



ESG Metrics Training

London Borough of Hammersmith
& Fulham Pension Fund

August 2024

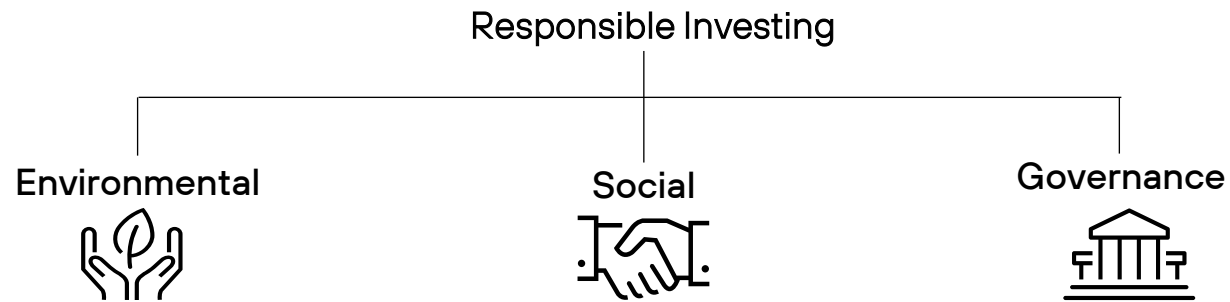
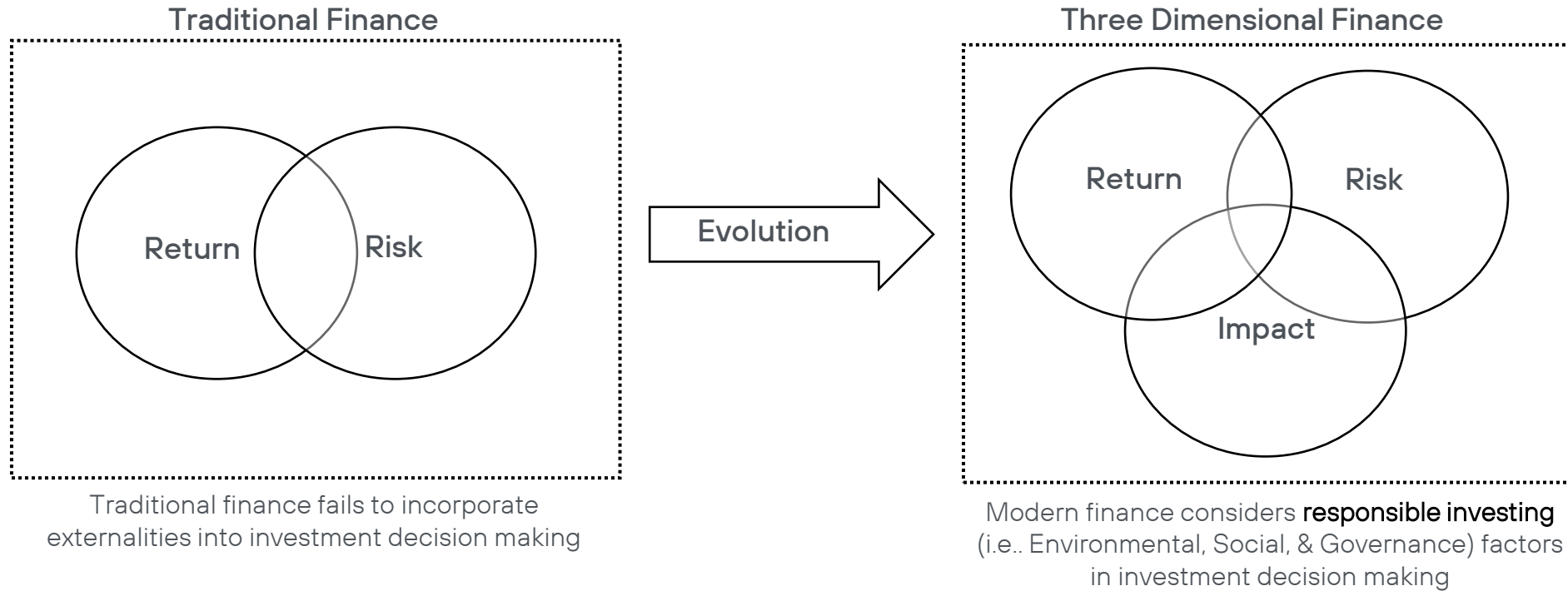
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Objectives for today

