



Behavioral Household Finance

Discussion

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Two really nice contributions



- William L. Skimmyhorn and Richard W. Patterson (2020) “How do Behavioral Approaches to Increase Savings Compare? Evidence from Multiple Interventions in the U.S. Army”
- Daniel Ben-David, Ido Mintz, and Orly Sade (2020) “Using AI and Behavioral Finance to Cope with Limited Attention and Reduce Overdraft Fees”

Similar Notable Strengths



- Important questions of interest to both academics and policymakers
- Causal identification from field (quasi-) experiments
 - Very large sample sizes -> allows precise estimates of impacts
- Real world settings
- High quality administrative data
- Well executed papers

Behavioral Approaches to Increase Savings Summary



- Examines several classes of interventions in U.S. Army
 - Behavioral messaging (randomized)
 - Savings targets (randomized)
 - Active choice (quasi-experimental)
 - Automatic enrollment (quasi-experimental)
- Same employer -> institutional settings held constant
- Effects on **TSP participation**, contributions, balances

Behavioral Approaches to Increase Savings Summary



- Increases in participation rate
 - Behavioral messaging: **0.41pp** (6%)
 - Savings targets: **0.69pp** (9%)
 - Active choice: **10.68pp** (104%)
 - Automatic enrollment: **37.28pp** (208%)
- Generally validates previous findings (estimates on low side)
- More validation/replication studies needed!

Behavioral Approaches to Increase Savings

Comments



- Unique institutional setting has advantages and drawbacks
 - Institutional features interact with interventions?
 - And effect relative effect sizes?
- Estimated effects of AE on participation from lit: 28pp – 70pp
- Active choice: 23pp (Carroll et al., 2009)
- Different (relative) effect sizes for different sized employers?

Behavioral Approaches to Increase Savings Comments



- Active choice implementations yield different effects?
 - Briefings
 - Return form (similar to Carroll et al., 2009)
 - Parallel trends across treatment and control sites?
- Introduction of AE part of retirement system overhaul
 - Reduced generosity of DB pension (\uparrow)
 - 1% automatic employer contribution (\leftrightarrow)
 - (Future) employer match ($\uparrow?$)
 - 2017 starts choose across retirement systems ($\downarrow?$)

Behavioral Approaches to Increase Savings

Comments



- Cost-effectiveness (more papers should do this!)
 - Active choice more cost effective for smaller firms
 - AE more effective for very large firms
- Light touch emails cost \$5,000 for next firm to implement?
 - “Many [employees] like you start by contributing at least X% of their [paycheck] into a traditional or Roth [401k]“
- Would most firms implement active choice via briefings?
- Cost estimate appears to be static?
 - With 10% annual employee turnover, AE more cost effective for a 750 employee firm after 6 years

AI, Behavioral Finance, and Overdrafts Summary



- Used AI to target a sample of Mint users at risk of overdraft
- Randomized into 4 groups
 - Control (no messages)
 - Base (original messages)
 - Simplified Avoid (negative framing)
 - Simplified Save (positive framing)
- Messages reduced overdrafts during 4 month intervention
 - Base by 3% (0.26 overdrafts)
 - Simplified avoid by 9% (0.72 overdrafts)
 - Simplified save by 5% (0.40 overdrafts)
 - Effects concentrated among higher income Minters

AI, Behavioral Finance, and Overdrafts Comments



Avoid overdrafting your # account by taking action

Hi **Minter**,

Uh oh! We think you might overdraft in the next few days in your # account. Overdrafting can make bank fees add up really quickly and it can become a dangerous spiral.

In the past, you paid \$34.00 in fees after overdrafting on **Jan 07 2018**

You can avoid overdrafting:

- If you have money in another account, transfer funds from there into checking.
- If you have a credit card with free balance, use that instead of debit card until your next paycheck.
- Cut back on the non-essential expenses for a few days.

Why did I get this email?

Based on your spending habits and history of overdrafts, our number crunchers think you're a likely candidate to overdraft again soon. This is still a beta feature, so we'd appreciate some [feedback](#).

CHECK MY ACCOUNT BALANCE

Avoid Paying \$34.00 Fee

Hi **Minter**,
we noticed that you might overdraft. Consider transferring money to your # account, paying with credit card or postponing non-essential expenses.

If we are too late, try asking your bank for a waiver.



Check how to Avoid

AI, Behavioral Finance, and Overdrafts Comments



- Over the full experiment, intervention only effective for higher income Minters
 - Systematic differences in number of overdrafts across income categories
 - Look at no overdraft indicator?
 - AI better at predicting overdrafts among high income Minters?
 - Control for and look at interaction effects with prior overdrafts?
- Mechanisms?
 - Reduced consumption?
 - Increased borrowing?
 - Better financial management (transfers)?

AI, Behavioral Finance, and Overdrafts Comments



- Helpful to see a balance table
 - Income
 - Prior overdrafts?
- Also helpful to see regression specs for simplified save vs. control
 - Can have one specification with each treatment and compare across treatments
- Income heterogeneity sample size appears considerably larger than main effects sample size?