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In Holdings We Trust: Uncovering the ESG Fund Lemons

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Provide initial evidence of
greenwashing by funds available to
New Zealand retail investors.

Growth of Sustainable Investing



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REGIONS	2016	2018	2020
Total AUM of regions	81,948	91,828	98,416
Total sustainable investments only AUM	22,872	30,683	35,301
% Sustainable investments	27.9%	33.4%	35.9%
Increase of % sustainable investments (compared to prior period)		5.5%	2.5%

Source: GSIR 2020

Greenwashing



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- To capitalize on the growing ESG investment market, **funds that greenwash present themselves in such a manner that they appear more responsible than they truly are** (Brandon et al., 2021; Liang et al., 2020)

Literature - Greenwashing



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- Greenwashing may be **emphasized for retail investors** (Carlin & Manso, 2011; deHaan et al., 2021).
- Liang et al. (2020)
 - **one-fifth of Hedge Fund UNPRI signatories** had ESG scores that fell **below the median score**.
- Kim and Yoon (2020) highlighted that **PRI signatories did not exhibit material improvements in their fund-level ESG, but flows increased**

→ **UNPRI signature increases flow (signal), but does not lead to ESG outperformance**

Literature - Greenwashing



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- Brandon et al. (2021)
 - **U.S.-domiciled** PRI signatories who reported partial or full ESG integration **did not obtain better portfolio ESG scores**
 - **non-U.S. signatories did obtain better scores**
- **Greenwashing may be more of an issue in the U.S. than Europe?**
What about NZ?
- Dumitrescu et al (2022)
 - **24% of mutual funds are greenwashers according to their definition.**
- Raghunandan and Rajgopal (2021)
 - showed that that **ESG funds had significantly more law violations, alongside higher CO2 emissions intensity for funds from the same scheme**

Literature – Sustainable Investing beliefs



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- Results on ESG to return relationship are mixed.
- Amel-Zadeh and Serafeim (2018) and van Duuren et al. (2016) show significant differences in the **geographic perceptions of ESG investing** between the **United States and Europe**.
 - U.S. skeptical about the social benefits of RI
 - Europeans view ESG integration as ethical responsibility

