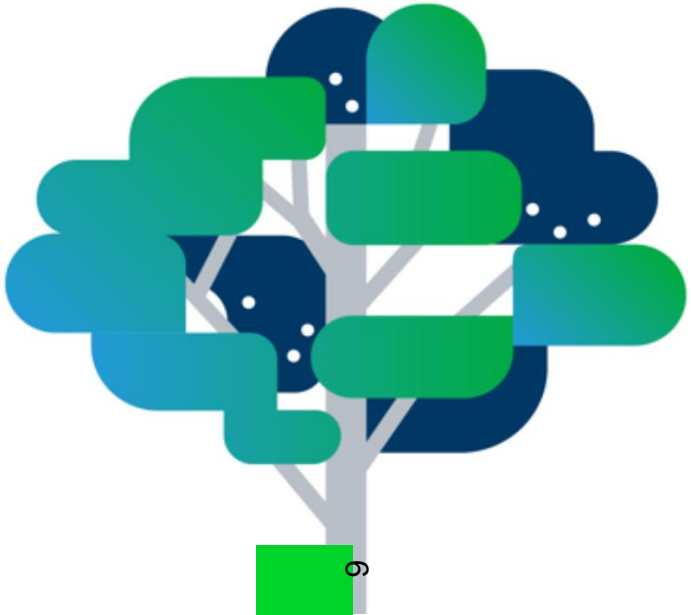
Mercer

Surrey Pension Fund

Climate-Related Risk Metrics and Proposal

Sam Wreford & Steve Turner
November 2021



welcome to brighter

Executive Summary

Summary and Key Messages

Recent Changes

The Committee agreed a switch from RAFI and Low Carbon into the Future World fund which was implemented at 30 September 2021

20%+

Reduction in carbon footprint and absolute emissions and

TCFD

This analysis establishes the baseline climate risk metrics to put into the TCFD report. Full details on the metrics are set out on slides 18-20

3

At least three metrics will need to be included in the TCFD report

Net Zero

An immediate consideration for the Committee will be to set an ambitious but realisable net zero carbon target date

2050

Border to Coast have set a net zero carbon date of 2050

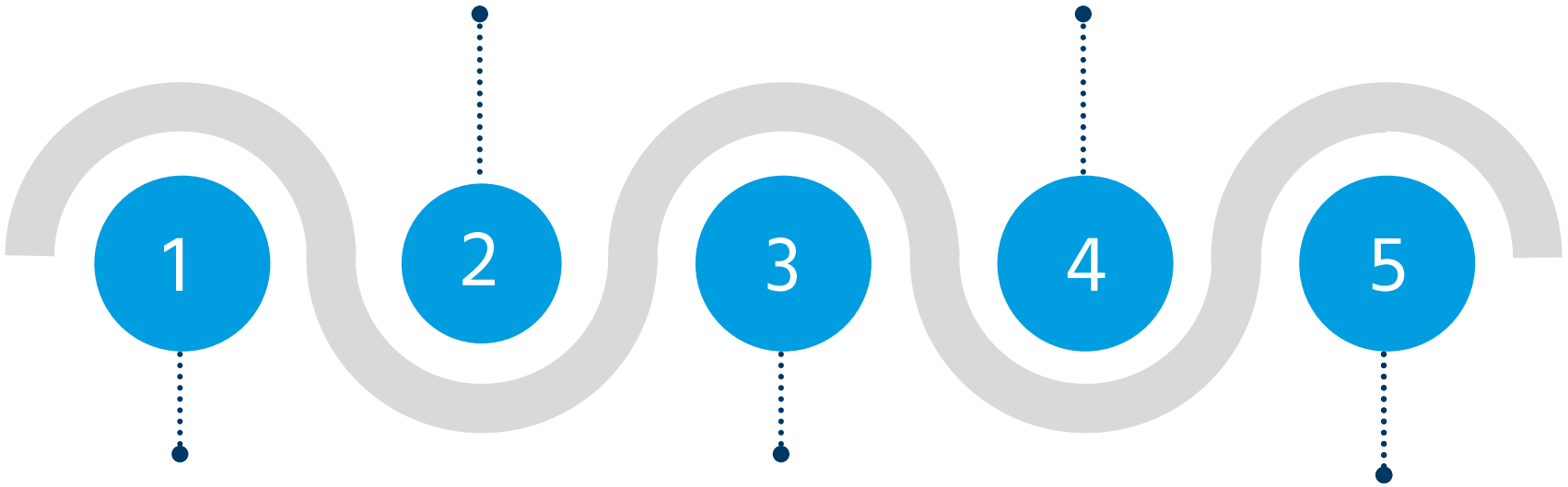
Investment Strategy

The metrics in this report will likely inform the investment strategy review, including the approach to investing in areas with a higher carbon footprint

36%

Contribution to the carbon footprint comes from emerging markets

Next Steps



Metrics
Agree the metrics that the Committee is comfortable to include within the TCFD report

Net Zero
Agree a net zero target date

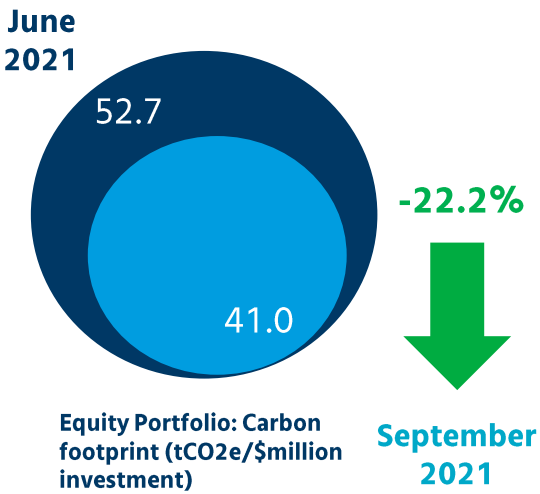
TCFD Report
Draft the TCFD report for approval by the Pensions Committee

Investment Strategy Review
To be completed during the first half of 2022

Manager Engagement (Ongoing)
Engage with managers on key issues

Recent Changes
Summary

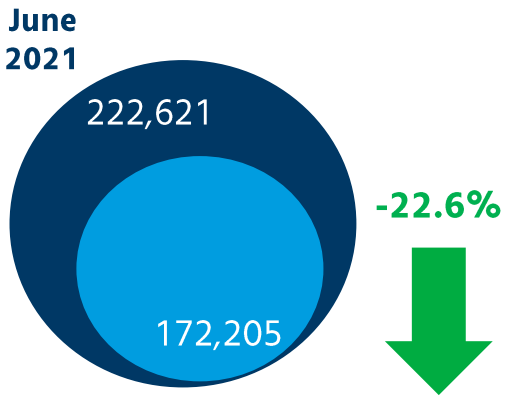
Listed Equity Carbon Footprint (Backward Looking)



Equity Portfolio: Carbon footprint (tCO2e/$million investment)

The **listed equities holdings' carbon footprint fell by c.-22.2%** over the 3 month period to September 2021.

