





**Confusing choices complicate decisions...**

# Growing demand for sustainable investment products

- Sustainable finance: 50% inflow of EU investment products (Morningstar, 2021)
- No single definition that identifies investment products as “sustainable.”
- Knowledge about sustainable investments becomes critical to making informed investment decisions.
- We call this type of knowledge “sustainable finance literacy (SFL)”

# Research Questions

- What is the level of sustainable finance literacy among retail investors in Switzerland?
- What are the determinants of the level of knowledge?
- Is this knowledge a determinant for owning sustainable finance products?

# Literature and contribution

- Financial literacy - (Lusardi and Mitchell (2008), Agraval and Mazumder (2013), Titman et al. (2021), Jappelli and Padula (2013))
  - Financial Literacy depends on education, income, and gender
  
- The literature on the demand for sustainable finance products is well documented (Gutsche et al. 2021, Riedl and Smeets 2017, Bauer et al. 2021, Gutsche et al. 2020, Heeb et al. 2021, Rossi et al. 2019).
  - Main results: general willingness to pay for sustainable finance products, especially for individuals with environmental values

# Link to online survey (open-ended question)



<https://www.research.net/r/MC9LQPF>

# Empirical Approach

- Survey organized in 2021
- Final participants: 3,059 from the German-speaking part of Switzerland.
  - Experienced retail investors (representative for 60% CH pop).
  - Recruited among a large panel of households by a professional marketing company.
- Self-disclosed ESG ownership

# What about the level of General Sustainable Finance Literacy?

- Question:

*Describe which characteristics you think to distinguish sustainable financial products from conventional investments. Please write a short text of about three sentences.*

- Example answer:

*“Sustainable financial products invest in companies or technologies that minimize environmental damage and unsocial conditions without being inefficient.”*



