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ESGi
ESG 研究中心
RESEARCH CENTRE FOR ESG

Grant Title: *Establishing a research infrastructure for ESG intelligence: A multi-stakeholder perspective (UGC/IDS(R)14/21)*

Survey Topic: *Investor survey for trade-offs between financial returns and ESG performance: US vs Mainland China*

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IDS Progress Report

Research Component (RC) 1: *Integrating social returns into performance benchmarks related to ESG portfolios*

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1. Background and Methodology
1.1. Background

RC1 focuses on finance and ESG integration for investment portfolios. The key objective is to identify the role of social return in creating ESG intelligence to gauge the satisfaction of asset owners. This is a challenging but significant research issue to provide investors with more completed performance benchmarks related to ESG portfolios instead of financial return only. A major challenge in promoting environmental and social engagement for listed firms or even for the society is a lack of benchmarking of the social reward of investments for the asset owners and investors. We believe that an effective way to overcome this challenge is to better quantify the value (i.e., utility/satisfaction) of social returns to asset owners and buy-side professionals. By doing so, portfolio managers can better present investment choices that are suitable to the social return and therefore ESG preferences of the asset owners, leading to a wider adoption of ESG integration among asset owners.

This study conducts online survey experiments in China and USA to investigate the effect of ESG consideration on investors' trade-offs for evaluation of stocks and portfolios. Our results should provide a linkage and insight for adjusting the expected return conditional to ESG performance. Our study has two novel features. Firstly, it examines the willingness to invest in ESG (Environmental, Social, and Governance) stocks across various ESG dimensions, including Carbon emission record, Waste and hazardous materials, Greenhouse emission, Employee health and safety, Product quality and safety, and Data Security/Customer privacy. This approach enables the investigation of potential differences in preferences for ESG stocks across these dimensions. Secondly, the study includes participants from both the United States and China, facilitating a comparison of investor preferences for ESG stocks between these two countries. By considering perspectives from both countries, the research aims to provide insights into the divergences or similarities in ESG investment preferences among investors in the United States and China.

1.2. Methodology

To gauge the subjects' valuation of different portfolios, we employed a second-price sealed bid method in which participants were asked to provide their bids for a portfolio with a high ESG rating and a portfolio with a low ESG rating. The bids can be considered as an indication of the subjects' valuation of the respective portfolios.

The bidding task for the High ESG portfolio in the United States study is outlined below. The task for the low ESG portfolio follows a similar structure, with the only difference being that the portfolio consists of stocks with a low ESG rating. The bidding tasks for the China study were also structured in a similar manner.

Bidding task (High ESG portfolio, USA)

We have constructed a portfolio with 5 companies (with equal sharing in the portfolio) which has received high rating on ESG (Environment, Social, and Governance). The initial amount allocated to the portfolio on 16 Oct 2023 was US$100. We invite you to submit your bid for the portfolio. The market value of the portfolio will be determined by the market prices of the 5 companies on 16 Jan 2024. The winner will be one who submits the highest bid. The winner will receive an amount equal to the market value of the portfolio on 16 Jan 2024 and will pay the second highest bid (instead of his/her highest bid submitted) for the portfolio.

For example, suppose the market value of the portfolio on 16 Jan 2024 is US$Y, the highest bid is US$a, and the second highest bid is US$b. Then the payoff of the winner is US$Y-US$b. That is, on 16 Jan 2024, we will pay the winner US$Y, and the winner will pay US$b. When there are two or more winners, the winner will be randomly determined.

Please submit your bid now.

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2. Findings

2.1. Data description

The survey with USA subjects was conducted in the online platform prolific with 291 subjects (48.8% female) in November 2023.

The survey with China subjects was conducted in the online platform Credamo with 300 subjects (58.47% female) in November 2023.

2.2. Summary Statistics of the Demographics of the Sample

	USA	China
	Mean (S.D)	Mean (S.D)
Female	48.8%	58.47%
Age	3.53 (1.40)	2.77 (1.01)
Education	3.89 (0.95)	4.19 (0.77)
Income	7.46 (3.29)	6.35 (1.61)
Observations	291	300

Notes: Age is in the scale of (1)Below 18 to (9) 85 or above. Education is in the scale of (1) Middle school or below to (6) PhD or above. Income (for China study) is in the monthly income in scale of (1) below RMB 1000 to (9) 100,000 or above. Income (for USA study) is in the annual income in scale of (1) Below USD 10,000 to (12) USD 150,000 or above.