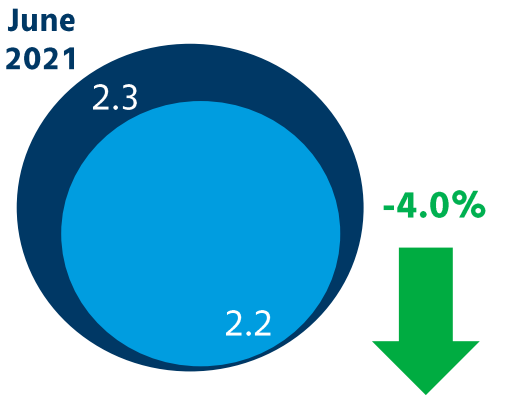
Listed Equity Absolute emissions (Backward Looking)



Equity Portfolio: Absolute emissions ([£investment value / company enterprise value]*tCO2e).

The **listed equities holdings' absolute emissions fell by c.-22.6%** over the 3 month period to September 2021.

Listed Equity ITR (Forward Looking)

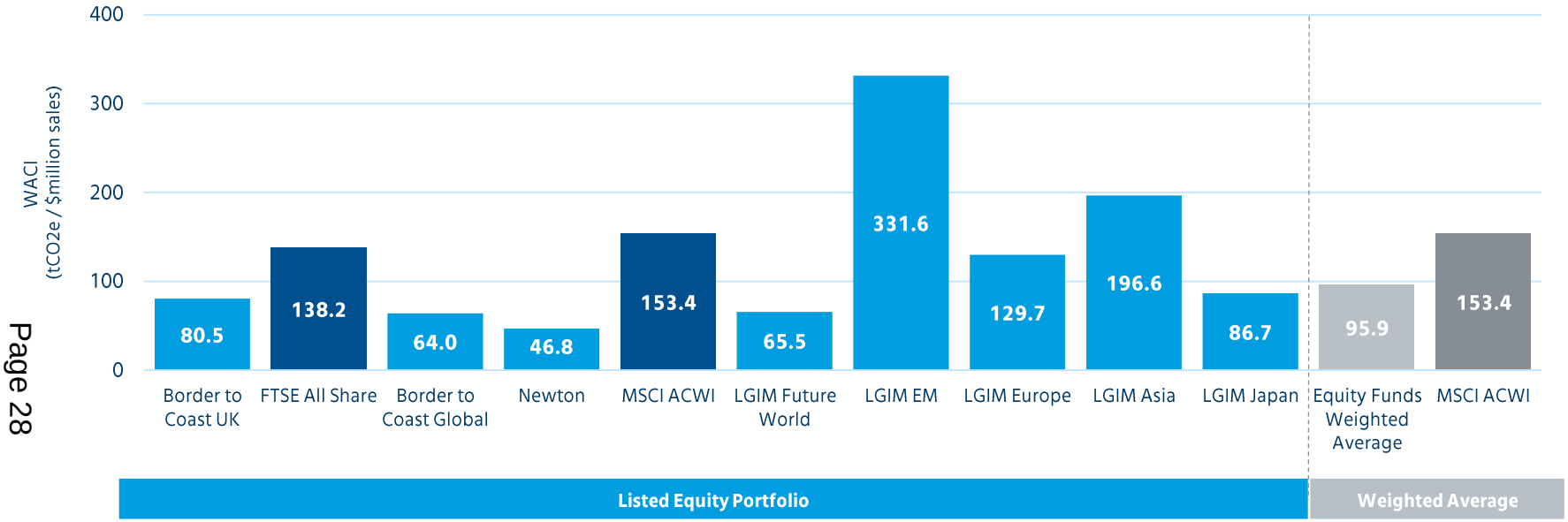


Equity Portfolio: Implied Temperature Rise (ITR) (^{0}C)

The **listed equities holdings' ITR fell by c.-4.0%** over the 3 month period to September 2021.

Carbon Intensity – WACI

Listed Equity Portfolio – September 2021*



The overall portfolio has a c.-37.5% lower carbon intensity than MSCI ACWI (the global benchmark)
Active funds have a significantly lower carbon intensity than their benchmarks
All LGIM funds are passively managed so metrics are in-line with the respective benchmark

*Note that while the allocation is at September 20201, all data is at June 2021.