- Provide:
 - an recap of to ESG investing
 - an overview of ESG metrics
 - training on the ESG metrics we report on for Allspring

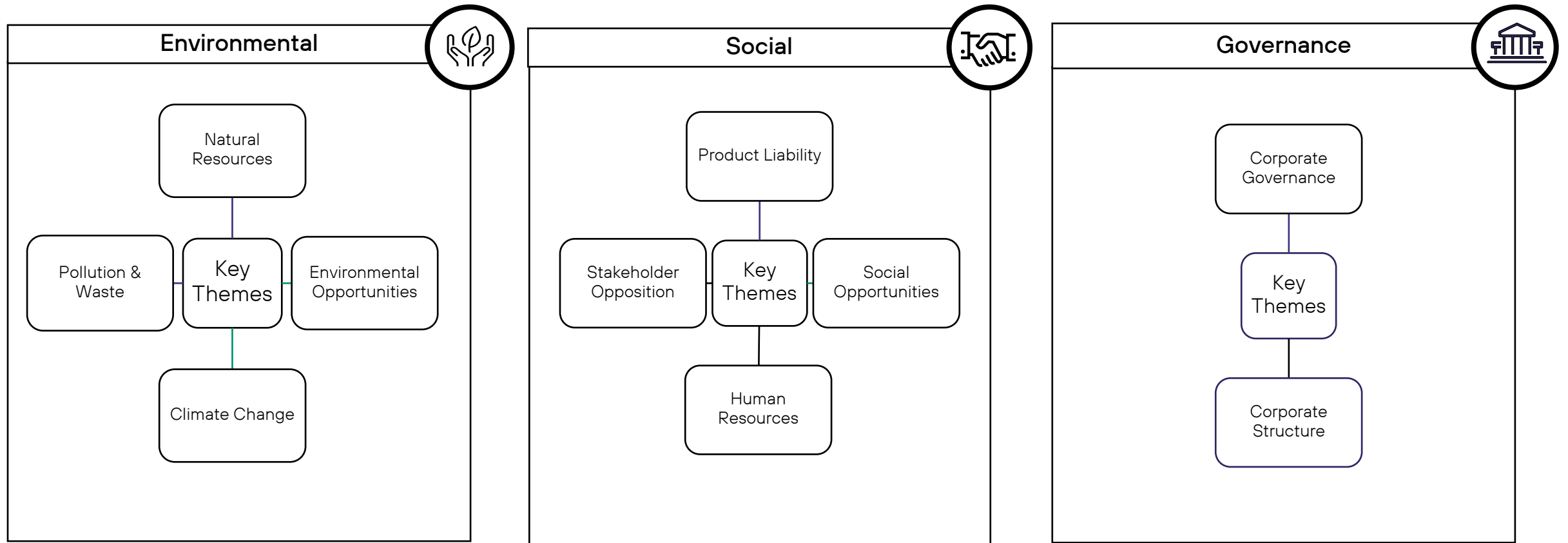
ESG Recap

Introduction to Responsible Investing



Responsible Investing - An overview

“An approach to investing that aims to incorporate Environmental, Social and Governance factors in investment decisions, to better manage risk and generate sustainable, long term returns.” - United Nations



The outlook for Responsible Investing is strong

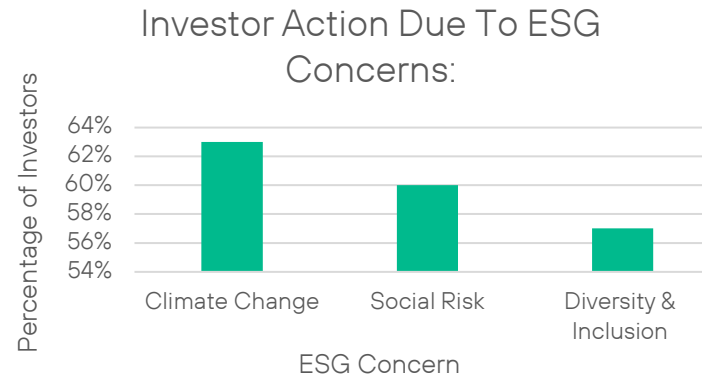
Societal attitudes continue to change...

