

Surrey Pension Fund

Net zero considerations

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welcome to brighter



Summary

This is a discussion document on Net Zero decarbonisation targets. 2050 is the current globally accepted “standard” target date, which is supported by science. If investors wish to adopt more ambitious targets, a key point to understand is that potentially radical changes will be needed to investment portfolios, leading to increased levels of concentration risks and reductions in diversification. Crucially, such changes may not necessarily translate into real world impact and help make progress to a lower carbon world.



Earlier targets are possible but will be harder to achieve and involve reduced diversification



Investing only in companies aligned with an Implied Temperature Rise of 1.4/1.5°C would increase 3 year VaR (funding risk) by c.£200m



Balancing actual portfolio metrics or real world change?



Divestment, bias to low carbon investment, engagement all needed



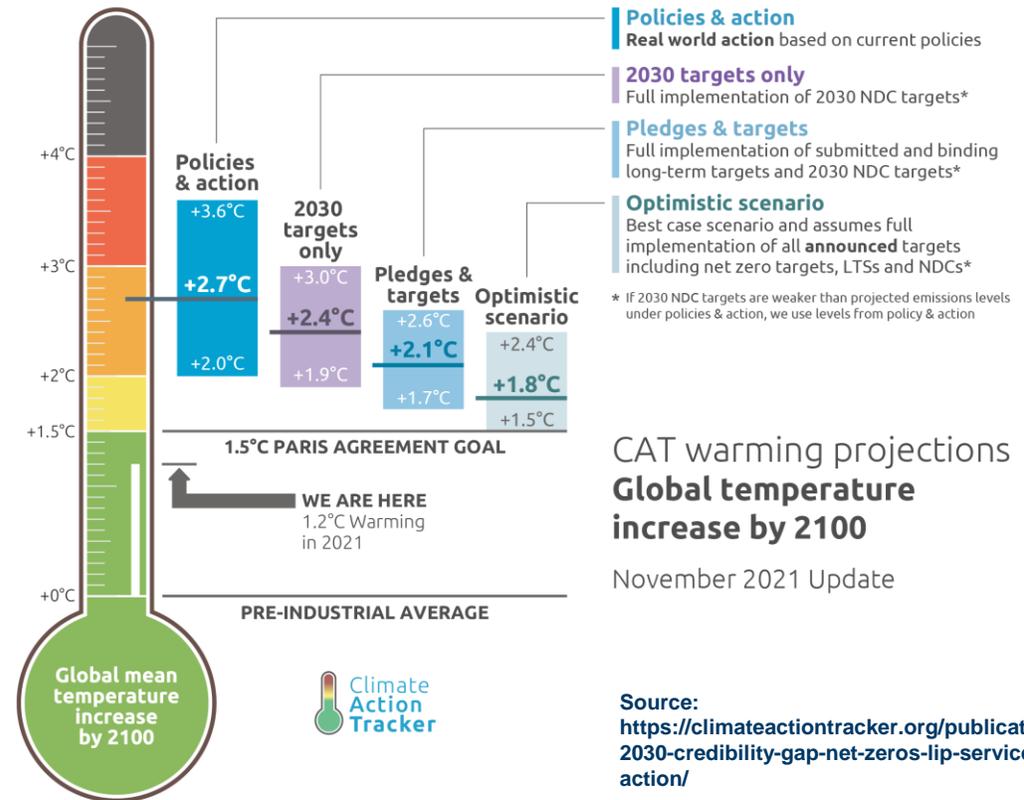
Implementation challenges: actions taken by LGPS pools will be key



Regular review

Credible transition plans are key

- Climate Action Tracker's latest estimates highlight the 'credibility gap', noting that **current policy commitments put the world on track for 2.1 degrees**, with an 'optimistic scenario' resulting in warming of 1.8 degrees.
- Under current policies, the end-of-century warming is estimated to be 2.7 degrees.
- **There has been insufficient momentum from leaders and governments to increase 2030 climate targets** ahead of, and at, Glasgow.
- Even with all new Glasgow pledges for 2030, we will emit roughly twice as much in 2030 as required for 1.5°. **Therefore, all governments need to reconsider their targets.**

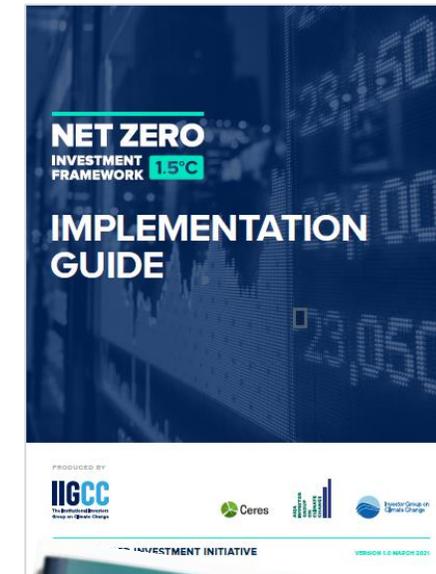


‘Actions speak louder than words’: Investors will need to demonstrate how they are transitioning their investments for real world impact. Commitments and pledges are important, but only the practical application and implementation of a credible net zero transition plan will position investors well over the coming decade.