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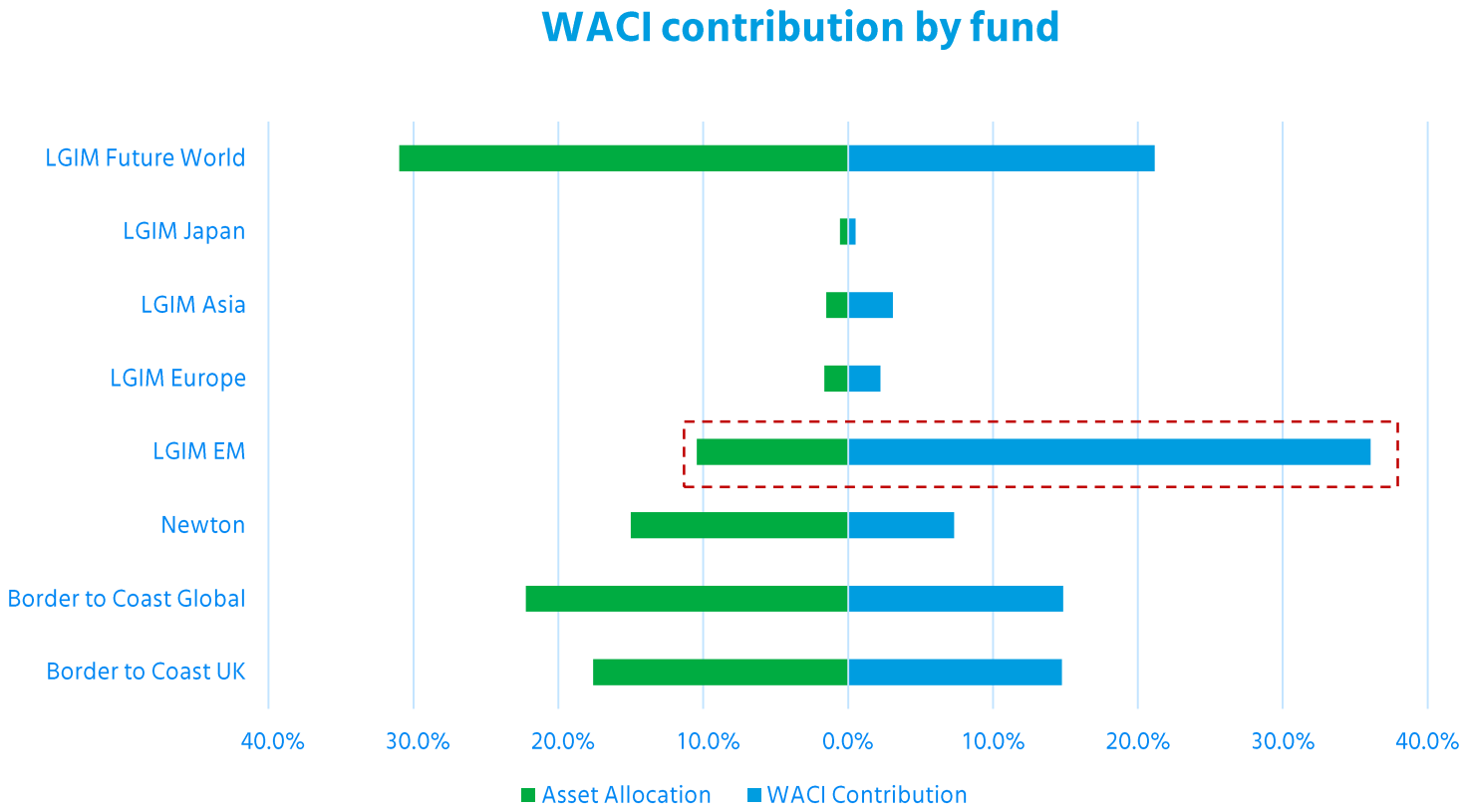
Carbon Intensity – WACI
Listed Equity Portfolio – September 2021



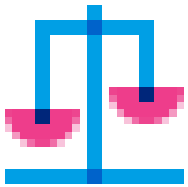
The Emerging Markets equity allocation contributes more than any other allocation to carbon intensity, despite having a relatively low allocation.

We expect emerging market equities to outperform developed markets by c. 2% p.a. over the long-term

Source: Managers data.

Guidance

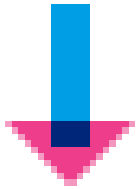
Low Carbon Transition targets
Definitions



Paris Alignment

Bringing investments in line with the objectives of the Paris Agreement.

To hold the mean surface temperature increase to "well below 2^{0}C above preindustrial levels and to pursue efforts to limit the increase to 1.5^{0}C".



Net Zero

Bringing investments to a carbon neutral target.

In September 2020, the UN noted that 22 regions, 452 cities, 1,101 businesses, 549 universities and >45 of the biggest investors had net zero commitments.

The United Nations-Convened Net-Zero Asset Owner Alliance

Aiming to achieve net zero by 2050, representing $5.5 trillion of AUM and align portfolios with a 1.5 ^{0}C scenario.

IIGCC

"Paris Aligned Investor Initiative - PAII". Committing to a goal of net zero emissions 2050 or sooner. The framework was developed by 70 investor representing $16 trillion of AUM.

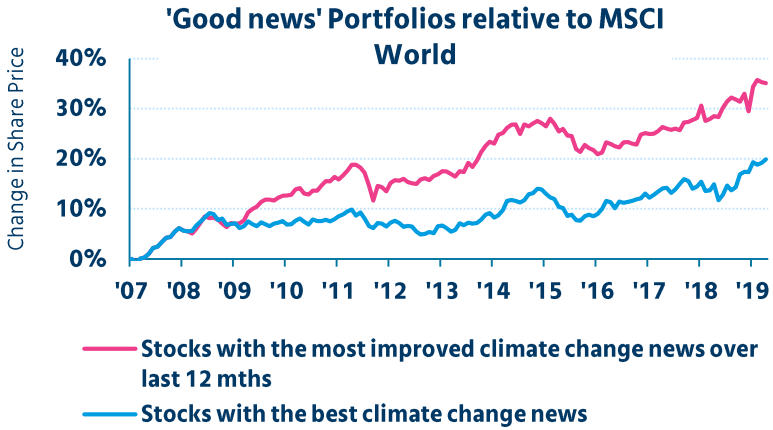
Emerging but strong net zero target industry movement, regulatory direction and existing practice make target setting possible and targets achievable.

Sources: UNFCCC; IIGCC; Net Zero Asset Owner Alliance

From Disclosure to Transition Commitments

Investors Are on the Move

- There is evidence that ESG considerations are making their way into **price movements.**
- Investors **already face transition risk,** including stranded assets. Assessing those companies and countries most vulnerable to transition risk is needed to stay ahead of market movements.



After 10 years on investor radars, 5 years since the Paris Agreement, 3 years since the TCFD framework, a growing investor cohort are now focused on action plans for decarbonising.

TCFD

- **Disclosure** framework released in 2017, with DWP guidance on mandatory disclosures for larger schemes, and the UK Chancellor of the Exchequer announcing mandatory disclosure across the UK economy by 2025.

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

- 500+ companies have approved decarbonisation targets under the **Science Based Targets Initiative** (SBTi). This framework has been used as one possible avenue of analysis in this report.

Sources: Asset Owner Alliance - https://www.unepfi.org/net-zero-alliance/; Science Based Targets - https://sciencebasedtargets.org/; IPCC 1.5^{0}C report; Deutsche Bank Research: 'Past the Tipping Point with Customers and Stockmarkets, Sept 2019

Low Carbon Transition Plan
Analytics for Climate Transition (ACT)

Investing for a <2°C scenario recognises the risks, opportunities, likelihood and fiduciary duty requirements in changes happening now and anticipated in future. A low carbon transition plan, helps to ensure key questions can be answered: Can we reduce emissions and still meet investment objectives? Can we isolate where emissions reductions should come from without just divesting high intensity companies? How can we set a target that is aligned, can be implemented and monitored?

