CLIMATE RISK

AT THE PORTFOLIO LEVEL

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AGENDA

Russell Investments overview

A leading global investment solutions partner

Decades of global investment experience

50+ years
Investment consulting

40+ years
Multi-manager funds and outsourced investing

30+ years
Working alongside New Zealand investors

Significant global scale

$494.7bn
Assets under management

$1.6tn
Assets under advice

$91.5bn
Assets managed on behalf of financial advisers

Long-standing track record in New Zealand

1992
Opened office in NZ

$3.0bn
Funds under management for NZ clients

$11bn
Assets under advice

30+ clients

Integrated global investment platform

Research & advice

- Capital markets insight
- Asset allocation tools
- Proprietary risk systems

Fund management & implementation

- Manager research
- Proprietary factor strategies
- Global multi-asset investing
- In-house trading
- Efficient implementation

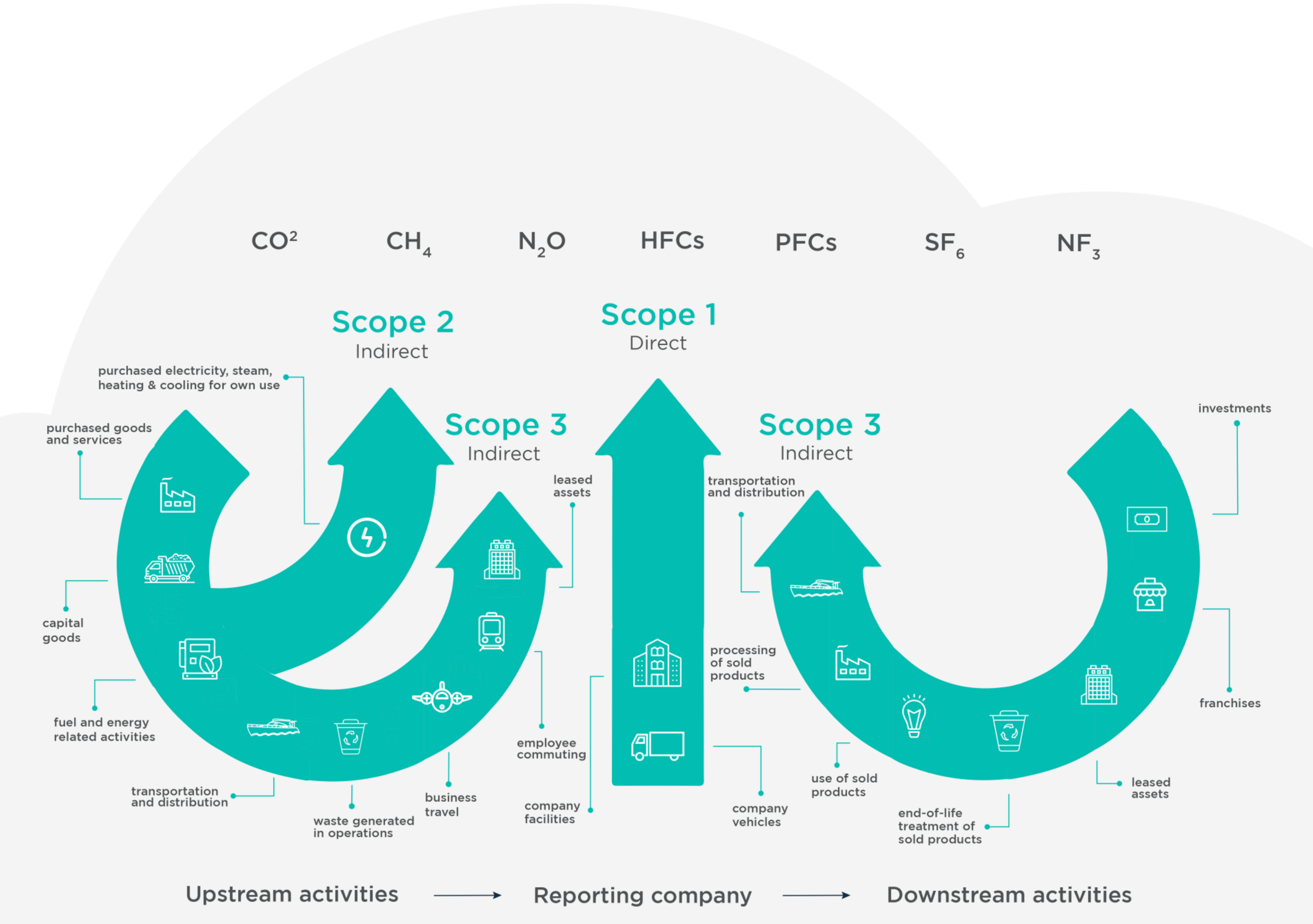
NZ and Global AUM data as of 30 June 2024. NZ and Global AUA as of 31 December 2023. All values in NZD unless otherwise stated. Please note that the logos shown above may be registered trademarks of the organizations represented. Clients may contract for a variety of services from Russell Investments. The identification of the clients listed does not constitute an endorsement or recommendation of Russell Investments' products or services by such client.

CLIMATE METRICS AND INSIGHTS

Carbon Emissions

Measurement recap

- Emissions can be categorised in ‘Scopes’ depending on when in the production chain they are generated.
- Scope 1 – Direct emissions from manufacture
- Scope 2 – Indirect by consuming e.g. electricity
- Scope 3 – Beyond business controls e.g. supply chain and distribution



Source: GHG Protocol https://snowkap.com/

Climate Jargon

Carbon Neutral vs Net Zero

- Terms like carbon-neutral and net-zero are often thrown about with little understanding of what they actually mean.
- Carbon neutral refers to the ability to purchase carbon credits to offset gross emissions. This may not adequately reduce a company's emissions, they merely purchase a 'licence to pollute'.
- Net Zero requires an explicit commitment to make significant reductions in GHGs. It is therefore a more ambitious target than carbon neutrality. Net Zero also incorporates Scope 3 emissions which are quite difficult to quantify.

	Carbon neutral	Net zero
Definition	Sum of greenhouse gas emissions produced are balanced or "offset" – no requirement to reduce absolute emissions	Greenhouse gas emissions are reduced in line with the latest climate science 1.5^{o}C trajectory
Emissions covered	Scopes 1& 2, (Scope 3 encouraged)	Scopes 1,2 & 3
Applicable offsets	Carbon avoidance/reduction credits, and removal credits	Predominantly carbon removal only
Application of definition	Company, product, or service-level	Global, national or company-level

Source: Table from CFA Institute 2024

Climate Metrics and Insights

WACI

Weighted average carbon intensity	*Description*	Portfolio's exposure to carbon-intensive companies, expressed in tons CO_2e / $M revenue. *Metric recommended by the task force*.
	Formula	$\sum_{i}^{n}\left(\frac{current\ value\ of\ investment_i}{current\ portfolio\ value}\ X\ \frac{issuer's\ scope\ 1\ and\ scope\ 2\ GHG\ emissions_i}{issuer's\ \$M\ revenue_i}\right)$
	Methodology	Unlike the next three metrics, 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.
	Key points +/-	+ Metric can be more easily applied across asset classes since it does not rely on equity ownership approach + The calculation of this metric is fairly simple and easy to communicate to investors + Metric allows for portfolio decomposition and attribution analysis - Metric is sensitive to outliers - Using revenue (instead of physical or other metrics) to normalise the data tends to favour companies with higher pricing levels relative to their peers

