



SOCIALLY RESPONSIBLE INVESTMENTS: *ARE HOUSEHOLDS WILLING TO PAY?*

Maria Cristina Rossi, University of Turin, CeRP, Netspar

Dario Sansone, Georgetown University

Arthur van Soest, Tilburg University and Netspar

Costanza Torricelli, University of Modena & Reggio Emilia, Cefin, CeRP

Workshop on Household Finance and Economic Behaviour
University of Turin & Collegio Carlo Alberto, maggio 2017

Aim & Motivation

- To analyze *revealed* and *stated* **individual preferences** for socially responsible (**SR**) investments in the Netherlands
- To test whether households are **willing to pay** for SR investing
- Tendency towards more choice flexibility for participants in **occupational pensions**
 - If participants can choose their own investment strategy, they may be interested SR investments
 - If employees can choose their own pension fund, pension funds can differentiate by, for example, SR investments
- Relevance for **mutual funds and corporations** (to reduce cost of capital)

Issues in the literature

- *Why to invest social?*
 - Superior financial returns? (cf. traditional finance theory)
 - Utility function depending on wealth and non-wealth returns
- Related question: *performance w.r.t. conventional investments?*
 - Is there an ethical penalty?
- E.g. Pasewark and Riley (2010)
 - asked individuals to choose between 2 bonds: one issued by a tobacco company and one outside the tobacco industry
 - SR investors accept lower returns →
 - traditional wealth-maximization approaches by not including the investor's personal values fail to capture an important factor of investment decisions

Issues in the literature (cont.)

- *Identification of the SRI investor's profile*
- Bauer and Smeets (2015)
 - found high levels of social identification among young, highly-educated and low-wealth investors, based on NL bank data →
 - supporting the profiling of socially responsible investors done in Junkus and Berry (2010) for US
- Nilsson (2008)
 - Importance of gender and education
 - social investors not only driven by altruistic motives, but also by the idea that ethical mutual funds have average or higher performance.