Manage 'Grey' Risks
High carbon intensity, low transition capacity

Steward the 'In-between'
Varying carbon intensity and transition prospects

Target 'Green' Solutions
Low carbon intensity, high transition capacity

2021 — 2030 — 2050

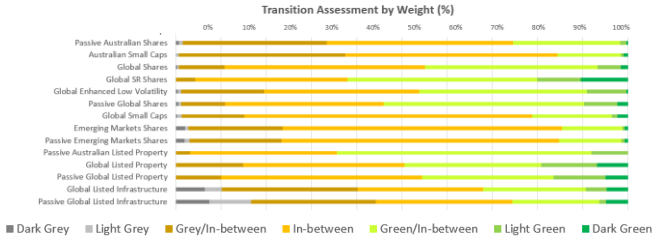
1. Current emissions baseline

Calculations complete, dashboard drafted – total portfolio: e.g. absolute emissions, emissions intensity

Mercer Single Sector Funds	Coverage	Weighted Average Carbon Intensity	Metric By Asset Class	Dark Grey %	Light Grey %	Grey/ In-between %	In-between %	Green/ In-between %	Light Green %	Dark Green %
Australian Shares		189.7	T CO2e / $M Rev	0.4	0.5	30.9	40.0	22.6	1.6	0.2
Australian Shares Plus		185.9	T CO2e / $M Rev	0.4	0.3	33.3	41.8	21.7	1.6	0.2
Australian SR Shares		148.3	T CO2e / $M Rev	0.1	0.8	30.4	38.3	25.2	1.2	0.8
Australian Tax Exempt		197.1	T CO2e / $M Rev	0.4	0.6	34.1	37.3	24.7	0.8	0.4
Passive Australian Shares		218.3	T CO2e / $M Rev	0.7	0.8	31.7	41.0	23.6	1.5	0.3
Australian Small Caps		145.1	T CO2e / $M Rev	0.0	0.6	30.7	39.2	11.6	0.6	0.8
Global Shares		86.0	T CO2e / $M Rev	0.3	0.3	9.7	42.1	36.4	4.9	1.5
Global SR Shares		73.6	T CO2e / $M Rev	0.0	0.0	4.1	31.8	39.6	9.2	9.8
Global Enhanced Low Volatility		219.0	T CO2e / $M Rev	0.4	0.7	17.6	32.8	35.5	8.3	0.4

2. Portfolio possibilities

Analysis complete on 'grey, green and in-between' transition capacity



3. Target and timing

Setting decarbonisation targets:

- 2030 and interim targets e.g. to 2025
- Net zero targets to 2050, or earlier/later

4. Transition plan for implementation

Integration
- Climate change scenario analysis
- Monitor developments and prices

Stewardship
- Engage with companies
- Utilise voting rights

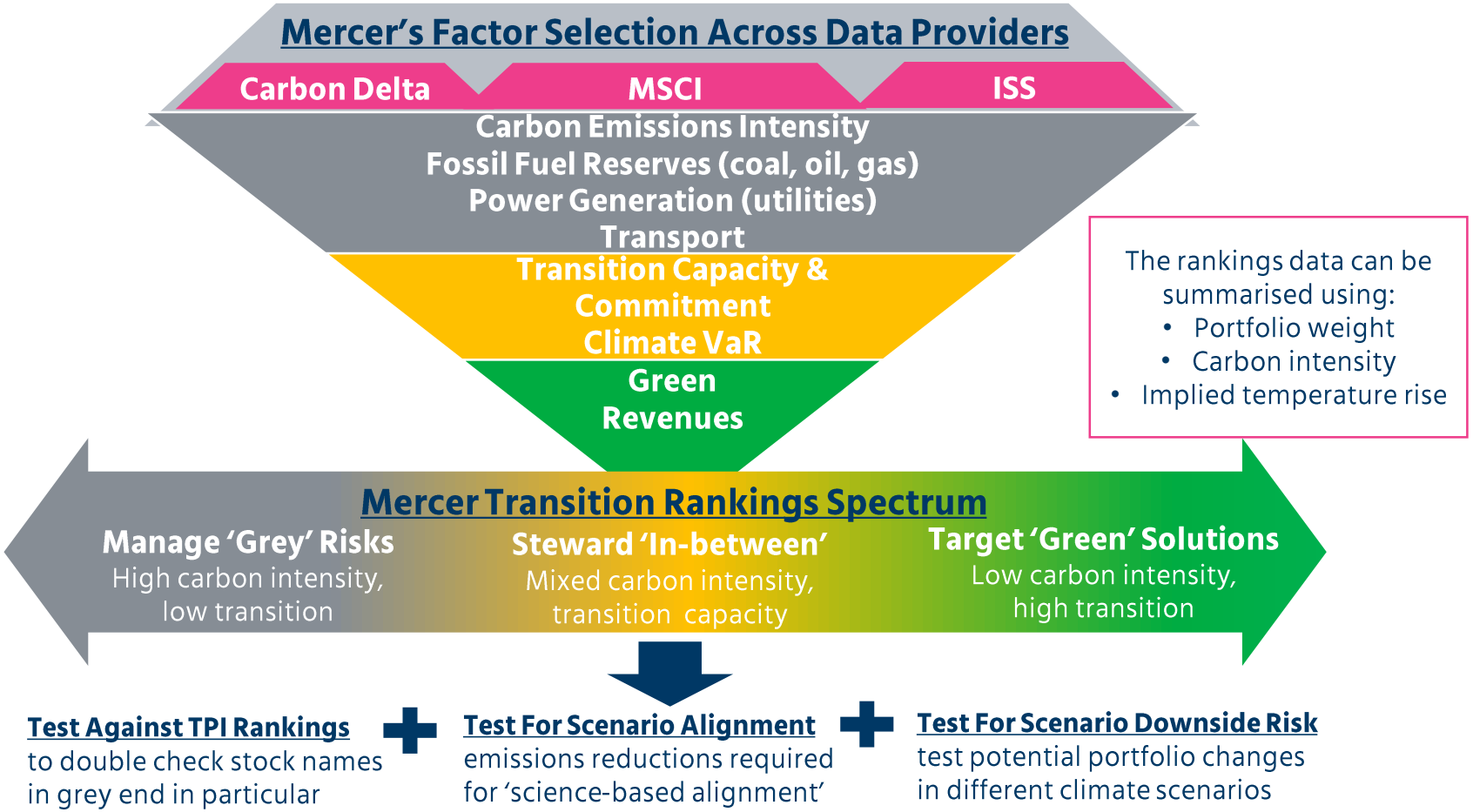
Investment
- Allocate to innovation and solutions
- Monitor developments and prices

Screening
- Restrict high carbon solutions where needed

Mercer

Mercer
ACT Metrics

The objective is to identify the 'grey', the 'green' and the 'in-between' i.e. from the likely 'losers' to the potential 'winners' in a low carbon transition, with the company names evolving each year.