Source: Russell Investments

Climate Metrics and Insights

Financed Emissions Intensity aka Carbon Footprint

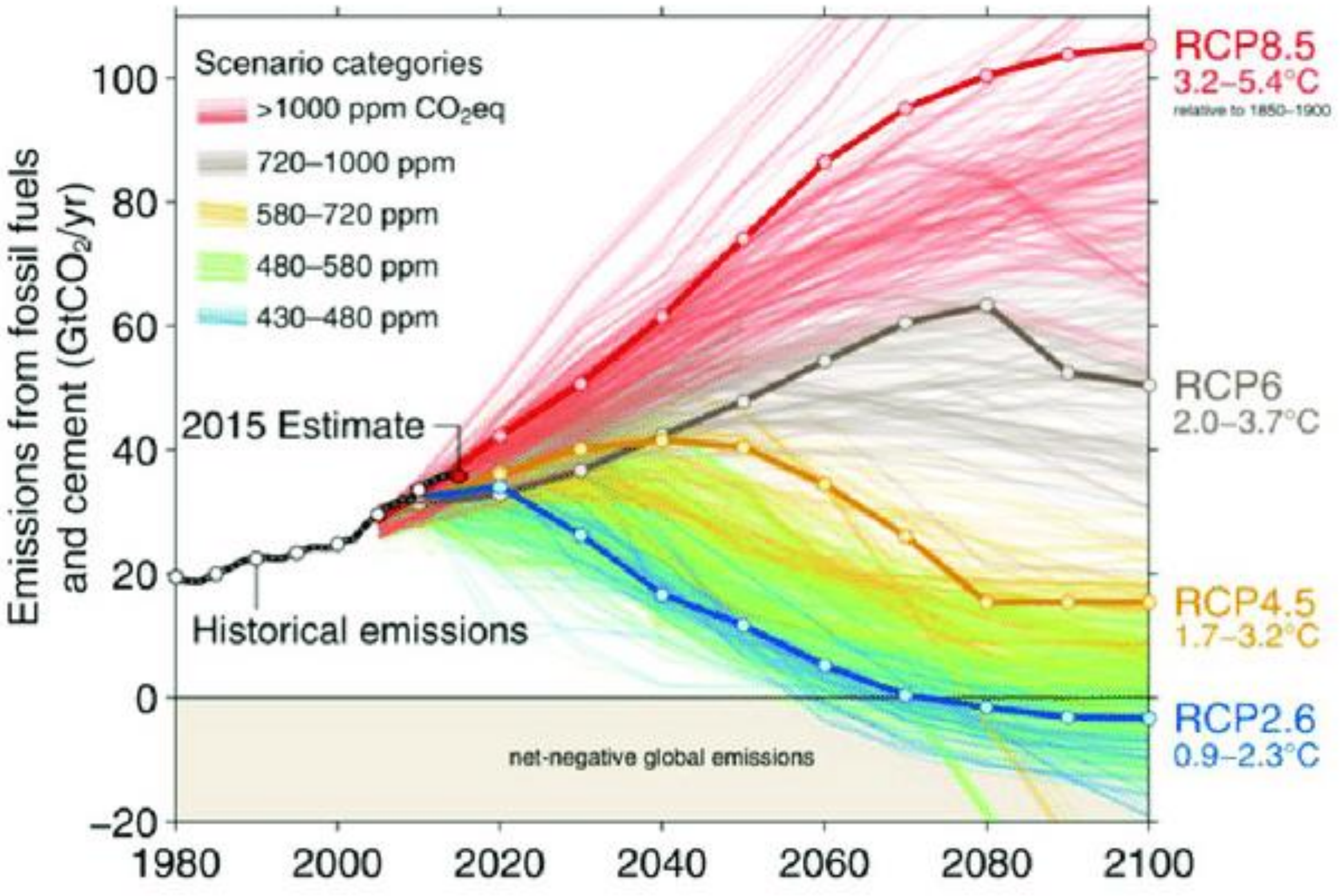
Carbon footprint	*Description*	Total carbon emissions for a portfolio normalised by the market value of the portfolio, expressed in tons CO_2e / $M invested
	Formula	$$\frac{\sum_i^n \left(\frac{current\ value\ of\ investment_i}{issuer's\ market\ capitalisation_i}\ X\ issuer's\ scope\ 1\ and\ scope\ 2\ GHG\ emissions_i\right)}{current\ portfolio\ value\ (\$M)}$$
	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**.
	Key points +/-	+ Metric may be used to compare portfolios to one another and/or to a benchmark + Using the portfolio market value to normalise data is fairly intuitive to investors + Metric allows for portfolio decomposition and attribution analysis - Metric does not take into account differences in the size of companies (e.g. does not consider the carbon efficiency of companies) - Changes in underlying companies' market capitalisation can be misinterpreted.

Source: Russell Investments

Climate Metrics and Insights

Paris Alignment

- Multitudes of underlying assumptions
- Representative Concentration Pathways (RCP)s
  - Lean into clean technology
  - Political will power
  - Strength of solar radiation and how much is trapped and for how long
  - Emissions capture
  - Peak CO2 estimate



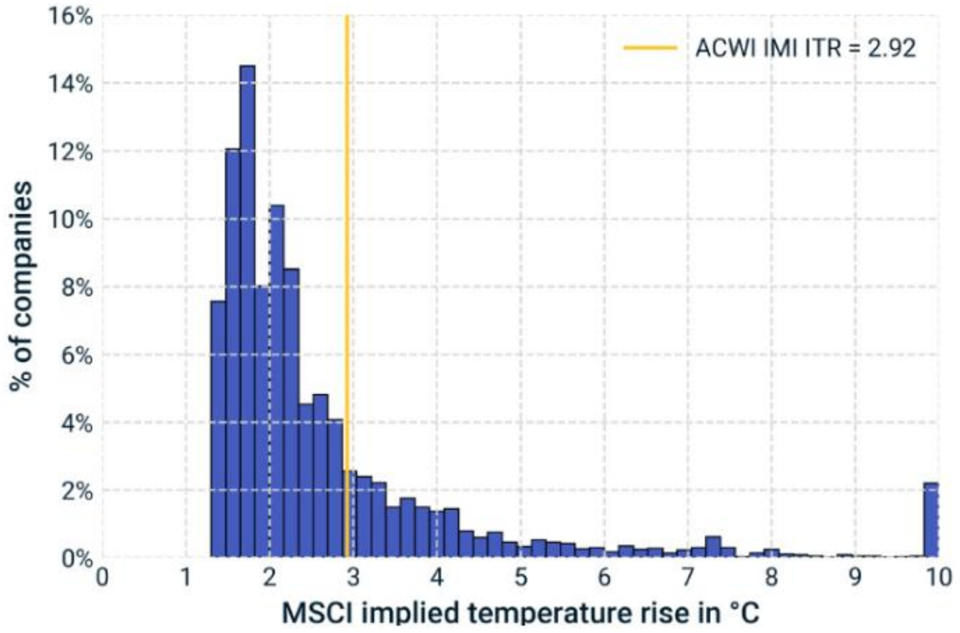
Source: Sabine Fuss et al, Betting on negative emissions - Carbon dioxide emission pathways until 2100 and the extent of net negative emissions and bioenergy with carbon capture and storage (BECCS) in 2100. Blobal Carbon Project.