Data on public attitudes to the environment and the impact of climate change showed that in 2022, **75%** of the UK population considered **environmental issues** to be one of the top 3 concerns facing the country.

Source : Office for National Statistics 2022

extensive investment rationale is increasing ...

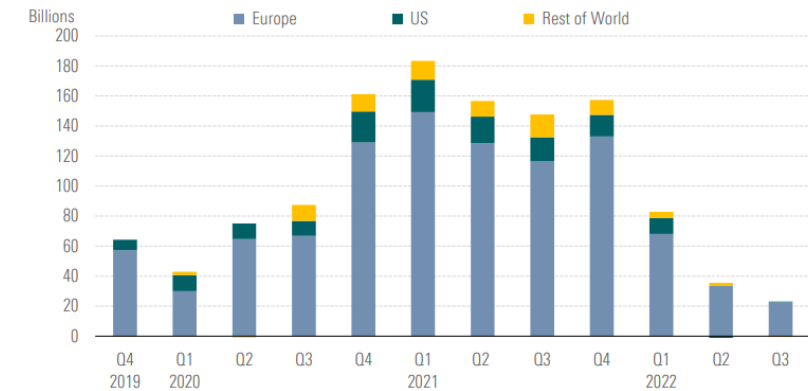
Investor survey, Responsible Investing rationale



Source : Nuveen, Responsible Investing Survey 2021

... leading to growth in Sustainable AUM

Quarterly Global Sustainable Fund Assets (\$), 2019-2022



Source : Morningstar Direct

ESG Metrics Overview and Training

TCFD metrics – what we expect to be required

Total greenhouse gas emissions (Scope 1 & 2)

Total amount of greenhouse gas emissions emitted by the underlying portfolio companies, attributed to the investor based on the total investment in each company.

Carbon footprint (Scope 1 & 2)

An intensity measure of emissions that assesses the level of greenhouse gas emissions arising from a \$1 million investment in a company.

Implied temperature rise (“ITR”)

The temperature pathway the mandate aligns to, expressed as a projected increase in global average temperatures by the end of the century.

A Paris-aligned strategy should have an ITR of 1.5°C.

Data quality

Exposure to emissions data that is verified, reported, estimated and unavailable.

Verified: Data that has been independently verified

Reported: Data directly reported by the company.

Estimated: Data that has been estimated by the investment manager or an ESG data provider.