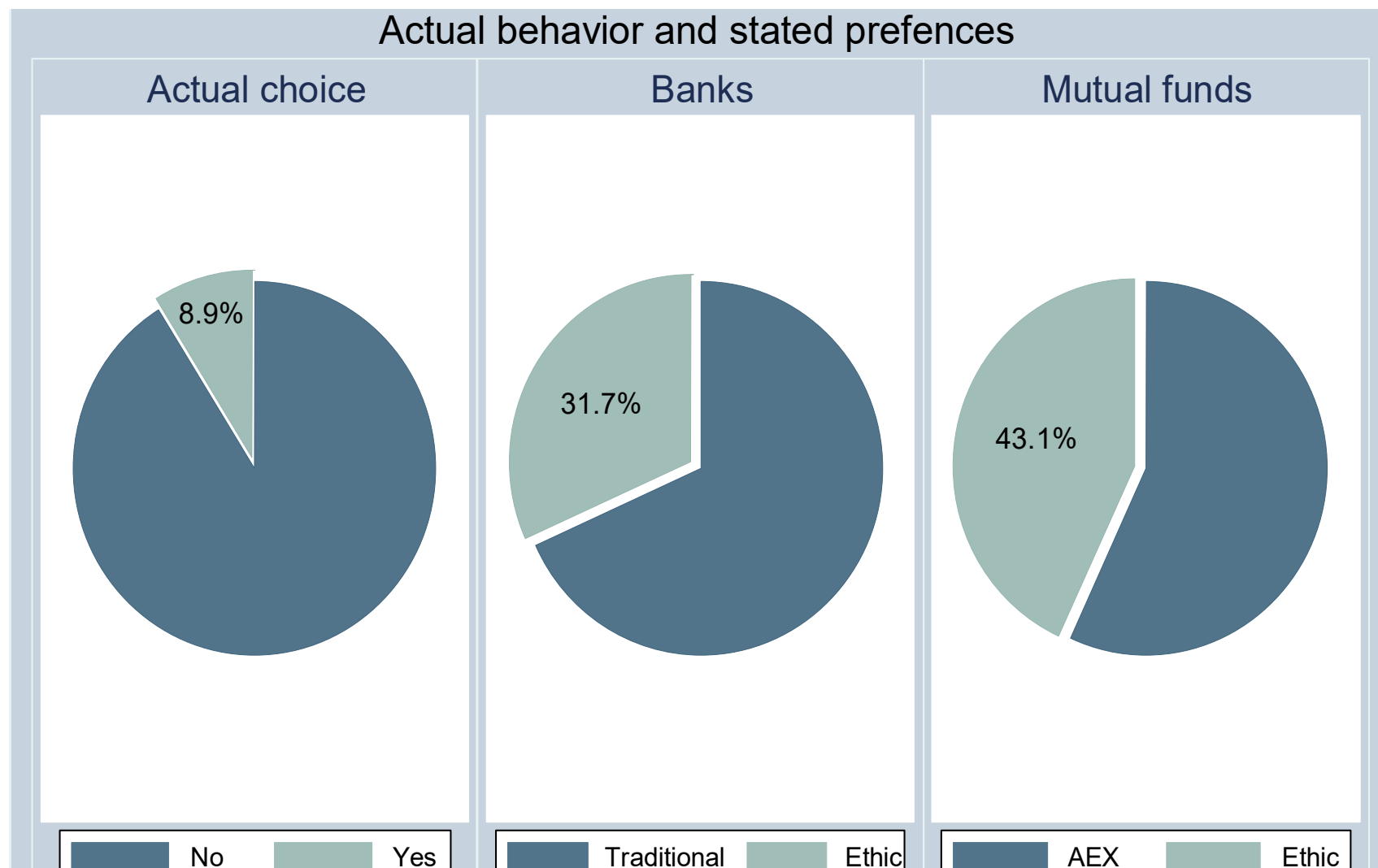
Overview of the paper

- **Actual behavior** and **stated preferences** on socially responsible assets (saving accounts at SR banks, mutual funds)
- Survey data collected in **CentERpanel** in May 2016
- Descriptive analysis of an exploratory nature
- Specific **questions addressed** by econometric analyses
 1. What are the characteristics of actual SR investors?
 2. What are the characteristics of respondents stating preference for SR?
 3. How important are the characteristics/design of the investment product? →
 4. Pure SR investor or investor needing a nudge?

Data

- Collected via an *internet survey* among participants of the CentERpanel run by CentERdata (Tilburg University) specialized in data collection and internet surveys.
- The CentERpanel consists of about 2,000 households
 - *representative* for the Dutch adult population
 - basis for the DNB Household Survey and ECB Financial Household Survey (Dutch contribution)
- Module of 8 questions concerning SRI submitted in May 2016

Actual vs Stated preferences for SR assets



Actual ownership of SR assets

Q 1: Do you (or someone in your household) have any investments in socially responsible assets or other mutual funds that invest in environmentally friendly companies or in cultural or other activities that are beneficial to society?

Yes: 8.9%; No: 91.1%

Probit estimates

	Marg.eff.	Standard errors
female	0.006	0.012
age	0.002***	0.001
Sec_edu	0.032*	0.019
Ter_hig	0.099***	0.018
married	0.006	0.015
kid hhd	-0.007	0.017
working	0.005	0.017
urban	0.018	0.013
Log_income	0.009*	0.005

Reasons for SR investing (n=187)

Q2 (If Q1=1) Why did you invest in these? (allow for more than one answer)

- Want to contribute to improving society 60.4
- More confidence than in other financial companies 37.4
- Expected (financial) returns 24.0
- Tax favored nature of these assets 27.8
- Response to a special offer 3.7

Reasons for not investing in SR

assets(n=1924)(with significant determinants)