Climate Metrics and Insights

Paris Alignment

- Metric tracks companies' actual and forecasted carbon intensity is aligning with the 1.5C goal.
- Often involves a subjective transition pathway assessment, examining adequacy of emission reductions over time
- Questions remain around data accuracy

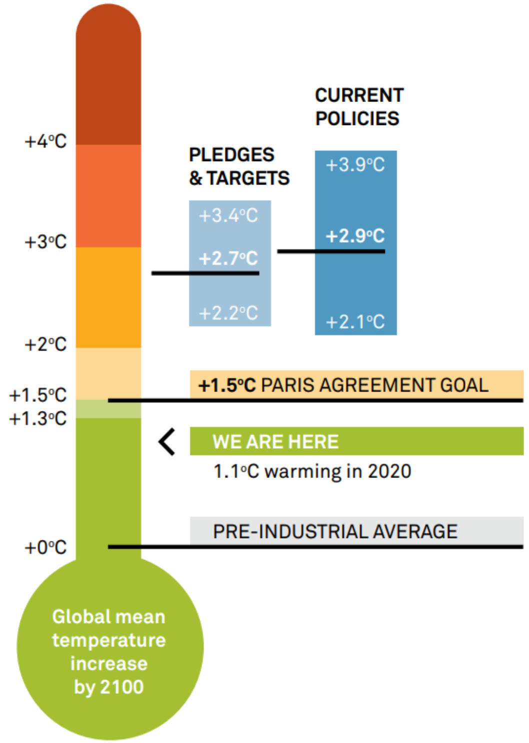
Less than 10% of MSCI ACWI IMI Constituents Had an Implied Temperature Rise of 1.5˚C or Less



As of Sept. 8, 2021. Source: MSCI ESG Research LLC

CAT warming projections Global temperature increase by 2100

September 2020 Update



Source: Climate Action Tracker, September 2020.

ESG MANAGER SURVEY

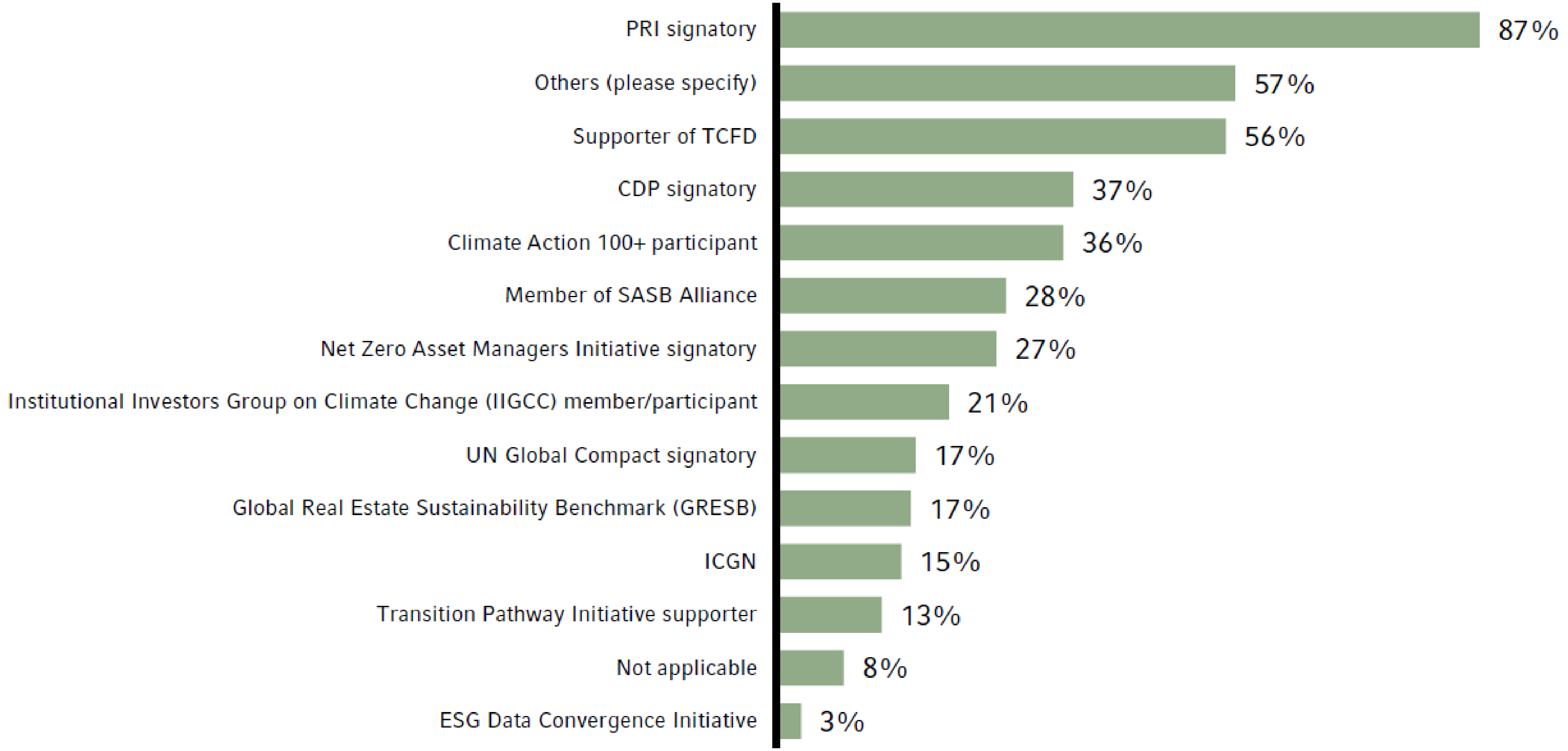
Russell Investments 2023 Annual Manager ESG Survey

Responses received for the 2023 survey were often consistent year-over-year, with results suggesting that a number of trends are continuing:

- Managers continue to hire into ESG-related roles, adding specialists across functions including data analysis and compliance.
- Respondents indicated consistent momentum toward net zero initiatives.
- Net zero aligned assets under management are low but managers' interim targets suggest a meaningful ramp up into 2030.
- Climate remains the greatest ESG-related concern among managers' clients.
- Managers continue to increase reporting of ESG metrics.
- More managers are choosing to disclose diversity metrics.

