How to Foster the Role of Households in Financing The Energy Transition?

Prof. Dr. Arthur van Soest

Gundars Gulbis Akay Kaan Kadioglu

Tilburg University

CentER Honors Research Experience
July 5, 2024

Overview

Research Motivation

Building on the Previous Project

- Rossi, Sansone, Soest, Toricelli, 2019:
  - Dutch representative household panel aims to measure actual/latent demand for SRI products.
  - Aims to disentangle return expectations from investor preferences.
  - Internet survey, CentERpanel.
  - 2000 households.

Research Motivation

Building on the Previous Project

- Significance for SRI vs non-SRI:
  1. Education is pivotal.
  2. Income not significant.
  3. Urban households have more interest in SRI.
  4. More likely to invest if the bank invests more in SRI.

- ”Social investors are willing to pay a price to be socially responsible [...]”
- ”[...] SR investment decisions are driven by non-monetary factors.”

Research Motivation

Building on the Previous Project

- Differentiation between non-SRI and SRI mainly.
- SRI characteristics considered compositely.
- What about components of the SRI demand?
  1. Environmental?
  2. Social?
  3. Governance?

Research Motivation

Overview of Literature

- Branuen, Laubach, 2022:
  - Sustainable consumption patterns are significant for predicting investment choices.
- D'Hondt et. al, 2022:
  - Heterogeneous investor preferences.
- Filippini, Leippold, Wekhof, 2024:
  - Significance in SRI: University education, wealth, donation, risk preference, altruism...
- Seifert et. al, 2024:
  - Financial literacy, education, higher income are significant.

Research Motivation

Overview of Literature

- Assaf et. al, 2024:
  - One composite ESG score is not well adapted to investors.
- Roos, Jansson, and Garling, 2024:
  - SR investors prioritize social, ethical, and environmental factors over wealth.
- Cucinelli, Soana, 2023:
  - Marital status, education, income, and employment status are significant.
- Meira et al, 2022:
  - Heterogeneity in agendas for firms.
- Ehlers et al, 2023:
  - ESG scores might not necessarily reflect true firm performance.

Research Motivation

Purpose of the Project and Our Contribution

- Composite ESG is not enough to match demand to investments.
- Household preferences and financial markets are dynamic.
    1. Household preferences may change over time.
    2. Sustainable investments are more differentiated over time.
    3. Heterogeneous firm agendas and industries.
- Who is more environmentally sustainable? Do I prefer environmental more than social? A composite ESG score fails to capture these.

Research Motivation

Purpose of the Project and Our Contribution

- We analyze 2442 Dutch households from CentER data panel using STATA.
- Econometric analysis of responses from a questionnaire consisting of 17 questions.
- We explicitly analyse the determinants of investor behavior and infer whether investors have heterogeneous preferences (ESG).

Methodology and Results

Survey Design

- Multiple choice questions for preferences between different accounts, funds etc.
- Questions that test the WTP for different products by assigning portfolio weights
- Additional randomizations to further test the WTP
- Questions about socio-economical characteristics

Methodology and Results

Descriptive statistics

	Weighted	Unweighted			
	(1) All	(2) All	(3) SRI owners	(4) Non-SRI owners	(5) Two-tailed p-value
	N = 2147	N = 2383	N = 341	N = 2042	N = 2383
Male	0.467	0.516	0.563	0.508	0.059
Age	48.870	57.879	57.883	57.879	0.997
Vocational Education	0.321	0.317	0.220	0.333	<0.001
Higher Education	0.427	0.428	0.642	0.392	<0.001
Urban	0.499	0.489	0.493	0.489	0.901
Individual Income in categories	5.002	5.239	5.792	5.147	<0.001
Charity	0.618	0.722	0.800	0.709	<0.001
Volunteer Work	0.283	0.344	0.418	0.332	0.002
Working	0.559	0.517	0.560	0.509	0.082