- Should do this, but did not get to it 9.5%
female (-); education (+)
- No money to invest 34.8%
Age (-), education (-), married (-), work (-)
- Want to be able to withdraw immediately 47.5%
Income (+)
- High costs or low (expected) returns 11.1%
- Only want to invest in traditional banks 14.5%
Income (-), education (+), urban (-)

Actual behavior: special offers

At some banks you receive a present, like a **book or a voucher**, if you open a new account or start investing, or if you make an additional investment

Q 3: Did you (or anyone in your household) **ever receive such an offer, and if so, did you make use of it?**

- | | | |
|----|---|-------|
| a) | As far as I know, I/we never received such an offer | 63.0% |
| b) | I/we received such an offer but did not make use of it | 25.9% |
| c) | I/we once made use of such an offer to allocate part of our savings | 6.2% |
| d) | I/we more than once made use of such an offer to allocate part of our savings | 5.0% |

Table: Heckman Probit - Received Gift (Q3)

	(1) MFX 1Step	(2) MFX 2Step	(3) Conditiona 1 MFX
Female	-0.037 (0.022)	0.145*** (0.053)	0.137*** (0.032)
Age	-0.000 (0.001)	-0.002 (0.002)	-0.002 (0.001)
Secondary education	0.010 (0.030)	0.074 (0.051)	0.071 (0.048)
Tertiary education	0.081*** (0.029)	0.066 (0.050)	0.068 (0.046)
Working	0.015 (0.030)	-0.009 (0.050)	-0.008 (0.048)
Married / Living together	-0.001 (0.026)	0.001 (0.043)	0.001 (0.041)
Children in the household	0.082*** (0.027)	0.066 (0.044)	0.068* (0.041)
Urban	0.052** (0.022)	-0.037 (0.044)	-0.032 (0.035)
Log(Individual Income)	0.000 (0.006)	0.016 (0.010)	0.016* (0.009)
Observations	2047	2047	2047

Standard errors in parentheses

SE clustered at the household level

Source: CenntERpanel

These are the marginal effects computed from the Heckman model estimates.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Stated preferences: saving account

(randomizations in blue)

Q5: Suppose you receive an inheritance of [5000 / 10,000] but the condition is that you cannot spend the money now but only one year from now at the earliest. You can invest it in some **account or mutual fund** and receive the money plus net return one year from now. What would you choose if you had the following possibilities?

- a) Put the money in a saving account **at a traditional bank** and receive an interest rate of 1% (75.4%)
- b) Put the money in a saving account **at a bank that only invests in socially responsible companies** and receive an interest rate of [0.6% / 0.8%]. (15.3%)
- c) Put the money in a saving account **at a bank that only invests in socially responsible companies** and receive an interest rate of [0.5% / 0.75%]. In addition, if you open the account you get a **Deluxe edition of the book** Wildlife in Europe with a value of [40/60] if you would buy it in a store. (9.3%)

Stated preferences: savings account &

specified SR

Q 6: What would you choose you if you had the following possibilities?

- a) Put the money in a saving account at a traditional bank and receive an interest rate of 1% (68.3%)
- b) Put the money in a saving account at a bank that only invests in socially responsible companies and receive an interest rate of [0.6% / 0.8%]. The **bank guarantees that the remaining [0.4% / 0.2%]** will be used for [vaccinations of children in Africa / loans to help women in developing countries to set up their own business]. (23.1%)
- c) Put the money in a saving account at a bank that only invests in socially responsible companies and receive an interest rate of [0.5% / 0.75%]. In addition, when you open the account, the bank gives you a **voucher** worth [40/ 60] that you can spend on theater visits, cinema tickets, sports events, or concerts in the next twelve months. (8.6%)