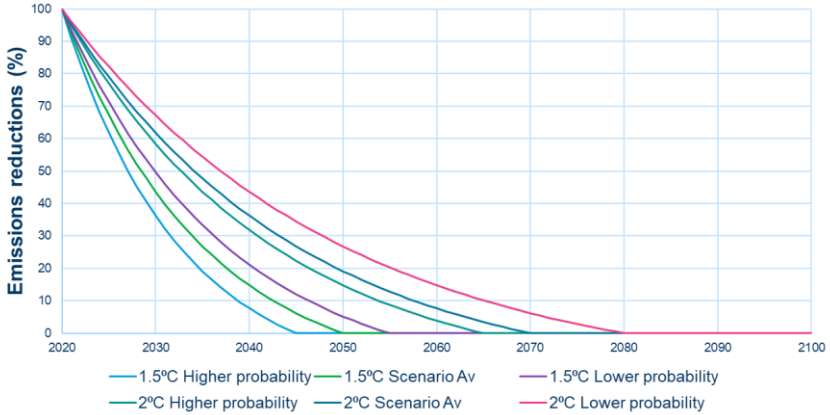
Mercer
ACT Decarbonisation Target Setting

Scientific Guidance – from the Intergovernmental Panel on Climate Change (IPCC)

Pathway Group	Pathway Class	Pathway selection criteria and description	Number of scenarios	Number of scenarios
1.5°C or 1.5°C-consistent	Below-1.5°C	Pathways limiting peak warming to below 1.5°C during the entire 21st century with 50-66% likelihood*	9	90
	1.5°C-low-OS	Pathways limiting median warming to below 1.5°C in 2100 and with a 50-67% probability of temporarily overshooting that level earlier, generally implying less than 0.1°C higher peak warming than Below-1.5°C pathways	44	
	1.5°C-high-OS	Pathways limiting median warming to below 1.5°C in 2100 and with a greater than 67% probability of temporarily overshooting that level earlier, generally implying 0.1–0.4°C higher peak warming than Below-1.5°C pathways	37	
2°C or 2°C-consistent	Lower-2°C	Pathways limiting peak warming to below 2°C during the entire 21st century with greater than 66% likelihood	74	132
	Higher-2°C	Pathways assessed to keep peak warming to below 2°C during the entire 21st century with 50-66% likelihood	58	

* No pathways were available that achieve a greater than 66% probability of limiting warming below 1.5°C during the entire 21st century based on the MAGICC model projections.

Mercer Emissions Reduction Curves



IPCC Guidance on Net Zero Targets

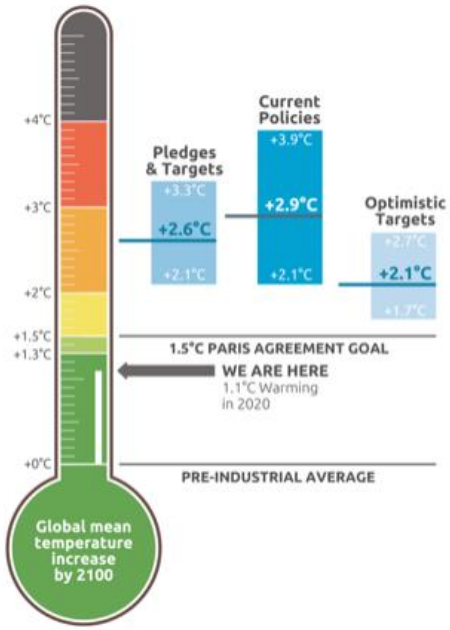
IPCC Scenarios	Target Net Zero Year (Average)
1.5^{0}C	2050
2^{0}C	2070

Source: IPCC 2018 1.5^{0}C report

The analysis will help establish:

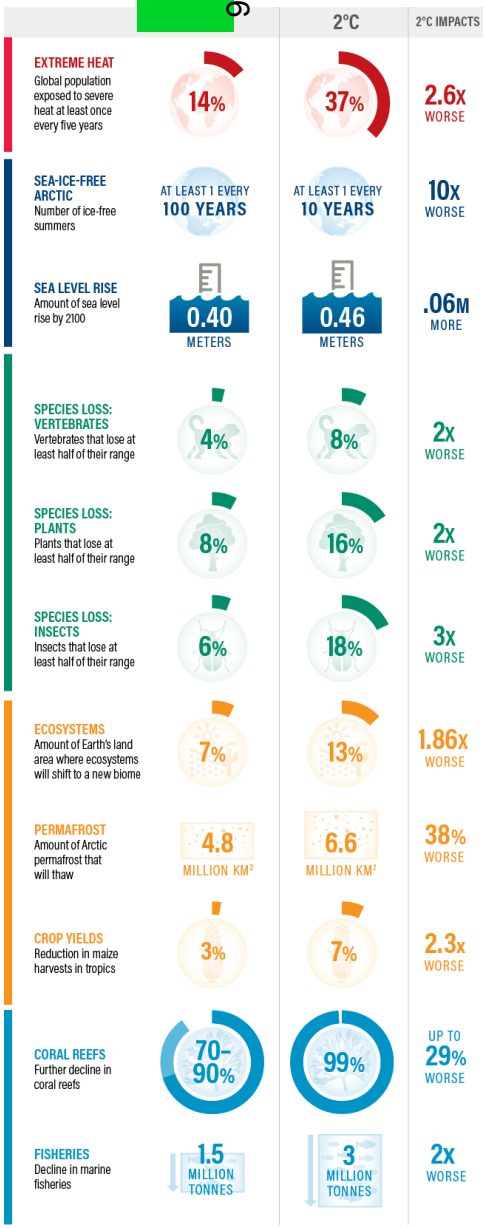
- **Absolute emissions reductions targets** for the Scheme, based on science and policy;
- Can also be applied to emissions intensity reduction targets, drawing on the science and policy.