Russell Investments 2023 Annual Manager ESG Survey

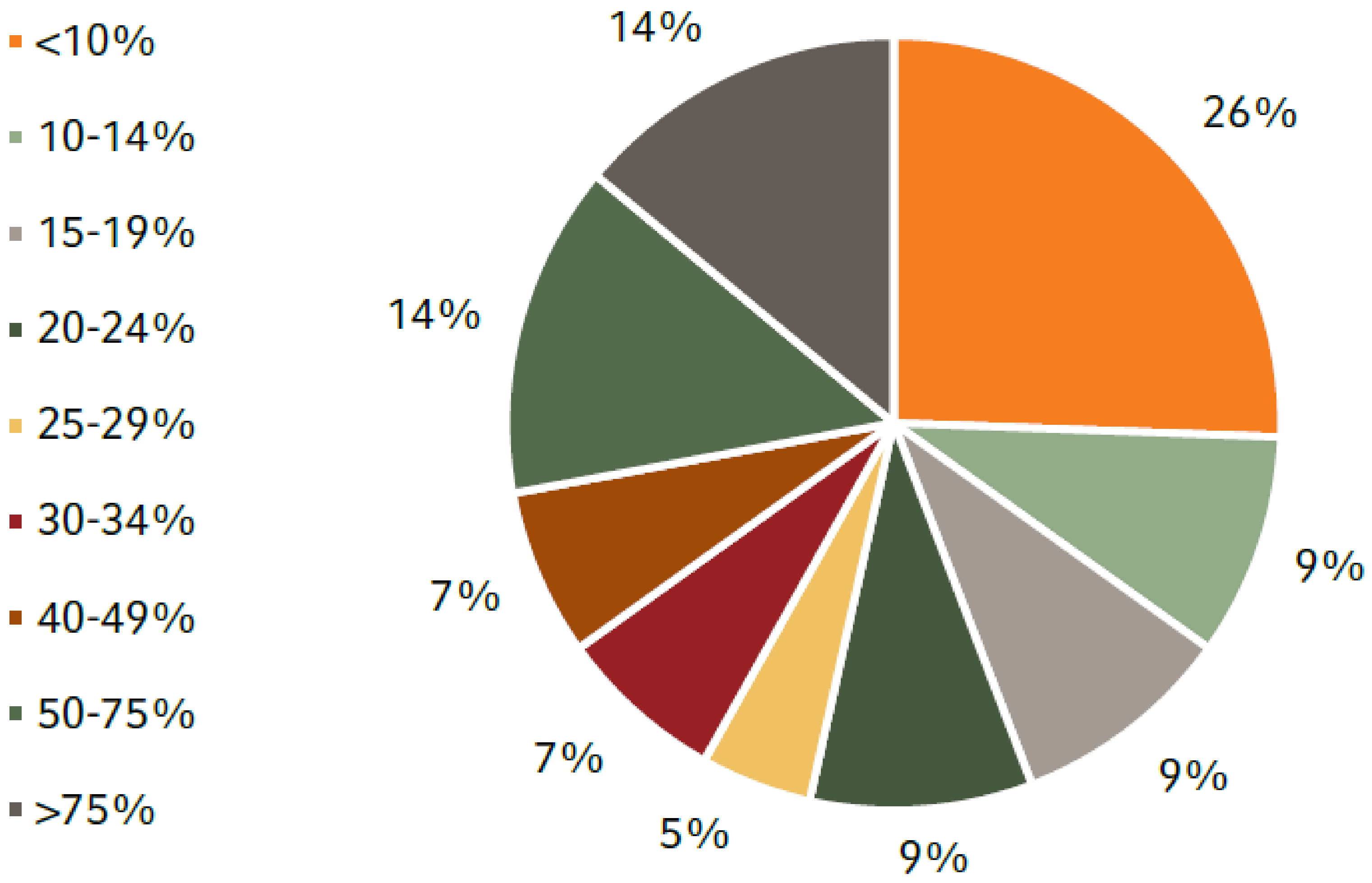
Which sustainability-related organisations or initiatives is your firm officially engaged with?



Source: Russell Investments ESG Manager Survey 2023

Russell Investments 2023 Annual Manager ESG Survey

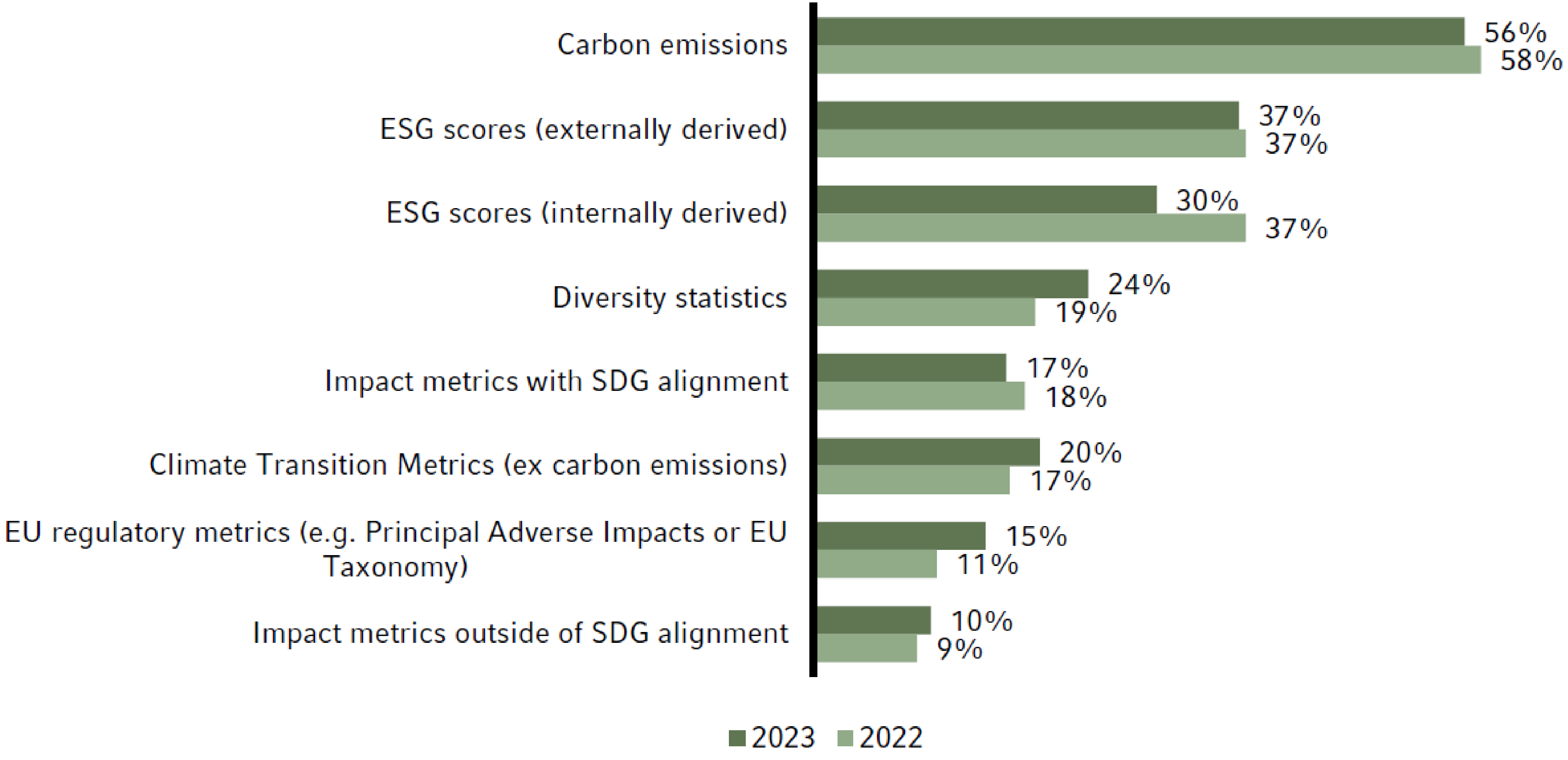
% AUM managed in line with net zero goals