Net zero and offsets

Industry debate

- Increasingly, investors are considering how ambitious they can be when it comes to net zero targets and commitments. **Setting more ambitious net zero targets will be reliant on the use of carbon offsets.** At present, the market is not sufficiently developed to rely on them to meet targets but they do present an opportunity through both negative emissions technologies and nature-based solutions.
- The Institutional Investor's Group on Climate Change (IIGCC) Net Zero Framework notes:**
 - Investors **should not offset emissions in one part of their portfolio through accounting for avoided emissions in another part.** Given the necessity of effectively reaching zero emissions from investments over time, trading these two against each other is not consistent with creating incentives for investors and underlying assets to maximise their efforts to decarbonise their portfolios to the full extent possible.
- The Net Zero Asset Owner's alliance notes:**
 - Investments in carbon dioxide removal (CDR) and negative emissions technologies and solutions (including nature-based solutions) will also be complementary and necessary to accelerate progress and keep global average warming to 1.5°C.



Industry thinking will evolve and we expect the use of offsets will become more sophisticated

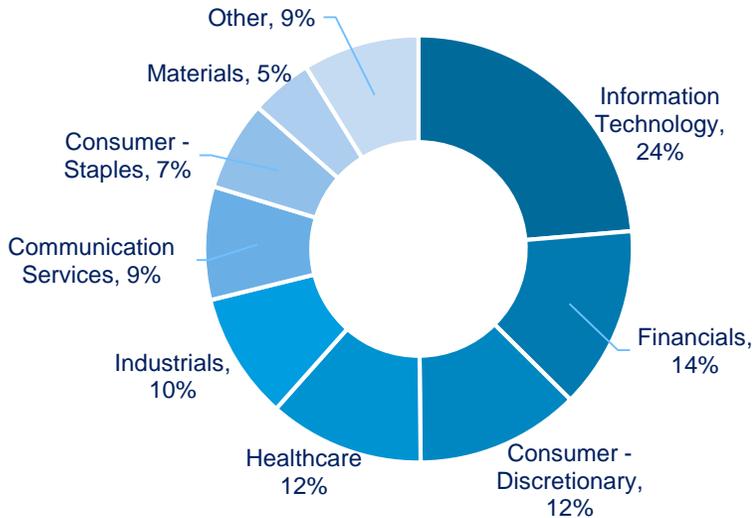
Equities: how many companies are aligned to 1.5°C & 1.4°C Implied Temperature Rise?

Reduction in investible universe

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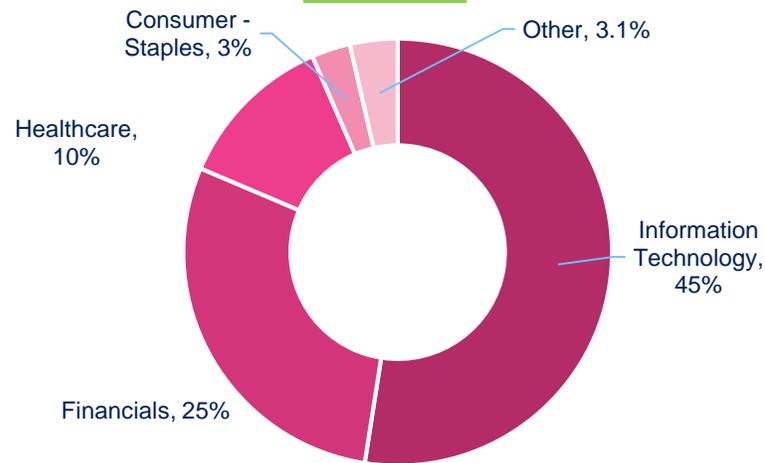
Global Equity Universe (MSCI ACWI)

2953 stocks



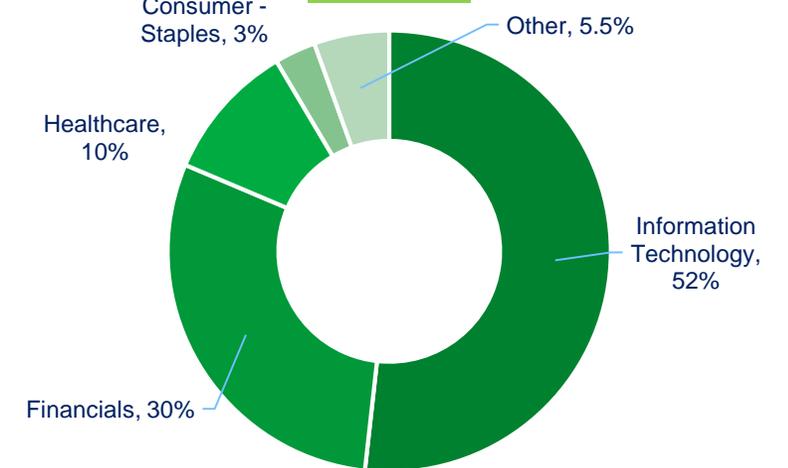
Stocks aligned to 1.5 Implied Temperature Rise

