderly transition, these opportunities may be more muted as regional diversity in climate policy introduces additional complexity.

Over this timeframe, the physical impacts of climate change are expected to become more systemic. The geographical and sectorial diversity of holdings across the portfolio may provide some resilience to regional climate impacts. However, the portfolio holds some businesses with higher levels of potentially significant geographic concentration (such as HDFC, Reliance Industries, Rio Tinto and BHP) and others reliant on complex international supply chains (such as TSMC).

Long-term risks and opportunities (10+ years)

Assessing risks and opportunities to the portfolio over these timeframes becomes particularly challenging due to the increased uncertainties involved. However, under a hothouse world scenario, it is anticipated that the influence of physical climate impacts becomes the chief climate-related risk to returns. Under this scenario, the impact on policy, populations and overall economic activity - and thus shareholder returns - is likely to be portfolio-wide and systemic, with very few holdings unaffected.

Under orderly or disorderly transition scenarios, the impacts on the portfolio observed in the medium term may become further extended and entrenched. Risks and opportunities associated with technologies and markets may become even more significant as the winning forces of the transition emerge, causing the old to fall away. Under a disorderly scenario, regions of the world that were delayed in their transition might be expected to play 'catch up', offering new opportunities for transition-aligned companies. However, the sheer rapidity of the transition may result in greater policy dislocation and abrupt asset retirement that could transcend individual companies to pose systemic risks to the portfolio.

Our approach to climate risk management

We aim to assess all holdings in the portfolio at least annually as part of Baillie Gifford's 'climate audit' process. This helps inform our view of climate-related risks and opportunities across the portfolio. The results are shown in the metrics section of this report. Holdings are assessed on two main criteria:

- Their emissions reduction goals and performance. Holdings are categorised as 'leading', 'preparing', or 'lagging' based on an assessment of their ambition and related strategies to reach net zero emissions by 2050 or before.
- Their potential transition role. Holdings are categorised as 'solutions innovators', 'carbon-light potential influencers', 'potential evolvers' or 'materially challenged' based on an assessment of their strategic positioning relative to the net zero transition.

In addition to the climate audit process, we conduct more in-depth research into specific holdings where we feel climate-related risks could be particularly material. This research utilises a variety of information sources and is supported by ESG analysts and Baillie Gifford's central climate team. These insights are considered as part of the stock discussions in the underlying investment teams represented in the Managed Fund and are shared with colleagues across Baillie Gifford through our research library.

To help manage and mitigate the risks identified, we undertake direct engagement with some holdings where we seek to understand their approach. We encourage steps to minimise risks and maximise opportunities where we believe it is material to the success of the company. You can find more details of individual company engagements in our most recent Stewardship Report.

From 2023 onwards, as part of the integration of climate-related risks into Baillie Gifford's overall risk management framework, the climate metrics used in this report will be incorporated into the existing Investment Risk Reports that are provided to the portfolio managers by Baillie Gifford's Investment Risk team. To help provide additional oversight, three core metrics (the Weighted Average Carbon Intensity, fossil fuel exposure and the percentage of holdings not assessed under our 'climate audit' process) will also be reported to Baillie Gifford's ESG Regulatory Sub-Group and either the Equity or Multi Asset and Fixed Income Investment Risk Committees.

Key metrics (as at end December 2022)

The following metrics are used as part of our assessment of climate-related risks and opportunities across the portfolio and we believe they are useful to investors. The metrics include but are not limited to the Carbon Footprint, Weighted Average Carbon Intensity and Total Emissions of the portfolio as required by the UK Financial Conduct Authority's product-level climate disclosure rules. These rules also require Baillie Gifford to determine if a portfolio has concentrated exposures or high exposures to carbon intensive sectors¹ and if so to include quantitative scenario analysis metrics. In such cases, we therefore also include climate value-at-risk metrics in this section if we can obtain data for at least 70% of the portfolio (by AUM) from our data supplier. However, unless specifically required, Baillie Gifford has chosen not to provide climate value-at-risk metrics or implied temperature rise metrics for all portfolios as we believe current methodologies do not render them practicable for widespread use and potentially could lead to inaccurate or misleading disclosures particularly when there are significant gaps in the underlying data. More explanation on the metrics used in this section can be found in the footnotes. Any climate targets or objectives set by the portfolio are detailed in the earlier sections of this report.

Note on data availability and benchmarks

Data for some holdings – in particular those not listed on a stock exchange - is currently unavailable from our data supplier. The metrics presented in this section may therefore not relate to the entire portfolio. You can find details of the percentage of the portfolio for which data is reported, estimated or unavailable in the 'Emissions data availability and disclosure from holdings' table below. The disclosure of metrics associated with our own assessments of holdings' transition role and targets is intended to help address gaps in data from external data suppliers, and we will continue to explore additional solutions to this in future as the climate data landscape continues to evolve. Cash and derivatives are presently excluded.

Benchmark metrics have been provided for comparison purposes only and relate to the financial benchmark used by the portfolio. The benchmark used for this portfolio is the OCMANAGED (75% Equity, 20% Bond, 5% Cash).