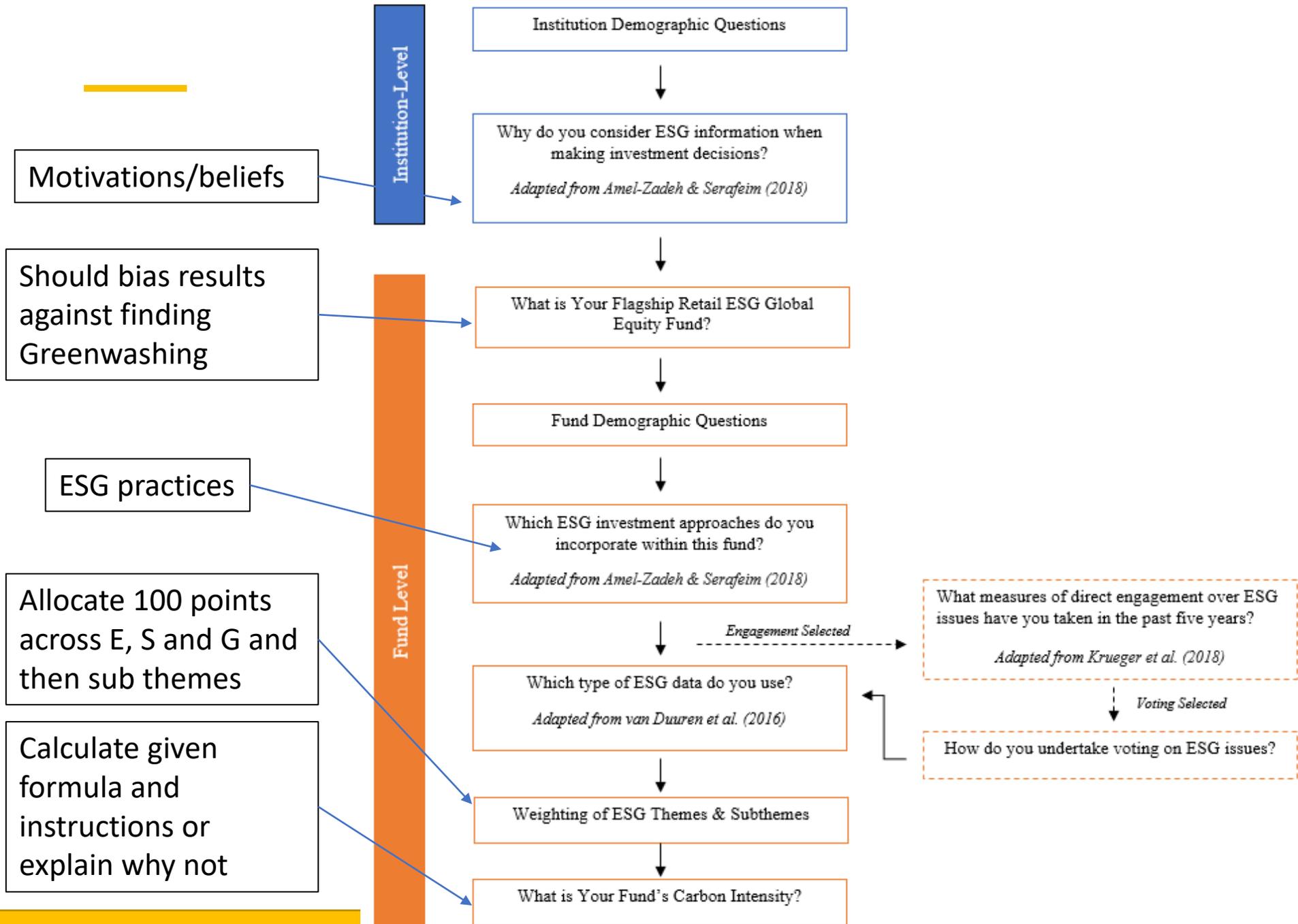
→ **what about in NZ?**

Methodology: Survey



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- Some questions were inspired by the existing literature (Amel-Zadeh and Serafeim, 2018; van Duuren et al., 2016; Krueger et al., 2020).
- Feedback from academic experts and Beta tested with industry partners and network
 - 36 questions with branching logic (next slide).
- *Voluntary nature would bias our survey **toward more ESG minded funds with less to hide**, which would bias our results against finding evidence greenwashing.*



Data: Survey



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- **Sent to 105 fund managers**, which have global equity funds investable by New Zealand retail investors.
 - **43 eligible responses** (high 41% response rate)

Data: Holdings and ESG



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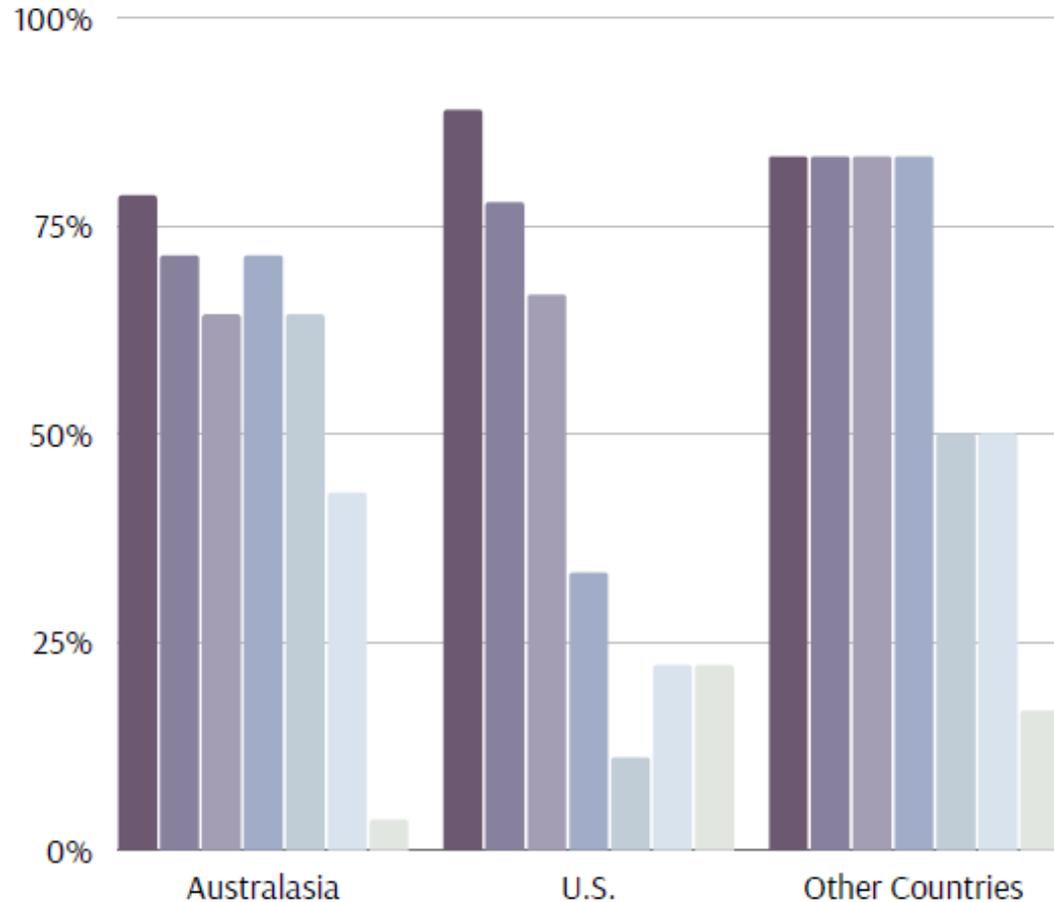
- Collected **most ESG ambitious global equity fund** names
 - **Respondent Managers:** collected stated most ESG ambitious global equity fund holdings data
 - **Non-respondent Managers:** holdings data on the most ESG ambitious fund of the institution, as determined by industry partners from Morningstar and MyFiduciary.
 - Some funds were ESG named/focussed funds and some were general global equity funds.
 - Data anonymised after matching to holdings data
- **Holdings data was provided by Morningstar, as of 30 June 2021.**