Allspring ESG metrics in our reporting

Data Source	Metric	Scoring	Description
MSCI	MSCI ESG Scores	Scores range from 10 (best) to 0 (worst)	MSCI measures and analyses companies' risk and opportunities arising from environmental, social and governance issues. By assessing indicators typically not identified by traditional securities analysis, ESG Ratings uncover hidden risks and value potential for investors. Ratings range from AAA (best) to CCC (worst). Scores range from 10 (best) to 0 (worst).
Sustainalytics	ESG Risk Score	ESG Risk assessment ranging from Negligible (best) to Severe (worst)	ESG Risk assessment consisting of Negligible (best), Low, Medium, High, and Severe (worst).
Trucost	Carbon Intensity-Direct+First Tier Indirect (tonnes CO2e/\$MM)	GHG emissions over which the company has control, or derive from direct suppliers, divided by revenue	Greenhouse gases emitted by the direct operations of and suppliers to a company (scope 1, 2, and upstream scope 3) divided by revenue.
Trucost	Carbon-Direct+First Tier Indirect (tonnes CO2e)	GHG emissions over which the company has control (Direct + First Tier indirect)	Greenhouse gases emitted by the direct operations of and suppliers to a company (scope 1, 2, and upstream scope 3).
Trucost	Carbon-Scope 1 (tonnes CO2e)	GHG emissions from operations that are owned or controlled by the company	Greenhouse gas emissions generated from burning fossil fuels and production processes which are owned or controlled by the company (reference: GHG Protocol).
Trucost	Carbon-Scope 2 (tonnes CO2e)	GHG emissions from consumption of purchased electricity, heat or steam by the company	Greenhouse gas emissions from consumption of purchased electricity, heat or steam by the company (reference: GHG Protocol).
Trucost	Carbon-Scope 3 (tonnes CO2e)	Other indirect GHG emissions not covered in Scope 2	Other upstream indirect greenhouse gas emissions, such as from the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. T&D losses) not covered in Scope 2, outsourced activities, waste disposal, etc. (in line with GHG Protocol standards) (reference: GHG Protocol).
Trucost	Reserves CO2 emissions from Coal (tonnes)	GHG emissions embedded in coal reserves in tonnes CO2	GHG emissions embedded in coal reserves in tonnes CO2.
Trucost	Reserves CO2 emissions from Gas (tonnes)	GHG emissions embedded in gas reserves in tonnes CO2	GHG emissions embedded in gas reserves in tonnes CO2.
Trucost	Reserves CO2 emissions from Oil (tonnes)	GHG emissions embedded in oil reserves in tonnes CO2	GHG emissions embedded in oil reserves in tonnes CO2.

1) Allspring ESG benchmark scores

MSCI ESG SCORE

	Fund		Benchmark ¹	
	Value	Coverage	Value	Coverage
MSCI Overall Score	7.4	98%	7.2	92%

Data is sourced from MSCI ESG Research where companies are rated on a scale of 0 – 10 (0 -worst, 10 - best). Weighted average scores exclude effects of unrated securities.

SUSTAINALYTICS ESG RISK SCORE

	Value	Coverage
Fund	20	95%
Benchmark¹	21	94%

ESG Risk Ratings measure exposure to and management of ESG risks. Lower risk scores reflect less ESG risk. Sustainalytics ESG Risk Scores measure ESG risks on a scale of 0 – 100 (0 - no ESG Risk, >40 - Severe ESG Risk).

