



Saving with Premeditation: How Poor Households in Bangladesh React to Access to Commitment Savings Accounts?

Carolina Laureti & Mélanie Volral

2018 ASSA Annual Meeting
“New Frontiers in Economics of the Household”
Philadelphia, January 5, 2018

1. INTRODUCTION

Poor households:

- have **difficulty to save** for temptation issues, lack of attention and/or cognitive biases → **behavioral anomaly** (Atkinson et al. 2013)
- are saving constrained (Bauer et al. 2012)
- RCT evidence: when offered **commitment savings products**, their savings significantly boost (Ashraf et al. 2006; Dupas and Robinson 2013; Brune et al. 2016)
- BUT: changing savings behavior is difficult

1. INTRODUCTION

How does the **savings behavior change**?

- (i) Sudden, impulsive? Main view among (development) economists
- (ii) Progressive, intentional? “Transtheoretical model of behavioral change” (TTM) by Prochaska and DiClemente (1982; 1983)

→ This paper investigates whether the TTM from the psychology literature is valid among poor households

1. INTRODUCTION

SafeSave

- Since 1996, in Dhaka (Bangladesh)
- Regular (liquid) savings account = fully flexible
- October 2009: launched Long Term Savings (LTS)
 - Fixed-maturity savings plan (period 3, 5, 7 or 10 years)
 - Fixed monthly deposits (amount BDT 50 or a multiple of BDT 100)
 - Early withdrawal penalty
- John (2014): LTS take-up increases savings by 180%

1. INTRODUCTION

This paper:

- Individual savings before LTS take-up
- Do savings increase?
- Separate “early takers” and “late takers”

Main results → Yes

- Behavioral change is intentional/premeditated
- In line with the TTM (Prochaska and DiClemente 1982; 1983)

2. RELATED LITERATURE

TTM (Prochaska and DiClemente 1982; 1983)

- Psychological literature (exercise acquisition, diet, smoking cessation)
- Behavioral change = intentional process that unfolds over time and involves progress through a series of 5 “stages of change”:
 - i. pre-contemplation (no intent to change in the foreseeable future),
 - ii. contemplation (intent to change in the next 6 months),
 - iii. preparation (intent to change in the next month),
 - iv. action (busiest stage which lasts for about 6 months, the behavioral change is overt)
 - v. maintenance (6 months to 5 years).

2. RELATED LITERATURE

TTM in banking

- Financial behavior of rich households in the context of financial education and financial counseling programs in U.S. (Kerkman 1998; Bristow 1997; Xiao et al. 2004; Shockey and Seiling 2004).
 - Gutter et al. (2007): use the TTM to assess individuals' intention to save (before take-up retirement savings plans) → Individuals in the contemplation and preparation stage have higher liquid savings than individuals in the pre-contemplation stage
- This paper main contribution: first to assess whether the TTM may apply to a poor population living in a developing country