ESG Motivations



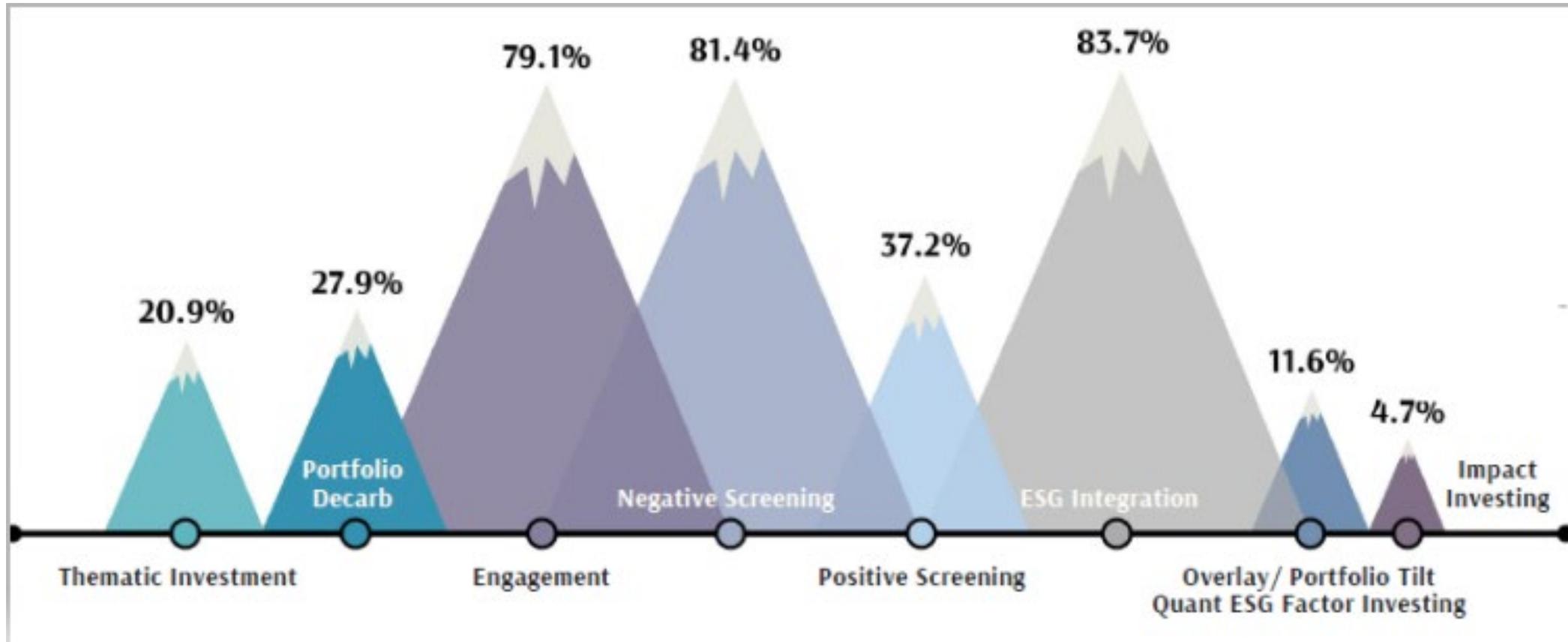
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- ESG info is material to investment performance
- Growing client/stakeholder demand
- ESG risks & opportunities will soon affect fund performance
- To encourage positive change in individual firm ESG practices
- We see it as an ethical responsibility
- It is part of our mandated investment strategy/SIPO
- Other