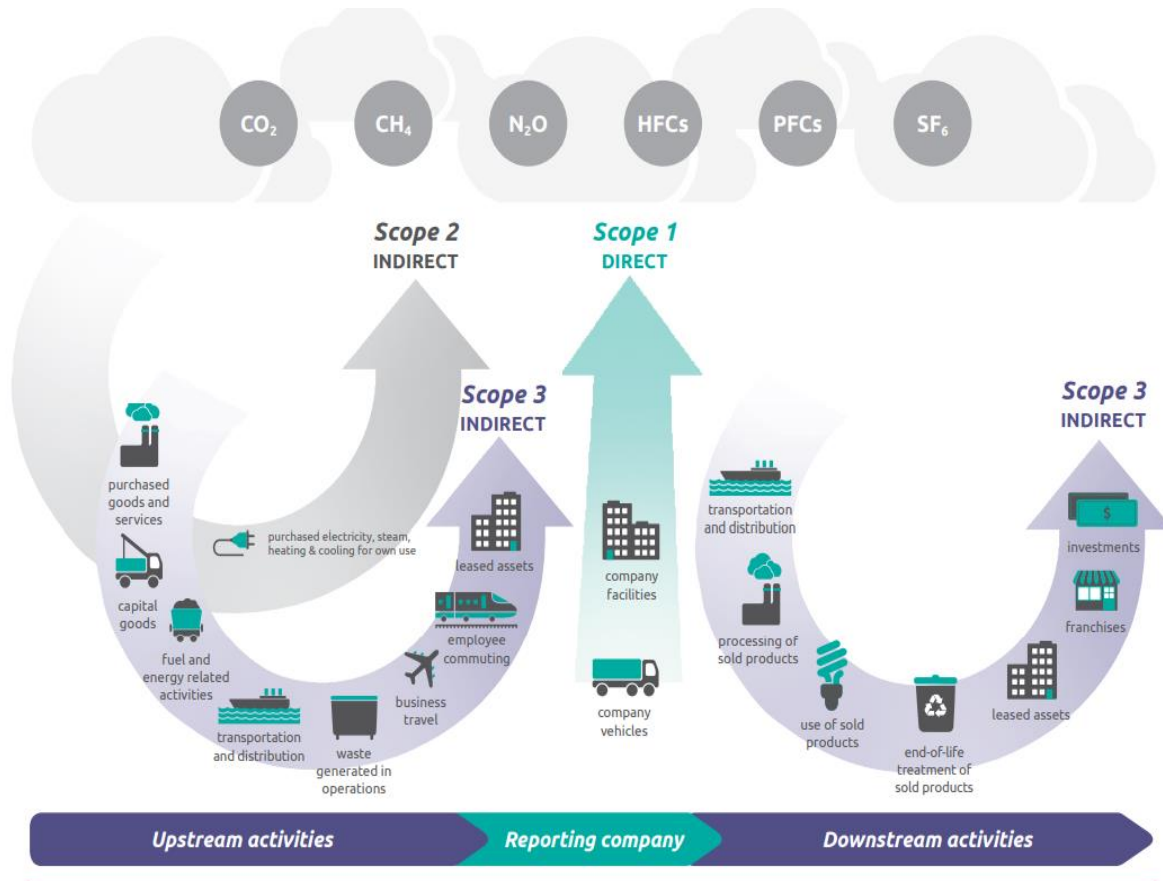
Example – MSCI Overall ESG Score

The weighted scores for all ESG issues are aggregated to form the overall ESG score. Industry Benchmarking: The score is then compared to industry peers to determine where the company stands in relation to others in the same sector. Final Score and Rating: The overall ESG score is usually presented on a scale from 0 to 10, with 10 being the best. This score is then used to assign a rating, typically from AAA (best) to CCC (worst).

- Market wide indices from a range on well known data providers
- Selection criteria are bespoke and proprietary

- Example selection criteria used are:
 - Selection of relevant ESG issues:
 - Industry Relevance
 - Time Horizon
 - Stakeholder Materiality
 - Assessment of exposure
 - Company Exposure
 - Sector and Geographic Factors
 - Assessment of management
 - Policies and Programs
 - Performance
 - Trend Analysis
 - Score and weighting
 - Issues Scores
 - Weighting

2) What are absolute carbon metrics - scope 1, 2 & 3 emissions



Scope 1 & 2: This includes emissions from company facilities and vehicles (**Scope 1**), as well as emissions from the use of electricity or heating (**Scope 2**).

Scope 3: Because they relate to up/downstream indirect emissions, **Scope 3** are much more difficult for companies to assess, let alone for managers to report.

Scope 3 emissions are expected to be required in TCFD reporting from the **second year onwards**, when regulations come in for LGPS.

2) How are absolute carbon metrics and footprint calculated?

Metric	Description	Calculation
Absolute Emissions (Scopes 1 & 2)	Total amount of greenhouse gas emissions emitted by the underlying portfolio companies, attributed to the investor based on the total investment in each company	$\sum_n^i \left(\frac{\text{Current value of investment}_i}{\text{Investee company enterprise value}_i} \right) \times \text{investee company's scope 1 and 2 emissions}_i$
Carbon Footprint (Scopes 1 & 2)	An intensity measure of emissions that assesses the level of greenhouse gas emissions figure arising from \$1 million investment in a company	$\frac{\sum_n^i \left(\frac{\text{Current value of investment}_i}{\text{Investee company enterprise value}_i} \times \text{investee company's scope 1 and 2 emissions}_i \right)}{\text{Current value of all investments (£ millions)}}$

3) Allspring Carbon Intensity Metrics

CARBON CHARACTERISTICS

	Fund		Benchmark ¹		% above / below benchmark
	Value	Coverage	Value	Coverage	
Carbon to value invested (metric tons CO2e/\$MM invested)*	37	89%	48	72%	-23%
Weighted average carbon intensity (metric tons CO2e/\$1MM revenues)*	67	96%	94	89%	-29%

*Carbon emissions includes operational and first-tier supply chain greenhouse gas emissions. Data sourced from S&P Trucost Limited.

