

Why (Academic) Finance Has Such a Difficult Time with ESG – And What We Can Do About it

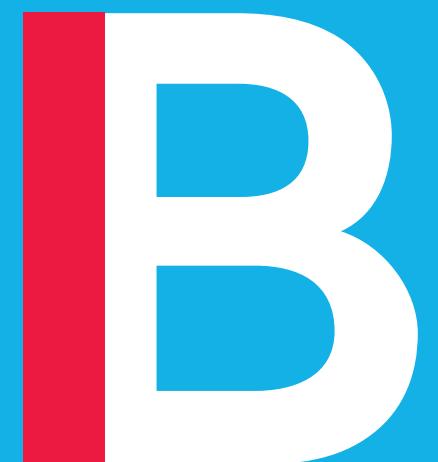
OECD Workshop on Infrastructure as an Asset Class

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About Imperial College London

- Research-led, science-based university with 17,000 students across four colleges: science, engineering, medicine, and business. 15 Nobel laureates.
- Research Excellence Framework (REF): Imperial College has the greatest concentration of high impact research of any UK university
- QS World University Rankings 2016/17 – 9th in the world
- *Times Higher Education* World University Rankings 2016/17 - 8th in the world, 3rd in Europe



Centre for Climate Finance and Investment



A mission to unlock solutions within **capital markets** to address the challenge of global climate change



Highly **inter-disciplinary** research drawing upon deep technical expertise within Imperial College



Academically **rigorous**, investment industry **relevant** research

Ongoing areas of work:

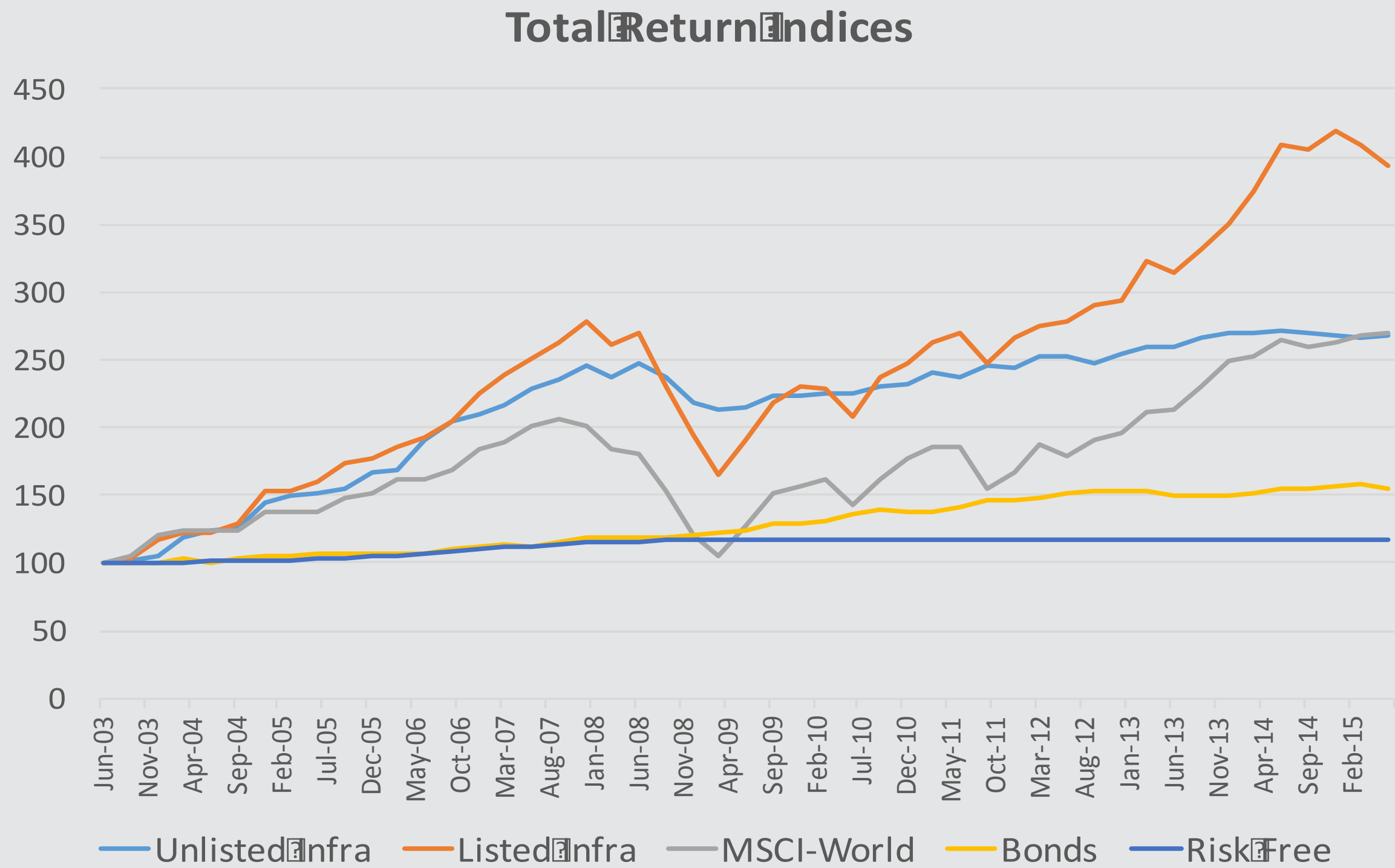


- Empirical approaches to determining **risk-adjusted returns** in green infrastructure



- Construction of real asset **investment benchmarks** in emerging / frontier markets

How Do Investors Understand Infrastructure?



Source: Wilde, S. (2017) Centre for Climate Finance and Investment, Imperial College Business School

More than an Illiquidity Premium

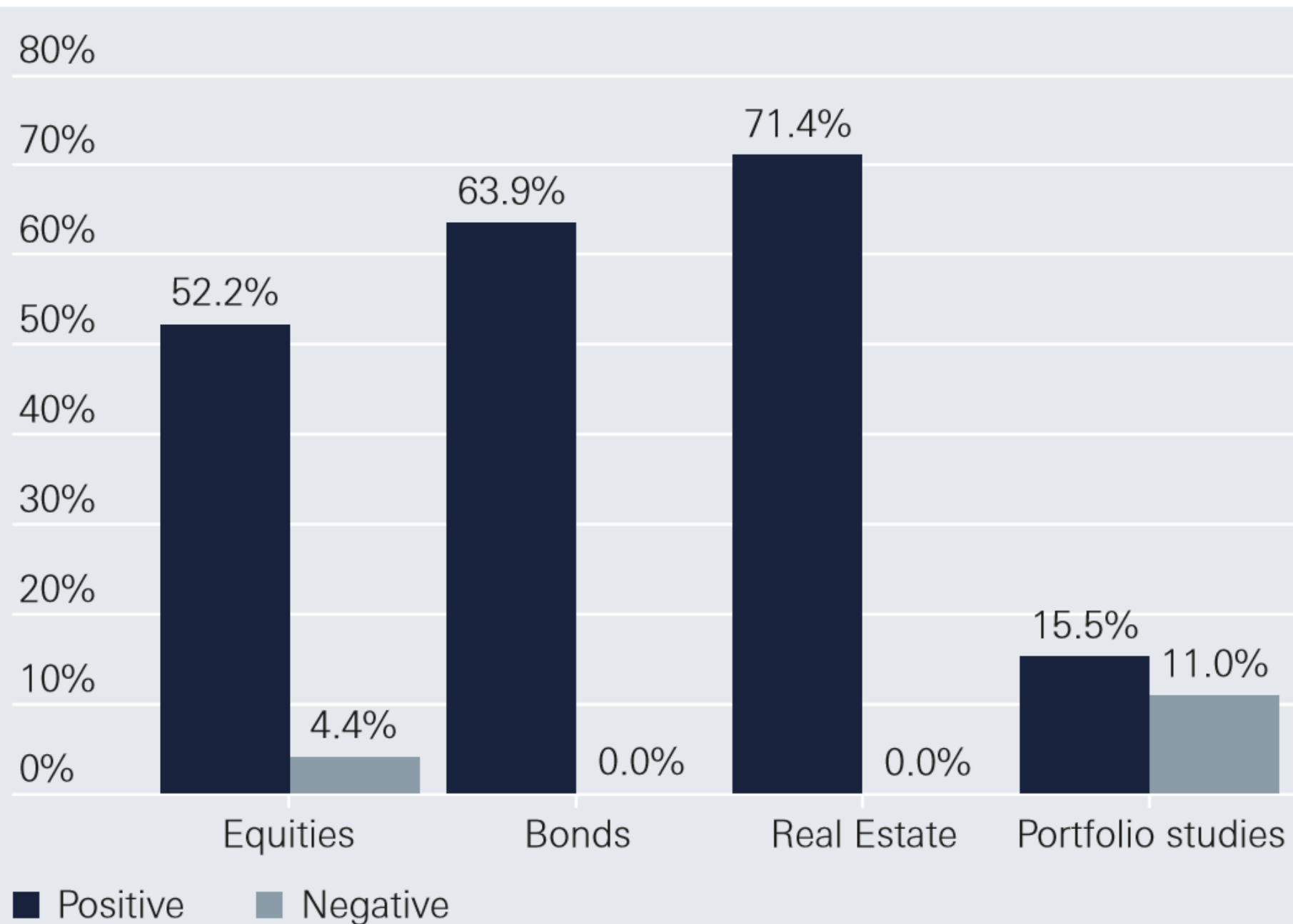
	Unlisted Infra	Listed Infra	MSCI World	Risk Free
Mean Return	8.60%	12.66%	9.77%	1.31%
Standard Deviation	7.97%	14.73%	16.76%	0.89%
Sharpe Ratio	0.914	0.77	0.505	
CAPM Beta	0.177	0.759	1	
CAPM Alpha	5.75%	4.78%	0%	