Source: Russell Investments ESG Manager Survey 2023

Russell Investments 2023 Annual Manager ESG Survey

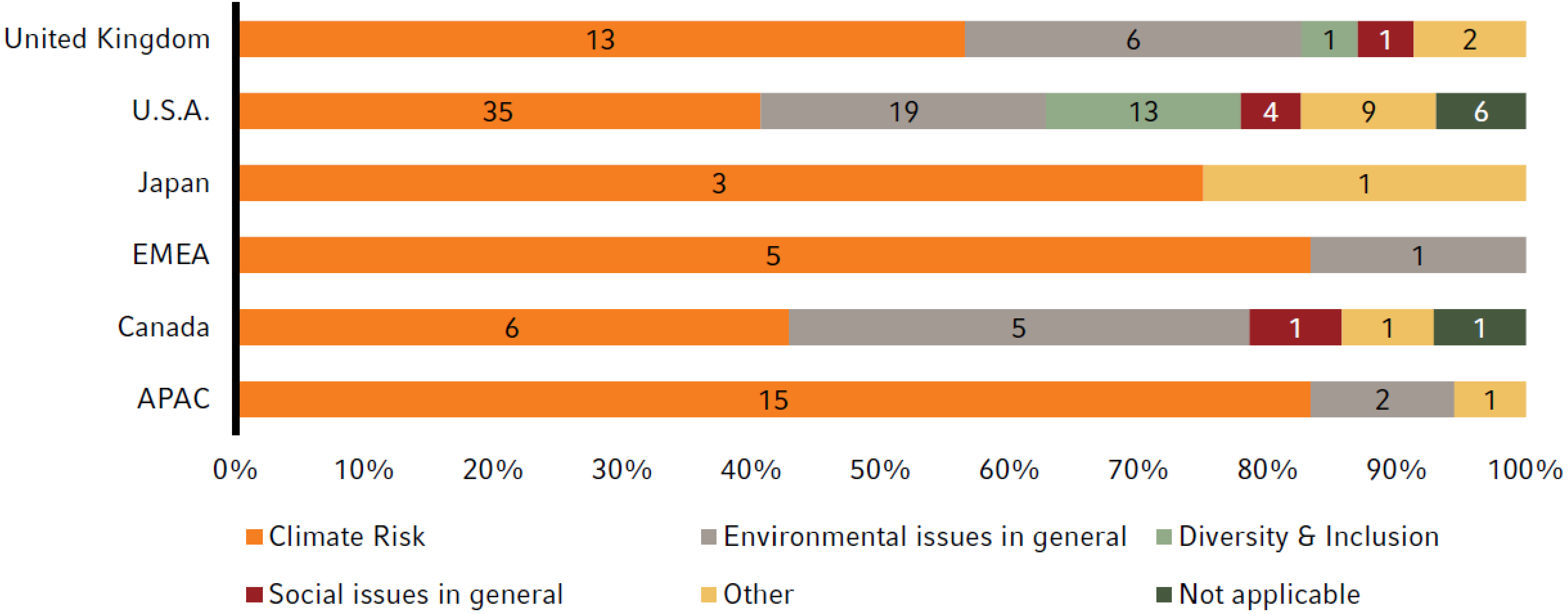
Which ESG metrics do you report in your client reporting?



Source: Russell Investments ESG Manager Survey 2023

Russell Investments 2023 Annual Manager ESG Survey

What is the single biggest challenge of incorporating ESG-related info into investment decision making?



Source: Russell Investments ESG Manager Survey 2023

CARBON MANAGEMENT CONSIDERATIONS

Key global trends in responsible investing

MARKET CHANGES AND DEVELOPMENTS

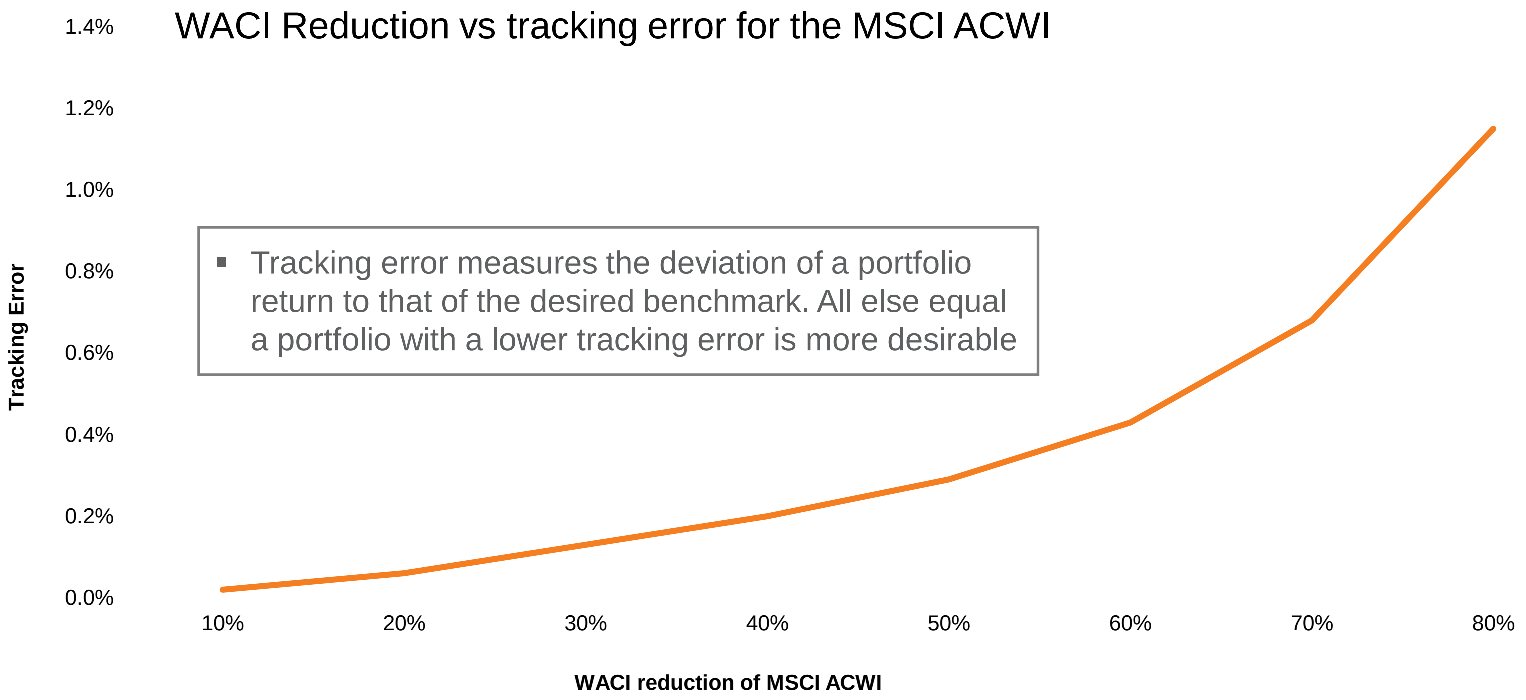
- Client demand
- Climate related risk & opportunities
- Corporate reporting
- Regulation
- Society changes post pandemic
- Shift to low carbon economy

Responsible investing is moving mainstream and we have witnessed record asset flows into sustainable approaches. We believe this trend is set to continue.

Source: Russell Investments, for illustrative purposes only.

Carbon management strategies

- Fossil fuel reserves and greenhouse gas (GHG) emission statistics provide valuable, yet incomplete, insights into a firm's overall climate exposure
- Due to an increasing level of sophistication in climate finance and rapid improvements in company-level carbon data, investors can now better manage the carbon exposure of their equity investments
- Carbon management strategies:
  - Exclusions
  - **Decarbonisation**
  - Proxy voting and engagement
  - Green impact investment



Carbon management strategies

Summary of strategies - Benefits

EXCLUSIONS	DECARBONISATION	PROXY VOTING & ENGAGEMENT	GREEN IMPACT INVESTMENT
Straightforward to implement for investors with scale to operate segregated accounts	Pragmatic approach that acknowledges carbon exposure lies on a spectrum	Potentially high impact, ‘active-ownership’ strategy	Proactive approach, putting ‘money where the mouth is’
Easy to understand and simple to monitor and manage	Low impact on risk/return characteristics of aggregate portfolio	Does not require change of total portfolio investment strategy	Does not require wholesale change of total portfolio investment strategy
Allows ‘piggy-backing’ off exclusions lists of high-profile investors (e.g. NZ Super)	Provides the most flexibility and works particularly well for well diversified portfolios	Real world solution that recognises the practical realities of the current situation (i.e. to make a real difference, the high emitters need to improve too)	Emission targeting in the investment portfolio can offset emissions elsewhere in portfolio (like buying carbon offsets)
Allows for blanket policies which may resonate with clients or fund beneficiaries (e.g. no investment in fossil fuel companies)	Allows for targeting of specific reductions in emissions in absolute or relative terms		

Source: Russell Investments 2020.