Carbon to Value Invested

$$\text{Carbon to Value invested} = \frac{\text{Company's Total Carbon Emissions (tons of CO}_2\text{ e)}}{\text{Value of the Investment (USD)}}$$

- Higher Carbon to Value Invested: Suggests that the portfolio has a higher carbon intensity per dollar invested, indicating greater exposure to carbon risks.

Weighted Average Carbon Intensity

$$\text{Carbon Intensity} = \frac{\text{Company's Total Carbon Emissions (tons of CO}_2\text{ e)}}{\text{Company's Revenue (in million USD)}}$$

- A lower WACI score indicates that the portfolio is less exposed to carbon-intensive companies, suggesting lower climate-related risks. Conversely, a higher WACI score implies higher exposure to carbon risks.
- WACI is widely used by investors who are focused on sustainable investing or who want to align their portfolios with climate targets, such as reducing carbon emissions in line with global climate agreements

Additional Information

Key terminology

Term	Definition
Net-Zero	Achieving a state in which the activities within the value-chain of a company (or country) result in no net impact on the climate from greenhouse gas emissions
Paris Agreement	An international treaty adopted in 2015 with nations committing to keep the rise in mean global temperature to well below 2 °C above pre-industrial levels, and preferably limit the increase to 1.5 °C
Transition Risk	Risks associated with transition to a low carbon economy. Transitioning to a lower-carbon economy can entail extensive policy, legal, technology and market changes to address mitigation and adaptation requirements related to climate change
Physical Risk	Risks to assets held within a portfolio which may be impaired or destroyed as a result of climatic weather events
Temperature Pathway	Projected rise in global average temperature, it is currently estimated that we are on a 2.5°C pathway (by 2100)
UN Sustainable Development Goals (SDGs)	A set of 17 global goals designed to be a "blueprint to achieve a better and more sustainable future for all", intended to be achieved by 2030

Key definitions

Absolute carbon emissions (Scope 1 & 2)

Total amount of greenhouse gas emissions emitted by the underlying portfolio companies, attributed to the investor based on the total investment in each company.

Investments in companies with 1.5°C SBTi targets In place

Exposure to companies with 1.5°C-aligned carbon emission reduction targets listed on the Science Based Targets initiatives database.

Fossil fuel extraction exposure

Var to companies active in the fossil fuel sector, i.e. companies that have revenues of more than 10% linked to activities including exploration and extraction of fossil fuels, processing/ refinement of oil and transport of fossil fuels.

Carbon footprint (Scope 1 & 2)

An intensity measure of emissions that assesses the level of greenhouse gas emissions arising from a £1 million investment in a company.

Implied temperature rise ('ITR')

The temperature pathway the mandate aligns to, expressed as a projected increase in global average temperatures by the end of the century. A Paris-aligned strategy should have an ITR of 1.5°C.

Extent of 'green' revenue exposure

Var to revenue that are aligned with sustainable business activities, examples include climate change mitigation and adaptation, the transition to a circular economy and the protection and restoration of biodiversity and ecosystems.

Weighted average carbon intensity ('WACI') (Scope 1 & 2)

An intensity measure of emissions that assesses the level of greenhouse gas emissions arising from £1 million of sales/revenue generated by the company.

Climate VaR

Measures the potential size of the loss attributable to climate-related risks a portfolio may experience, within a given time horizon, if a particular climate scenario unfolds, such as a hot house scenario with temperatures rising by 4-5°C by the end of the century.

Climate related engagements

Exposure to portfolio companies for which engagement or voting on climate-related risk and opportunities has been a substantive topic over the course of the previous 12 months.

Global warming projections



Greenhouse gases ('GHGs') are released into the atmosphere from various activities, including burning fossil fuels. These GHGs result in a 'greenhouse effect'.



