#### Final report for Milestone 2, 3 and 4

## Why does it keep going up? The psychology of why people fail at managing debt.

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#### Funded by Progetti Eccelenza Fondazione Cariparo

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#### Milestone 2

Study 3

## Methods and procedure

The goal of this Milestone was to investigate the effect of perceived scarcity in the choice of loan repayment modality under conditions of difficulty with installment payments.

Participants were randomly assigned to one of two conditions: financial scarcity or control. The financial scarcity manipulation was induced through a recall task adapted from Roux et al. (2015). Subsequently, participants read a scenario describing a situation in which, after having paid half of a loan for the purchase of a desired product, they had been unable to make payments over the past two months and were likely to struggle to pay the remaining installments. Participants were informed that they have to decide between refinance the loan with another credit product or renegotiate the loan terms with the lending institution. Clear definitions of both options were provided. Participants were then asked to respond to the following dependent variables: 1) Indicate their opinion on a slider ranging from "Refinancing is better than renegotiating" to "Renegotiating is better than refinancing."; 2) Choose which of the two options—refinance or renegotiate—they would prefer to adopt in managing the situation.

Based on their chosen option, participants were asked to indicate the motivation behind their decision to refinance or renegotiate. Mediators were measured using the POBM scale (Sharma et al., 2021) and ad-hoc scale for perceived debt risk. Moderators such as the TEIQue-SF (Petrides et al., 2016) and the Subjective Scarcity Scale (Roux et al., 2015) were also assessed. In addition financial literacy (Mitchell & Lusardi, 2015) and financial awareness were examined as potential covariates. A specific item was added to the financial literacy scale to assess participants' understanding of the information provided in the scenario.

Demographic information was collected as well, including: age, gender, income, financial capability, area of residence, family status, education level, difficulty in making ends meet at the end of the month, employment status, and political orientation. These demographic variables were also considered as covariates. Finally, participants were asked to rate the extent to which they perceived themselves to be in a situation of financial scarcity.

## Hypotheses

H1: We hypothesize that people in a scarcity (vs. control) condition should be more prone to open a new line of credit to repay previous debt (refinance), instead of renegotiating it.

H2: We hypothesize that POBM should mediate the effect of scarcity on opening a new line of credit to repay previous debt, so that greater POBM will lead to greater tendency to open a new line of credit to repay previous debt (vs renegotiating).

H3: We hypothesize that perceived risk associated with the lack of resources should mediate the effect of scarcity on opening a new line of credit to repay previous debt, so that:

3A) greater Concern about lack of resources (CLR) should lead to higher tendency to open a new line of credit to repay previous debt (vs renegotiating).

3B) greater Concern about debt (CD) should lead to lower tendency to open a new line of credit to repay previous debt (vs renegotiating).

H4: We hypothesize that emotional regulation (trait EI) should moderate the relationship between scarcity and repayment strategies, and also POBM and perceived risk associated with lack of resources. Specifically:

4A) higher (vs. lower) emotional regulation should reduce (vs. increase) the tendency to open a new line of credit.

4B) higher (vs. lower) emotional regulation should reduce (vs. increase) POBM and perceived risk associated with lack of resources.

PreregistrationisavailableonOSFhttps://osf.io/aktwx/?view\_only=9696eab89ab0494b97bdf41323707f22The project was approved bythe ethical committee of the PI's University (Protocol 5380/2023).

#### Results

#### Descriptive statistics

Data collection was entrusted by a private company to ensure a representative sample of the Italian population and participants were paid for their participation. A total of 1927 participants open the survey, but only 938 meet the inclusion criteria as reported in the preregistration.

	Control (N=529)	Scarcity (N=409)	Overall (N=938)
Gender			
Male	243 (45.9%)	210 (51.3%)	453 (48.3%)
Female	286 (54.1%)	199 (48.7%)	485 (51.7%)
Age			
Mean (SD)	51.1 (16.0)	52.1 (15.9)	51.5 (16.0)
Median [Min, Max]	53.0 [18.0, 93.0]	54.0 [18.0, 85.0]	53.0 [18.0, 93.0]
Repay slider [from refinance to renegotiate]			
Mean (SD)	74.2 (26.9)	74.5 (26.2)	74.4 (26.6)
Median [Min, Max]	80.6 [0, 100]	81.2 [0, 100]	80.8 [0, 100]
Repay			
Refinance	97 (18.3%)	80 (19.6%)	177 (18.9%)
Renegotiate	432 (81.7%)	329 (80.4%)	761 (81.1%)
Income			
<15	120 (22.7%)	105 (25.7%)	225 (24.0%)
15-22k	98 (18.5%)	88 (21.5%)	186 (19.8%)
22-30k	91 (17.2%)	76 (18.6%)	167 (17.8%)
30-38k	75 (14.2%)	49 (12.0%)	124 (13.2%)
38-45k	43 (8.1%)	32 (7.8%)	75 (8.0%)

## Table 1

	Control (N=529)	Scarcity (N=409)	Overall (N=938)
>45k	54 (10.2%)	35 (8.6%)	89 (9.5%)
no ans	38 (7.2%)	21 (5.1%)	59 (6.3%)
don't know	10 (1.9%)	3 (0.7%)	13 (1.4%)
Making end meets			
Mean (SD)	3.51 (1.50)	3.26 (1.53)	3.40 (1.52)
Median [Min, Max]	4.00 [1.00, 6.00]	3.00 [1.00, 6.00]	3.00 [1.00, 6.00]
Education			
Middle school	219 (41.4%)	161 (39.4%)	380 (40.5%)
High school	194 (36.7%)	162 (39.6%)	356 (38.0%)
University or higher	116 (21.9%)	86 (21.0%)	202 (21.5%)
POBM			
Manipulation check			
Mean (SD)	4.15 (1.83)	4.56 (1.77)	4.33 (1.82)
Median [Min, Max]	4.00 [1.00, 7.00]	5.00 [1.00, 7.00]	4.00 [1.00, 7.00]
POBM			
Mean (SD)	4.40 (1.76)	4.20 (1.79)	4.31 (1.77)
Median [Min, Max]	4.50 [1.00, 9.00]	4.00 [1.00, 9.00]	4.50 [1.00, 9.00]
Concern about debt			
Mean (SD)	-0.0320 (1.03)	0.0414 (0.959)	-0.0000000000000134 (1.00)
Median [Min, Max]	0.132 [-3.55, 2.17]	0.169 [-3.78, 1.93]	0.138 [-3.78, 2.17]
Concern about lack of resources			
Mean (SD)	-0.103 (1.03)	0.133 (0.944)	0.000000000000000399 (1.00)
Median [Min, Max]	-0.0287 [-3.77, 2.11]	0.308 [-3.74, 2.72]	0.0832 [-3.77, 2.72]
Trait El			
Mean (SD)	4.15 (0.79)	4.47 (1.77)	4.33 (1.82)
Median [Min, Max]	4.43 [2.43, 6.83]	4.37 [2.13, 6.47]	4.40 [2.13, 6.83]

## Repayment

Participants' reported their preference on repayment options through two items: first using a slider ranging from "Refinancing is better than renegotiating" to "Renegotiating is better than refinancing" (0 to 100; Repay 1), and then indicating their preference choosing between refinancing and renegotiating (0-1; Repay 2). See Table 1 for details about the distribution.



#### *Figure 1. Distribution of the two dependent variables: Repay 1 on the left and Repay 2 on the right.*

We tested the distribution of repay 1 and 2 using the Shapiro-Wilk normality test and the results confirm that the distribution is not normal (W = .8, p < .001 for both the dependent variables). We thus investigated the impact of the scarcity manipulation on participants' repayment decision using Mann-Whitney U tests and results showed no significant effect of the manipulation for none of the dependent variables (p = .90 and p = .60).

Based on that, we decided to test a beta regression model for repay1 by transforming its values from a 0–100 scale to a 0–1 scale. For Repay 2, given its binary nature, we decided to use a logistic regression model. For both the models we considered age and gender as covariates, and as predictors the POBM, Concern for debt (CD), Concern for lack of resources (CLR), Trait EI, the condition and the Make ends meet, plus the interaction between the latter two. Please check Table 2 for full results. Interestingly, an interaction emerges between the experimental condition and participants' reported difficulty in making ends meet (with higher values indicating greater financial ease; red\_mese). The results show that, under scarcity, individuals with higher income levels are more likely to choose renegotiation over refinancing options. Although not statistically significant, the results illustrated in Figure 2 suggest an opposite trend among those experiencing greater financial hardship, suggesting a role of durable financial insecurity in repayment strategy.

	Repay 1			Repay 2		
Predictors	Estimates	CI	p	Odds Ratios	CI	p
(Intercept)	1.62	0.92 – 2.85	0.095	2.78	0.80 - 9.92	0.110

 Table 2. Results of the beta regression model for Repay 1 and of the logistic model for Repay 2.