432 stocks

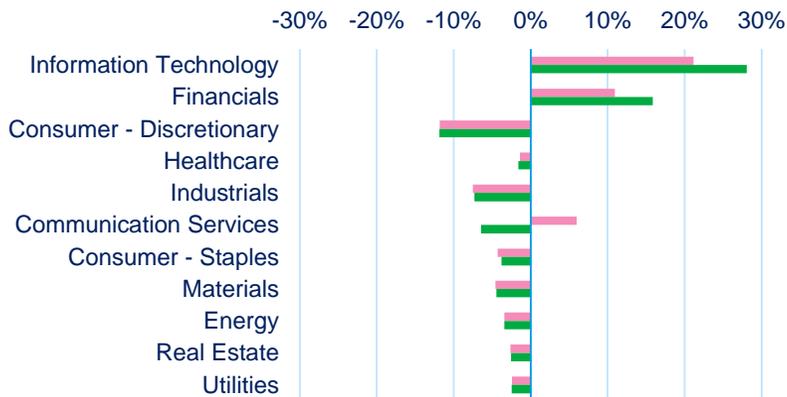


Stocks aligned to 1.4 Implied Temperature Rise

181 stocks



Relative Sector Positions



c.85% reduction of universe in terms of number of companies
c.77% reduction in terms of market cap screened out

c.94% reduction of universe in terms of number of companies, c.88% reduction in terms of market cap screened out

Investment products currently don't exist to be able to invest on this basis. Loss of diversification is a concern

What does a portfolio of companies aligned to 1.5°C & 1.4°C Implied Temperature Rise look like? Portfolio holdings

For the two implied temperature rise portfolio's 1.5°C & 1.4°C, we have analysed the expected risks and portfolio tilts compared to the MSCI AC World Index in order to assess the potential impacts the restrictive universe could have on a portfolio composition. For each implied temperature rise portfolio we have analysed the portfolio in two ways; the first is to take the current market cap weightings and scale up the holdings, so for example in the 1.5°C scenario the universe is reduced to c.23% of market cap, so all holdings, in effect will be just over 4x as large as in the full market cap weighting. The impact on the 1.4°C scenario is even more exaggerated as the 12% residual market cap means that the holdings are c. 8x larger. To counteract the concentration risk, we have also looked at equally weighted portfolios for all the available holdings. Whilst this reduces the potential concentration risks of the largest holdings, this results in a significant bias to small cap holdings.

Company	MSCI AC World Index Market Cap	1.5°C Market Cap Weight	1.5°C Equal Weight
Apple	4.2%	18.5%	0.2%
Alphabet	2.4%	10.8%	0.2%
United Health Group	0.7%	3.0%	0.2%
Visa	0.5%	2.3%	0.2%
Mastercard	0.5%	2.0%	0.2%
Adobe	0.4%	1.7%	0.2%
Cisco	0.4%	1.7%	0.2%
Accenture	0.4%	1.7%	0.2%
Salesforce	0.4%	1.6%	0.2%
Paypal	0.3%	1.3%	0.2%
Total top 10	10.0%	44.5%	2.6%

Company	MSCI AC World Index Market Cap	1.4°C Market Cap Weight	1.4°C Equal Weight
Apple	4.2%	36.2%	0.6%
Cisco	0.4%	3.3%	0.6%
Accenture	0.4%	3.2%	0.6%
Salesforce	0.4%	3.1%	0.6%
Novo Nordisk	0.3%	2.3%	0.6%
AstraZeneca	0.3%	2.2%	0.6%
SAP	0.2%	1.8%	0.6%
La Banque Toronto	0.2%	1.7%	0.6%
Commonwealth Bank of Australia	0.2%	1.6%	0.6%
AIA Group	0.2%	1.5%	0.6%
Total top 10	6.6%	57.0%	5.5%

Source: MSCI, products may not sum due to rounding. 31 December 2021

MSCI AC World Index column shows the weight of the 1.5 & 1.4 degree stocklists in the full MSCI AC World Index, actual top 10 of MSCI AC World Index is different to above, the numbers are to show comparison weightings. Actual top ten has weighting of 17.8%.

Significant concentration risk in a few stocks, in particular Apple

What does a portfolio of companies aligned to 1.5°C & 1.4°C Implied Temperature Rise look like? Portfolio Characteristics

	Risk		Portfolio Biases				ESG Scores
Portfolio	Expected volatility increase of portfolio above MSCI AC World Index	Potential Fund 3 year Value at Risk Increase	Style Bias	Market Cap Bias	Sector Bias	Regional bias	MSCI E, S & G impacts
1.5°C Market Cap Portfolio	12.8% increase	c.£212m	Slight bias to growth	Large Cap Bias	Overweight to IT and Financials	Slight America bias / underweight Asia	Improved Environmental Below benchmark on Social & Governance
1.5°C Equal Weight Portfolio	6.1% increase	c.£100m	Huge Value bias	Significant small cap bias	Significant overweight to Financials	Towards Europe and Asia, bias away from America	Social much worse, Environmental worse too
1.4°C Market Cap Portfolio	15.8% increase	c.£262m	Slight bias to growth	Large Cap Bias	Overweight to IT and Financials	Slight European bias	Improved Environmental Some deterioration on Social & Governance
1.4°C Equal Weight Portfolio	4.9% increase	c.£80m	Huge Value bias	Significant small cap bias	Significant overweight to Financials	Large Europe bias and Asia bias, bias away from America	Social much worse, Environmental worse too

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Source: MSCI, Style Analytics.