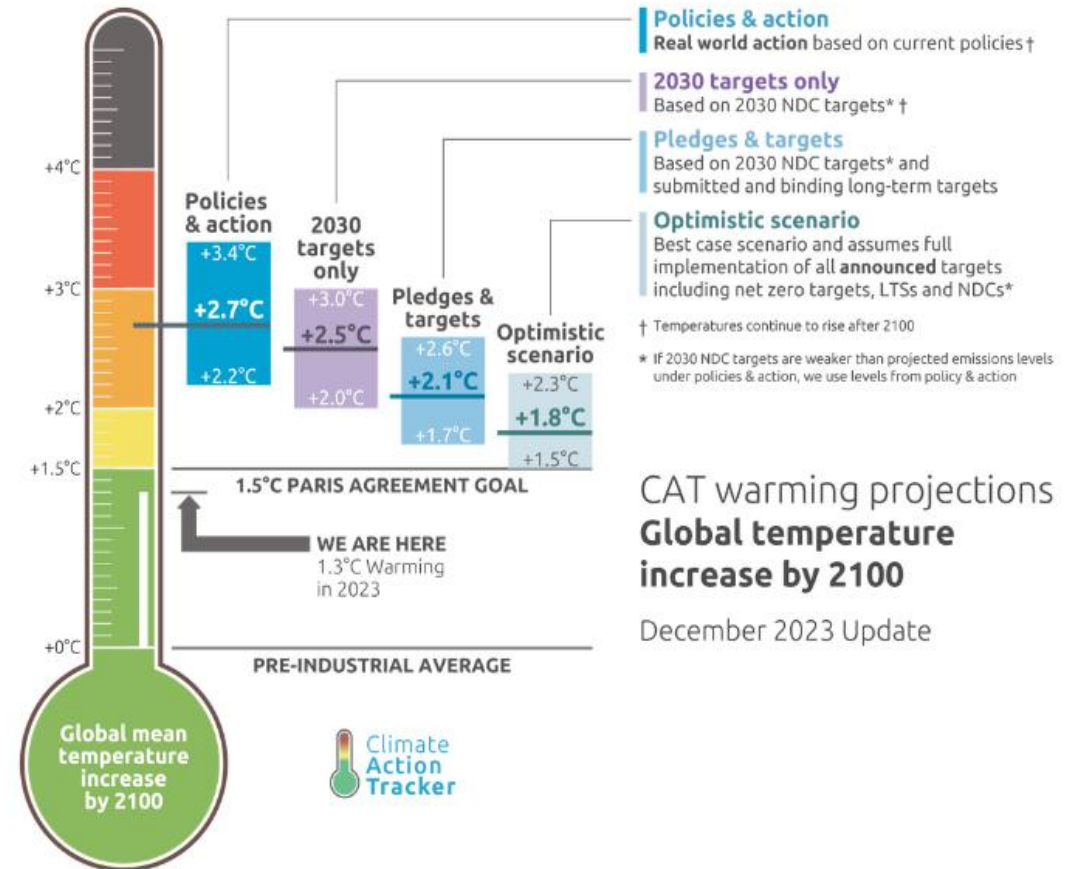
In 2015, the **Paris Agreement** was adopted, which aims to keep average temperature rise to well below 2°C, with ambitions towards 1.5°C, this century (above pre-industrial levels).



It is estimated that we are currently at **1.3°C warming** relative to pre-industrial average and that we're on track for **2.5°C warming this century**.



Significant decarbonisation would be required to meet the Paris Agreement, and some may now consider that an unrealistic scenario.