2.3. **Results**

Below, we provide the key preliminary findings from our research. We anticipate finalizing the working paper by July 2024.

2.3.1. Bid for portfolio with high ESG rating and low ESG rating

Table 1. Bidding Amount for High ESG Portfolio vs. Low ESG Portfolio

	High ESG Portfolio	Low ESG Portfolio	Mean Difference	*p*-value
USA	USD110.77	USD106.59	4.18	0.03**
China	RMB1948.26	RMB1707.15	241.11	0.00***

Result 1: *Subjects are willing to bid more for portfolio consisted of high ESG stocks than low ESG stocks.*

2.3.2. Premium for High ESG stocks

Through a series of tasks, we elicit the subjects' willingness to pay a premium for investing in High ESG (Environmental, Social, and Governance) stocks. In these tasks, participants indicate whether they prefer to invest in a High ESG stock with an expected return of 8%, while the return of the Low ESG stock ranges from 8% to 18%. We identify the switch point at which participants transition from investing in High ESG stocks to Low ESG stocks as a measure of the premium attached to High ESG stocks. This premium indicates the amount of potential return the investor is willing to forego in order to invest in High ESG stocks.

We elicit these premiums for High ESG stocks across six different dimensions of ESG: Carbon emission record, Waste and hazardous materials, Greenhouse emission, Employee health and safety, Product quality and safety, and Data Security/Customer privacy. By exploring these dimensions, we aim to understand the varying levels of importance placed on different aspects of ESG when evaluating investment choices.

Table 2. High ESG Premiums

Average Premium for High ESG Stock	USA	China
Carbon	6.04	6.55
Waste	6.50	6.83
Greenhouse	6.24	6.68
Employee	6.63	7.04
Product	6.43	7.38
Data	6.19	7.15

Result 2: *Subjects are willing to pay a premium to invest in High ESG stock.*

2.3.3. Expected Returns

In a series of tasks, we elicit subjects' expected returns such that they are willing to invest in High ESG stock, and low ESG stocks in the ESG categories of Carbon, Waste, Greenhouse, Employee, Product, and Data.

Table 3. Comparisons between expected returns of High ESG stock and Low ESG Stocks in the USA study

	High ESG	Low ESG	*p*-value
Carbon	3.32	4.27	0.00***
Waste	3.34	4.03	0.00***
Greenhouse	3.21	4.00	0.00***
Employee	3.11	3.85	0.00***
Product	3.09	3.85	0.00***
Data	3.15	5.53	0.00***

Table 4. Comparisons between expected returns of High ESG stock and Low ESG Stocks in the China study

	High ESG	Low ESG	p-value
Carbon	3.65	5.36	0.00***
Waste	3.48	5.37	0.00***
Greenhouse	3.42	5.33	0.00***
Employee	3.41	5.31	0.00***
Product	3.41	5.30	0.00***
Data	3.42	5.43	0.00***

Result 3: *Subjects have lower expected return for investing in High ESG stock than low ESG stock.*

2.3.4. Willingness to Take Risk

We elicit subjects' willingness to take risk from High ESG stock and Low ESG stock conditional on the same expected return of 5%, but subject to 10 sequential choices of risk ranges varying from (-5 to +5%) to (-55 to +55%).

Table 5. Comparison of Willingness to Take Risk between High ESG and Low ESG Stocks in the USA Study

	High ESG	Low ESG	*p*-value
Carbon	5.53	3.78	0.00***
Greenhouse	5.50	3.49	0.00***
Employee	5.64	3.43	0.00***
Data	5.70	3.41	0.00***

Table 6. Comparison of Willingness to Take Risk between High ESG and Low ESG
Stocks in the China Study

	High ESG	**Low ESG**	*p*-value
Carbon	6.98	4.20	0.00***
Greenhouse	7.08	4.30	0.00***
Employee	7.26	4.23	0.00***
Data	7.18	4.23	0.00***

Result 4: *Subjects are willing to accept higher variance (risk) from High ESG stock than low ESG stock.*

3. Conclusion and Implication

Since the results include both mainland China and the US, we aim to further explore the differences of ESG-return trade-offs between the two countries. Our final results can be useful to understand different types of investors in determining the trade-offs between social returns and financial returns.