Emissions metrics for 'corporate like' assets²

Total carbon emissions ³ from assets held by the portfolio	Portfolio Benchmark	
Total Scope 1&2 emissions (tCO ₂ e)	249,888	N/A
Total Scope 1,2 & material ⁴ Scope 3 emissions (tCO ₂ e)	1,234,463	N/A
Total Scope 3 emissions (tCO ₂ e)	1,744,517	N/A
Total Scope 1,2&3 emissions (tCO ₂ e)	1,994,405	N/A

Source: Baillie Gifford, MSCI

¹ We define portfolios with 'concentrated exposures or high exposures to carbon intensive sectors' as those with either 1) a weighted average carbon intensity (on a Scope 1,2 & material Scope 3 basis) above that of their respective financial performance benchmark index or the MSCI ACWI index, or 2) a higher level of exposure to holdings generating more than 5% revenues from oil, gas or thermal coal activities than their respective financial performance benchmark index or the MSCI ACWI index.

² We define 'corporate like' assets as those invested in listed equities and corporate credit instruments. Metrics for Sovereign Bond holdings are included separately.

³ The total emissions of the portfolio represent the absolute greenhouse gas emissions from assets held, allocated on an ownership basis. This means a portfolio holding 1% of a company's enterprise value would be attributed 1% of the company's emissions.

⁴ We define material Scope 3 emissions using the original definition provided by the Partnership for Carbon Accounting Financials (PCAF), mapped to GICS sub-industries or NACE code. This means that our version of material Scope 3 emissions are those produced by holdings classified as oil & gas or mining companies. We acknowledge the updated timeline to also include Scope 3 emissions from those classified as transportation, construction, buildings, materials and industrial companies has changed from 2024 to 2023 and are working to update systems accordingly. (p51, [The Global GHG Accounting and Reporting Standard for the Financial Industry \(carbonaccountingfinancials.com\)](#))

Carbon footprint ⁵ of the portfolio	Portfolio Benchmark	
Scope 1&2 emissions (tCO ₂ e) per \$M invested	35	71
Scope 1,2 & material Scope 3 emissions (tCO ₂ e) per \$M invested	172	401
Scope 1,2&3 emissions (tCO ₂ e) per \$M invested	278	572

Source: Baillie Gifford, MSCI

Weighted average carbon intensity (WACI) ⁶ of the portfolio	Portfolio Benchmark	
Scope 1&2 emissions (tCO ₂ e) per \$M revenue	86	150
Scope 1,2 & material Scope 3 emissions (tCO ₂ e) per \$M revenue	385	658
Scope 1,2&3 emissions (tCO ₂ e) per \$M revenue	725	1,093

Source: Baillie Gifford, MSCI

Emissions data availability and disclosure from holdings in the portfolio ⁷	Portfolio Benchmark	
% of total AUM invested in 'corporate-like' holdings where reported Scope 1&2 emissions data is available from our data provider	66	77
% of total AUM invested in 'corporate-like' holdings where estimated Scope 1&2 emissions data is available from our data provider	20	11
% of total AUM invested in 'corporate-like' holdings where scope 1&2 emissions data is not available from our data provider	3	1
% of total AUM invested in sovereign bonds where emissions data is available from our data provider	11	11
% of total AUM invested in holdings where reported Scope 3 emissions data is available from our data provider ⁸	52	67
% of total AUM invested in holdings where estimated Scope 3 emissions data is available from our data provider	86	87
% of total AUM invested in holdings where Scope 3 emissions data is not available from our data provider	14	13
% of total AUM invested in holdings disclosing to CDP annually	54	73

Source: Baillie Gifford, MSCI, CDP

Additional metrics for sovereign bond holdings only

Metrics for sovereign bond holdings ⁹	Portfolio Benchmark	
Weighted average emissions (tCO ₂ e) per \$ million GDP 2017 PPP	219	199
Weighted average emissions (tCO ₂ e) per capita	11	13
% of total AUM invested in Sovereign Bonds	11	11
% of total AUM invested in Sovereign Bonds associated with countries that are signatories to the Paris Climate Agreement	11	11

Source: Baillie Gifford, WDI, EDGAR, MSCI

⁵ The carbon footprint of the portfolio represents the aggregated GHG emissions per million £/\$ invested and allows for comparisons of the carbon intensity of different portfolios.

⁶ The WACI of the portfolio represents the aggregated carbon intensities of the companies in a portfolio, scaled by size of holding. The WACI metric therefore helps measure a portfolio's exposure to high carbon intensity companies.

⁷ These metrics provide a guide to the level of reported vs. estimated vs. unavailable data in all emissions metrics for the portfolio. Further explanation of our use of metrics, their quality and coverage, is available in the [Baillie Gifford & Co Climate Report](#).

⁸ In many cases, companies only report part of their Scope 3 emissions (for example business travel). This means that whilst there is some reported data, it does not always equate to full reported Scope 3 emissions across all Scope 3 categories covered by the GHG Protocol. Where all Scope 3 data is estimated by our data provider, it does include emissions across all Scope 3 categories. For consistency, only estimated Scope 3 data is included in carbon calculations.