CAT warming projections
Global temperature increase by 2100

December 2023 Update

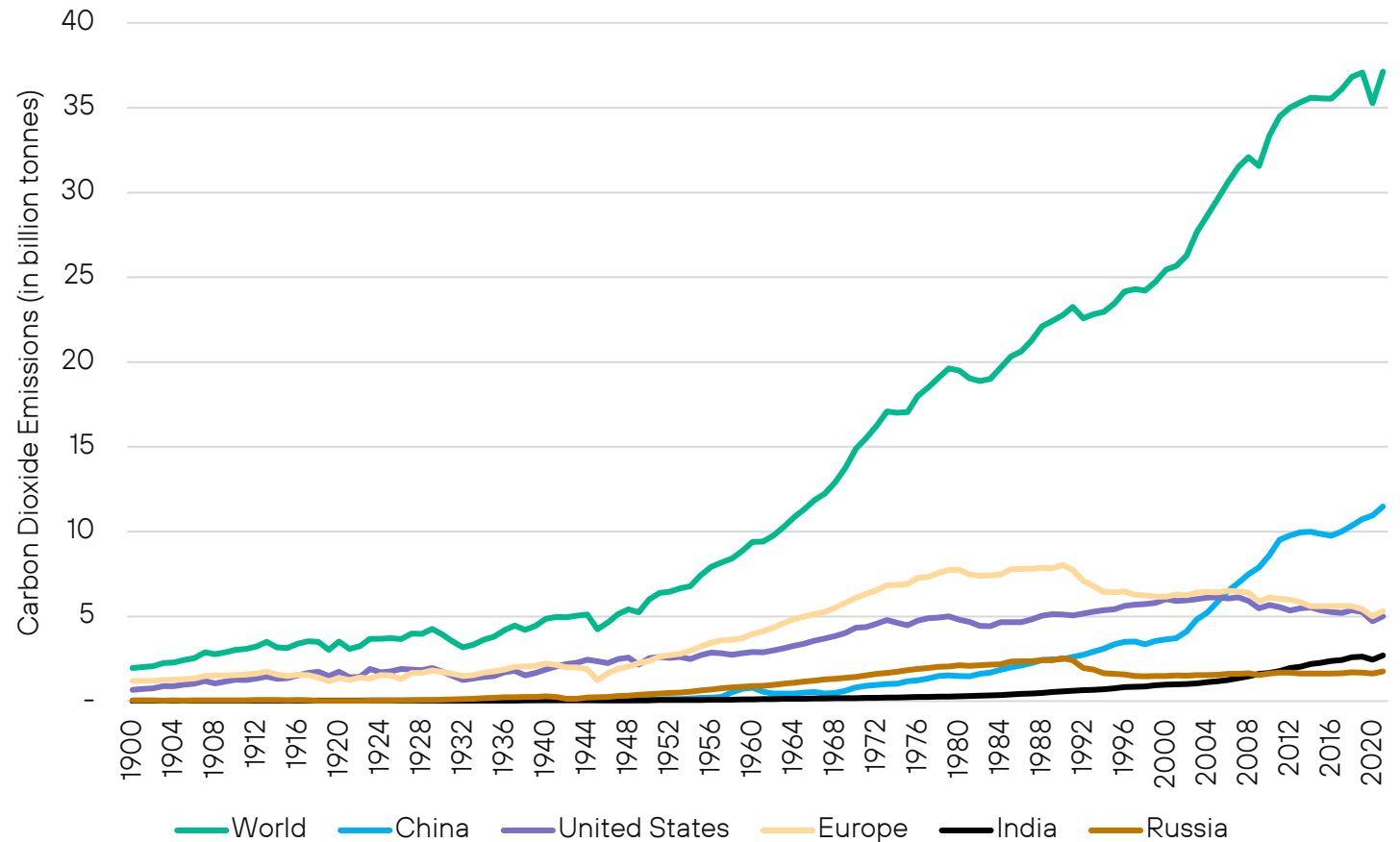


Source: Climate Action Tracker

Emissions to date

- 40 billion tonnes of CO₂ was emitted globally over 2023.
- It is estimated that to date we have emitted a total of c. 1,700 billion tonnes of CO₂ into the atmosphere.
- In order to keep global temperatures below a 1.5°C rise, **emissions need to be reduced by at least 43% by 2030** compared to 2019 levels, and at least 60% by 2035.
- **Significant decarbonisation** is required to achieve the Paris goal.

Regional annual carbon dioxide emissions



Source: Global Carbon Project. The 5 regions shown are the highest global emitters.

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