	Region of Headquarters				
	(1) All	(2) Australasia	(3) U.S.	(4) Other	(5) Range
ESG information is material to investment performance	81%	79%	89%	83%	10%
Growing client/stakeholder demand	74%	71%	78%	83%	12%
ESG risk and opportunities, although not yet priced, will soon affect investment performance	67%	64%	67%	83%	19%
We believe this will encourage positive change in individual firm ESG practices	65%	71%	33%	83%	50%
We see it as an ethical responsibility	51%	64%	11%	50%	53%
It is part of our mandated investment strategy/SIPO	40%	43%	22%	50%	28%
Other	9%	4%	22%	17%	19%

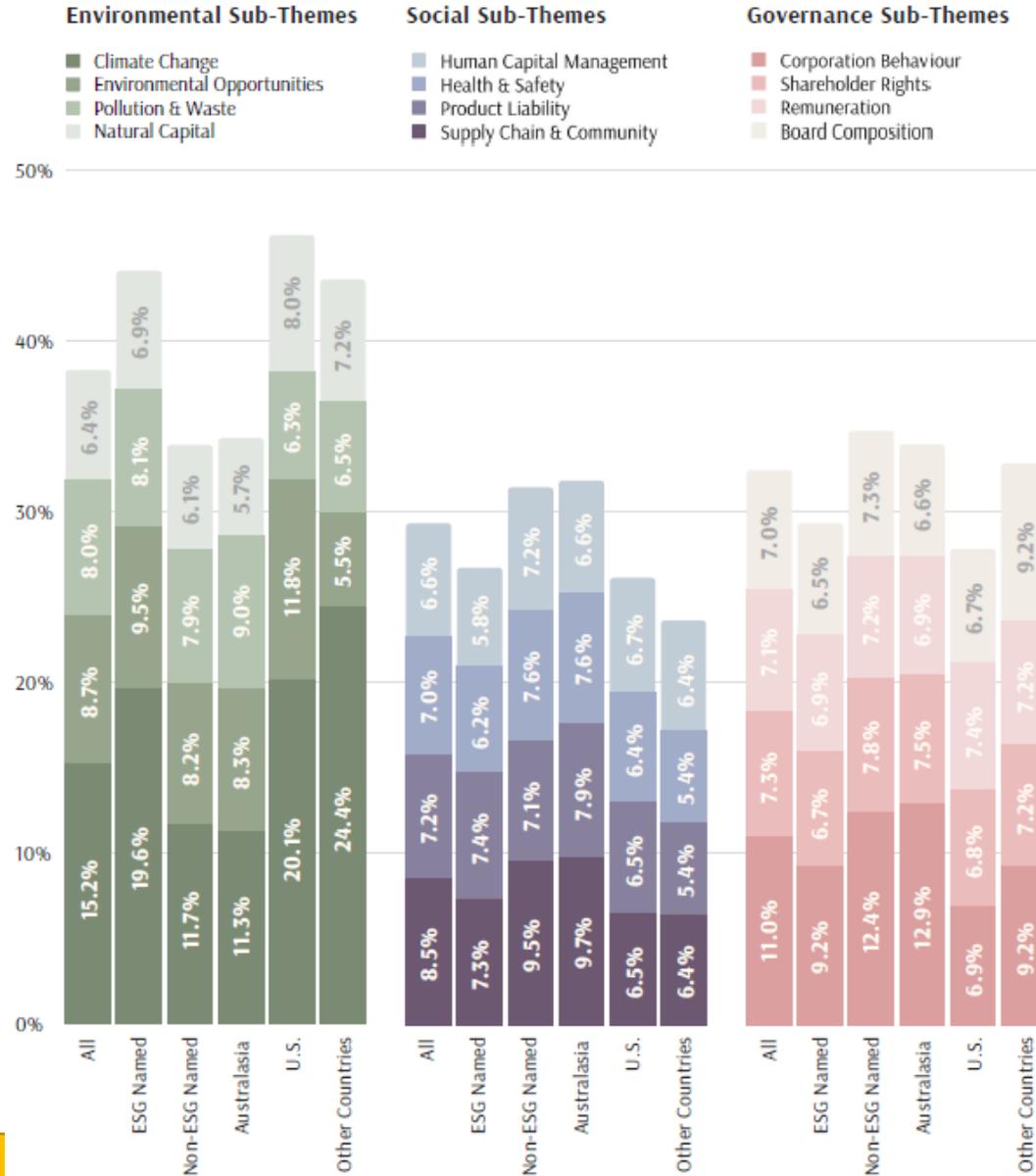
ESG Approaches



ESG theme priority



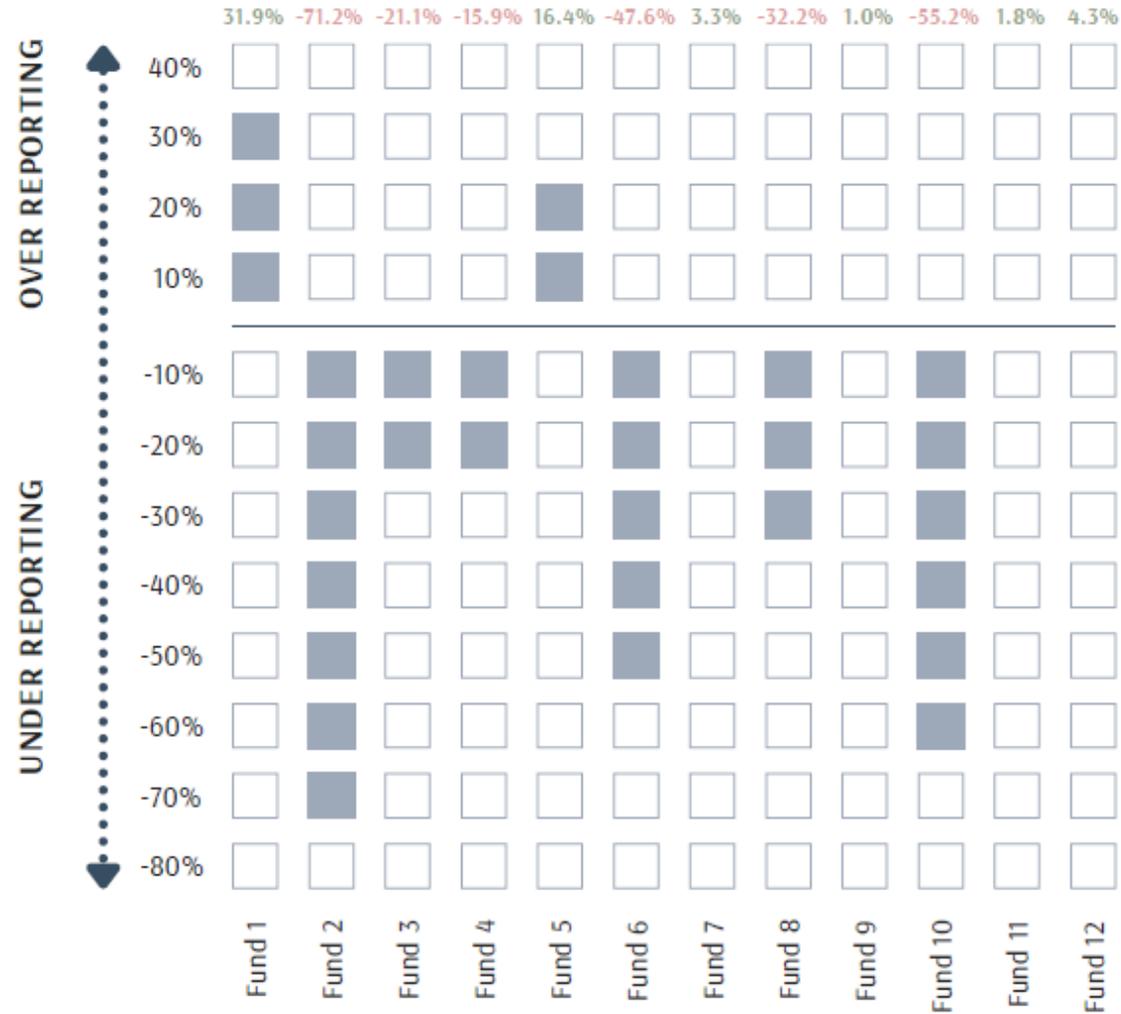
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Reported vs estimated Carbon Intensity