Carbon management strategies

Summary of strategies - Challenges

EXCLUSIONS	DECARBONISATION	PROXY VOTING & ENGAGEMENT	GREEN IMPACT INVESTMENT
Can be a blunt tool and opens investors up to claims of hypocrisy and inconsistency	Requires a significant amount of data on underlying holdings	Reliance on fund managers/third party providers to implement proxy votes and/or engage with management	Difficulty in identifying appropriately skilled managers
For smaller investors, they are limited by the availability of appropriately screened products.	Can be complicated with need for optimisation software	Large shareholding required to ensure change	Potentially high-risk investments
Does not consider the spectrum of carbon emissions	May not materially improve real economic outcomes	Requires ongoing effort from the investor	Data constraints on measuring portfolio KPI's and outcomes
May lead to adverse portfolio outcomes	Challenging to implement across high conviction portfolios		

Source: Russell Investments 2020.

Russell Investments decarbonisation journey

From 1.0 to 3.0 - an industry leader in research and investment management

2015
Decarbonisation 1.0

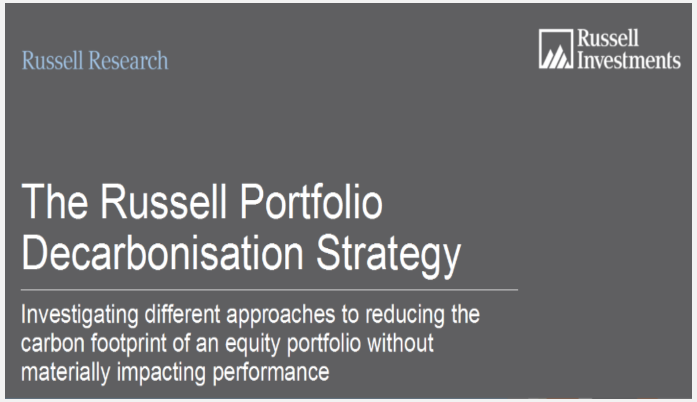
- Carbon footprint reduction

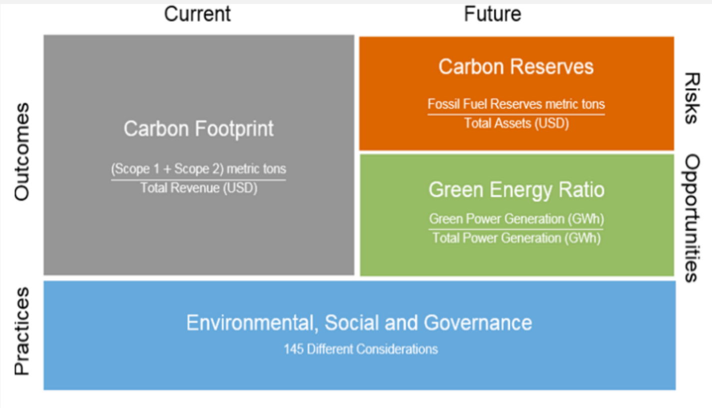
2017
Decarbonisation 2.0

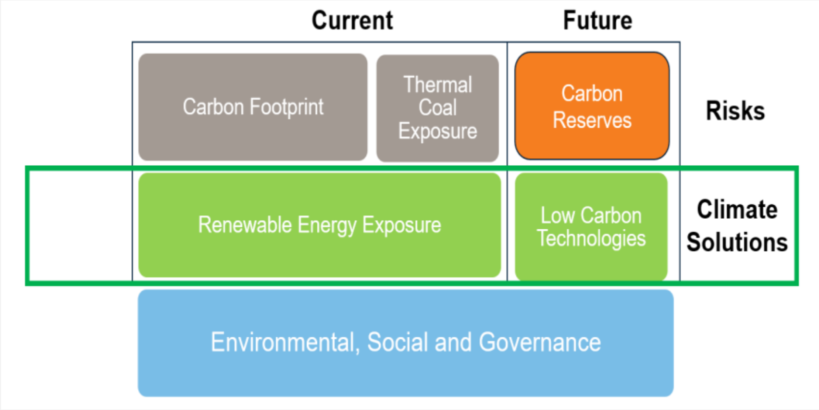
- Carbon footprint reduction
- Carbon reserves reduction
- Green energy ratio increase
- Material ESG score increase
- Exclusions

Beyond 2024
Decarbonisation 3.0

- Carbon footprint reduction
- Carbon reserves reduction
- Climate solutions increase
- ESG score improvement
- Exclusions





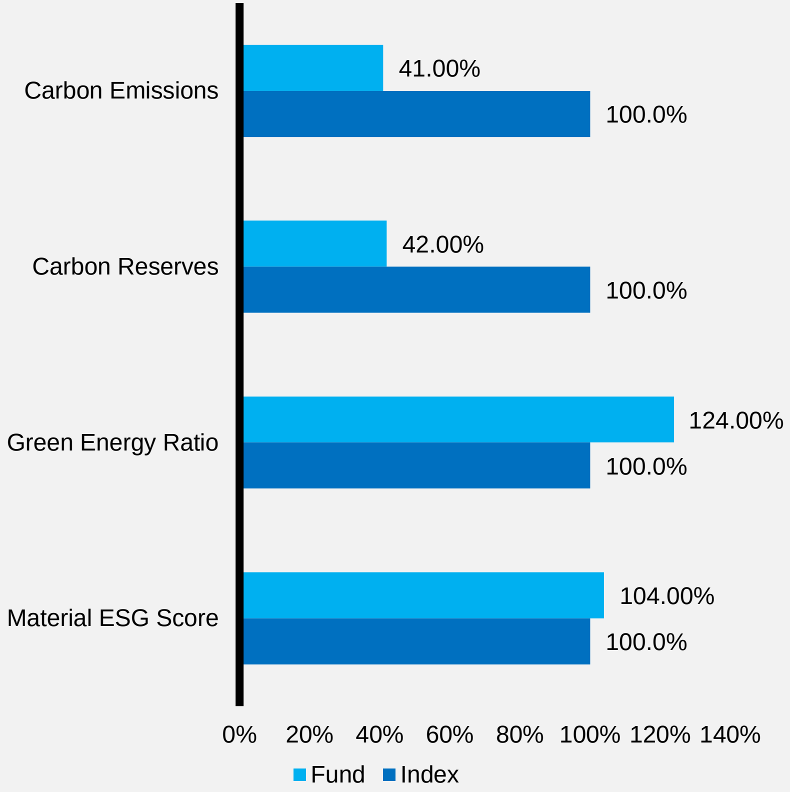


Source: Russell Investments. Decarb 2.0: https://russellinvestments.com/-/media/files/nz/pages/decarbonisation/2020-decarbonisation.pdf

Russell Investments Sustainable Global Shares

Beyond decarbonisation

DECARBONISATION & ESG OUTCOMES:
JULY 2024



DATA DEFINITIONS:

Carbon Emissions

Carbon emissions as Scope 1 (direct) carbon emissions plus Scope 2 electricity consumption) carbon emissions measured in metric tons of carbon dioxide equivalent (CO2-e), divided by company revenue ($m USD).

The company-level carbon intensity is then rolled up to calculate a portfolio-level carbon intensity using the weighted average carbon intensity (WACI) approach.

Carbon Reserves

Carbon reserves refer to the asset relative fossil fuel reserves of a company. Specifically, it is defined as: Fossil fuel reserves (m tonnes) divided by total company assets ($b USD).