3. DATASET

SafeSave administrative data

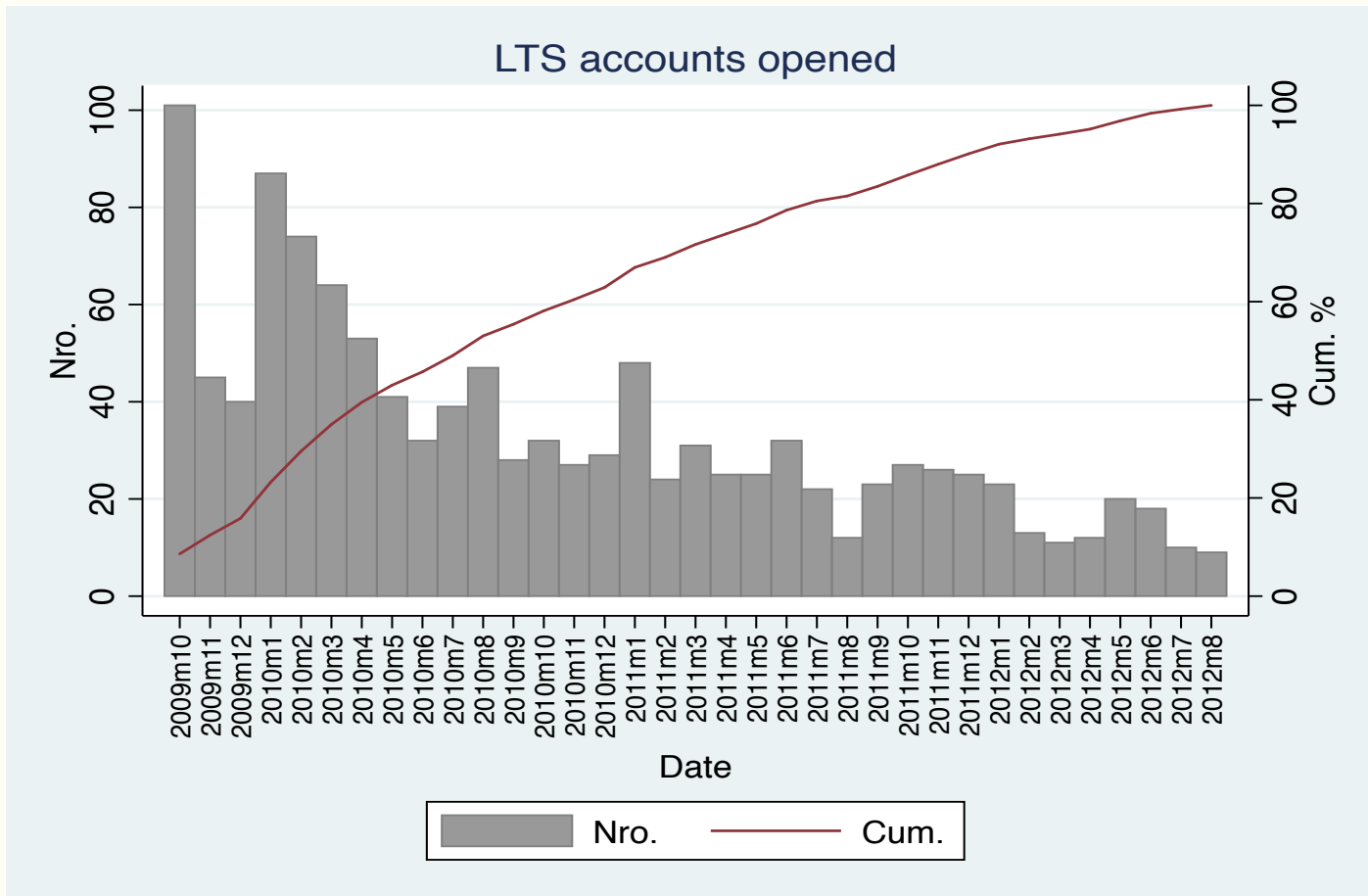
- January 2004 - August 2012
- Original sample: 16,071 clients
- 1,175 clients (active before October 2009 and took up a LTS account)
- Individual monthly savings (liquid account and commitment account)
- Clients characteristics: age, gender, occupation, time at SafeSave, branch

3. DATASET

Variables:	Mean			
	(Standard Deviation)			
Sample	Initial database	Final sample	Early takers	Late takers
	(1)	(2)	(3)	(4)
<i><u>Individual characteristics</u></i>				
Females (%)	80.84	89.79	88.17	90.09
Age when entering SafeSave (years)	26.1 (12.18)	26.15 (11.16)	27.14 (11.92)	25.96 (11.01)
Banking relationship with SafeSave (years)	3.37 (2.48)	5.55 (1.73)	5.46 (1.86)	5.56 (1.70)
Occupation (%):				
No occupation	50.15	55.29	56.99	54.97
Regular occupation	11.38	9.98	10.75	9.84
Irregular occupation	38.46	34.73	32.26	35.19
Taking-up a LTS commitment account (%)	14.12	100	100	100
Age when taking-up a LTS commitment account (years)	28 (11.84)	29.81 (11.43)	29.85 (12.24)	29.80 (11.27)
<i><u>Financial characteristics</u></i>				
Savings balance on the liquid account (BDT)	1,629.87 (10240.62)	2,060.11 (1847.41)	2,041.71 (1407.51)	2,063.57 (1919.48)
Savings balance on the LTS commitment account (BDT)	170.47 (1099.61)	894.39 (1609.12)	1,900.33 (3083.01)	705.2 (1034.70)
Number of observations	634,002	77,518	12,064	65,454
Number of clients	16,071	1,175	186	989