# How do people describe sustainable financial products compared to conventional investments?

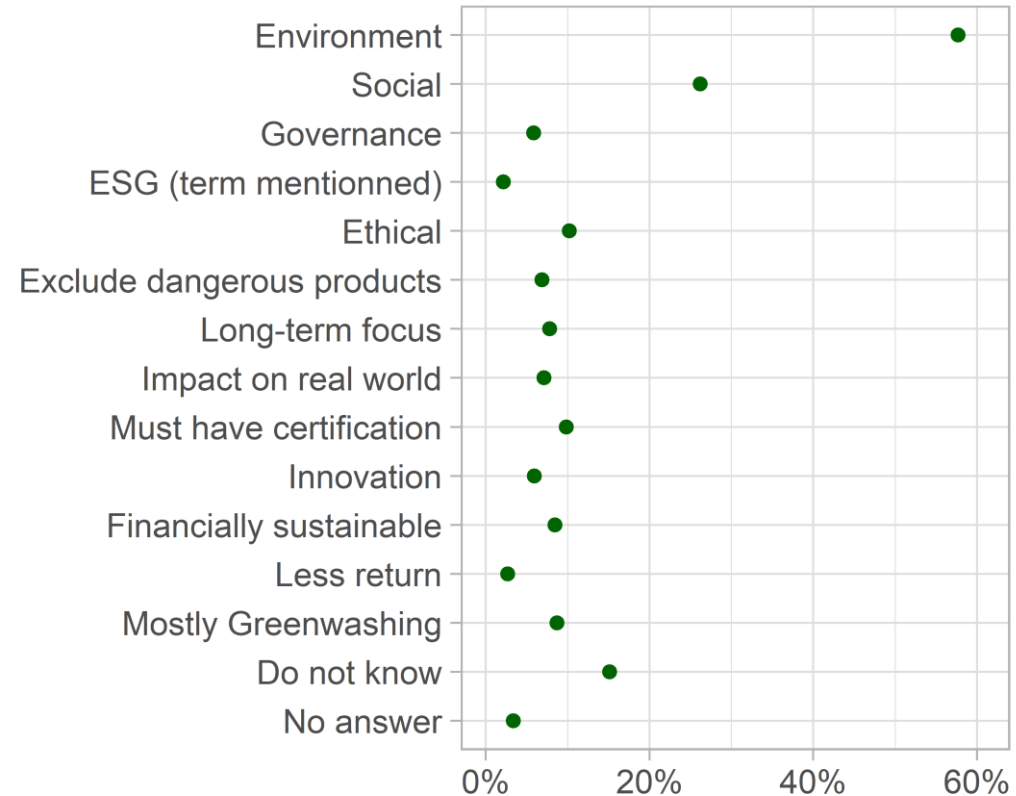


*Environmental*



*Social*

Share of topics to describe a sustainable finance product

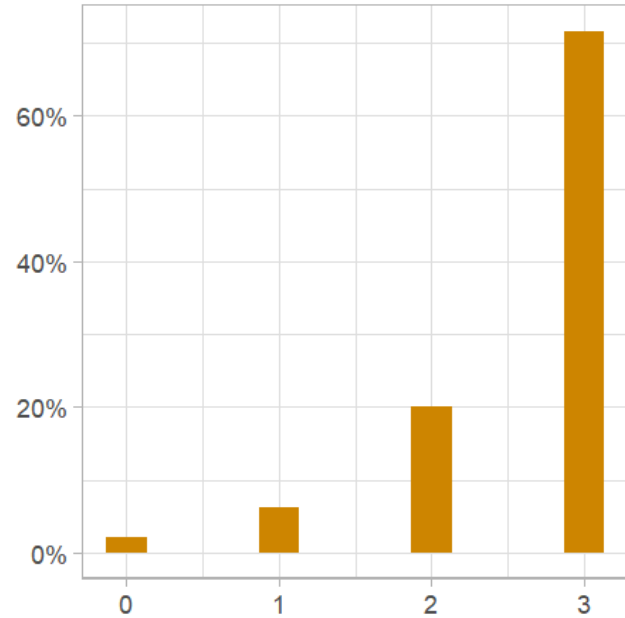


# The level of Sustainable Finance Literacy is low

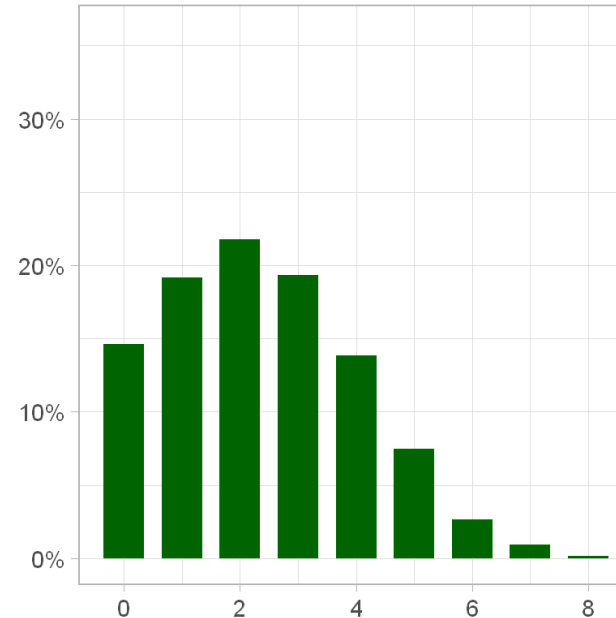
Table: Sustainable finance literacy, individual questions

Questions on concept, rules, labels:	% correct
- ESG definition	26.41
- ESG rules	41.03
- Awareness of label	12.68
Questions on requirements to get an ESG label:	% correct
- ESG example	32.30
- ESG elements	4.48
Questions on impact on real economy:	% correct
- ESG impact	52.24
- ESG engagement	47.92
- Impact definition	20.14

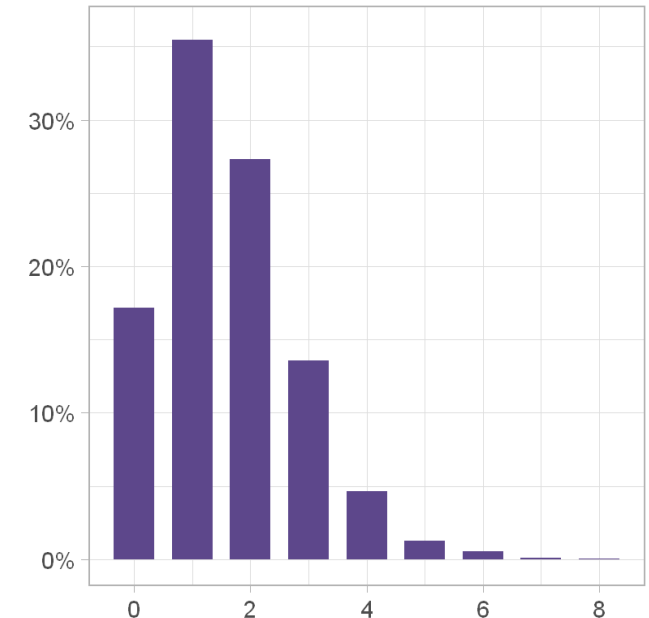
# Distribution of literacy scores



Financial literacy  
*(general knowledge about investments)*



Sustainable finance literacy



General Sustainable finance literacy

# Model: determinants of literacy (Poisson regression)

$$\text{Model 1 : } \textit{literacy}_i = \alpha_i + \beta X_i + \varepsilon_i,$$

Literacy score: financial literacy,  
sustainable literacy, SFL

Socioeconomic characteristics

# Determinants of literacy

Table: Determinants of literacy, poisson avg. marginal effects

	Financial lit	SFL - closed	SFL - open
Age	−0.001 (0.003)	−0.022*** (0.003)	0.004 (0.003)
Female	−0.465*** (0.071)	−0.416*** (0.077)	0.043 (0.061)
University educ	0.277*** (0.069)	0.422*** (0.074)	0.319*** (0.061)
Log income	0.221** (0.091)	0.338*** (0.098)	0.118 (0.081)
Log wealth	0.034 (0.032)	0.091*** (0.035)	0.021 (0.028)
Donation: environment	0.096 (0.068)	0.182** (0.073)	0.183*** (0.060)
Donation: social	0.110 (0.079)	0.124 (0.084)	0.264*** (0.073)
[...]	[...]	[...]	[...]
Num.Obs.	2159	2159	2159
Log.Lik.	−3441.674	−3890.236	−3225.683

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

# The level of sustainable finance literacy is an important determinant for owning sustainable finance products

- The ownership of sustainable finance products is associated with the level of both SFL measures.
- Respondents with a high score in **either** of the literacy measures tend to hold sustainable finance products more frequently.
- Both SFL measures are complementary:
  - highest probability of owning sustainable assets if both SFL scores are high.