Expected volatility increase has been calculated using expected absolute volatility of the portfolio divided by that of the benchmark.

Full portfolio analysis can be found in the appendix.

All portfolio biases comments are relative to the benchmark.

Fund total 3 year Value at risk as at 31 March 2022 was £2bn

Additional risks and consequences from focusing solely on carbon reduction

Summary Comments

- **Return** – we have not looked to estimate expected returns, we do not have return assumptions for individual stocks. Ordinarily, we would expect a reduced investment universe to reduce the expected return. In practice, the range of potential returns will be much greater (positive or negative) and likely highly dependent on one stock – Apple.
- **Risk** – absolute volatility of the portfolios modelled is higher than the benchmark. Arguably the only known is that these portfolios will take more risk. The additional concentration risk in the market weighted portfolios is particularly concerning.
- **Portfolios biases** – all the portfolios in one way or another have significant biases, the market cap portfolios have large cap and significant top ten holding concentration risks. The equally weighted portfolios have very significant small cap and value styles biases as well as a significant concentration in financials. All portfolios would be expected to deviate significantly from the benchmark at times for a variety of reasons. There are also significant sector and regional biases seen across the portfolios.
- **ESG** – whilst the companies, and portfolios, should and do, score well on carbon metrics, the analysis indicates that this is potentially at the detriment of other ESG factors. In particular social and governance scores are worse than the benchmark, indicating that the restrictive opportunity set would likely impede the Funds wider UN SDG ambitions. More detail on this can be provided, if required.
- **Implementation** – to our knowledge there are no investment strategies for listed equities that are systematically targeting net zero significantly in advance of 2050. Any implementation which had severe limits on the companies available from investment managers to invest would likely need to be conducted outside of the Border to Coast pool, this would have potentially significant cost implications for the Fund.
- **Limited real world impact** – investing only in companies already aligned to a 1.5/1.4°C Implied Temperature Rise (ITRs) arguably will have limited additional real world impact on carbon reduction. Real world impact will require companies with currently higher ITRs to implement credible carbon reduction plans.

The example portfolios are highly unconventional and raise material suitability concerns

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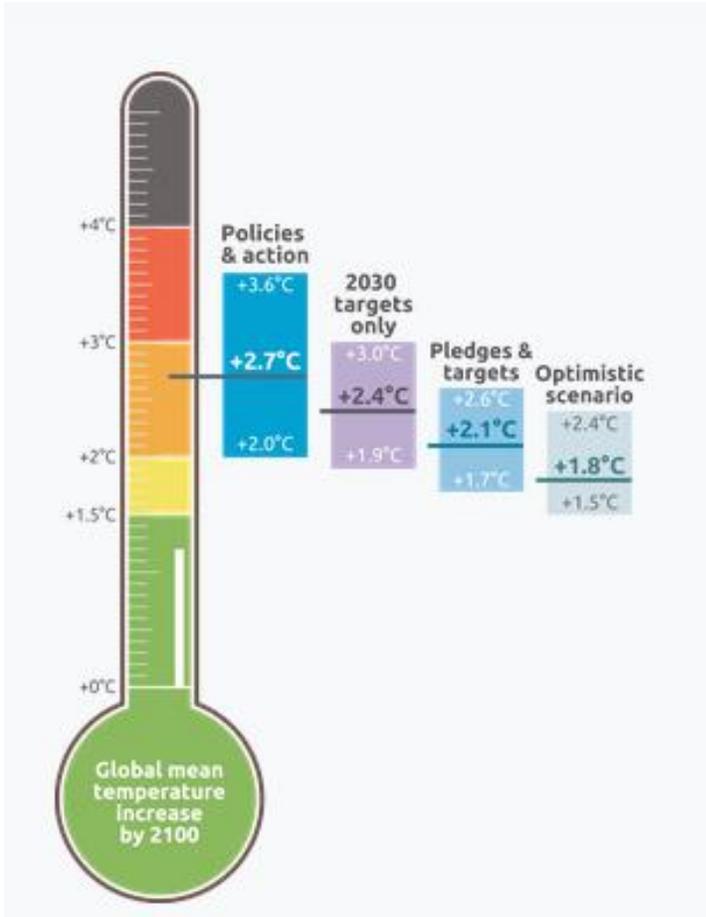
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Appendix

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Climate Change Scenarios Commitments and the Science



What the low carbon scenarios mean in practice:

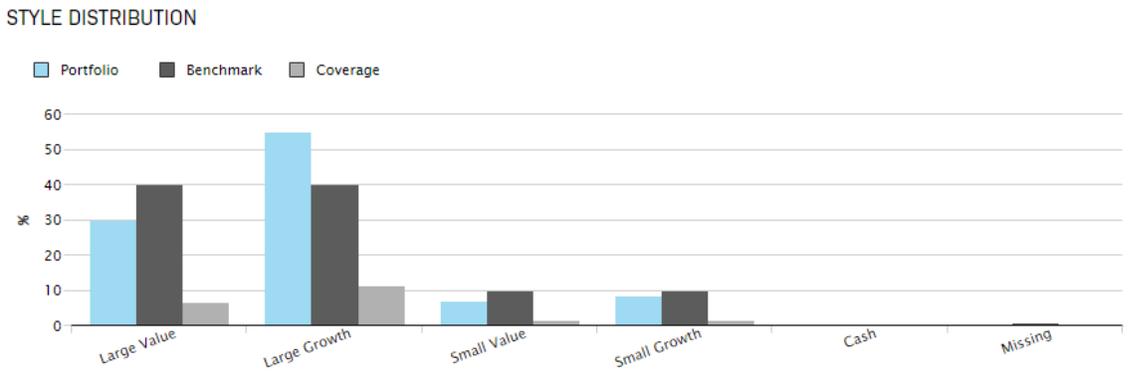
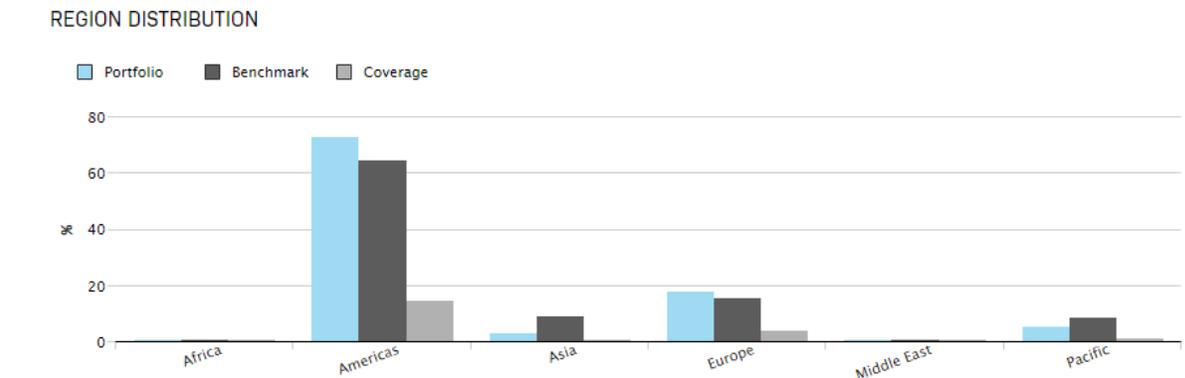
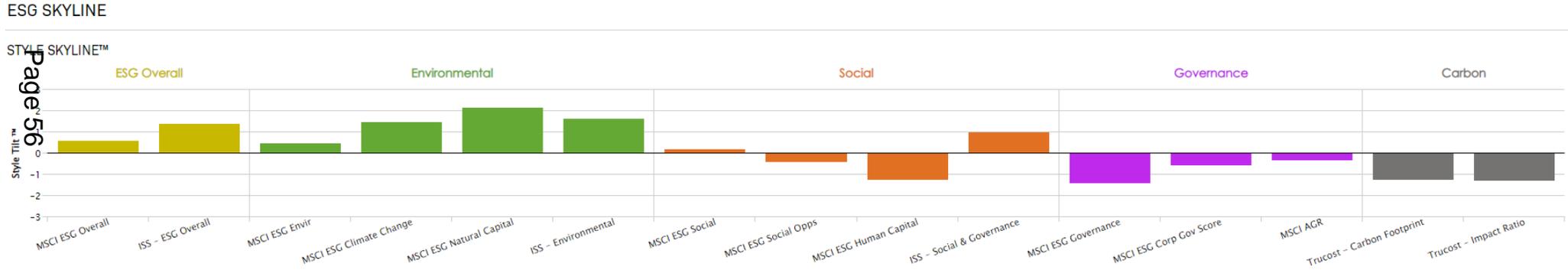
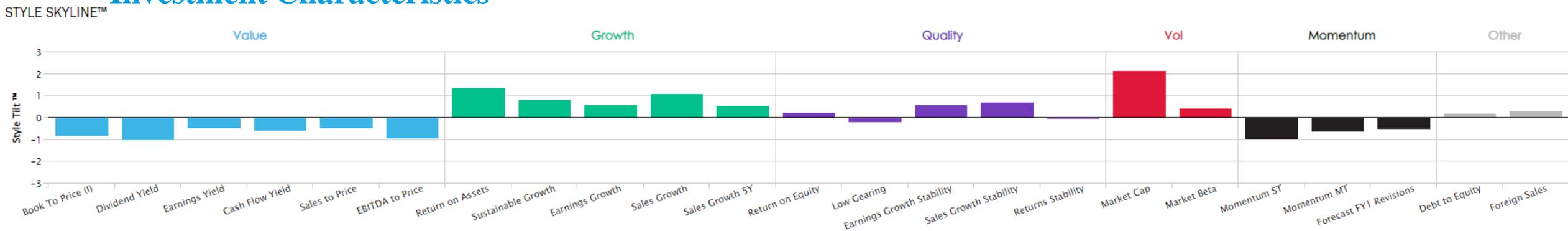
- 50-67% chance of achieving a **1.5°C scenario** needs:
 - 45% emissions reduction by 2030 (vs 2010)
 - net zero ~2050.
- 50-67% chance of achieving a **2°C scenario** needs:
 - 25% emissions reduction by 2030 (vs 2010)
 - net zero ~2070.