Green Energy Ratio

The green energy score calculates the percentage of total energy produced from renewable energy sources. Specifically defined as: Renewable Energy GwH divided by Total Energy Production GwH Relative to benchmark.

Material ESG Scores

Our Material ESG Score ranges from 0 to 10, where 0 represents weak performance on a company's material sustainability issues, and 10 represents strong performance. The methodology combines the Materiality Map from the Sustainability Accounting Standards Board (SASB) with underlying ESG data provided from MSCI.

Source: Russell Investments, MSCI as of 31 July 2024.

Net zero carbon emissions goal

2050 net zero carbon emissions for its investment portfolios globally

Member of the Net Zero Asset Managers Initiative

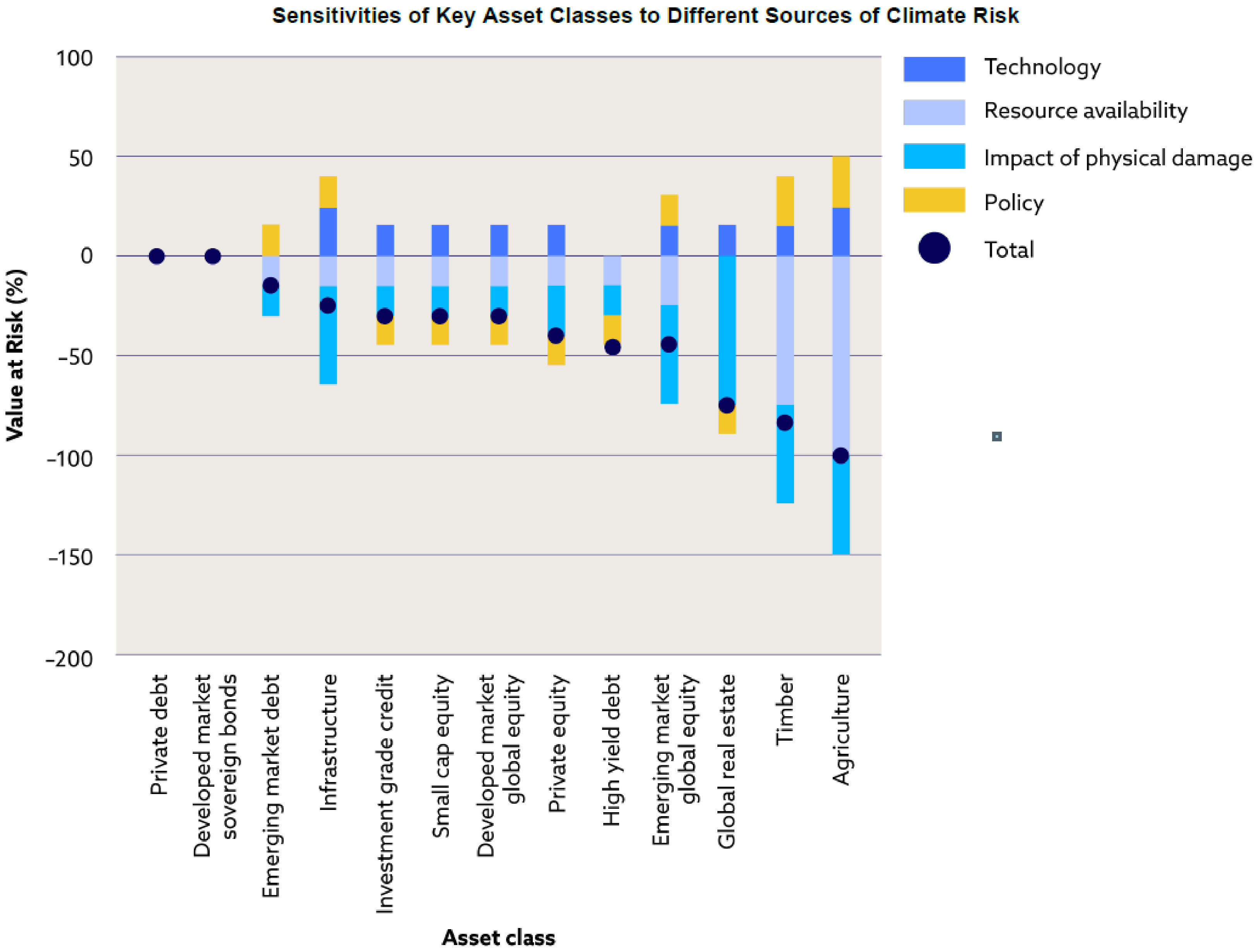
2030 net zero for global business operations*

Note*: Russell Investments' Net zero by 2030 across global business operations target relates to the firm's Scope 1 and Scope 2 emissions with a near term ambition to incorporate scope 3 (categories 1-14)
Source: Russell Investments, as at 31 December 2022.