# Determinants of sustainable financial product

Model 2 :  $SFP_i = \alpha_i + \beta Li_i + \delta X_i + \varepsilon_i,$

Indicator 0/1 if the respondent owns a sustainable financial product

Literacy score: financial literacy, sustainable literacy, SFL

Socioeconomic characteristics

## Possible instrumental variable

- Exposure to newspaper articles about "ESG" in the 12 months preceding the survey.
  - For each major newspaper in Switzerland, the survey company provided us with information on how often a respondent reads a newspaper.
- Similar to (Klapper 2013) - number of available newspapers as an instrument for financial literacy.
- The idea behind this instrument is that people who regularly read this newspaper are more exposed to the ESG topic.



# Determinants of sustainable investments

Table: Determinants of ESG-ownership, probit avg. marginal effects

	<i>ESG-ownership</i>				
	(1) Probit	(2) Probit	(3) Probit	(4) 2SRI	(5) 2SRI
SFL: open	0.021*** (0.008)		0.026*** (0.008)		0.154** (0.078)
SFL: closed	0.026*** (0.006)	0.028*** (0.006)		0.096* (0.055)	
Sustainability literacy	-0.004 (0.008)	-0.003 (0.008)	-0.001 (0.008)	-0.014 (0.012)	-0.013 (0.011)
Financial literacy	0.015 (0.016)	0.018 (0.016)	0.021 (0.016)	-0.002 (0.023)	-0.006 (0.023)
Age	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	0.001 (0.002)	-0.002* (0.001)
Female	0.015 (0.020)	0.019 (0.020)	0.007 (0.021)	0.038 (0.026)	-0.009 (0.023)
University educ [...]	0.050** [...]	0.056*** [...]	0.057*** [...]	0.034 [...]	0.022 [...]
Num.Obs.	2159	2159	2159	2159	2159
Log.Lik.	-1124.768	-1128.549	-1134.275	-1127.816	-1132.945

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

# Determinants of Investment – complementary literacy measures

Table 8: SFL clusters and sustainable investments - marginal effects probit regression

	(1)
SFL: high open - high closed	0.134*** (0.029)
SFL: high open - low closed	0.066** (0.028)
SFL: low open - high closed	0.066** (0.027)
Sustainability literacy	-0.002 (0.008)
Financial literacy	0.017 (0.016)
Covariates	Yes
Num.Obs.	2159
Log.Lik.	-1129.357

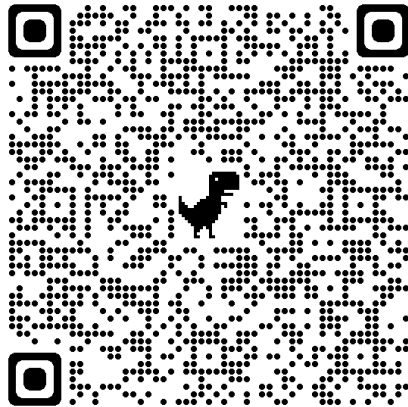
*Note:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

# Implications and Policy Recommendations

- SFL is low among Swiss retail investors, even though they have a high level of financial literacy.
- Low levels of SFL are associated with investing less in sustainable assets.
- The targeting of educational measures can be gender- and income-neutral because the literacy level is homogeneous and very low among the population.
- Improving SFL could increase retail investors' demand for sustainable finance products.

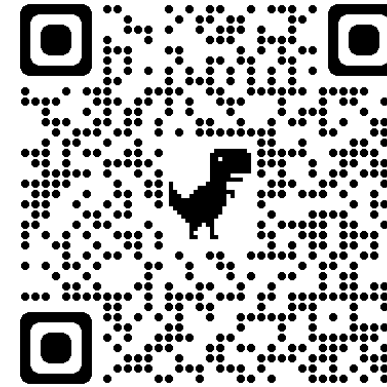
# References

## Link: Policy Brief



[https://ethz.ch/content/dam/ethz/special-interest/mtec/cepe/energy-and-public-econ-dam/documents/PolicyBriefs/ETH\\_CEPE\\_UZH\\_Policy\\_Brief\\_SFL\\_03\\_11\\_22.pdf](https://ethz.ch/content/dam/ethz/special-interest/mtec/cepe/energy-and-public-econ-dam/documents/PolicyBriefs/ETH_CEPE_UZH_Policy_Brief_SFL_03_11_22.pdf)

## Link: Academic Working Paper



[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3997285](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3997285)

**Tobias Wekhof** | Ph.D. Candidate in Economics | ETH Zurich  
<https://sites.google.com/view/tobiaswekhof> | [twekhof@ethz.ch](mailto:twekhof@ethz.ch)