Climate Change Scenarios
Commitments and the Science



- **Paris Agreement Aim: "**well below 2°C"
- **Global implementation of policies and pledges:** ~2.6°C to ~2.9°C
- **Business as usual (RCP 8.5):** ~2.6°C to ~4.8°C

- What the low carbon scenarios mean in practice:
  - For a c.50-67% chance of achieving a **1.5°C scenario**:
    - a 45% emissions reduction is required from 2010 levels to 2030 and the net zero target year is ~2050.
  - For a c.50-66% chance of achieving a **2°C scenario:**
    - a 25% emissions reduction is required from 2010 levels to 2030 and the net zero target year is ~2070.
  - The diagram (right) illustrates the difference **0.5°C** can make



Sources: Climate Action Tracker (December 2020 http://climateactiontracker.org/); IPCC - https://www.ipcc.ch/sr15/; WRI (2018) "8 Things You Need to Know About the IPCC 1.5°C Report"; IPCC (2018) "Global Warming of 1.5°C"

Regulatory Recap

TCFD Reporting Best Practice
Elements to Understand

An overview of the TCFD recommendations is provided below:

Governance
- Review your **climate change-related investment beliefs**
- Prioritise actions and understand the roles and responsibilities
- Establish processes for asset owners to satisfy themselves that persons managing the Fund are assessing and managing climate-related risks and opportunities
- Clear governance structure for (board) oversight of climate-related factors, including assigned senior leaders with oversight of climate responsibilities
- Best practice may include hiring climate specialists and regular **climate training for investment colleagues**

Strategy
- Firm-wide public **strategy on climate change**, including the impact of climate-related risks and opportunities on investments, over different timeframes
- **Conduct climate change scenario analysis** (using two scenarios, including a scenario of 2^0C or lower) to understand impacts on assets/liabilities, the resilience of the investment strategy and (for DB) the funding strategy
- Understand the sponsor's exposure to climate risk and how they are adapting to such risks
- Stewardship included in the strategy, with a focus on policy and industry engagement, including collaborative and climate change initiatives

Risk Management
- Include climate change risk within the Fund's **risk register**
- Describe the process to identify and assess, manage, and integrate climate risks (transition and physical risks)
- Include climate change considerations as part of the **selection and monitoring of managers**, with a particular focus on: how are they integrating/voting/engaging on climate change?
- Annual review of Mercer manager ESG ratings for your managers alongside other climate change data
- Consider sustainable asset allocations, such as low carbon or ESG funds

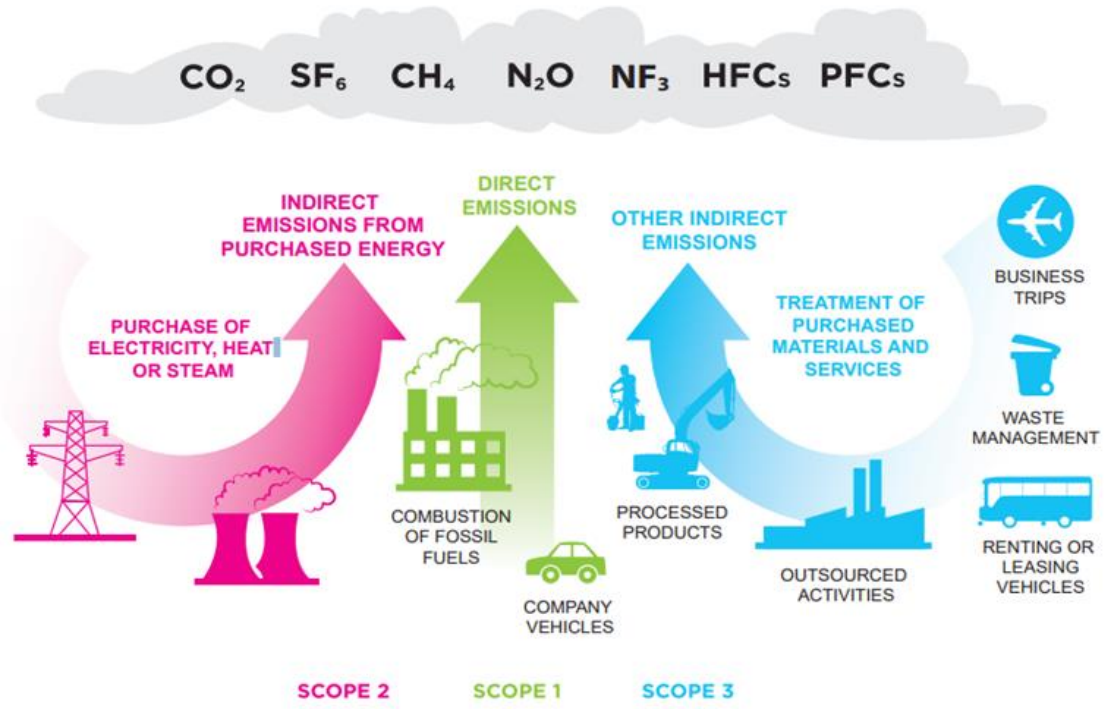
Metrics and targets
- Align with best practice approaches, in terms of metrics to measure risk and opportunity
- **Set at least one climate-related target**, e.g. decarbonisation by a target date, or alignment with a temperature target, or net zero emissions by 2050 or earlier
- **Monitor absolute emissions, an emissions intensity metric, and an additional metric** (e.g. implied temperature rise, climate VaR, or green revenues)
- Annually monitor metrics for the asset classes with data availability, and understand what is possible in other asset classes. Describe why data may not cover the whole portfolio

Formally adopting TCFD reporting could further enhance the Fund's governance and reputation

Carbon footprinting

Scope 1, 2 and 3 emissions

- **Carbon footprinting** is an analysis that shows the **amount of greenhouse gas emissions an entity produces** directly through it's day-to-day operations and indirectly through its utility usage and wider supply chains.
- The statutory guidance: **the Committee should take into account scope 1, 2 <u>and 3</u> greenhouse gas emissions** in the calculation of total emissions and carbon footprint metrics, as far as they are able.