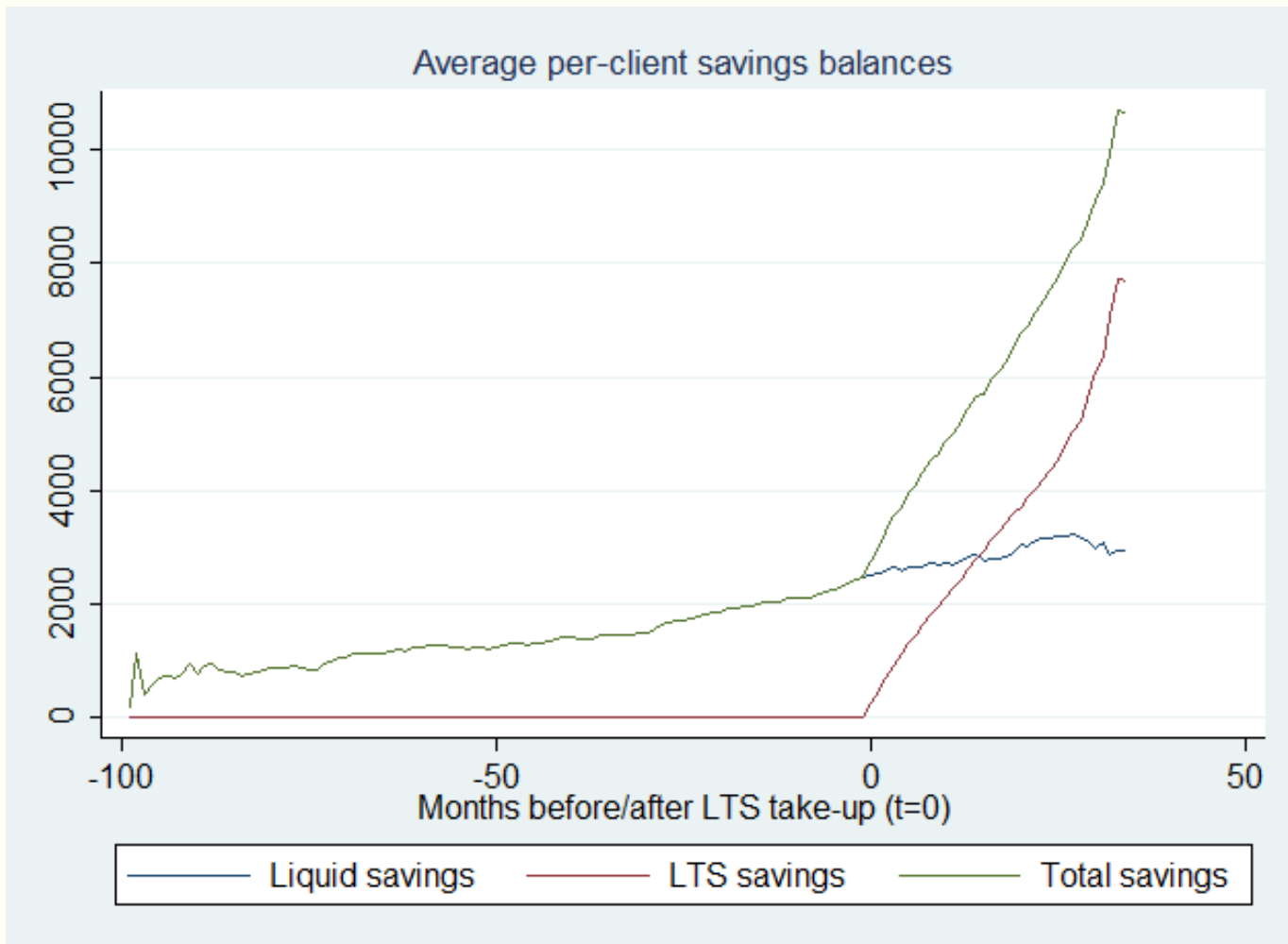
3. DATASET

- Distribution of LTS take-up over calendar time



3. DATASET

- Dynamics of savings before/after LTS take-up



4. METHODOLOGY

Study design

- Natural experiment: Oct 2009 LTS was launched
- Savings balances 6 months before LTS take-up (conditional on having access to LTS take-up)
- Compare with previous savings
- Heterogeneous effect between
 - (i) “early takers” (within 3 months, N=186) → impulsive
 - (ii) “late takers” (wait 3 months, N=989)

4. METHODOLOGY

- Panel regression, with individual FEs, time FEs, and linear trend

$$S_{it} = \gamma_0 + \gamma_2 \boldsymbol{\tau}_{it} + \gamma_2 T_{it} + \theta_t + u_i + \omega_{it} \quad (1)$$

S_{it} End-of-month savings balance of individual i at month t

$\boldsymbol{\tau}_{it}$ Vector of 6 month-dummies (1st to 6th month before LTS take-up, conditional on LTS access)

5. RESULTS

- Panel regression, with individual FEs, seasonal FEs, and linear trend

Dependent variable:	Savings balances		
Sample	Full sample	Early takers	Late takers
	(1)	(2)	(3)
Number of months before LTS take up			
1	169.75*** (60.03)	201.04 (196.25)	171.17*** (63.27)
2	172.26*** (59.57)	106.99 (208.07)	179.69*** (61.63)
3	112.99* (59.87)	omitted	118.78** (60.33)
4	53.41 (60.51)	omitted	59.26 (61.04)
5	72.33 (57.39)	omitted	78.42 (57.32)
6	33.47 (56.05)	omitted	39.15 (55.94)
Mean dependent variable (BDT)	1,735.58	1,651.96	1,746.65
R ² within	0.14	0.15	0.14
Number of observations	51,579	6,029	45,550