⁹ The emissions metrics in the sovereign bond subsection represent aggregated exposure to the carbon intensities of underlying economies, measured on a GDP Purchasing Power Parity (PPP), and per person (capita) basis.

Metrics providing additional insights into climate-related risks and opportunities

Exposure to 'climate material' sectors ¹⁰	Portfolio Benchmark	
% of total AUM invested in holdings in 'climate material' sectors	20	32

Source: Baillie Gifford

Exposure to fossil fuels	Portfolio Benchmark	
% of total AUM invested in holdings with > 5% revenues from oil and/or gas activities ¹¹	1	9
% of total AUM invested in holdings with > 5% revenues from thermal coal mining and sale ¹²	1	0
% of total AUM invested in holdings with > 5% revenues from thermal coal power generation	0	1

Source: Baillie Gifford, MSCI

Climate 'value-at-risk' assessment ¹²	Portfolio Benchmark	
Indicative estimate of climate-related value at risk from transitional factors by 2100 under REMIND NGFS 1.5C 'orderly transition' scenario (provided by MSCI)	-5	-8
Indicative estimate of climate-related value at risk from transitional factors by 2100 under REMIND NGFS 1.5C 'disorderly transition' scenario (provided by MSCI)	-20	-31
Indicative estimate of climate-related value at risk from transitional factors by 2100 under REMIND NGFS 3C scenario (provided by MSCI)	-1	-1
Indicative estimate of climate-related value at risk from physical factors by 2100 under high emission (based on RCP 8.5) scenario (provided by MSCI)	-5	-7

Source: MSCI, FactSet

Metrics providing insights into net zero alignment of holdings

Our assessment of holdings' net zero targets ¹³	Portfolio
% of total AUM with targets assessed as 'leading'	32
% of total AUM with targets assessed as 'preparing'	25
% of total AUM with targets assessed as 'lagging'	31
% of total AUM with targets not assessed	12

Source: Assessed according to Baillie Gifford's internal assessment framework.

¹⁰ Our definition of 'climate-material sectors' uses the TCFD 'carbon related assets' definition, i.e., any company operating in the Energy, Transportation, Buildings and Materials, Agriculture, or Food and Forests sectors, mapped by either GICS sub-industry or NACE code.

¹¹ Includes oil and/or gas extraction and production, distribution, retail, equipment and services, petrochemicals, pipelines and transportation and refining. Excludes biofuel production and sales, and trading activities.

¹² Includes the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. Excludes metallurgical coal, coal mined for internal power generation, intra-company sales of mined thermal coal and revenue from coal trading.

¹³ To help provide an initial quantitative assessment of impacts to the portfolio under different climate scenarios, we provide MSCI's CVaR (Climate Value at Risk) metrics for both transitional and physical impacts. We believe these metrics are at a very early stage of evolution and should not be used as a guide to future performance because they do not fully capture all transitional and physical factors, especially over the longer term. We expect to provide additional analysis in future iterations of this report.

¹⁴ More details of this assessment process can be found in the [Baillie Gifford & Co TCFD Climate Report](#). In some cases, portfolios with higher proportions of unlisted or smaller companies may contain a greater proportion of holdings assessed as 'lagging'. This may be due to the relative immaturity of some of these companies' disclosure and net zero alignment strategies, when compared to more established listed and larger companies.

Our assessment of holdings' transition role ¹⁴	Portfolio
% of total AUM assessed as 'solutions innovators'	2
% of total AUM assessed as 'potential influencers'	45
% of total AUM assessed as 'potential evolvers'	33
% of total AUM assessed as 'materially challenged'	1
% of total AUM not assessed	19

Source: Assessed according to Baillie Gifford's internal assessment framework.

Science-Based Targets ¹⁴ alignment among holdings	Portfolio	Benchmark
% of total AUM invested in companies with targets approved by Science-Based Targets Initiative	20	34
% of total AUM invested in companies who have committed to set targets approved by the Science-Based Targets Initiative	18	15

Source: SBTi

¹⁵ More details of this assessment process can be found in the [Baillie Gifford & Co TCFD Climate Report](#)

¹⁶ Using the framework and methodology developed by the Science Based Targets Initiative. 'Approved' companies are those whose net zero targets have been validated by the SBTi. 'Committed' companies are those who have submitted a commitment letter and are in the process of setting and submitting science-based net zero targets or their targets are currently being validated.

Legal Notices

Baillie Gifford uses a combination of internal research and analysis and third-party data sources when preparing ESG-related disclosures.

Prior to using data sourced from a third-party provider, Baillie Gifford conducts appropriate due diligence on the third-party provider including validation of their methodology and assessment of their coverage and then carries out spot checks of the data periodically, escalating issues to the third-party provider where necessary.

However, Baillie Gifford cannot guarantee that such data is complete, up-to-date and/or accurate. Furthermore, information disclosed is based on data established at a specific time which may be liable to change. More generally, the coverage, standardisation, and comparability of ESG data continues to change and develop over time.

This disclosure is not intended to be used for marketing purposes and nor does it constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such.

The figures in this report are aggregations and calculations which draw upon data from our external data providers, principally MSCI.

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