Source: https://www.savemoneycutcarbon.com

The Committee are not required to obtain Scope 3 emissions in the first scheme year during which they are subject to the requirements in the Regulations

Emissions based metrics

DWP statutory guidance – absolute and intensity metrics

Metric type	Recommendations	Description
1. Absolute GHG emissions	Total greenhouse gas (GHG) emissions	Likely market standard to report on total GHG emissions
2a. Emissions intensity	Carbon Footprint	Total GHG Emissions figure weighted to take account of the size of the investment made
2b. Alternative emissions intensity	Weighted Average Carbon Intensity (WACI) (in tCO2e / £m)	Average exposure (weighted by portfolio allocation) to GHG emissions normalised by a factor such as enterprise value or revenue. The Committee may calculate and report WACI in place of Carbon Footprint, but they should explain their reasoning

Additional metrics

DWP statutory guidance – One of the following

Metric type	Description
3a. Portfolio Alignment	Seeks to consolidate the carbon reduction and net zero targets of issuers in whom the Scheme is invested into a forward-looking measure of exposure to climate-related risks and their ability to capitalise on opportunities in the low-carbon transition.
3b. Climate Value at Risk (VaR)	Aims to measure the size of the loss attributable to climate-related risks a portfolio may experience, within a given time horizon, if a particular scenario unfolds.
3c. Data Quality	Aims to represent the proportions of the portfolio for which the Committee have high quality data. The Committee should calculate the proportion of the portfolio for which each of Scope 1-2 emissions are verified, reported, estimated or unavailable (and from the second scheme year onwards Scope 3). For the portion of the portfolio in the "estimated" category, the Committee may also calculate the proportions estimated to different degrees of certainty.

Recommended metrics

Regulatory requirement

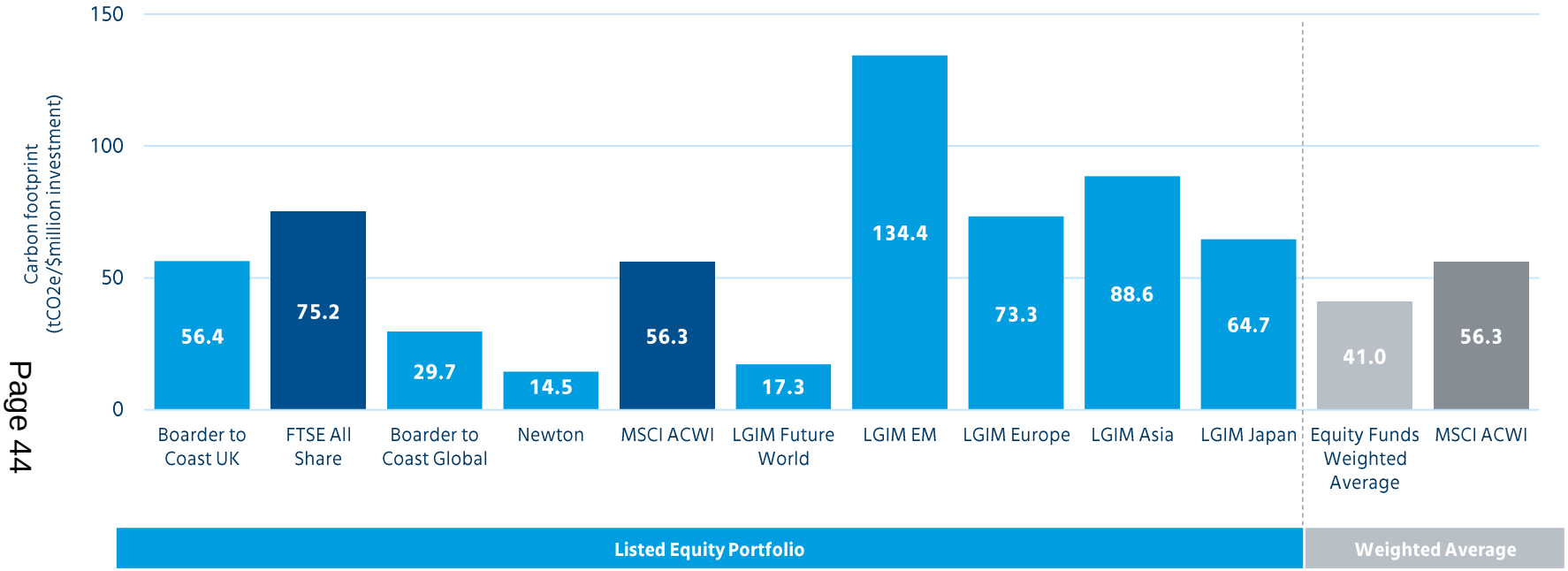
- Set at least **one absolute greenhouse gas emissions** based metric;
- Set at least one emissions intensity based metric;
- Set at least one additional (non-emissions based) metric.

Recommendations

1. **Total emissions.** Simplest available and standard absolute emissions metric. Data availability expected to be reasonable.
2. **Carbon footprint.** Emphasised as preferred intensity metric in DWP statutory guidance. WACI can still be reported.
3. **Portfolio alignment – Implied temperature rise.** Most aligned metric with ultimate climate outcome.
4. **Data quality.** Also monitor data quality (but perhaps not as a formal TCFD metric).