	Unlisted Infra	Listed Infra	MSCI World	Bonds
Unlisted Infra	1			
Listed Infra	0.51	1		
MSCI-World	0.39	0.89	1	
Bonds	0.05	0.07	-0.13	1

Source: Wilde, S. (2017) Centre for Climate Finance and Investment, Imperial College Business School

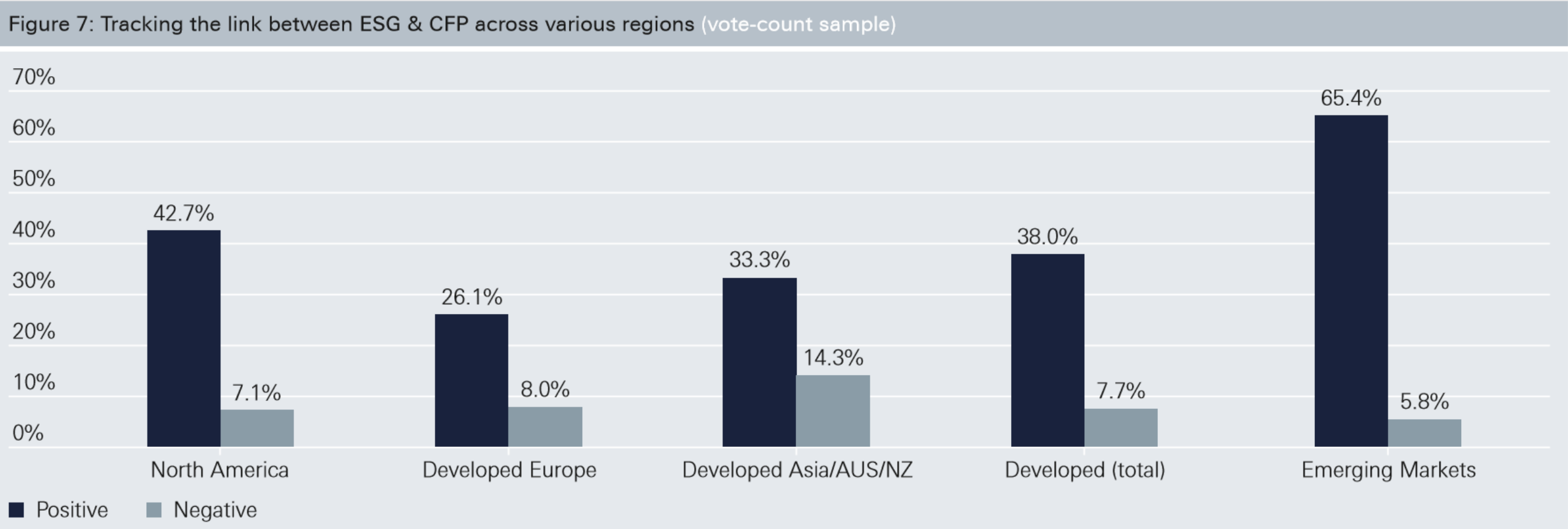
How Do Investors Understand ESG?

Figure 4: Tracking the link between ESG & CFP across major asset classes (vote-count sample)



Source: Friede, Busch, Bassen (December 2015)

Clearest Indicator in Emerging Markets



Source: Friede, Busch, Bassen (December 2015)

How Does Academic Finance Understand ESG in Infrastructure?

- In short, *not very well*
- ESG risks pose some difficult challenges to mainstream finance theory, for example common refrains that
 - Proper diversification makes them irrelevant
 - If real, they are already priced by market participants
- The challenge is therefore to empirically observe how ESG risks destroy value
 - Cashflows
 - Discount rate

Observations for Discussion

- To gain legitimacy in the eyes of academic finance researchers, benchmarks will need to be
 - Quantitative rather than qualitative
 - Disentangle E,S & G from their scoring
- To be beneficial to investors, benchmarks will need to:
 - Focus on less transparent investment markets
 - Help establish that there is a priced risk factor (e.g. climate Beta)