GREENWASHING AND FUTURE DEVELOPMENTS

Future Developments

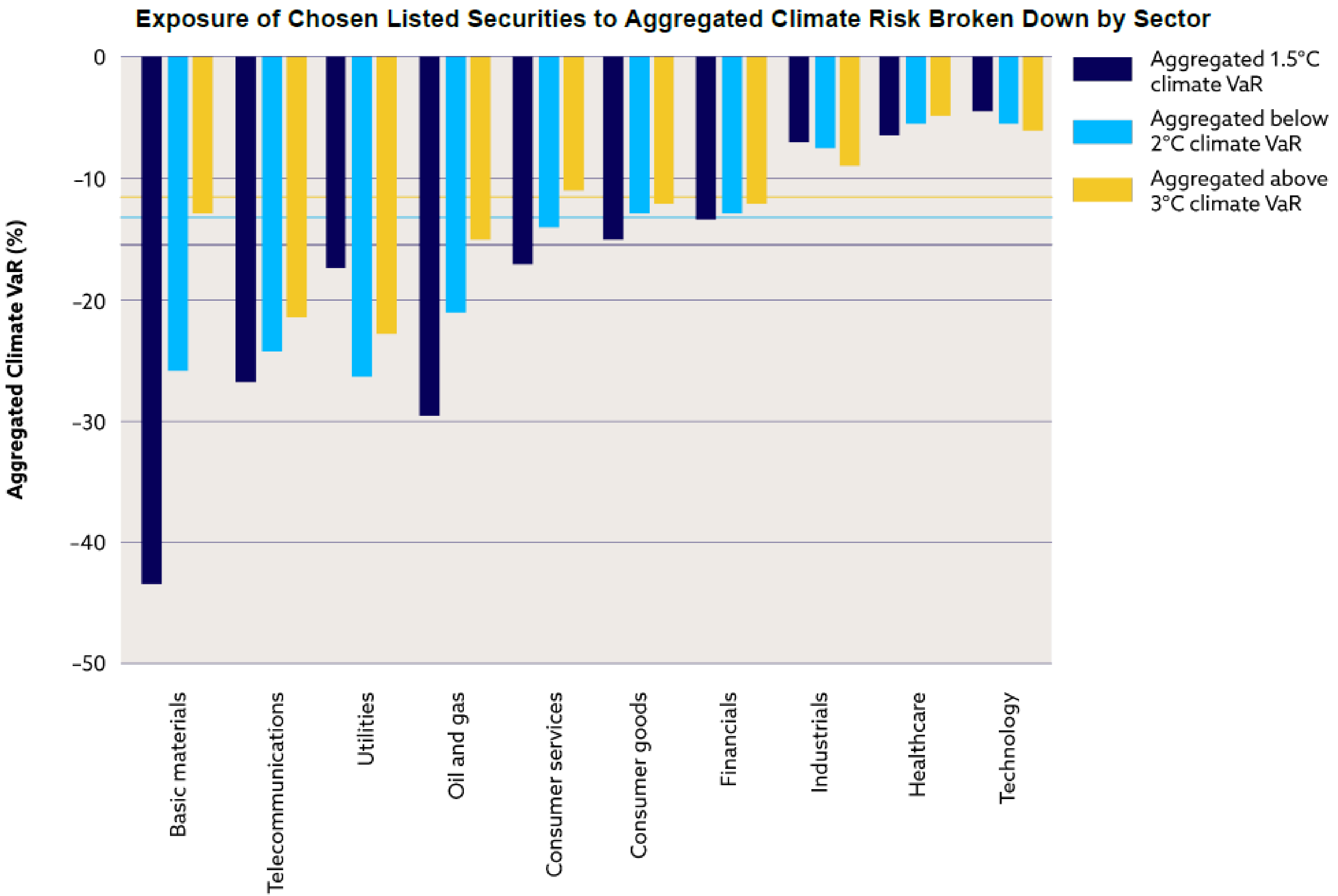
Asset class sensitivities



Source: Funding the future: Investing in climate action, Schroders (2022). https://mybrand.schroders.com/m/8645ae373488e2e/original/schroders_tcfd_2022.pdf/

Future Developments

Sector sensitivities



Source: Funding the future: Investing in climate action, Schroders (2022). https://mybrand.schroders.com/m/8645ae373488e2e/original/schroders_tcfd_2022.pdf/

Greenwashing and Future Developments

Greenwashing

- Regulators all over the globe are battling greenwashing.
- FMA has been watching how things are turning out in Australia and recently opened submissions on its fair outcomes disclosures.
- ASIC has recently prosecuted for misleading representations and fee disclosure failures.
- WWF also have a 4-step guide to greenwashing, focussing on buzzwords, evidence, verification and sustainability

Source: https://asic.gov.au/about-asic/news-centre/find-a-media-release/2023-releases/23-314mr-mercer-to-pay-12-million-penalty-for-misleading-representations-and-fee-disclosure-failures/
https://www.wwf.org.uk/learn/guide-to-greenwashing#verification WWF Guide to Greenwashing

Greenwashing and Future Developments

Next steps

- The FMA is likely to continue with its focus on greenwashing, particularly given the recent prosecutions by ASIC.
- Aotearoa NZ's External Reporting Board (XRB) is starting to implement Climate Reporting Standards for Climate Reporting Entities
- Being one of the first to require mandatory climate reporting, NZ is likely to need to refine the process, updating guidance, incorporating developments from overseas, and confirming definitions.

Greenwashing and Future Developments

Next steps

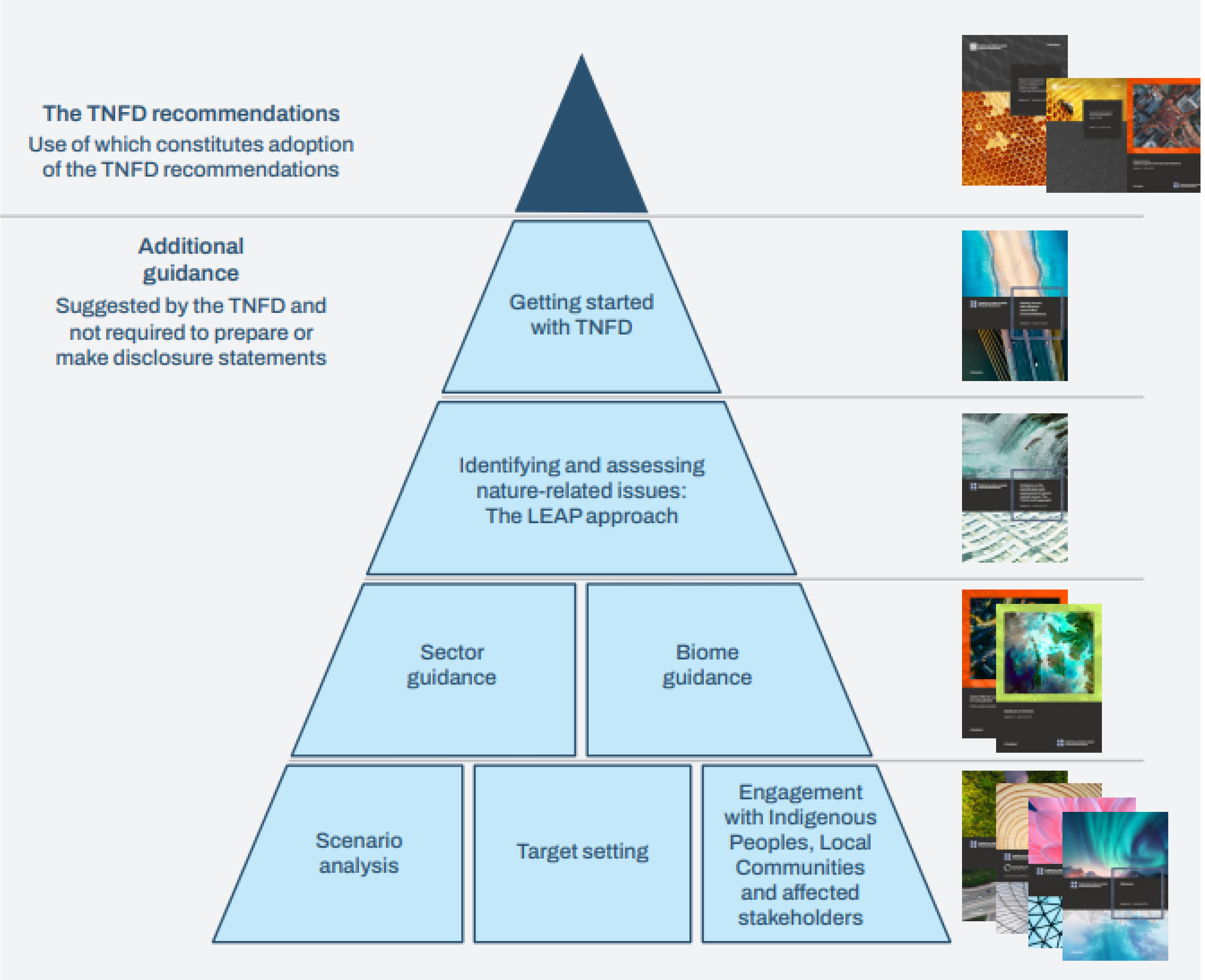
- WWF, the University of Oxford, and the University of Zurich have collaboratively launched an AI tool entitled "Natural Language Processing for Sustainable Finance Programme" (NLP4SF) to combat greenwashing. The AI tool identifies inconsistencies and potential greenwashing in transition plans

Source: Natural Language Processing for Sustainable Finance Programme (NLP4SF)." Oxford Sustainable Finance Group. University of Oxford. (2023). https://sustainablefinance.ox.ac.uk/nlp4sf-home/ (Accessed: November 2, 2023).

Greenwashing and Future Developments

Next steps

- More mature markets such as the UK and EU are already well versed in climate-related disclosure and now are turning to the next chapter
- The Taskforce on Nature-related Financial Disclosures (TNFD) has developed a set of disclosure recommendations and guidance that encourage and enable business and finance to assess, report and act on their nature-related dependencies, impacts, risks and opportunities.
- Similar to TCFD, the TFND also keeps the framework of Governance, Strategy, Risk and Impact Management, and Metrics and Targets.
- EU focus on double materiality



Source: https://tnfd.global/publication/recommendations-of-the-taskforce-on-nature-related-financial-disclosures/

Q&A

THANK YOU!

ANY QUESTIONS?

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