Portfolio Analysis

Carbon Intensity – Carbon Footprint*

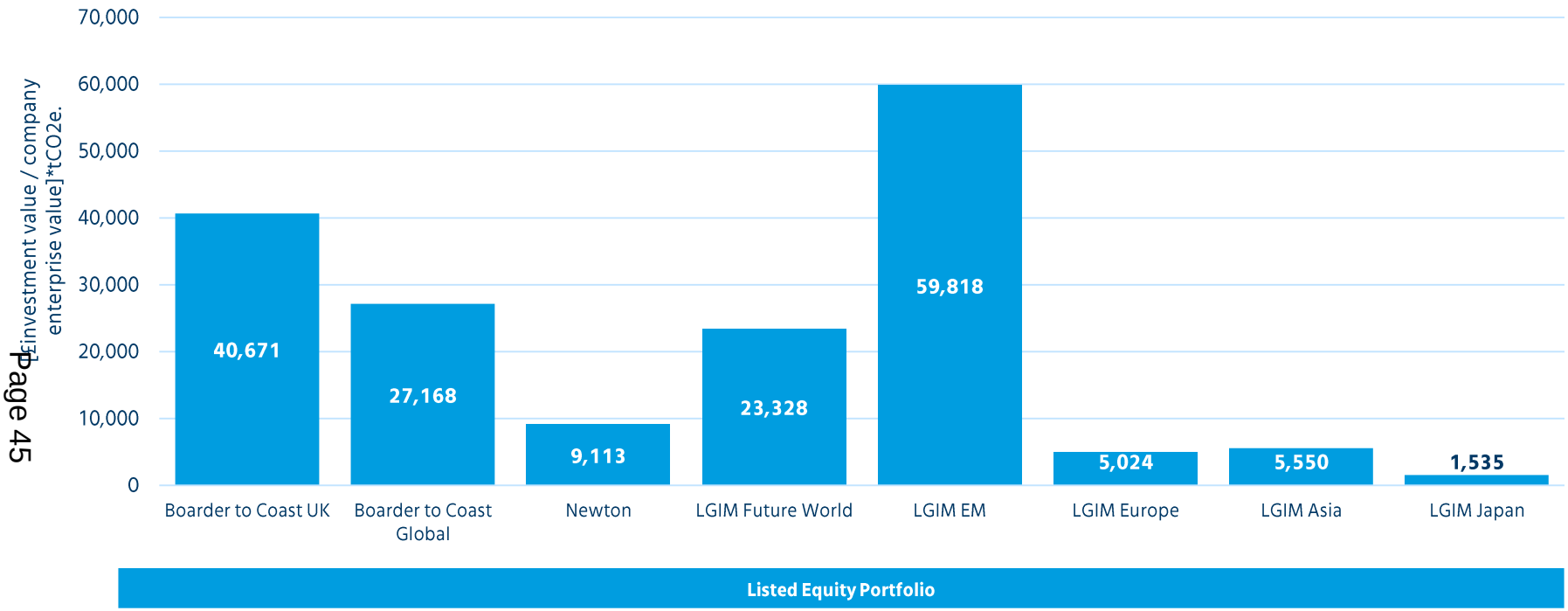


When considering the September 2021 allocation, **the listed portfolio has a c.-27.1% lower carbon intensity than MSCI ACWI.**

It is a c.-22.2% lower Carbon Footprint when comparing with the June 2021 allocation (52.7 tCO2e per $million invested versus 41.0 tCO2e per $million invested).

*Note that while the allocation is at September 20201, all data is at June 2021.

Absolute Emissions*



Given the methodological approach for calculating absolute emissions (based on the value of Surrey Pension Fund's value of investment in investee companies), it is not possible to provide benchmark comparisons.

Attributing company emissions to the Fund is based on the value of investment, with all measurements on an absolute basis making changes in total investment value essential.

*Note that while the allocation is at September 20201, all data is at June 2021.

Summary of Results *

Asset Class	Manager/ Mandate	Benchmark	% of fund successfully analysed	Benchmark WACI (tons CO2e / $M revenue)	Fund WACI (tons CO2e / $M revenue)	Benchmark Carbon Footprint (tons CO2e / $M invested)	Carbon Footprint (tons CO2e / $M invested)	Absolute Emissions (tons CO2e)	% of Portfolio
Listed Equity	Border to Coast UK	FTSE All Share	92.9%	**138.2**	**80.5**	**75.2**	**56.4**	40,671	10.6%
	Border to Coast Global	MSCI ACWI	96.5%	**153.4**	**64.0**	**56.3**	**29.7**	27,168	13.4%
	Newton	MSCI ACWI	97.2%	**153.4**	**46.8**	**56.3**	**14.5**	9,113	9.1%
	LGIM EM	-	95.0%	-	**331.6**	-	**134.4**	59,818	6.3%
	LGIM Europe	-	96.6%	-	**129.8**	-	**73.3**	5,024	1.0%
	LGIM Asia	-	97.6%	-	**196.6**	-	**88.6**	5,550	0.9%
	LGIM Japan	-	98.3%	-	**86.6**	-	**64.7**	1,535	0.3%
	LGIM Future World*	-	93.8%	-	**65.6**	-	**17.3**	23,328	18.7%

Notes: % of fund directly analysed reflects coverage under the MSCI tool used in this analysis.
*Note that while the allocation is at September 20201, all data is at June 2021.

Key:

Green (below index)

Grey (in line with the index)

Red (contributed negatively with above index performance)

Implied Temperature Rise*

Asset Class	Manager/ Mandate	% of Fund Covered by Assessment	Benchmark	Benchmark ITR	Fund ITR	Percentage of Portfolio
				^{0}C	^{0}C	(%)
Listed Equity	Border to Coast UK	92.9%	FTSE All Share	2.3	**2.3**	10.6%
	Border to Coast Global	96.5%	MSCI ACWI	2.4	**2.2**	13.4%
	Newton	97.2%	MSCI ACWI	2.4	**2.1**	9.1%
	LGIM EM	95.0%	-	-	**2.9**	6.3%
	LGIM Europe	96.6%	-	-	**2.3**	1.0%
	LGIM Asia	97.6%	-	-	**2.8**	0.9%
	LGIM Japan	98.3%	-	-	**2.6**	0.3%
	LGIM Future World	93.8%	-	-	**2.1**	18.7%

Notes: The range of holdings analysed reflects both coverage under the MSCI tool used in this analysis.
*Note that while the allocation is at September 20201, all data is at June 2021.

Key:

Green 2^{0}C or below

Amber between 2^{0}C and 3^{0}C

Red over 3^{0}C

Grey (Limited / Directional / No data)

Border to Coast Update

BORDER TO COAST COMMITS TO NET ZERO

Recognising the urgent need to tackle climate change, Border to Coast Pensions Partnership, one of the largest UK pension pools, today confirms its commitment to achieving net-zero greenhouse gas emissions across its investments by 2050 or sooner.

Announced as part of its first standalone Climate Change Policy, Border to Coast will use the Net Zero Investment Framework to set out a roadmap over the next 12 months defining how it will support this commitment. This will include:

- Setting interim targets for 2030, supporting efforts to achieve up to a 50% global reduction in CO2 emissions identified as a requirement in the IPCC special report on global warming;
- Prioritising engaging with policymakers, regulators and companies to work to achieve real economy emissions reductions within the sectors and companies in which it invests;
- Creating and evolving investment propositions aligned with net zero emissions by 2050, and facilitating increased investment in climate transition solutions;
- Working with the industry to improve carbon data disclosure and transparency in fixed income and private markets, where information is currently unreliable; and
- Implementing a revised stewardship and engagement strategy with a clear escalation and voting policy that is consistent with being Net Zero across its investments by 2050 or sooner.

Source: Border to Coast

Conclusions & Recommendations

Summary and Key Messages

Recent Changes

The Committee agreed a switch from RAFI and Low Carbon into the Future World fund which was implemented at 30 September 2021

20%+

Reduction in carbon footprint and absolute emissions and

12% reduction in WACI

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This analysis establishes the baseline climate risk metrics to put into the TCFD report. Full details on the metrics are set out on slides 18-20

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At least three metrics will need to be included in the TCFD report

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An immediate consideration for the Committee will be to set an ambitious but realisable net zero carbon target date

2050

Border to Coast have set a net zero carbon date of 2050

Investment Strategy

The metrics in this report will likely inform the investment strategy review, including the approach to investing in areas with a higher carbon footprint

36%

Contribution to the carbon footprint comes from emerging markets

Important Notices

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