Age [37-48]		1.25	0.98 – 1.59	0.068	1.11	0.67 – 1.84	0.677
Age [49-57]		1.10	0.86 - 1.41	0.437	1.01	0.61 - 1.67	0.979
Age [58-68]		1.16	0.91 – 1.46	0.226	1.63	0.96 – 2.80	0.074
Age [69-93]		1.34	1.04 - 1.72	0.025	2.73	1.44 - 5.41	0.003
Gender [Female]		0.90	0.77 – 1.05	0.188	0.87	0.61 - 1.24	0.443
Condition [scarcity]		0.68	0.46 - 1.01	0.057	0.44	0.19 – 0.98	0.049
Make ends meet [2]		0.70	0.47 – 1.04	0.078	0.76	0.32 – 1.76	0.516
Make ends meet [3]		0.99	0.69 – 1.42	0.961	0.91	0.41 – 1.99	0.824
Make ends meet [4]		0.88	0.61 – 1.25	0.468	0.62	0.28 - 1.32	0.224
Make ends meet [5]		0.83	0.55 – 1.24	0.360	2.16	0.76 – 6.77	0.163
Monthly end meets [6]		1.11	0.72 – 1.72	0.631	1.39	0.48 - 4.43	0.560
POBM [3.75-3.75]		0.93	0.73 – 1.18	0.542	1.36	0.76 – 2.45	0.300
POBM [4.75-4.75]		0.72	0.57 – 0.92	0.008	1.00	0.57 – 1.77	0.992
POBM [5.75-5.75]		0.65	0.51 – 0.83	0.001	0.59	0.34 - 1.00	0.053
POBM [6.75-9]		0.79	0.62 - 1.00	0.052	0.71	0.42 – 1.22	0.215
CLR		1.12	1.03 – 1.22	0.010	0.91	0.74 - 1.10	0.328
CD		1.11	1.03 – 1.20	0.009	1.14	0.95 – 1.36	0.160
Trait El		1.17	1.06 - 1.30	0.002	1.13	0.90 - 1.43	0.307
Condition [scarcity] Monthly end meets [2]	×	1.61	0.92 – 2.83	0.098	2.68	0.83 – 8.95	0.104
Condition [scarcity] Monthly end meets [3]	×	1.41	0.85 – 2.34	0.179	2.89	0.99 – 8.70	0.055
Condition [scarcity] Monthly end meets [4]	×	1.49	0.90 – 2.47	0.125	2.28	0.82 – 6.56	0.120
Condition [scarcity] Monthly end meets [5]	×	1.39	0.79 – 2.44	0.249	0.88	0.22 - 3.45	0.852

Condition Monthly end m	[scarcity] neets [6]	×	1.85	0.99 – 3.43	0.052	3.13	0.61 – 18.92	0.184
Observations			938			938		
R <sup>2</sup>			0.071			0.062		

## *Figure 2. Interaction between Condition and Make end meets (red\_mese).*

# Interaction Effect of Condition and Make ends meet on Repay (slider)



## Mediation effect of POBM

We used lavaan (Rosseel, 2012) to investigate the mediating role of POBM, both for Repay 1 and Repay 2. None of the models tested significant (total effect p = -.862 and p = .635, respectively), however, in both models, results showed a negative direct effect of POBM on Repay 2 (B = -.01, p = 0.027 and B = .02, p = 0.017). This results suggested that higher POBM reduce the preference for renegotiation over refinance.

# Mediation effect of Concern about lack of resources and Concern about debt

We used lavaan (Rosseel, 2012) to investigate the mediating role of Concern about lack of resources, both for Repay 1 and Repay 2. Results showed that none of the mediations were significant (total effect p = .862 and p = .501), however the condition significantly influence the Concern about lack of resources (B = .24, p <.001) in both the models, suggesting that scarcity influenced the concern about the missing resource.

We then considered the mediating role of Concern about debt, both for Repay 1 and Repay 2. None of the models tested significant (total effect p = .862 and p = .635, respectively).

# Moderation effect of Trait emotional intelligence

Finally, we tested whether Trait EI moderate the effect of the condition on Repay 1 and 2. We run a beta regression logistic model for Repay 1 which showed a quasi-significant effect for the moderation (B = 0.18, p = 0.061). For Repay 2, the logistic model, did not show a moderation effect, however higher Trait EI reduced the willingness to refinance, and thus to open a new line of credit.

	Repay 1			Repay 2		
Predictors	Estimates	s CI	р	Odds Ratio	s CI	р
(Intercept)	0.93	0.52 – 1.67	0.803	1.01	0.27 – 3.70	0.986
Condition [scarcity]	2.34	0.97 – 5.62	0.058	2.35	0.35 – 15.92	0.378
Trait El	1.25	1.10 - 1.42	<0.001	1.39	1.05 – 1.87	0.026
Condition [scarcity] × Trait EI	0.83	0.69 - 1.01	0.062	0.81	0.53 – 1.24	0.338
Observations	938			938		
R <sup>2</sup>	0.018			0.006		

## Table 3. Moderating effect of Trait EI

## Pretest Video manipulation

#### Methods and procedure

For the following studies, we decided to test a new manipulation compared to the one used in Study 1 (under review) and 2, aiming for an approach that would also be suitable for a laboratory setting. We therefore opted to use a video-based manipulation to induce a perception of scarcity (vs. control). We conducted a between-subjects design survey on Prolific to pretest four videos that we had created, two intended to evoke a sense of scarcity and two for the control condition. After watching the video, participants answered a series of questions aimed at assessing the effectiveness of the manipulation. Specifically, they were asked to rate, on a scale from 1 (not at all) to 9 (extremely), how much the video made them think about economic resource scarcity, financial insecurity, or struggling to make ends meet (thinking of scarcity), as well as how much they personally felt in such a condition (feeling scarcity). Participants also rated how unpleasant/pleasant (valence) and calm/agitated (arousal) they felt while watching the video (again on a 1–9 scale). To ensure data quality, we included five attention checks throughout the survey. Finally, we collected demographic information including gender, age, income, perceived monthly income, education level, and employment status.

#### Results

#### Descriptive

A total of 191 participants (50.3% identified as female, one participant indicated not identifying with any gender, and three preferred not to disclose their gender) fully completed the survey. The average age was 33.9 years (SD = 11.0), with ages ranging from 18 to 66. In terms of education, 44% had completed secondary education, while 53.9% reported having a university degree or higher. After cleaning the dataset based on the attentional check, we have 179 participants left for the analysis (see Table 4 for descriptive statistics).

	Control1 (N=43)	Control2 (N=44)	Scarcity1 (N=48)	Scarcity2 (N=44)	Overall (N=179)
Gender					
Male	26 (60.5%)	22 (50.0%)	21 (43.8%)	21 (47.7%)	90 (50.3%)
Female	16 (37.2%)	21 (47.7%)	26 (54.2%)	22 (50.0%)	85 (47.5%)
None	0 (0%)	0 (0%)	0 (0%)	1 (2.3%)	1 (0.6%)
l prefer not to answer	1 (2.3%)	1 (2.3%)	1 (2.1%)	0 (0%)	3 (1.7%)
Age					
Mean (SD)	32.8 (10.8)	32.2 (9.64)	33.7 (11.5)	37.0 (11.8)	33.9 (11.0)
Median [Min, Max]	29.0 [20.0, 61.0]	30.0 [20.0, 60.0]	31.0 [21.0, 66.0]	37.0 [18.0, 58.0]	30.0 [18.0, 66.0]
Education					
Middle school or lower	3 (7.0%)	0 (0%)	1 (2.1%)	0 (0%)	4 (2.2%)
High school	18 (41.9%)	19 (43.2%)	25 (52.1%)	17 (38.6%)	79 (44.1%)
University or higher	22 (51.2%)	25 (56.8%)	22 (45.8%)	27 (61.4%)	96 (53.6%)
Thinking of scarcity					
Mean (SD)	2.26 (1.54)	2.00 (1.43)	8.38 (0.733)	8.61 (0.754)	5.40 (3.39)
Median [Min, Max]	2.00 [1.00, 6.00]	1.00 [1.00, 6.00]	8.50 [6.00, 9.00]	9.00 [6.00, 9.00]	7.00 [1.00, 9.00]
Feeling scarcity					
Mean (SD)	2.63 (1.96)	2.39 (2.04)	6.77 (2.08)	6.84 (2.08)	4.72 (2.96)
Median [Min, Max]	2.00 [1.00, 7.00]	1.00 [1.00, 7.00]	7.00 [1.00, 9.00]	7.00 [2.00, 9.00]	5.00 [1.00, 9.00]
Valence					
Mean (SD)	7.33 (1.67)	7.84 (1.38)	2.08 (1.81)	2.27 (1.73)	4.80 (3.18)
Median [Min, Max]	7.00 [1.00, 9.00]	8.00 [3.00, 9.00]	1.00 [1.00, 9.00]	2.00 [1.00, 9.00]	5.00 [1.00, 9.00]

#### Table 4. Descriptive statistics.

	Contro (N=43)	11	Contro (N=44)	012	Scarcit (N=48)	y1	Scarcit (N=44)	:y2	Overal (N=179	1 Э)
Mean (SD)	2.58 (2	.07)	1.64 (1	40)	6.29 (1	.50)	6.14 (1	86)	4.22 (2	.70)
Median [Min, Max]	2.00 9.00]	[1.00,	1.00 7.00]	[1.00,	6.00 9.00]	[3.00,	6.00 9.00]	[2.00,	4.00 9.00]	[1.00,

#### ANOVA and Post hoc analysis

An ANOVA conducted to test differences across the four conditions on the item "thinking of scarcity" yielded a significant effect. To explore these differences further, we ran a Tukey post hoc test, which revealed significant differences for all scarcity–control comparisons. However, no significant differences emerged between the two scarcity videos or between the two control videos (see Table 5 for full results).

A similar pattern was found for the item assessing how much participants personally felt in a condition of resource scarcity. Specifically, we found significant result when comparing control (1 or 2) vs. scarcity (1 or 2) videos, while no significant differences were found between scarcity 1 and 2 or between control 1 and 2 (see Table 5).

Comparable results emerged for perceived valence and arousal, with one exception: for arousal, we observed a significant difference also between the two control videos (see Table 2).

	p value					
	Thinking of scarcity	Feeling scarcity	Valence	Arousal		
Control2 - Control1	0.74	0.95	0.47	0.05		
Scarcity1 - Control1	0.00	0.00	0.00	0.00		
Scarcity2 - Control1	0.00	0.00	0.00	0.00		
Scarcity1 - Control2	0.00	0.00	0.00	0.00		
Scarcity2 - Control2	0.00	0.00	0.00	0.00		
Scarcity2 - Scarcity1	0.76	1.00	0.95	0.97		

## Table 5. Post hoc Tukey test.

Regarding the scarcity's video, we selected the one with the highest scores for Thinking of scarcity and Feeling of scarcity. For the other two measures, we looked for videos with lower valence (indicating a more unpleasant emotional state) and higher arousal (indicating a greater level of agitation). Based on these criteria, we chose Scarcity video 2 for the next studies. Considering the video for the control condition, we selected the one with the lowest scores for Thinking of scarcity and Feeling of scarcity, while for the other two measures, we looked for videos with higher valence (indicating a more pleasant emotional state) and lower arousal (indicating a greater level of calm). Based on that we selected Control video 2.

Selected	videos	are	available	on	OSF
https://osf.io/7	/u8we/?view_only=c7	4ef101bb3047db	<u>b999a241320fa4682</u> (It	talian language o	nline).