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Climate Change Priority – Estimated Carbon Intensity



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Panel A: Stated vs. Actual Rankings		
	Stated Importance Placed on Climate Change	Portfolio Scope 1 & 2 Carbon Intensity (tCO ₂ e/US\$M)
	(1)	(2)
Fund A	1	22
Fund B	2	8
Fund C	3	24
Fund D	4	17
Fund E	5=	3
Fund G	5=	18

Panel B: Correlation Between Stated and Actual Rankings (Full Sample)	
	Portfolio Scope 1 & 2 Carbon Intensity (tCO ₂ e/US\$M) Ranking
Stated Importance Placed on Climate Change Ranking	-0.056

Methodology: Determinants of Carbon intensity



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- **Respondent sample:**
 - 33 respondent funds with holdings data
 - Rotated control variables

$$\text{Portfolio Carbon Intensity}_j = \beta_0 + \beta_1 X_j + \beta_2 HQ + \beta_3 ESG \text{ Name}_j + \varepsilon_j, \quad (4)$$

$$\text{Portfolio Carbon Intensity}_j = \beta_0 + \beta_1 X_j + \beta_2 Style_j + \beta_3 \ln(Size)_j + \varepsilon_j, \quad (5)$$

- X_j are the variables of interest
 - Climate initiative dummy
 - Material to financial performance motivation dummy
 - Ethical responsibility motivation dummy
 - Decarbonization strategy dummy
 - Future performance ESG effect belief dummy
 - Engagement dummy
 - Environment theme weighting
 - Climate Change theme weighting

Drivers of Estimated Carbon Intensity – respondents (n=33)



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	Portfolio Carbon Intensity							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Model 1								
Material to Financial Performance	47.35*							
Ethical Responsibility		19.94						
Future Performance			55.20***					
Decarbonisation				-14.00				
Engagement					54.90**			
Environment Weighting						23.10		
Climate Change Weighting							-0.223	
Climate Initiative								53.20**
Headquarters								
U.S.	-14.07	0.07	0.46	-6.65	-16.45	-12.66	-10.93	-14.46
Other	17.53	26.93	9.5	25.89	14.53	18.06	20.19	17.20
ESG Name	9.34	-4.37	8.52	1.72	7.96	-0.25	1.60	-16.30
Constant	61.49**	89.46***	63.24***	102.10***	58.65**	93.46***	100.90***	83.21***
R-Squared	0.11	0.04	0.18	0.03	0.15	0.02	0.02	0.18

Methodology: Determinants of Carbon intensity



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- **All funds**
 - 78 respondent and non-respondent funds with holdings data
 - Rotated control variables

Portfolio Carbon Intensity_j

$$\begin{aligned} &= \beta_0 + \beta_1 \text{Headquarters}_j + \beta_2 \text{Style}_j + \beta_3 \text{ESG Name}_j + \beta_4 \text{Ln}(\text{Fund Size}_j) \\ &+ \beta_5 \text{Survey Respondent}_j + \beta_6 \text{Age}_j + \beta_7 \text{Financial Performance}_j + \beta_8 \text{Volatility}_j \\ &+ \beta_9 \text{Intensity Coverage}_j + \varepsilon_j \end{aligned} \quad (6)$$

- Survey Respondent dummy
- Age of fund
- 12 month financial return and volatility of fund
- Coverage of carbon intensity before sector average approximation

Drivers of Estimated Carbon Intensity – all funds (n=78)