Figure: Weighted by age

Methodology and Results

Descriptive statistics

Have children	0.399	0.286	0.267	0.289	0.404
Sustainable lifestyle	0.487	0.545	0.660	0.526	<0.001
Risk seeking	4.509	4.347	5.388	4.171	<0.001
Future oriented	4.697	4.561	5.315	4.434	<0.001
Optimistic of return from ESG	0.122	0.109	0.130	0.105	0.177
Optimistic of risk from ESG	0.105	0.098	0.158	0.088	<0.001

Figure: Weighted by age

Methodology and Results

Results

Actual SRI ownership	Choice in SP question on mutual funds (Q8)	Expected return from SRI products		
		Low	High	Total
Now owning SRI	Traditional	0.65	0.60	0.62
	Pure SRI	0.26	0.32	0.29
	SRI & In-kind	0.10	0.09	0.09
Owning SRI	Traditional	0.53	0.46	0.49
	Pure SRI	0.39	0.46	0.43
	SRI & In-kind	0.08	0.09	0.08
Total	Traditional	0.63	0.57	0.60
	Pure SRI	0.28	0.34	0.31
	SRI & In-kind	0.09	0.09	0.09

Methodology and Results

Results

	(1) Actual (Q1)	(2) Stated Banks (Q5)	(3) Stated Banks (Q6)	(4) Stated Stocks (Q8)
Male	-0.008	0.041**	0.012	-0.069***
Age	0.001	0.001	-0.000	0.001
Vocational Education	0.033*	0.001	0.010	-0.009
Higher Education	0.114***	0.086***	0.093***	0.060*
Urban	0.002	0.064***	0.047**	0.061***
Individual Income in categories	0.006*	-0.009**	-0.002	-0.011**
Charity	0.020	0.094***	0.125***	0.124***
Volunteer Work	0.019	0.054***	0.056***	0.067***
Sustainable lifestyle	0.043***	0.090***	0.094***	0.154***
Risk seeking	0.024***	0.014***	0.007	-0.006
Future oriented	0.008**	0.020***	0.029***	0.029***
Optimistic of return from ESG	0.003	0.030	0.015	0.046
Optimistic of risk from ESG	0.026	0.156***	0.185***	0.181***

Figure: Probit regressions

Methodology and Results

Results

Inheritance 10K		-0.014	0.003	-0.031
High int. rate SR acc. option 2		0.005	0.030	
High int. rate SR acc. option 3		-0.024	0.029	
High value of Wildlife book		0.027		
Investment in micro-credits			0.001	
High voucher value			0.013	
Higher expected return SR funds				0.036*
Has SR investments		0.140***	0.208***	0.107***
Observations	2189	2189	2189	2189

Figure: Randomizations

Methodology and Results

Results

	(1) Traditional	(2) SR	(3) SR & In-kind	(4) Marginal effects
Male	0.069***	-0.065***	-0.004	-2.758*
Age	-0.001	0.000	0.001	0.134***
Higher Vocational Education	0.008	0.011	-0.020	1.798
Higher Education	-0.060*	0.070**	-0.010	9.144***
Urban	-0.061***	0.050***	0.011	5.257***
Individual Income in categories	0.011**	-0.005	-0.006*	-0.491
Charity	-0.126***	0.105***	0.020	11.754***
Volunteer Work	-0.066***	0.074***	-0.008	2.553
Sustainable lifestyle	-0.154***	0.123***	0.031**	7.327***
Risk seeking	0.006	-0.006	-0.001	0.474
Future oriented	-0.030***	0.023***	0.007**	2.256***
Optimistic of return from ESG	-0.046	0.030	0.016	3.869*
Optimistic of risk from ESG	-0.179***	0.169***	0.011	11.680***

Figure: Multinomial probit (1-3) and Tobit (4)

Methodology and Results

Results

What about separating ESG?