#### Study 4

#### Methods and procedure

The study was conducted online via Prolific considering a population of Italian respondents balanced for gender (N = 420, 48.1% female). Participants get paid for their participations. After agreeing to informed consent, participants were asked to choose a product of interest priced between €100 and €5000 (as suggested by a previous pretest and as done for Study 1). After indicating their chosen product, participants were randomly assigned to watch videos manipulating economic conditions (scarcity vs. control; see <u>Pretest Video manipulation</u> for more details). Immediately after, their willingness to borrow (WTB) for the chosen product was measured (slider from 0 = Not at all likely to 100 = Extremely likely). Next, the psychological ownership to borrow money (POBM; Sharma et al., 2021) was assessed. Participants who indicated a WTB greater than or equal to 1 were asked to choose their preferred loan repayment method in case of difficulty paying installments (refinancing vs. renegotiating). This question was then repeated with detailed information about the implications of refinancing vs. renegotiating.

Subsequently, participants completed the scarcity perception scale (Roux et al., 2015), an *ad-hoc* risk scale composed of 13 items and two factors (*Concern for debt* and *Concern about lack of resources*), and the Trait Emotional Intelligence Scale (Petrides et al., 2016). Given that the least financially literate individuals incur high fees and have trouble judging their debt positions (Lusardi & Tufano, 2015), respondents also completed the 3-item financial literacy scale (Mitchell & Lusardi, 2015). Two questions were included to check financial knowledge related to the scenario (financial check).

Finally, participants reported demographic information including age, gender, educational level, employment, and income. Participants were also asked to complete a financial capability question, which assessed how difficult it would be for them to obtain €5,000 in an emergency situation. Following this, participants indicated the extent to which they felt in a state of economic scarcity while completing the questionnaire (manipulation check). To ensure data quality, an attention check was also incorporated into the study.

## Hypotheses

Hypothesis 1A: Participants assigned to the economic scarcity condition (vs. control) should be more willing to open a new line of credit.

Hypothesis 1B: Participants assigned to the economic scarcity condition (vs. control) should be more willing to refinance (vs. renegotiate) their debt.

Hypothesis 2: Under conditions of perceived scarcity (vs. control), the perception of ownership of borrowed money should mediate the effect of economic condition on the propensity to take on new debt.

Hypothesis 3A: Under conditions of perceived scarcity (vs. control), the perception of concern about lack of resources should mediate the effect of economic condition on the propensity to take on new debt.

Hypothesis 3B: Under conditions of perceived scarcity (vs. control), the perception of concern for debt should mediate the effect of economic condition on the propensity to take on new debt.

Hypothesis 4: High (vs. Low) Trait EI should moderate the effect of scarcity on lending behaviour. Specifically, borrowers with high (vs. Low) trait EI should be less inclined to take on new debt.

#### Results

#### Demographic

480 participants took part in the survey. Of these, 23 participants were excluded for not accurately completing the attention check. Additionally, since the manipulations were in Italian, we removed participants who did not have Italian as their first language (N = 37). Of the 420 subjects included in the analyses, 48.1% were female with an average age of 32.3 years (SD = 10.3). 207 participants were randomly assigned to the control condition and 213 to the scarcity condition. Most participants reported having a university education or higher (63.8%). See Table 6 for full details.

	Control (N=207)	Scarcity (N=213)	Overall (N=420)
Gender			-
Male	101 (48.8%)	107 (50.2%)	208 (49.5%)
Female	101 (48.8%)	101 (47.4%)	202 (48.1%)
None	5 (2.4%)	5 (2.3%)	10 (2.4%)
Age			
Mean (SD)	33.6 (11.6)	31.0 (8.77)	32.3 (10.3)
Median [Min, Max]	29.0 [18.0, 65.0]	28.0 [19.0, 65.0]	29.0 [18.0, 65.0]
Education			
middle school or lower	5 (2.4%)	4 (1.9%)	9 (2.1%)
high school	68 (32.9%)	74 (34.7%)	142 (33.8%)
university or higher	134 (64.7%)	135 (63.4%)	269 (64.0%)
WTB			
Mean (SD)	27.7 (31.0)	29.4 (31.5)	28.6 (31.2)
Median [Min, Max]	10.0 [0, 100]	20.0 [0, 100]	10.0 [0, 100]
Repay 1			
Rinegotiate	133 (64.3%)	141 (66.2%)	274 (65.2%)
Refinance	14 (6.8%)	21 (9.9%)	35 (8.3%)
Missing	60 (29.0%)	51 (23.9%)	111 (26.4%)
Repay 2			
Rinegotiate	128 (61.8%)	137 (64.3%)	265 (63.1%)
Refinance	19 (9.2%)	25 (11.7%)	44 (10.5%)
Missing	60 (29.0%)	51 (23.9%)	111 (26.4%)
POBM			
Mean (SD)	3.30 (1.67)	3.25 (1.72)	3.27 (1.70)
Median [Min, Max]	3.00 [1.00, 8.25]	3.00 [1.00, 7.75]	3.00 [1.00, 8.25]
Concern about debt			

#### Table 6. Descriptive statistics for Study 4.

	Control (N=207)	Scarcity (N=213)	Overall (N=420)
Mean (SD)	0.0114 (1.00)	-0.0110 (1.00)	-0.00000000000000149 (1.00)
Median [Min, Max]	0.220 [-3.58, 1.78]	0.147 [-5.58, 1.69]	0.184 [-5.58, 1.78]
Concern about lack of resources			
Mean (SD)	-0.129 (1.07)	0.125 (0.916)	0.00000000000000180 (1.00)
Median [Min, Max]	-0.0160 [-4.77, 1.64]	0.287 [-2.83, 2.19]	0.156 [-4.77, 2.19]
Trait El			
Mean (SD)	4.50 (0.890)	4.42 (0.807)	4.46 (0.849)
Median [Min, Max]	4.53 [2.07, 6.80]	4.40 [2.30, 6.17]	4.47 [2.07, 6.80]
Perceived monthly income			
Mean (SD)	4.21 (1.31)	4.23 (1.28)	4.22 (1.29)
Median [Min, Max]	4.00 [1.00, 6.00]	4.00 [1.00, 6.00]	4.00 [1.00, 6.00]
Income			
<15	48 (23.2%)	37 (17.4%)	85 (20.2%)
15-22k	29 (14.0%)	41 (19.2%)	70 (16.7%)
22-30k	43 (20.8%)	46 (21.6%)	89 (21.2%)
30-38k	24 (11.6%)	20 (9.4%)	44 (10.5%)
38-45k	19 (9.2%)	24 (11.3%)	43 (10.2%)
>45k	23 (11.1%)	25 (11.7%)	48 (11.4%)
No answer	12 (5.8%)	9 (4.2%)	21 (5.0%)
I don't know	9 (4.3%)	11 (5.2%)	20 (4.8%)
Manipulation check			
Mean (SD)	4.24 (1.78)	4.40 (1.65)	4.32 (1.72)
Median [Min, Max]	5.00 [1.00, 7.00]	5.00 [1.00, 7.00]	5.00 [1.00, 7.00]
Financial capability			
Mean (SD)	5.40 (2.96)	5.55 (2.96)	5.47 (2.96)
Median [Min, Max]	5.00 [1.00, 10.0]	5.00 [1.00, 10.0]	5.00 [1.00, 10.0]

## Willingness to borrow

We tested the distribution of the willingness to borrow (WTB) using the Shapiro-Wilk normality test and the results confirm that the distribution is not normal (W = .8, p < .001). See also Figure 3. We investigated the impact of the scarcity manipulation on participants' WTB money using Mann-Whitney U tests and results showed no significant effect of the manipulation (p = .40).

Figure 3. WTB distribution for Study 4.



Subsequently, we explore two more complete models to test the of the scarcity manipulation on WTB using a Zero-Inflated Poisson (ZIP; see Table 4). The first model considered as predictors condition, age, gender and education; whereas in the second model we added financial capability as predictor, since we considered it as proxy of real financial deprivation. Result from the count model 1 showed no effect of the condition (p = 35), however we found that people with higher education and older (age 35-66) were more willing to borrow (p < .001 and p = .026, respectively). Count model 2 showed an effect of financial capability showing that people with more financial insecurity were more willing to borrow money to buy the desired product (p < .001).

	WTB			WTB		
Predictors	Incidence Rate Ratios	CI	р	Incidence Rate Ratios	CI	р
(Intercept)	30.83	26.67 – 35.65	<0.001	26.38	22.51 – 30.91	<0.001
Condition [scarcity]	1.02	0.98 - 1.06	0.352	1.02	0.98 - 1.06	0.294
Gender [Female]	0.99	0.95 – 1.03	0.520	0.98	0.94 - 1.01	0.201
Age cat [27-33]	1.04	0.99 – 1.09	0.089	1.05	1.00 - 1.10	0.042
Age cat [34-65]	1.05	1.01 - 1.10	0.026	1.07	1.02 – 1.12	0.003
Education [high school]	1.09	0.94 – 1.26	0.262	1.14	0.98 – 1.32	0.089
Education [university or higher]	1.28	1.11 - 1.48	0.001	1.37	1.18 – 1.59	<0.001

#### Table 7. Estimates of the ZIP model for the effect of scarcity and financial capability on WTB.

Financial capability				1.02	1.01 - 1.03	<0.001
Zero-Inflated Model						
(Intercept)	0.57	0.13 – 2.41	0.444	0.62	0.13 – 2.95	0.550
Condition [scarcity]	0.82	0.53 – 1.28	0.391	0.82	0.53 – 1.28	0.394
Gender [Female]	1.12	0.72 – 1.75	0.605	1.14	0.73 – 1.79	0.573
Age cat [27-33]	0.79	0.46 – 1.36	0.393	0.79	0.45 – 1.36	0.386
Age cat [34-65]	0.98	0.58 – 1.65	0.931	0.96	0.57 – 1.64	0.892
Education [high school]	0.68	0.16 – 2.87	0.597	0.67	0.16 – 2.85	0.587
Education [university or higher]	0.75	0.18 - 3.09	0.686	0.72	0.17 - 3.02	0.652
Financial capability				0.99	0.91 - 1.07	0.711
Observations	410			410		
R <sup>2</sup> / R <sup>2</sup> adjusted	0.708 / 0.703			0.774 / 0.769		

#### Mediation effect of POBM

To study the effect of POBM on WTB we perform a Zero-Inflated Poisson model. Although we planned to test the mediation effect of POBM on WTB, since the ZIP model did not show any relevant results, we did not test the mediation. Specifically, while the POBM predict the WTB (p = <.001) the condition did not predict the POBM (p = 0.79). See Table 8 for full results.