		Portfolio Carbon Intensity	
		Model 1	Model 2
		(1)	(2)
Respondent		8.02 (0.503)	14.38 (0.858)
ESG Name		-7.06 (-0.378)	-4.61 (-0.243)
Headquarters			
	U.S.	28.11 (1.363)	29.33 (1.389)
	Other	33.31 (1.667)	37.38* (1.984)
Style			
	Value	54.81** (2.235)	66.64** (2.640)
	Growth	-27.95 (-1.621)	-32.80* (-1.905)
Age		0.00 (0.038)	
<u>Ln(Size)</u>		-4.38 (-1.144)	
Intensity Coverage		1.49 (0.709)	1.30 (0.607)
Financial Performance			1.02 (1.424)
Volatility			-18.13* (-1.674)
Constant		29.37 (0.135)	3.49 (0.016)
N		77	73
R-Squared		0.23	0.25

Drivers of Estimated ESG score – all funds (n=78)

	Portfolio ESG Score					
	Model 1			Model 2		
	Refinitiv (1)	MSCI (2)	Sustainalytics (3)	Refinitiv (4)	MSCI (5)	Sustainalytics (6)
Respondent	-0.03 (-0.028)	-0.15 (-1.082)	-0.47 (-1.045)	-0.40 (-0.314)	-0.14 (-1.030)	-0.74 (-1.628)
ESG Name	0.62 (0.435)	0.42** (2.530)	1.05* (1.960)	1.02 (0.697)	0.48*** (2.983)	1.13** (2.122)
Headquarters						
U.S.	4.00*** (2.832)	0.43** (2.449)	0.15 (0.257)	3.85** (2.439)	0.39** (2.290)	0.37 (0.650)
Other	4.46*** (2.952)	0.32* (1.857)	-0.89 (-1.606)	3.08** (2.160)	0.22 (1.458)	-0.77 (-1.511)
Style						
Value	-2.58 (-1.534)	-0.51** (-2.439)	-0.88 (-1.309)	-2.46 (-1.258)	-0.43** (-2.115)	-0.82 (-1.224)
Growth	-6.71*** (-4.639)	-0.02 (-0.147)	1.01** (2.076)	-5.79*** (-4.423)	-0.07 (-0.499)	0.94** (2.011)
Age	-0.00 (-0.954)	-0.00 (-0.184)	0.00 (0.760)			
Ln(Size)	0.33 (1.031)	-0.02 (-0.617)	-0.27** (-2.546)			
ESG Coverage	0.83*** (5.874)	0.03** (2.316)	0.14*** (2.687)	0.69*** (5.364)	0.03** (2.252)	0.11** (2.104)
Financial Performance				-0.16*** (-2.998)	-0.00 (-0.811)	-0.00 (-0.334)
Volatility				1.78** (2.181)	-0.06 (-0.637)	-0.07 (-0.218)
Constant	-14.01 (-0.956)	3.11** (2.027)	-29.53*** (-5.923)	3.28 (0.268)	3.41** (2.331)	-31.16*** (-6.394)
N	75	74	74	71	70	70
R-Squared	0.59	0.41	0.38	0.64	0.46	0.32

Conclusions – practice and motivation



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- Some form of **ESG incorporation stated by all funds** surveyed, but the actual practice is not clear.
- ESG Investing is driven mainly by **expected value rather than values**
 - Particularly for U.S. headquartered funds
- U.S. HQ funds prioritise Environmental, while Australasian HQ funds equally weight E, S and G.
- **Climate Change is the most important ESG sub-theme** followed by corporate behaviour

Conclusions – portfolio analysis



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- Lack of understating of portfolio carbon intensities
 - Only about **half of respondents** provided it
- **Climate Initiative members actually have higher** portfolio carbon intensities
- Those that **prioritize climate change or claim a decarbonization** strategy, **do not have lower** carbon intensity
 - Not explained by engagement or active engagement → **a sign of greenwashing**
- ESG name does not mean much in terms of ESG performance or Carbon intensity

Plans ahead

- This was a **preliminary study for a larger global project** in collaboration with **Massachusetts Institute of Technology**
 - Study **global fund managers** beliefs, strategies and motivations through a survey/interview methodology and explore their portfolio holdings.
 - Refine questions
 - Explore **more granular ESG metrics**
 - Explore **more ESG providers' ratings,**
 - Analyze performance **vs benchmark**



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