Stated preferences: stock mutual funds

- Q 8: What would you choose you if you had the following possibilities?
- a) Put the money in a **mutual fund with a return linked to the AEX** (Amsterdam Stock Exchange) Index. (The AEX invests in the stocks of the 500 largest companies in the Netherlands) **(65.9%)**
 - b) Put the money in a mutual fund investing only in a careful selection of **socially responsible companies**. Compared to the AEX, this mutual fund has a **[1.0 percentage points / 0.5 percentage points]** lower return per year on average, and the same risk **(32.8%)**
 - c) Put the money in a mutual fund investing only in a carefully selected group of **socially responsible companies**. Compared to the AEX, this mutual fund has a **[1.2 / 0.6 percentage points]** lower return per year on average, and the same risk. In addition, you get a **Deluxe Edition of the book Wildlife in Europe** (with a value of 50 euros if you would buy it in a store). **(10.4%)**

Analyses for stated preferences

- **Probit for participation (b.&c. vs a.):**
 - SR vs. traditional saving account
 - SR with specified project vs. traditional saving account
 - SR stock fund vs. traditional stock fund
- **Multinomial to distinguish between pure SR investor from SR investor needing compensation (voucher)**
 - Traditional investment
 - Purely SR (with return reduction)
 - SR with in-kind voucher

Table 2: Participation in social investments - Probit

	(1) Actual (Q1)	(2) Stated Bank account (Q5)	(3) Stated Bank account with specified SR project(Q6)	(4) Stated Stocks (Q8)
Female	0.006 (0.012)	-0.004 (0.018)	-0.003 (0.020)	0.065*** (0.021)
Age	0.002*** (0.001)	0.002** (0.001)	0.000 (0.001)	0.002* (0.001)
Secondary education	0.032* (0.019)	0.056** (0.026)	0.039 (0.028)	0.008 (0.029)
Tertiary education	0.099*** (0.018)	0.201*** (0.024)	0.224*** (0.025)	0.136*** (0.028)
Working	0.005 (0.017)	0.011 (0.026)	0.030 (0.028)	-0.014 (0.030)
Married / Living together	0.006 (0.015)	-0.015 (0.023)	-0.050** (0.024)	-0.004 (0.026)
Children in the household	-0.007 (0.017)	-0.030 (0.024)	-0.051* (0.026)	-0.037 (0.028)
Urban	0.018 (0.013)	0.047** (0.019)	0.027 (0.021)	0.070*** (0.023)
Log(Individual Income)	0.009* (0.005)	-0.010** (0.005)	-0.004 (0.005)	-0.001 (0.006)
A-Random (Inheritance 10K)		0.011 (0.018)	0.023 (0.019)	0.020 (0.021)
B&C-Random (Return SR bank)		0.050** (0.021)		
D-Random (Book value)		-0.012 (0.018)		
E&H-Random (Return SR bank)			0.056** (0.022)	
G-Random (Vaccine/microloans)			-0.008 (0.020)	
I-Random (Voucher value)			0.001 (0.019)	
J-Random (Return SR fund)				0.026 (0.021)
Observations	2055	2225	2223	2198

Marginal effects; Standard errors in parentheses

SE clustered at the household level

Source: CenntERpanel

(d) for discrete change of dummy variable from 0 to 1

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Multinomial Probit - Wildlife Gift Stock (Q8)

	(1) Traditional	(2) SR	(3) SR & In-kind
Female	-0.065 ^{***} (0.021)	0.057 ^{***} (0.020)	0.009 (0.014)
Age	-0.002 [*] (0.001)	0.001 (0.001)	0.000 (0.001)
Secondary education	-0.011 (0.029)	0.034 (0.028)	-0.022 (0.017)
Tertiary education	-0.137 ^{***} (0.028)	0.159 ^{***} (0.026)	-0.021 (0.017)
Working	0.014 (0.030)	0.013 (0.028)	-0.027 (0.018)
Married / Living together	0.003 (0.026)	0.012 (0.024)	-0.015 (0.016)
Children in the household	0.036 (0.028)	-0.046 [*] (0.026)	0.010 (0.017)
Urban	-0.070 ^{***} (0.023)	0.076 ^{***} (0.021)	-0.006 (0.014)
Log(Individual Income)	0.001 (0.006)	0.003 (0.006)	-0.004 (0.004)
A-Random (Inheritance 10K)	-0.020 (0.021)	0.035 [*] (0.020)	-0.015 (0.013)
J-Random (Return SR fund)	-0.026 (0.021)	0.001 (0.020)	0.025 [*] (0.013)
Observations	2198	2198	2198