#### *Table 8. Estimates of the ZIP model to study the mediating role of POBM.*

	WTB			РОВМ	
Predictors	Incidence Rate Ratios	CI	p	Estimates Cl	p
(Intercept)	19.12	16.21 – 22.54	<0.001		
Condition [scarcity]	1.04	1.00 - 1.07	0.065		
POBM	1.08	1.07 – 1.10	<0.001		
Financial capability	1.01	1.01 - 1.02	0.001		
Gender [Female]	1.02	0.98 - 1.06	0.293		
Age [27-33]	1.08	1.03 - 1.13	0.001		
Age [34-65]	1.09	1.04 - 1.14	<0.001		
Education [high school]	1.16	1.00 – 1.35	0.044		

Education [university or higher]	1.38	1.19 - 1.60	<0.001			
Education [other]	1.58	1.25 – 2.00	<0.001			
(Intercept)				3.31	3.08 – 3.55	<0.001
Condition [scarcity]				-0.05	-0.38 – 0.29	0.789
Zero-Inflated Model						
(Intercept)	1.39	0.27 – 7.20	0.694			
Condition [scarcity]	0.80	0.51 – 1.26	0.339			
POBM	0.76	0.66 - 0.88	<0.001			
Financial capability	1.00	0.92 – 1.09	0.956			
Gender [Female]	1.01	0.64 - 1.61	0.955			
Age [27-33]	0.75	0.43 – 1.32	0.320			
Age [34-65]	0.95	0.55 – 1.63	0.845			
Education [high school]	0.68	0.15 – 3.02	0.615			
Education [university or higher]	0.77	0.18 - 3.38	0.734			
Education [other]	0.00	0.00 – Inf	0.990			
Observations	410			410		
R <sup>2</sup> / R <sup>2</sup> adjusted	0.953 / 0.952			0.000 / -	0.002	

#### Mediation effect of Concern about lack of resources and Concern about debt

Similarly, we explored the mediating role of Concern about lack of resources and Concern about debt. Based on the results of the ZIP model (see Table 9), we only tested the mediation for Concern about lack of resources. No significant results emerged for the mediation (total effect p = .68; see Table 10).

# Table 9. Estimates of the ZIP model to study the mediating role of Concern about debt and Concern about lack of resources.

	WTB			Concern	about debt		Con reso	cern about ources	lack	of
Predictors	IRR	CI	р	Estimates	CI	р	В	CI	р	
(Intercept)	37.51	36.51 – 38.53	<0.001							
Condition [scarcity]	1.02	0.98 - 1.05	0.417							

Concern about debt	0.97	0.95 – 0.99	<0.001						
Concern about lack of resources	0.89	0.88 - 0.91	<0.001						
(Intercept)				0.00	-0.14 - 0.14	0.956	- 0.14	-0.28 – - 0.00	0.044
Condition [scarcity]				-0.02	-0.21 - 0.18	0.856	0.27	0.07 – 0.46	0.007
Zero-Inflated Mo	del								
(Intercept)	0.40	0.29 – 0.54	<0.001						
Condition [scarcity]	0.80	0.51 – 1.25	0.328						
Concern about debt	0.94	0.76 - 1.18	0.611						
Concern about lack of resources	1.46	1.13 - 1.89	0.004						
Observations	410			410			410		
R <sup>2</sup> / R <sup>2</sup> adjusted	0.929 /	0.928		0.000 / -0.	.002		0.017	/ 0.015	

# *Table 10.* Mediation analysis for Concern about lack of resources.

Nonparametric Bootstrap Confidence Intervals with the Percentile Method

	Estimate	95% CI Lower	95% CI Upper	p-value
ACME (control)	-0.1242	-0.8279	0.67	0.70
ACME (treated)	-0.1514	-0.8408	0.68	0.62
ADE (control)	2.0547	-3.1119	7.27	0.62
ADE (treated)	2.0276	-3.0213	7.40	0.62
Total Effect	1.9034	-3.8312	7.50	0.68
<pre>Prop. Mediated (control)</pre>	-0.0652	-1.1386	1.02	0.86
<pre>Prop. Mediated (treated)</pre>	-0.0795	-1.2302	1.01	0.82
ACME (average)	-0.1378	-0.8321	0.67	0.64
ADE (average)	2.0412	-3.0650	7.34	0.62
<pre>Prop. Mediated (average)</pre>	-0.0724	-1.1448	1.01	0.84

Sample Size Used: 410

Simulations: 100

#### Moderation effect of Trait emotional intelligence

Finally, with a ZIP model, we tested the moderating effect of Trait emotional intelligence. Results showed that Trait EI moderated the effect of the condition on the WTB (IRR = 1.08, p <.001; see Table 11 left side), suggesting that higher emotional intelligence lead people in scarcity to borrow more. This results is not in line with our hypothesis, however, it could explain how people who are in temporary financial straits try to solve the impending straits problem by resorting to external financing to buy what they want. To better understand the role of financial constraints, we run a second ZIP model considering the interaction between financial capability, as a proxy of more durable financial insecurity, and Trait EI. Results showed a moderating effect also for Trait EI showing that higher Trait EI was associated with a decreased willingness to borrow for people with lower financial capability (IRR = 0.96, p <.001; see Table 11 right side).

	WTB (Model	1)		WTB (Mode	2)	
Predictors	Incidence Ratios	Rate <sub>CI</sub>	p	Incidence Ratios	Rate CI	p
(Intercept)	23.46	19.20 – 28.67	<0.001	4.70	3.49 - 6.33	<0.001
Condition [scarcity]	0.72	0.59 – 0.89	0.002	0.70	0.57 – 0.86	0.001
Trait El	1.08	1.04 - 1.11	<0.001	1.42	1.35 – 1.50	<0.001
Gender [Female]	0.97	0.94 - 1.01	0.152	0.94	0.91 - 0.98	0.002
Age [27-33]	1.03	0.98 - 1.08	0.220	1.03	0.99 – 1.08	0.145
Age [34-65]	1.01	0.96 – 1.06	0.712	1.01	0.96 – 1.05	0.823
Education [high school]	1.04	0.90 - 1.21	0.566	1.20	1.04 - 1.40	0.014
Education [university or higher]	1.21	1.04 - 1.40	0.012	1.46	1.26 – 1.69	<0.001
Condition [scarcity] × Trait El	1.08	1.04 - 1.13	<0.001	1.09	1.05 - 1.14	<0.001
Financial capability				1.28	1.24 – 1.33	<0.001
Trait EI × Financial capability				0.95	0.95 – 0.96	<0.001
Zero-Inflated Model						
(Intercept)	2.41	0.30 – 19.46	0.408	2.44	0.12 – 50.28	0.563
Condition [scarcity]	0.22	0.02 – 2.30	0.205	0.21	0.02 – 2.25	0.198
Trait El	0.71	0.50 - 1.01	0.058	0.74	0.42 - 1.30	0.294

Table 11. ZIP model to test the moderating effect between Trait EI and condition (Model 1, left side) and Trait EI and financial capability (Model 1, right side).

Gender [Female]	1.14	0.73 – 1.77	0.576	1.17	0.74 - 1.84	0.496
Age [27-33]	0.76	0.44 - 1.32	0.335	0.75	0.43 - 1.31	0.316
Age [34-65]	1.01	0.60 - 1.73	0.956	0.98	0.57 – 1.68	0.950
Education [high school]	0.70	0.16 - 2.99	0.631	0.69	0.16 - 2.98	0.624
Education [university or higher]	0.83	0.20 - 3.48	0.799	0.79	0.19 - 3.37	0.752
Condition [scarcity] × Trait El	1.34	0.79 – 2.27	0.270	1.35	0.80 - 2.28	0.260
Financial capability				1.03	0.70 - 1.51	0.893
Trait EI × Financial capability				0.99	0.90 - 1.08	0.765
Observations	410			410		
R <sup>2</sup> / R <sup>2</sup> adjusted	0.884 / 0.881			0.931 / 0.929		

#### Repayment strategy

To analyze the repayment strategy, we considered only participants who report a WTB higher or equal to 1 (in a scale from 0 to 100), leaving a sample of 300 participants, 143 participants assigned to the control condition and 157 to the scarcity condition (see Figure 4 for details on the distribution). Through two logistic models we tested the effect of the condition on repayment decision (1 and 2), controlling for covariates such as gender, age and education. No significant results emerged for none of the dependent variable (p = .392 and p = .561).



Figure 4

#### Mediation effect of POBM

We used lavaan (Rosseel, 2012) to investigate the mediating role of POBM, both for Repay 1 and Repay 2. None of the models tested significant (total effect p = -.673 and p = .501, respectively), however in the second model, results showed a negative direct effect of POBM on Repay 2 (B = -.03, p = 0.008), in line with the results of Study 3.

#### Mediation effect of POBM Concern about lack of resources and Concern about debt

We used lavaan (Rosseel, 2012) to investigate the mediating role of Concern about debt, both for Repay 1 and Repay 2. None of the models tested significant (total effect p = .421 and p = .501, respectively). Considering two mediating models testing the role of Concern about lack of resources on Repay 1 and Repay 2, results showed that none of the mediations was significant (total effect p = .421 and p = .501), however the condition significantly influence the Concern about lack of resources (B = .25, p = .030) in both the models, as showed in Study 3.

#### Moderation effect of Trait emotional intelligence

Finally, we tested two logistic models to study whether Trait EI moderate the effect of the condition on Repay 1 and 2. No moderating effect emerges (p = 0.47 and p = .39, respectively).