Paris Agreement Aim: 1.5°C
Actual trend: ~2.7°C
Current pledges: ~2.1°C

A net zero commitment by 2050 is aligned with a 50-67% probability of achieving 1.5°C.



1.5°C Implied Temperature Rise Market Cap Investment Characteristics



1.5°C Implied Temperature Rise Equal Weight Investment Characteristics

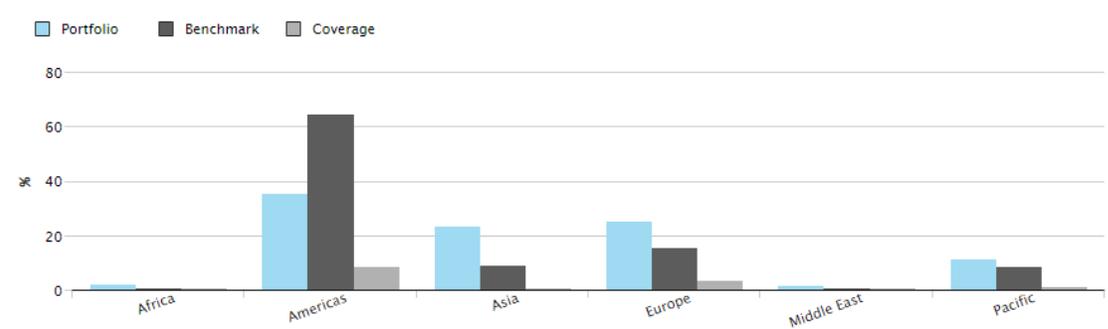
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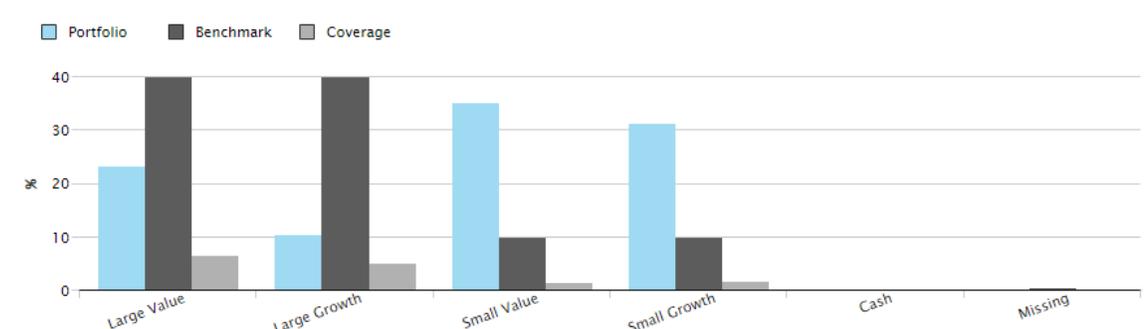
ESG SKYLINE



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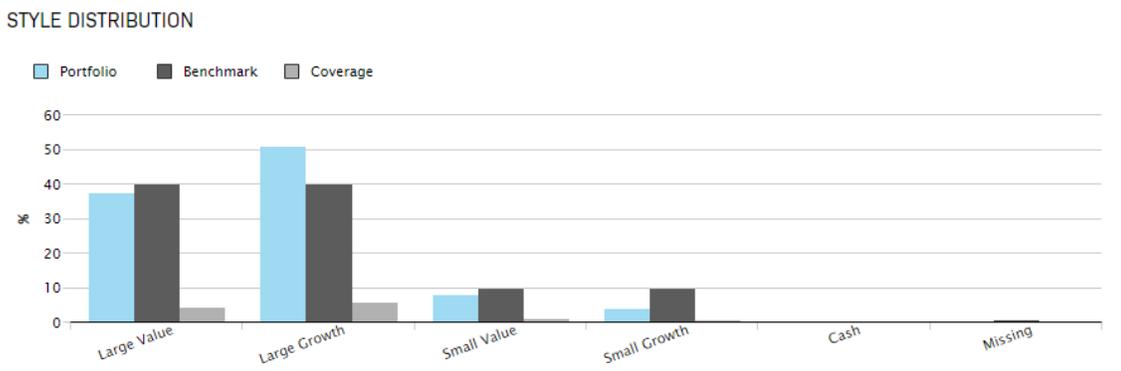
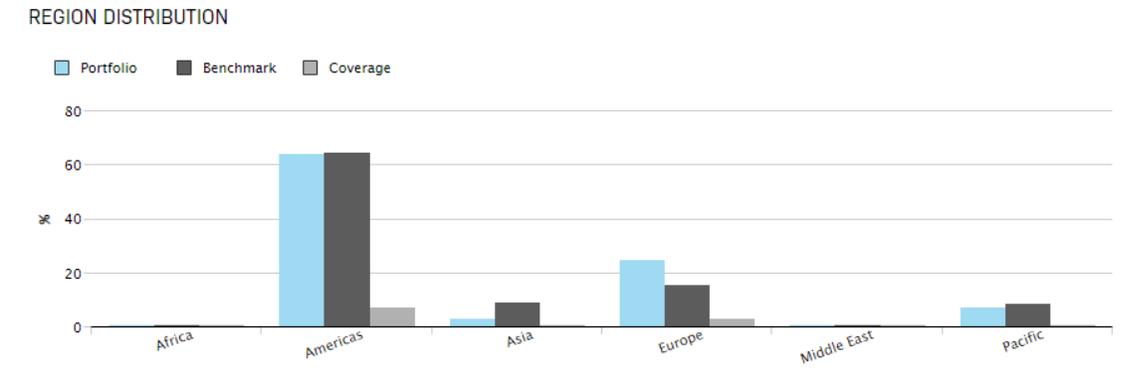
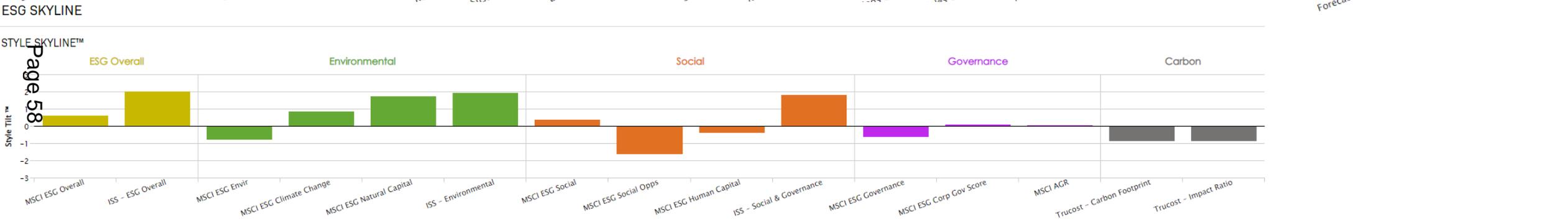