Standard errors in parentheses
SE clustered at the household level
Source: CenntERpanel

These are the marginal effects computed from the Multinomial Probit model estimates.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Stated preferences: saving account intensity

Q 7: Now suppose you can **split the amount in two**, put part of it in a savings account at a **traditional bank** with a 1% interest rate, **and** put the remaining part in a saving account at a **bank that only invests in socially responsible companies**, with an interest rate of [0.6% / 0.8%]. The bank **guarantees** that the remaining [0.4% / 0.2%] will be used for [vaccinations of children in Africa / loans to help women in developing countries to set up their own business].

How would you choose to allocate the total amount?

... % in the traditional savings account

... % in the socially responsible savings account

Percentage in the SR savings account (mean: 30.34%)

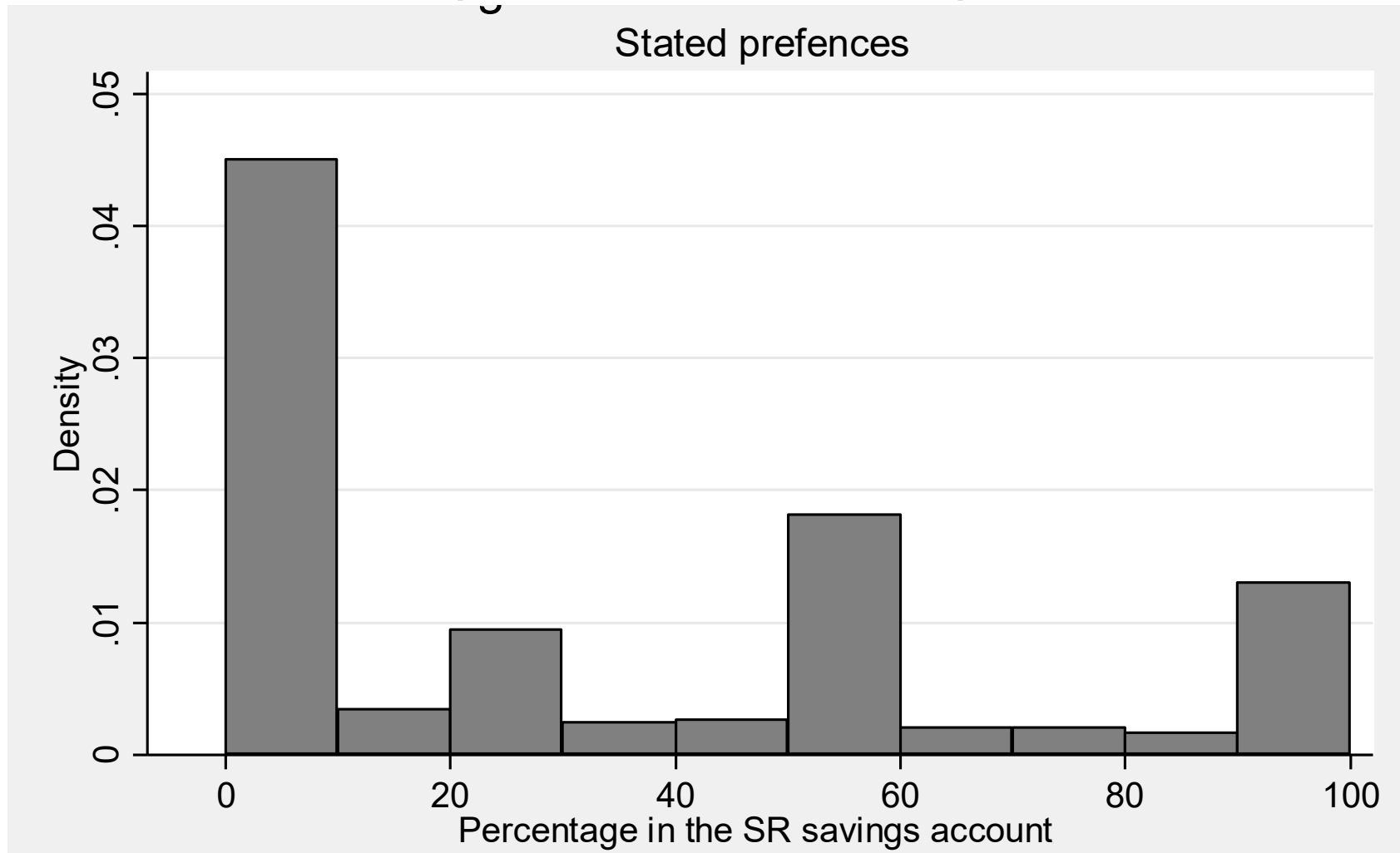


Table 4: Intensity of social investments (Q7) - Tobit

	(1) Tobit	(2) Margins
Female	8.676*** (3.211)	4.038*** (1.488)
Age	0.837 (0.642)	0.169** (0.068)
Age squared	-0.004 (0.006)	
Secondary education	4.152 (4.226)	1.933 (1.965)
Tertiary education	28.121*** (4.296)	13.090*** (1.949)
Working	4.140 (4.651)	1.927 (2.164)
Married / Living together	-8.163** (3.974)	-3.800** (1.844)
Children in the household	-3.999 (4.293)	-1.861 (1.995)
Urban	6.052* (3.504)	2.817* (1.629)
Log(Individual Income)	-0.468 (0.880)	-0.218 (0.410)
A-Random (Inheritance 10K)	5.046 (3.169)	2.349 (1.473)
E-Random (Return SR bank)	9.681*** (3.244)	4.506*** (1.502)