#### Milestone 3

The goal of Milestone 3 was to assess how people classify debt, as theirs vs. another institution's money. We analyzed the answer from previous studies (specifically Study 1, 3 and 4) considering the answer on 3 items of the POBM scale. The items were:

- Item 2: I would feel this money is mine (1 = Strongly disagree, 7 = Strongly agree)
- Item 3: Spending this money would feel like spending someone else's money (1 = Strongly disagree, 7 = Strongly agree)
- Item 4: To what extent would this money feel like money to be repaid rather than money to spend as your own? (1 = Feels more like money to be repaid, 7 = Feels more like my own money to spend)

Descriptive results from Study 1, (Table 13 and 14), Study 3 (Table 12) and Pilot study (Table 15 and 16) indicated that participants tended to perceive the borrowed money more as belonging to another financial institution rather than as their own.

	Control (N=529)	Scarcity (N=409)
POBM 2		
Mean (SD)	4.35 (2.24)	4.43 (2.39)
Median [Min, Max]	4.00 [1.00, 9.00]	4.00 [1.00, 9.00]
POBM 3		
Mean (SD)	5.83 (2.22)	5.87 (2.30)
Median [Min, Max]	6.00 [1.00, 9.00]	6.00 [1.00, 9.00]
POBM 4		
Mean (SD)	3.98 (2.29)	3.61 (2.23)
Median [Min, Max]	4.00 [1.00, 9.00]	3.00 [1.00, 9.00]

	WTB									
	0-9 (N=490)	10-19 (N=200)	20-29 (N=72)	30-39 (N=56)	40-49 (N=46)	50-59 (N=71)	60-69 (N=52)	70-79 (N=50)	80-89 (N=39)	90-99 (N=18)
POBM 2										
Mean (SD)	2.94 (2.51)	3.55 (2.51)	4.53 (2.70)	4.23 (2.35)	4.83 (2.62)	5.18 (2.33)	5.27 (2.33)	5.62 (2.38)	5.97 (2.40)	5.89 (2.89)
Median [Min, Max]	2.00 [1.00, 9.00]	3.00 [1.00, 9.00]	4.00 [1.00, 9.00]	4.00 [1.00, 9.00]	5.00 [1.00, 9.00]	5.00 [1.00, 9.00]	6.00 [1.00, 9.00]	6.00 [1.00, 9.00]	7.00 [1.00, 9.00]	6.50 [1.00, 9.00]
POBM 3										
Mean (SD)	6.50 (2.78)	5.97 (2.72)	5.40 (2.64)	5.89 (2.45)	5.76 (2.63)	5.10 (2.51)	5.19 (2.32)	5.58 (2.41)	5.44 (2.57)	5.22 (2.60)
Median [Min, Max]	7.00 [1.00, 9.00]	7.00 [1.00 <i>,</i> 9.00]	6.00 [1.00, 9.00]	6.00 [1.00, 9.00]	5.00 [1.00, 9.00]	5.00 [1.00, 9.00]	6.00 [1.00, 9.00]	6.00 [1.00, 9.00]	6.00 [1.00, 9.00]	6.00 [1.00, 9.00]
POBM 4										
Mean (SD)	2.56 (2.26)	3.05 (2.32)	3.56 (2.37)	3.23 (2.08)	4.07 (2.39)	4.21 (2.29)	4.81 (2.32)	5.18 (2.26)	5.13 (2.54)	5.39 (2.62)
Median [Min, Max]	1.00 [1.00, 9.00]	2.00 [1.00, 9.00]	3.00 [1.00, 9.00]	3.00 [1.00, 9.00]	4.00 [1.00, 9.00]	5.00 [1.00, 9.00]	5.00 [1.00, 9.00]	5.00 [1.00, 9.00]	6.00 [1.00, 9.00]	5.50 [1.00, 9.00]

 Table 13. Descriptive statistics of selected items from the POBM scale for Study 1 - Control condition.

	WTB									
	0-9 (N=318)	10-19 (N=139)	20-29 (N=73)	30-39 (N=41)	40-49 (N=46)	50-59 (N=65)	60-69 (N=35)	70-79 (N=38)	80-89 (N=22)	90-99 (N=21)
POBM 2										
Mean (SD)	2.58 (2.36)	2.94 (2.32)	3.59 (2.48)	4.51 (2.71)	4.80 (2.93)	4.60 (2.38)	5.17 (2.20)	5.37 (2.45)	5.45 (2.39)	7.05 (1.63)
Median [Min, Max]	1.00 [1.00, 9.00]	2.00 [1.00, 9.00]	3.00 [1.00, 9.00]	4.00 [1.00, 9.00]	4.50 [1.00 <i>,</i> 9.00]	4.00 [1.00, 9.00]	6.00 [1.00, 9.00]	5.00 [1.00, 9.00]	5.50 [1.00, 9.00]	7.00 [3.00, 9.00]
POBM 3										
Mean (SD)	7.00 (2.65)	6.94 (2.19)	6.04 (2.48)	6.12 (2.58)	6.43 (2.44)	5.57 (2.26)	5.66 (2.09)	5.47 (2.53)	5.05 (2.55)	3.76 (2.76)
Median [Min, Max]	8.00 [1.00, 9.00]	7.00 [1.00, 9.00]	7.00 [1.00, 9.00]	7.00 [1.00 <i>,</i> 9.00]	7.00 [1.00, 9.00]	6.00 [1.00, 9.00]	6.00 [1.00, 9.00]	6.00 [1.00, 9.00]	5.50 [1.00, 9.00]	3.00 [1.00, 9.00]
POBM 4										
Mean (SD)	2.11 (1.88)	2.40 (1.74)	3.05 (2.18)	3.51 (2.39)	3.11 (2.61)	3.57 (2.12)	4.14 (2.30)	3.63 (2.21)	4.36 (2.38)	5.33 (2.76)
Median [Min, Max]	1.00 [1.00, 9.00]	2.00 [1.00, 8.00]	2.00 [1.00, 9.00]	3.00 [1.00, 9.00]	2.00 [1.00, 9.00]	3.00 [1.00, 9.00]	4.00 [1.00, 9.00]	3.00 [1.00, 9.00]	4.50 [1.00 <i>,</i> 8.00]	6.00 [1.00, 9.00]

 Table 14. Descriptive statistics of selected items from the POBM scale for Study 1 - Scarcity condition

	WTB										
	0	10	20	30	40	50	60	70	80	90	100
	(N=60)	(N=51)	(N=16)	(N=15)	(N=9)	(N=14)	(N=7)	(N=7)	(N=12)	(N=7)	(N=9)
POBM 2											
Mean (SD)	2.80	2.67	3.56	3.80	3.78	4.29	4.29	4.29	3.83	2.43	4.22
	(2.38)	(1.70)	(2.22)	(1.52)	(1.09)	(2.81)	(1.98)	(2.50)	(1.47)	(1.51)	(2.49)
Median	2.00	2.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	3.00	4.00
[Min,	[1.00,	[1.00,	[1.00,	[1.00,	[2.00,	[1.00,	[1.00,	[1.00,	[2.00,	[1.00,	[1.00,
Max]	9.00]	8.00]	8.00]	7.00]	5.00]	9.00]	7.00]	9.00]	6.00]	5.00]	9.00]
POBM 3											
Mean (SD)	6.73	6.51	5.69	6.27	5.33	5.93	5.86	5.00	5.83	7.29	5.33
	(2.43)	(1.99)	(2.63)	(1.33)	(2.50)	(2.62)	(1.57)	(1.15)	(1.70)	(1.60)	(2.96)
Median	7.00	7.00	5.50	6.00	6.00	6.00	6.00	5.00	6.00	8.00	6.00
[Min,	[1.00,	[1.00,	[1.00,	[4.00,	[1.00,	[1.00,	[4.00,	[3.00,	[3.00,	[4.00,	[1.00 <i>,</i>
Max]	9.00]	9.00]	9.00]	9.00]	8.00]	9.00]	9.00]	6.00]	9.00]	9.00]	9.00]
POBM 4											
Mean (SD)	2.12	2.57	3.50	3.80	2.44	4.07	4.71	3.43	4.00	2.57	2.00
	(1.83)	(1.96)	(2.63)	(2.51)	(2.01)	(3.12)	(2.14)	(1.99)	(1.95)	(1.40)	(1.50)
Median	1.00	2.00	3.00	3.00	2.00	3.50	4.00	3.00	3.00	3.00	1.00
[Min,	[1.00,	[1.00,	[1.00,	[1.00,	[1.00,	[1.00 <i>,</i>	[1.00 <i>,</i>	[1.00,	[1.00,	[1.00,	[1.00,
Max]	9.00]	9.00]	8.00]	9.00]	7.00]	9.00]	7.00]	6.00]	7.00]	5.00]	5.00]

 Table 15. Descriptive statistics of selected items from the POBM scale for Study 4 - Control condition.

	WTB										
	0	10	20	30	40	50	60	70	80	90	100
	(N=51)	(N=54)	(N=26)	(N=12)	(N=11)	(N=13)	(N=10)	(N=6)	(N=10)	(N=6)	(N=14)
POBM 2											
Mean (SD)	2.73	2.83	3.54	3.00	2.82	3.15	3.50	4.17	4.20	5.17	2.93
	(2.26)	(1.86)	(2.72)	(1.65)	(1.47)	(1.77)	(1.84)	(2.14)	(2.82)	(1.94)	(2.37)
Median	2.00	2.00	2.00	3.00	3.00	3.00	4.00	4.00	3.50	4.50	2.00
[Min,	[1.00,	[1.00,	[1.00 <i>,</i>	[1.00,	[1.00,	[1.00,	[1.00 <i>,</i>	[1.00,	[1.00 <i>,</i>	[3.00 <i>,</i>	[1.00,
Max]	9.00]	8.00]	9.00]	6.00]	6.00]	7.00]	6.00]	7.00]	9.00]	8.00]	9.00]
POBM 3											
Mean (SD)	6.76	6.57	5.69	6.25	5.45	6.85	5.90	6.17	5.30	4.17	6.14
	(2.30)	(1.88)	(2.65)	(2.18)	(1.92)	(0.987)	(2.23)	(1.17)	(2.83)	(2.14)	(2.82)
Median	7.00	7.00	7.00	6.50	5.00	7.00	6.00	6.50	5.50	4.00	7.50
[Min,	[1.00,	[2.00,	[1.00,	[2.00,	[2.00,	[5.00,	[1.00 <i>,</i>	[4.00 <i>,</i>	[1.00 <i>,</i>	[1.00 <i>,</i>	[1.00,
Max]	9.00]	9.00]	9.00]	9.00]	9.00]	9.00]	9.00]	7.00]	9.00]	7.00]	9.00]
POBM 4											
Mean (SD)	2.65	2.59	3.04	2.83	3.64	3.46	3.10	3.17	3.00	4.67	2.93
	(2.48)	(2.05)	(2.47)	(2.44)	(1.91)	(2.18)	(2.33)	(2.04)	(2.67)	(3.01)	(2.87)
Median	1.00	2.00	2.00	2.00	3.00	3.00	2.50	3.00	1.50	4.50	1.50
[Min,	[1.00,	[1.00,	[1.00,	[1.00,	[1.00,	[1.00,	[1.00,	[1.00,	[1.00 <i>,</i>	[1.00 <i>,</i>	[1.00,
Max]	9.00]	9.00]	9.00]	8.00]	7.00]	7.00]	7.00]	7.00]	8.00]	9.00]	9.00]

 Table 16. Descriptive statistics of selected items from the POBM scale for Study 4 - Scarcity condition.