- Consistent evidence that, on average, **E** $>$ **ESG** $>$ **S** $>$ **G**

Time significance? Identifying 1507 matching individuals

- **156 people own SRI**, up from 110
- Amount of people who would put their money in a sustainable account - **increased by 30**
- More people assigned **less** weight to the sustainable portfolio

Implications of Our Findings

- European Union Markets in Financial Instruments Directive II (MiFID II)
  - Client sustainability preferences.
  - Preferences: Sustainable, eco-friendly, PAI impacts
  - MiFID I excluded investments with only environmental/social characteristics. (JP Morgan, 2023)

- Reduction in risk premium:
  - With separate ESG criteria, more diversification.
  - Total assets in ESG funds worldwide doubled from March to September 2021, reaching 3.9 trillion USD (MorningStar, 2021).
  - Better matching investment products to preferences could reduce the premium on ESG assets by diversifying the increasing demand (Assaf et. al, 2024).

Implications of Our Findings

- Pensions:
  - Netherlands had among the largest asset under management of pensions within EU-27. 3.37 Trillion euros. (Statista, 2024)
  - More efficient, diversified, sustainable investment in pensions.
  - ESG-based portfolios do not hinder financial performance (Ehlers et al., 2023). Low financial cost but more diversification and more client flexibility.

References I


Cynthia Assaf, Jerome Monne, Loïc Harriet, Luc Meunier (2024)
ESG investing: Does one score fit all investors' preferences?
Journal of Cleaner Production, 443, 141094.
https://doi.org/10.1016/j.jclepro.2024.141094


Ann-Christine Brunen, Oliver Laubach (2022)
Do sustainable consumers prefer socially responsible investments? A study among the users of robo advisors.
Journal of Banking & Finance, 136, 106314.
https://doi.org/10.1016/j.jbankfin.2021.106314


D. Cucinelli, M. G. Soana (2023)
Investor preferences, financial literacy and intermediary choice towards sustainability.
Research in International Business and Finance, 66, 102027.
https://doi.org/10.1016/j.ribaf.2023.102027

References II


Catherine D'Hondt, Maxime Merli, Tristan Roger (2022)
What drives retail portfolio exposure to ESG factors?
Finance Research Letters, 46(Part B), 102470.
https://doi.org/10.1016/j.frl.2021.102470


T. Ehlers, U. Elsenhuber, K. Jegarasasingam, E. Jondeau (March 10, 2023)
Deconstructing ESG Scores: How to Invest with your own Criteria?
IMF Working Paper, No. 2023/057.


Massimo Filippini, Markus Leippold, Tobias Wekhof (December 30, 2021)
Sustainable Finance Literacy and the Determinants of Sustainable Investing.
Swiss Finance Institute Research Paper No. 22-02.

References III

John Magnus Roos, Magnus Jansson, Tommy Gärling (2024)
A three-level analysis of values related to socially responsible retirement investments.
Journal of Sustainable Finance & Investment, 14(2), 327-343.
https://doi.org/10.1080/20430795.2022.2077291

JP Morgan (2023)
Explaining the sustainability preferences amendments to the European Union Markets in Financial Instruments Directive II Delegated Regulation.

E. Meira, F. A. F. d. S. Cunha, R. J. Orsato, M. M. Miralles-Quirós, J. L. Miralles-Quirós (2023)
The added value and differentiation among ESG investment strategies in stock markets.
Business Strategy and the Environment, 32(4), 1816–1834.
https://doi.org/10.1002/bse.3221

References IV

Mariacristina Rossi, Dario Sansone, Arthur van Soest, Costanza Torricelli (2019)
Household preferences for socially responsible investments.
Journal of Banking & Finance, 105, 107-120.
https://doi.org/10.1016/j.jbankfin.2019.05.018

Marcel Seifert, Florian Spitzer, Simone Haeckl, Alexia Gaudeul, Erich Kirchler, Stefan Palan, Katharina Gangl (2024)
Can information provision and preference elicitation promote ESG investments? Evidence from a large, incentivized online experiment.
Journal of Banking & Finance, 161, 107114.
https://doi.org/10.1016/j.jbankfin.2024.107114

Statista Research Department (2024, April 17)
Total value pension fund assets in the Netherlands 2009-2023.
Statista (2024)

The End

Thank you for your attention!