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1.4°C Implied Temperature Rise Market Cap Investment Characteristics

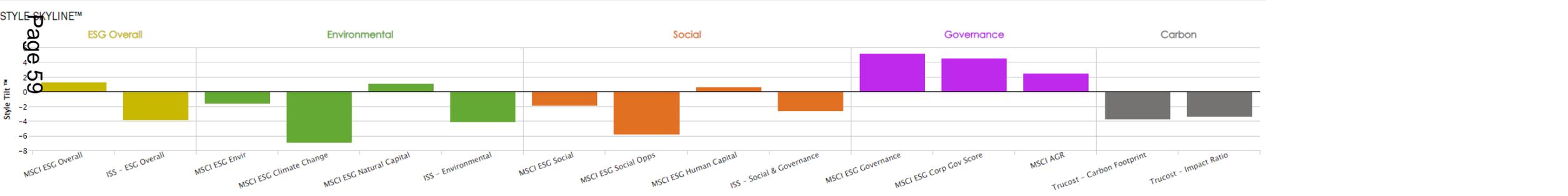


1.4°C Implied Temperature Rise Equal Weight Investment Characteristics

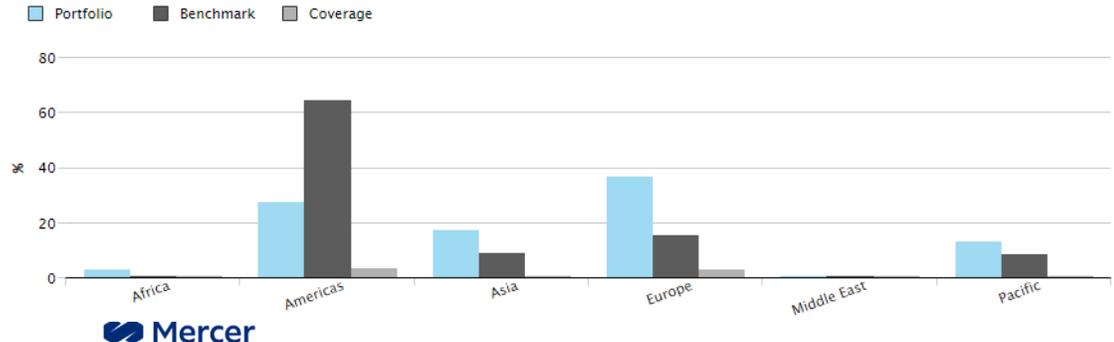
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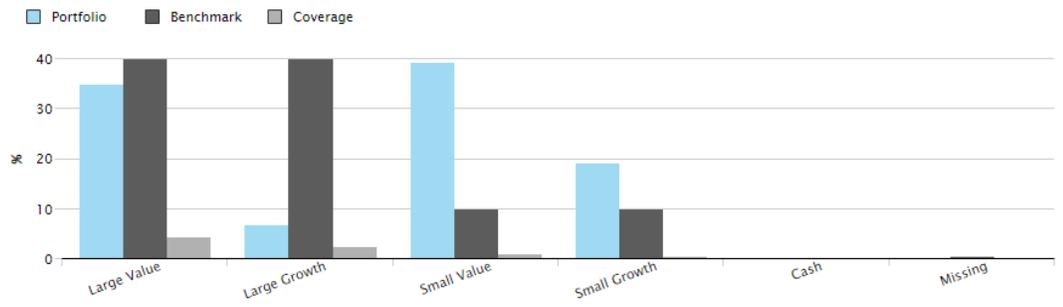
ESG SKYLINE