#### Milestone 4

#### Study 6A.

## Methods and procedure.

The study aimed to investigate the relationship between money scarcity, debt management, and mental accounting (i.e., the different values individuals assign to the same amount of money based on subjective criteria). Specifically, it examined the effects of financial scarcity and mental accounting on the propensity to take out a loan and on debt repayment behaviors (when incurred). The study was conducted in two phases:

Phase 1: we assessed general tendencies in mental accounting, financial literacy, and emotional regulation. Demographic information was also collected. Participants completed the following measures:

- Three scenarios designed to assess mental accounting (adapted from https://osf.io/apc26)
- Trait Emotional Intelligence Questionnaire Short Form (Petrides, 2009; 30 items), measuring emotional intelligence
- Financial literacy scale (Lusardi & Mitchell, 2014; 4 items)
- One item assessing risk aversion
- Demographic questions

Phase 2 (one week after Phase 1): participants were presented with the experimental manipulation: 2 financial availability (scarcity vs. control) X 2 Mental accounting (loan and interest presented separately vs. presented as a combined total). The financial scarcity manipulation was the same as in Study 4. Next, participants were presented with a scenario involving the purchase of a car using financing. The financial cost was described in accordance with the assigned mental accounting condition. Participants were then asked to indicate their WTB (on a 0–100 scale), their preference for debt repayment (refinancing vs. renegotiation), POBM (Sharma et al., 2021), the ad-hoc scale measuring perceived risk associated with loss of resources (Concern about debt and Concern about lack of resources), a scale assessing perceived subjective scarcity (Roux et al., 2015). The study was preregistered on OSF (<u>https://osf.io/7u8we/?view\_only=c74ef101bb3047db999a241320fa4682</u>) and was approved by the ethical committee of the PI's University (800-a/2024).

## Hypothesis.

H1A: Participants in scarcity condition (vs. control) should be more likely to open a new line of credit to proceed with the purchase of the presented product.

H1B: Participants in scarcity condition (vs. control) should be more likely to repay the loan by resorting to refinancing, rather than renegotiating.

H2A: Participants who are presented with the total loan amount and interest rate (vs. loan amount and interest rates as separately) should be more likely to open a new line of credit to proceed with the purchase of the presented product.

H2B: Participants who are presented with the total loan amount and interest rate (vs. loan amount and interest rates as separately) should be more likely to repay the loan by resorting to refinancing, rather than renegotiation.

H3: Presenting loan amount and interest rates as separately (vs. total loan amount and interest

rate) should counteract the effects of scarcity by reducing the propensity to take out new loans. Conversely, presenting the total loan amount and interest rate (vs. loan amount and interest rates as separately) should increase the propensity to borrow new loans.

H4: We hypothesize that POBM should mediate the effect of scarcity on opening a new line of credit and to repay previous debt, so that greater POBM will lead to greater tendency to open a new line of credit (vs renegotiating).

H5: We hypothesize that perceived risk associated with the lack of resources should mediate the effect of scarcity on opening a new line of credit, so that:

5A) greater worry about lack of resources should lead to higher tendency to open a new line of credit.

5B) greater worry about indebtedness should lead to lower tendency to open a new line of credit. H6: We hypothesize that emotional regulation (trait EI) should moderate the relationship between scarcity and repayment strategies, and also POBM and perceived risk associated with lack of resources. Specifically:

6A) Higher (vs. lower) emotional regulation should reduce (vs. increase) the tendency to open a new line of credit.

6B) Higher (vs. lower) emotional regulation should reduce (vs. increase) POBM and perceived risk associated with lack of resources.

## Results

## Descriptive statistics.

Data collection was conducted by a private company to ensure a representative sample. After applying the exclusion criteria, the final sample consisted of 918 participants. The number of participants was slightly unbalanced across the four experimental conditions (see Table 17).

	Сог	ntrol	Sca	rcity	Ov	erall
	Loan and interest separate (N=258)	Loan and interest combined (N=261)	Loan and interest separate (N=200)	Loan and interest combined (N=199)	Loan and interest separate (N=458)	Loan and interest combined (N=460)
Gender						
Male	113 (43.8%)	119 (45.6%)	96 (48.0%)	90 (45.2%)	209 (45.6%)	209 (45.4%)
Female	142 (55.0%)	142 (54.4%)	103 (51.5%)	109 (54.8%)	245 (53.5%)	251 (54.6%)
Non binario	3 (1.2%)	0 (0%)	1 (0.5%)	0 (0%)	4 (0.9%)	0 (0%)
Preferisco non rispondere	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Age						
Mean (SD)	48.3 (15.2)	48.7 (15.5)	46.3 (13.9)	48.3 (15.3)	47.4 (14.6)	48.5 (15.4)
Median [Min, Max]	50.0 [18.0, 75.0]	52.0 [18.0, 75.0]	47.0 [18.0, 75.0]	50.0 [18.0, 74.0]	48.0 [18.0, 75.0]	51.0 [18.0, 75.0]
Education						
middle school or lower	81 (31.4%)	89 (34.1%)	74 (37.0%)	70 (35.2%)	155 (33.8%)	159 (34.6%)
high school	105 (40.7%)	106 (40.6%)	85 (42.5%)	80 (40.2%)	190 (41.5%)	186 (40.4%)

# Table 17. Descriptive statistics for Study 6A.

university	or	72 (27.9%)	66 (25.3%)	41 (20.5%)	49 (24.6%)	113 (24.7%)	115 (25.0%)
higher							
Income							
<15		43 (16.7%)	50 (19.2%)	39 (19.5%)	38 (19.1%)	82 (17.9%)	88 (19.1%)
15-22k		43 (16.7%)	40 (15.3%)	33 (16.5%)	49 (24.6%)	76 (16.6%)	89 (19.3%)
22-30k		55 (21.3%)	54 (20.7%)	34 (17.0%)	40 (20.1%)	89 (19.4%)	94 (20.4%)
30-38k		38 (14.7%)	36 (13.8%)	27 (13.5%)	24 (12.1%)	65 (14.2%)	60 (13.0%)
38-45k		19 (7.4%)	23 (8.8%)	25 (12.5%)	14 (7.0%)	44 (9.6%)	37 (8.0%)
>45k		30 (11.6%)	28 (10.7%)	19 (9.5%)	17 (8.5%)	49 (10.7%)	45 (9.8%)
no ans		20 (7.8%)	13 (5.0%)	15 (7.5%)	12 (6.0%)	35 (7.6%)	25 (5.4%)
don't know		10 (3.9%)	17 (6.5%)	8 (4.0%)	5 (2.5%)	18 (3.9%)	22 (4.8%)
WTB							
Mean (SD)		34.5 (33.0)	37.1 (32.2)	37.3 (30.5)	42.4 (32.1)	35.7 (31.9)	39.4 (32.2)
Median	[Min,	24.0 [0, 100]	30.0 [0, 100]	30.0 [0, 100]	41.0 [0, 100]	29.0 [0, 100]	35.0 [0, 100]
Max]							
Repay 1							
Mean (SD)		1.83 (0.378)	1.81 (0.390)	1.83 (0.379)	1.87 (0.338)	1.83 (0.378)	1.84 (0.368)
Median	[Min,	2.00 [1.00,	2.00 [1.00,	2.00 [1.00,	2.00 [1.00,	2.00 [1.00,	2.00 [1.00,
Max]		2.00]	2.00]	2.00]	2.00]	2.00]	2.00]
Missing		31 (12.0%)	30 (11.5%)	15 (7.5%)	15 (7.5%)	46 (10.0%)	45 (9.8%)
Reapy 2			/	/	/	/	/
Mean (SD)	•- ·-	1.80 (0.403)	1.78 (0.413)	1.76 (0.427)	1.79 (0.406)	1.78 (0.414)	1.79 (0.409)
Median	[Min,	2.00 [1.00,	2.00 [1.00,	2.00 [1.00,	2.00 [1.00,	2.00 [1.00,	2.00 [1.00,
IVIdX]		2.00]	2.00]	2.00]	2.00]	2.00]	2.00]
Nissing		31 (12.0%)	30 (11.5%)	15 (7.5%)	15 (7.5%)	46 (10.0%)	45 (9.8%)
		2 56 (1 77)	2 42 (1 72)	2 50 (1 71)	2 21 (1 52)	2 54 (1 74)	2 20 /1 65)
Median	[] 4:00	3.50 (1.77)	3.43 (1.73)	3.50 (1.71)	3.31 (1.53)	3.54 (1.74)	3.38 (1.05)
Mavl	liviin,	3.50 [1.00, 9.00]	3.50 [1.00, 9.00]	3.38 [1.00, 9.00]	3.00 [1.00, 7.75]	3.50 [1.00, 9.00]	3.25 [1.00, 9.00]
Concern a	ahout	5.00]	5.00]	5.00]	7.75]	5.00]	5.00]
debt	bout						
Mean (SD)		-0.107 (1.05)	-0.132 (1.09)	0.127 (0.967)	0.185 (0.781)	-0.00495	0.00493 (0.978)
( )		, , , , , , , , , , , , , , , , , , ,	( )	ζ, γ	( )	(1.02)	, , , , , , , , , , , , , , , , , , ,
Median	[Min,	0.104 [-4.21,	-0.00486 [-4.10,	0.297 [-4.09,	0.294 [-2.31,	0.165 [-4.21,	0.163 [-4.10,
Max]		1.87]	1.72]	1.58]	1.30]	1.87]	1.72]
Concern a	about						
lack of resou	irces						
Mean (SD)		-0.0560 (1.05)	-0.0489 (1.05)	0.0581 (0.998)	0.0783 (0.854)	-0.00617	0.00615 (0.972)
	r					(1.03)	
Median	[Min,	0.186 [-4.24,	0.202 [-3.86,	0.253 [-4.13,	0.242 [-3.23,	0.221 [-4.24,	0.219 [-3.86,
		2.01]	1.94]	2.00]	1.50]	2.01]	1.94]
		A EQ (0 74C)	4 62 (0 777)				4 60 (0 772)
Nodian	[ ] ]	4.38 (U.740)	4.03 (U.///)	4.59 (U.779)			4.00 (U.772)
iviedian   Mavi	livin,	4.03 [1.70, 6.70]	4.07 [1.73, 6.40]	4.58 [2.40, 6.43]	4.50 [2.73, 6.57]	4.00 [1.70, 6.70]	4.00 [1.73, 6.57]
ivianj		0.70]	0.40]	0.45]	0.57]	0.70]	0.57]