G-Random (Vaccine/microloans)	-1.557 (3.225)	-0.725 (1.501)
Observations	2209	2209

Marginal effects; Standard errors in parentheses

SE clustered at the household level

Source: CenntERpanel

(d) for discrete change of dummy variable from 0 to 1

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Robustness/Alternatives

- Controlling for having a SR investment (significant) ✓
- Alternative income def. (gros, hhld level): no change ✓
- Allocation decision:
 - robustness for the 50-50 ✓
 - Ordered probit for 3-peaks and rounding ✓
- Accounting for the two-stage nature of the decision process?
 - *Nested logit*

Conclusions

- Our results suggest that **potential demand** for these types investments may exceed current holdings
- Strong interest shown by **highly educated** individuals, **older** individuals, and **women** (pure SR & stocks)
- **Returns matter**, also for SR investments
- **Some suggestive evidence** of two types of SR investor: pure SR investor caring less for the return

Table 1. Ratio investing in traditional, SRI, SRI with inkind across actual behavior.

Actual behavior	Type of Mutual Fund (Q8)	SR interest rate (J-Rand)		Total
		Low	High	
Not own SRI	Traditional	0.60	0.58	0.59
	Pure SRI	0.31	0.31	0.31
	SRI & In-kind	0.09	0.11	0.10
Own SRI	Traditional	0.42	0.32	0.37
	Pure SRI	0.54	0.55	0.55
	SRI & In-kind	0.04	0.13	0.09
Total	Traditional	0.59	0.56	0.57
	Pure SRI	0.33	0.33	0.33
	SRI & In-kind	0.09	0.11	.10

Each cell presents the ratio of investors in traditional, SRI, SRI with voucher broken down by two dimensions: their actual behavior (yes/no for those who own/don't own SRI) and the type of return offered on SRI (high or low).