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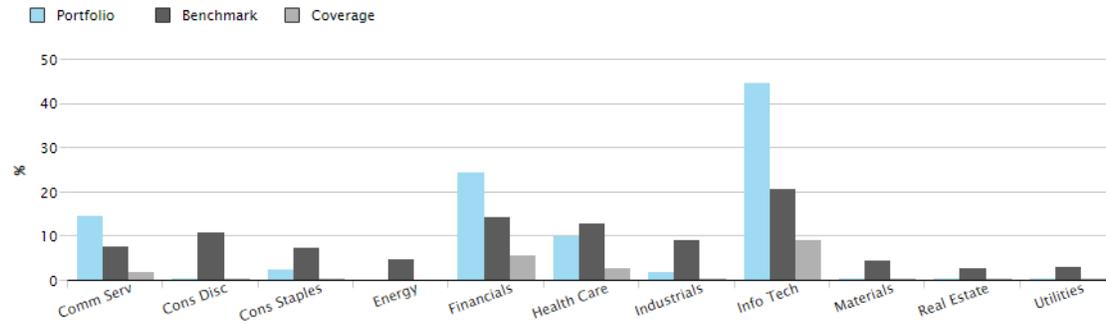


Implied Temperature Rise Portfolios

Sector Biases

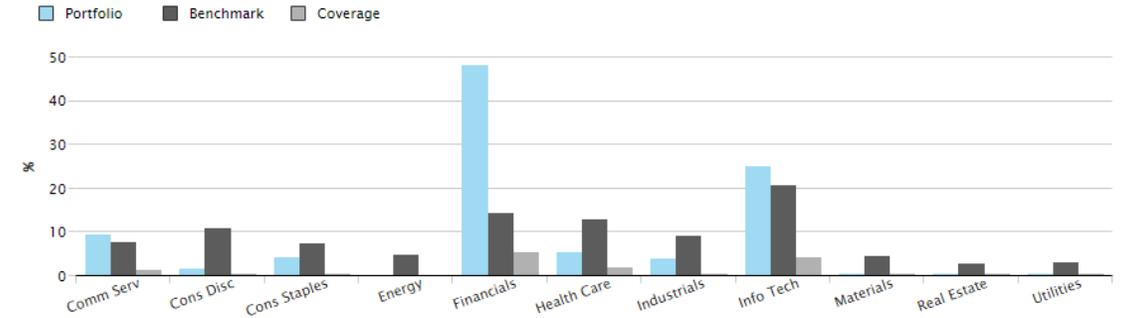
1.5°C Implied Temperature Rise Market Cap

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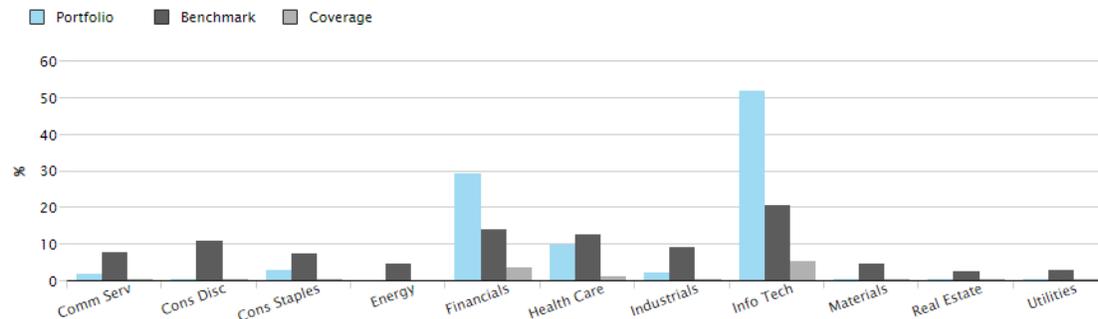
1.5°C Implied Temperature Rise Equal Weight

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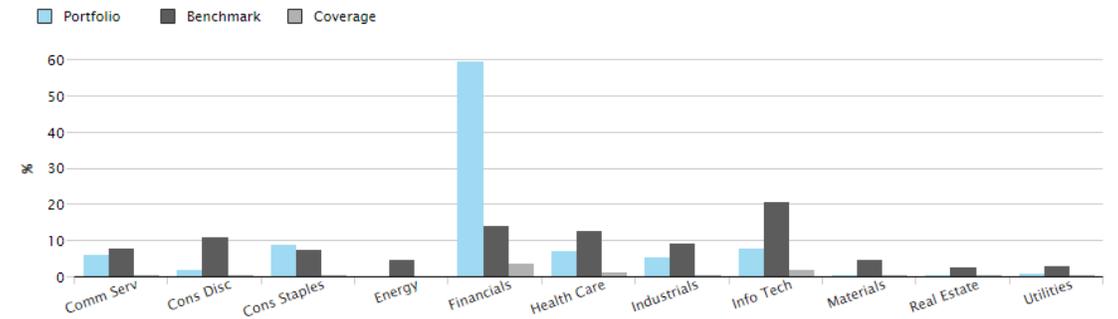
1.4°C Implied Temperature Rise Market Cap

SECTOR DISTRIBUTION



1.4°C Implied Temperature Rise Equal Weight

SECTOR DISTRIBUTION





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