WTB.

We tested the distribution of WTB using the Shapiro-Wilk normality test and the results confirm that the distribution is not normal (W = .9, p < .001; see also Figure 5). We thus investigated the impact of

the scarcity manipulation on participants' WTB using Mann-Whitney U tests and results showed a significant effect of the manipulation (W = 94281, p = 0.02). *Figure 5. WTB distribution per conditions.* 



Through a ZIP model we examined the moderating effect of the financial conditions and of the mental accounting on the WTB, and also their interaction. Results revealed an interaction between scarcity and mental accounting (IRR = 1.06, p = 0.004), suggesting that when the loan is presented as a combined amount including interest, the willingness to borrow increases under conditions of scarcity. See Table 18 for more details.

Table 18. Interaction between financial condition and mental accounting condi	ition
---	-------

			WTB		
Predictors			Incidence Rate Ratios	CI	р
Count Model					
(Intercept)			39.24	38.43 - 40.06	<0.001
Condition [scarcity]			1.03	1.00 - 1.06	0.076
Mental accounting interest combined]	[Loan	and	1.07	1.04 – 1.10	<0.001

Condition [scarcity] × Mental accounting [Loan and interest combined]	1.06	1.02 – 1.11	0.004
Zero-Inflated Model			
(Intercept)	0.14	0.09 - 0.20	<0.001
Condition [scarcity]	0.59	0.31 - 1.13	0.114
Mental accounting [Loan and interest combined]	0.95	0.56 – 1.62	0.854
Condition [scarcity] × Mental accounting [Loan and interest combined]	1.06	0.42 - 2.64	0.905
Observations	918		
R <sup>2</sup> / R <sup>2</sup> adjusted	0.590 / 0.588		

#### Mediation effect of POBM

A moderated mediation analysis was conducted to study the mediating role of POBM in the relation between conditions (Financial condition × Mental accounting) and WTB. Nonparametric bootstrapping with 100 simulations was used to estimate the indirect and direct effects. Results showed a significant direct effect of conditions on the dependent variable (p = 0.04), but the indirect effect through the mediator was not significant. This suggests that the interaction between conditions (Financial condition × Mental accounting) influenced the WTB directly (see Table 19).

#### Table 19. Mediation analysis for POBM.

Nonparametric Bootstrap Confidence Intervals with the Percentile Method

	Estimate	95% CI Lower 95%	CI Upper	p-value
ACME (control)	-0.496	-1.786	0.55	0.56
ACME (treated)	-0.504	-1.820	0.51	0.54
ADE (control)	4.569	0.678	8.68	0.04 *
ADE (treated)	4.561	0.625	8.68	0.04 *
Total Effect	4.065	0.398	8.37	0.04 *
Prop. Mediated (control)	-0.122	-0.953	0.27	0.60
Prop. Mediated (treated)	-0.124	-0.887	0.19	0.58
ACME (average)	-0.500	-1.820	0.53	0.56
ADE (average)	4.565	0.651	8.68	0.04 *
Prop. Mediated (average)	-0.123	-0.918	0.23	0.60
Signif. codes: 0 '***' (	0.001'**'	0.01 '*' 0.05 '.	' 0.1''	1

Sample Size Used: 918

#### Mediation effect of Concern about lack of resources and Concern about debt

A causal mediation analysis using nonparametric bootstrapping examined whether Concern about lack of resources (CLR) mediated the effect of interaction between conditions (Financial condition × Mental accounting) on the WTB. Results showed a significant direct effect of the of interaction between conditions (Financial condition × Mental accounting), but the indirect effect through CLR was not significant for either group. This indicates that the interactions between conditions influenced the outcome directly, and perceived CLR did not serve as a mediator in this relationship. See Table 20 for full details.

#### Table 20. Mediation analysis for CLR. .

	Estimate	95% CI Lower 9	5% CI Upper	p-value
ACME (control)	-0.646	-1.515	0.09	0.16
ACME (treated)	-0.651	-1.513	0.08	0.16
ADE (control)	4.714	0.906	8.80	0.02 *
ADE (treated)	4.709	0.901	8.73	0.02 *
Total Effect	4.063	0.176	8.39	0.04 *
<pre>Prop. Mediated (control)</pre>	-0.159	-2.536	0.20	0.20
<pre>Prop. Mediated (treated)</pre>	-0.160	-2.225	0.18	0.20
ACME (average)	-0.648	-1.507	0.08	0.16
ADE (average)	4.712	0.903	8.77	0.02 *
Prop. Mediated (average)	-0.160	-2.380	0.19	0.20
Signif. codes: 0 '***'	0.001 '**	'0.01'*'0.05	5 '.' 0.1 '	'1

Nonparametric Bootstrap Confidence Intervals with the Percentile Method

Sample Size Used: 918

Finally, a moderated mediation analysis tested the effect of interaction between conditions (Financial condition × Mental accounting) on the WTB variable was mediated by CD. The results indicated a significant indirect effect for the treated group (i.e., conditions interactions), suggesting that CD partially mediated the effect of conditions. The direct effects were also significant across both groups, indicating that conditions independently influenced the outcome regardless of mediation. The total effect was significant, confirming a combined impact of direct and indirect pathways. While the proportion mediated was small and not statistically significant, the presence of a significant indirect effect in the scarcity condition highlights a partial mediation pattern. See Table 21 for full details.

#### Table 21. Mediation analysis for CLR.

Nonparametric Bootstrap Confidence Intervals with the Percentile Method

	Estimate	95% CI Lower	95% CI Upper	p-value
ACME (control)	0.52250	-0.05334	1.25	0.12
ACME (treated)	0.67382	0.07254	1.51	0.04 *
ADE (control)	3.57774	0.30568	7.90	0.04 *
ADE (treated)	3.72906	0.36253	8.15	0.04 *
Total Effect	4.25156	0.51561	8.56	0.04 *
Prop. Mediated (control)	0.12290	-0.20392	0.51	0.16
Prop. Mediated (treated)	0.15849	-0.22538	0.57	0.08 .
ACME (average)	0.59816	0.00977	1.34	0.04 *
ADE (average)	3.65340	0.33411	8.03	0.04 *
Prop. Mediated (average)	0.14069	-0.21465	0.54	0.08 .
Signif. codes: 0 '***'	0.001 '**	' 0.01'*' 0.0	)5 '.' 0.1 ' '	'1

Sample Size Used: 918

#### Moderation effect of Trait emotional intelligence

Finally, we investigated whether trait EI moderated the effect of the scarcity manipulation and of the mental accounting on willingness to borrow using a ZIP model, including conditions and trait EI as predictors and their interaction term. We further considered in the model the role of CD, CLR, and POBM. Results showed an interaction between scarcity and Trait EI (IRR = 0.97, p = .043; see Table 22).

	wtb		
Predictors	Incidence Rate Ratios CI		р
Count Model			
(Intercept)	24.20	21.43 – 27.33	<0.001
Condition [scarcity]	1.22	1.07 – 1.39	0.004
Trait El	1.02	0.99 - 1.04	0.251
Mental accounting [Loan and interest combined]	1.11	0.97 – 1.27	0.117
CLR	0.93	0.92 - 0.94	<0.001
CS	1.11	1.10 - 1.13	<0.001
POBM	1.11	1.10 - 1.11	<0.001
Condition [scarcity] × Trait El	0.97	0.94 - 1.00	0.043
Trait EI × Mental accounting [Loan and interest combined]	1.00	0.97 – 1.03	0.843

#### Table 22. Moderation effect of Trait EI.

#### Zero-Inflated Model

(Intercept)	1.51	0.17 – 13.38	0.711		
Condition [scarcity]	1.31	0.09 - 19.01	0.842		
Trait El	0.79	0.49 – 1.26	0.316		
Mental accounting [Loan and interest combined]	0.12	0.01 - 1.60	0.109		
CLR	1.21	0.92 – 1.60	0.165		
CS	1.08	0.84 – 1.38	0.544		
POBM	0.64	0.54 – 0.76	<0.001		
Condition [scarcity] × Trait El	0.83	0.46 – 1.49	0.536		
Trait EI × Mental accounting [Loan and interest combined]	1.56	0.89 – 2.73	0.119		
Observations	918				
R <sup>2</sup> / R <sup>2</sup> adjusted	0.950 / 0.949				

#### Repayment.

We investigated the impact of the scarcity manipulation on participants' repayments using Mann-Whitney U tests and results showed no significant effect of the financial manipulation (p = 0.30 and p = 0.70, respectively for Repay 1 and Repay 2; see also Figure 6). No difference emerged neither for mental accounting (p = 0.70 and p = 0.80, respectively for Repay 1 and Repay 2).