Number of clients	1,175	186	989

5. RESULTS

- Group of “**late takers**” take up between January 2010 and May 2010 (rather than till August 2012)

Dependent variable	Savings balance	
	Early takers	Late takers
Sample	(1)	(2)
Number of months before LTS take up		
1	201.04 (196.25)	217.15* (121.24)
2	106.99 (208.07)	217.10* (125.89)
3	omitted	136.19 (123.47)
4	omitted	27.25 (147.05)
5	omitted	235.43** (113.95)
6	omitted	132.69 (152.72)
Mean dependent variable (BDT)	1,651.96	1767.15
R ² within	0.15	0.14
Number of observations	6,029	11,047
Number of clients	186	319

5. RESULTS

- Unique “preparation period” dummy

Dependent variable:	Savings balances		
Sample	Full sample	Early takers	Late takers
	(1)	(2)	(3)
Preparation period dummy	89.50*	171.76	100.71*
	(53.48)	(184.32)	(53.88)
Mean dependent variable (BDT)	1,735.58	1,651.96	1,746.65
R ² within	0.14	0.15	0.14
Number of observations	51,579	6,029	45,550
Number of clients	1,175	186	989

6. CONCLUSION

- Test the TTM from the psychology literature in a poor population
- Savings increase before the LTS take-up → evidence of premeditation
- The poor are more forward looking than previously thought
- Implication for product design → incorporating a “preparation phase” into the commitment savings products
 - a period of time between signing up the contract and making the first deposit contribution
 - in the starting up phase, progressively increase deposits (Thaler and Benartzi 2004)



*Thank you for your
attention!*