Through a logistic model we examined the interaction between the financial conditions and of the mental accounting on Repay 1 and Repay 2. Results showed no moderation effect (p = .26 and p = .44, respectively).



# Figure 6. Distribution of Repay 1 and Repay 2 in Study 6A.

#### Mediation effect of POBM

We used lavaan (Rosseel, 2012) to investigate the mediating role of POBM, both for Repay 1 and Repay 2, considering the moderation between financial condition x mental accounting. None of the models tested were significant (total effect p = .801 and p = .471, respectively), however in both models, results showed a negative direct effect of POBM on Repay (B = -.039, p < 0.001 and B = -.042, p < 0.001).

## Mediation effect of Concern about lack of resources and Concern about debt

We used lavaan (Rosseel, 2012) to investigate the mediating role of Concern about debt, both for Repay 1 and Repay 2. None of the models tested significant (total effect p = .801 and p = .471, respectively). Considering the mediating role of Concern about lack of resources, both for Repay 1 and Repay 2, results showed that none of the mediation was significant, however the CLR significantly influence repayment decision in both models (B = .039, p = .003 and B = .036, p = .013, respectively).

## Moderation effect of Trait emotional intelligence

Finally, we tested two logistic models to study whether Trait EI moderate the effect of the condition on Repay 1 and 2. We consider a three way interactions between financial condition × Mental accounting × Trait EI and no moderating effect emerges (ps = 0.35).

## Study 6B.

Study 6B aims was to replicate results of Study 6A in a laboratory setting assessing also the HRV, as an index of self regulation. We used the same design as in Study 6A, except for the fact that we assessed

a baseline for HRV before the video manipulation and then we assessed the physiological recation while watching at the video.

#### Results

# Descriptive statistics

Onehundred sixty eight participants took part to the laboratory study, and the distribution was well distributed across the conditions. See Table 23 for full details.

	Control		Scarcity		Overall	
	Loan and interest separate (N=48)	Loan and interest combined (N=39)	Loan and interest separate (N=40)	Loan and interest combined (N=41)	Loan and interest separate (N=88)	Loan and interest combined (N=80)
Gender						
Male	23 (47.9%)	16 (41.0%)	19 (47.5%)	17 (41.5%)	42 (47.7%)	33 (41.3%)
Female	25 (52.1%)	23 (59.0%)	21 (52.5%)	24 (58.5%)	46 (52.3%)	47 (58.8%)
Age						
Mean (SD)	23.8 (2.17)	22.4 (1.55)	23.0 (2.69)	23.2 (2.02)	23.4 (2.44)	22.9 (1.84)
Median [Min, Max]	24.0 [18.0, 29.0]	22.0 [20.0, 26.0]	23.0 [18.0, 30.0]	23.0 [19.0, 28.0]	23.0 [18.0, 30.0]	23.0 [19.0, 28.0]
Education						
middle school or lower	0 (0%)	0 (0%)	1 (2.5%)	0 (0%)	1 (1.1%)	0 (0%)
high school	6 (12.5%)	10 (25.6%)	11 (27.5%)	10 (24.4%)	17 (19.3%)	20 (25.0%)
university or higher	42 (87.5%)	29 (74.4%)	28 (70.0%)	31 (75.6%)	70 (79.5%)	60 (75.0%)
Income						
<15	4 (8.3%)	2 (5.1%)	1 (2.5%)	3 (7.3%)	5 (5.7%)	5 (6.3%)
15-22k	13 (27.1%)	6 (15.4%)	10 (25.0%)	5 (12.2%)	23 (26.1%)	11 (13.8%)
22-30k	5 (10.4%)	7 (17.9%)	9 (22.5%)	10 (24.4%)	14 (15.9%)	17 (21.3%)
30-38k	7 (14.6%)	3 (7.7%)	5 (12.5%)	2 (4.9%)	12 (13.6%)	5 (6.3%)
38-45k	9 (18.8%)	7 (17.9%)	3 (7.5%)	7 (17.1%)	12 (13.6%)	14 (17.5%)
>45k	5 (10.4%)	6 (15.4%)	5 (12.5%)	10 (24.4%)	10 (11.4%)	16 (20.0%)
no ans	2 (4.2%)	3 (7.7%)	4 (10.0%)	1 (2.4%)	6 (6.8%)	4 (5.0%)
don't know	3 (6.3%)	5 (12.8%)	3 (7.5%)	3 (7.3%)	6 (6.8%)	8 (10.0%)
Manipualtion check						
Mean (SD)	2.48 (1.43)	2.49 (1.30)	4.20 (1.45)	3.93 (1.51)	3.26 (1.67)	3.23 (1.57)
Median [Min, Max]	2.00 [1.00, 5.00]	2.00 [1.00, 6.00]	5.00 [1.00, 6.00]	4.00 [1.00, 6.00]	3.50 [1.00, 6.00]	3.00 [1.00, 6.00]
WTB						
Mean (SD)	47.2 (26.3)	45.9 (29.1)	46.9 (29.7)	52.5 (32.4)	47.1 (27.8)	49.3 (30.8)
Median [Min, Max]	47.5 [0, 100]	40.0 [0, 100]	50.0 [0, 100]	60.0 [0, 100]	50.0 [0, 100]	49.5 [0, 100]
Repay 1						
Mean (SD)	1.81 (0.398)	1.84 (0.374)	1.82 (0.389)	1.90 (0.304)	1.81 (0.391)	1.87 (0.338)
Median [Min, Max]	2.00 [1.00, 2.00]					

Table 23. Descriptive statistics for Study 6B.

Missing	1 (2.1%)	2 (5.1%)	1 (2.5%)	1 (2.4%)	2 (2.3%)	3 (3.8%)
Repay 2						
Mean (SD)	1.74 (0.441)	1.76 (0.435)	1.77 (0.427)	1.73 (0.452)	1.76 (0.432)	1.74 (0.441)
Median [Min, Max]	2.00 [1.00, 2.00]	2.00 [1.00, 2.00]	2.00 [1.00, 2.00]	2.00 [1.00, 2.00]	2.00 [1.00, 2.00]	2.00 [1.00, 2.00]
Missing	1 (2.1%)	2 (5.1%)	1 (2.5%)	1 (2.4%)	2 (2.3%)	3 (3.8%)
POBM						
Mean (SD)	3.00 (1.45)	2.99 (1.39)	2.87 (1.47)	3.21 (1.49)	2.94 (1.45)	3.10 (1.44)
Median [Min, Max]	2.88 [1.00, 6.50]	2.75 [1.25, 7.00]	2.75 [1.00, 6.50]	3.00 [1.00, 7.25]	2.75 [1.00, 6.50]	3.00 [1.00, 7.25]
Concern about debt						
Mean (SD)	-0.312 (1.12)	-0.0701 (0.880)	0.186 (0.866)	0.250 (1.00)	-0.0856 (1.04)	0.0942 (0.953)
Median [Min, Max]	-0.118 [-4.51, 1.39]	-0.0828 [-2.65, 1.60]	0.236 [-2.46, 1.87]	0.265 [-2.28, 1.87]	0.130 [-4.51, 1.87]	0.0421 [-2.65, 1.87]
Concern about lack of resources						
Mean (SD)	-0.173 (0.858)	-0.0335 (1.05)	0.0521 (1.03)	0.183 (1.08)	-0.0706 (0.942)	0.0776 (1.06)
Median [Min, Max]	-0.129 [-2.15, 1.64]	0.321 [-2.64, 1.53]	0.351 [-2.33, 1.74]	0.298 [-2.29, 1.56]	0.0807 [-2.33, 1.74]	0.309 [-2.64, 1.56]
Trait El						
Mean (SD)	4.84 (0.658)	4.94 (0.608)	4.88 (0.765)	4.83 (0.826)	4.86 (0.705)	4.88 (0.725)
Median [Min, Max]	5.00 [3.30, 6.57]	4.90 [3.47, 6.30]	4.93 [3.07, 6.30]	4.93 [2.40, 6.33]	5.00 [3.07, 6.57]	4.92 [2.40, 6.33]

# WTB

The WTB has a non normal distribution as hilighted by the Shapiro test (p<.001; see also Figure 8). We thus run two Mann-Whitney U tests to test the difference among the financial condition and mental accounting for the WTB; no significant results emerged. Due to the non-normal distribution we are still trying to identify the proper anlayis to test the effect of the interaction between the conditions. We are considering the possibility to run the analysis considering quantile regression or running a logistic regression by only considering the extreme answer (lower that 30 and higher than 70, on the scale from 0 t o100).





#### Repayment

As in the previous studies we only consider partipcants who reported a willingness to borrow higher or equal to 1. Distribution among the two repayment option was in line with previous studies, with majority of participants more willing to renegotiate, instead of refinance a debt (see Figure 9).





#### Mediation effect of POBM

We used lavaan (Rosseel, 2012) to investigate the mediating role of POBM, both for Repay 1 and Repay 2, considering the moderation between financial condition x mental accounting. None of the models tested significant (total effect p = .760 and p = .820, respectively).

#### Mediation effect of Concern about lack of resources and Concern about debt

We used lavaan (Rosseel, 2012) to investigate the mediating role of Concern about lack of resources and Concern about debt both for Repay 1 and Repay 2, considering the moderation between financial condition x mental accounting; none of the models tested significant.

#### Moderation effect of Trait emotional intelligence

Finally, we tested two logistic models to study whether Trait EI moderate the effect of the conditions on Repay 1 and 2. No moderating effect emerges (ps > 0.24).

#### HRV

We run an exploratory models to understand weather physiological recation predicted the WTB or repayment strategies. We thus tested a linear model to assess the predictors of WTB and a logistic model for repayment strategies. Results only showed a significant effect of nn50index (calculated subtracting the sperimental index to the baseline) in predicting the WTB, specifically higher nn50index bring to higher willingngess to borrow money (B = 0.273, p = 0.036).

We are still analyzing this data.

#### References

Rosseel, Y. (2012). lavaan: An R Package for Structural Equation Modeling. Journal of Statistical Software, 48(2), 1–36.