The Impact of Formal Savings on Salaried Workersâ€™ Spending and Borrowing in Eastern Ghana

Researchers:

Niklas Buehren

Markus Goldstein

Leora Klapper

Tricia Koroknay-Palicz

Robert Osei

Simone Schaner

Sector(s): Finance, Gender

Fieldwork: Innovations for Poverty Action (IPA)

Location: Ghana

Sample: 320 individuals receiving electronic salary payments at eight bank branches

Target group: Civil servants Rural population

Outcome of interest: Savings/deposits

Intervention type: Commitment devices Savings

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Partner organization(s): Gates Foundation, North Volta Rural Bank (NVRB), World Bank

Commitment savings products are designed to help people overcome social and behavioral barriers to saving money, but many questions remain about how, and in which cases, these products work. In Ghana, researchers worked with the North Volta Rural Bank (NVRB) and IPA to conduct a randomized evaluation to test the impacts of a commitment savings product linked to electronic salary payments on clients' total savings and debt. Results show that the commitment savings product increased participants' savings with NVRB, while impacts on total savings and net savings varied based on customers' use of NVRB overdrafts in the year before the project began. Clients who had used overdrafts more frequently in the past did not accrue new savings during the commitment period, and instead drew down on other savings and took on new debt; clients who had used overdrafts less frequently, on the other hand, significantly increased their total savings during and after the commitment period.

Policy issue

As developing countries increasingly move to digital payments of government workers and cash transfer beneficiaries, there is a large opportunity to introduce financial products that work in tandem with these digital payments to help individuals build savings and manage their money—for example, through the roll-out of savings products that automatically deduct savings contributions from individuals' salary payments.

Such products typically involve some level of commitment on the contribution side (e.g. setting a monthly contribution amount), withdrawal side (constraints on when and how much money can be withdrawn), or both. In this way, they are commitment savings products, which studies have shown can help individuals overcome social and behavioral barriers to savings.[1] However, commitment savings products' success is often measured without capturing participants' total balance sheets—which include total savings across all places and net savings (savings minus debt). If individuals who use a commitment savings product reduce or draw down savings elsewhere, or take on debt because of the commitment savings product's limits on withdrawals, the total welfare impacts of an apparently successful commitment savings product could in fact be negative.

Evaluating the impact of such products is critical in order to understand potential welfare impacts, and to inform product design and targeting, before they are marketed or rolled-out at scale.

Context of the evaluation

The Government of Ghana pays many of its employees electronically, with individuals' salaries paid directly into their bank accounts. This study was done in partnership with North Volta Rural Bank (NVRB), which is a small bank with eight branches located across Ghana's Volta Region. Researchers invited all NVRB customers whose salaries are paid directly into their NVRB bank accounts to participate in this study. Of the 320 salaried customers who agreed to participate in this study, 245 were men and 75 were women. Ninety percent were public sector workers, and over half were teachers. The median monthly salary in the study's initial survey was 524 GHS (US$273).[2], Like many banks in Ghana, NVRB offers customers whose salaries are electronically deposited by their employer the opportunity to take out overdrafts (short-term, high-interest loans similar to payday loans) against their incoming salaries. The majority of NVRB's salaried customers have taken these loans at least once, and many customers take out these loans repeatedly. NVRB charges an 18 percent fee for overdrafts, and the loan period is until the next salary payment is received (usually within a month). In the year before this study's initial survey, 58 percent of our study sample took an overdraft from NVRB at least once, and the average person was in overdraft for nearly a third of the year.[3] In the same year these customers spent an average of 226 GHS (US$117) on interest and fees associated with these overdrafts, which is equal to about 42 percent of the initial average monthly salary.



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Details of the intervention

North Volta Rural Bank worked with the research team to create a savings product called “Salary Susu Plus” (SSP), in which customers commit to having a fixed amount taken directly from their salary and put in a separate savings account for an 18-month period.

At program start, each customer specified their monthly contribution amount (which had to equal or exceed 30 GHS), and this could not be changed after it was set. Customers could not access their contributions during the savings cycle unless they opted out of the program at a cost of one month’s contribution. Customers who completed the commitment cycle received all their contributions plus an additional bonus payment equal to one month’s contribution. This amounted to an annual percentage yield (APY) of 7 percent, which was a better return than the interest rate NVRB was offering on savings accounts at the time of the baseline (3 percent APR) but substantially lower than interest rates offered by other banks in Ghana at the time (13 percent average deposit interest rate).[4], Given high annual inflation rates (from 12 to 17 percent) during the study period, real interest on SSP deposits was negative.[5], Half of the customers who chose to participate in the study were randomly assigned to a group which was offered the opportunity to sign up for SSP, while the other half served as the comparison group. Within these groups, researchers studied sub-groups based on participants’ gender, and whether their past overdraft usage was above the median (“heavy overdrafters”) or below the median (“light overdrafters”).[6]

Seventy-two percent of people in the group offered SSP signed up for it. The median monthly contribution was GHS 30, while the average contribution was GHS 42. Program completion rates were high, with just 13 percent of respondents who signed up for SSP dropping out before the savings cycle was over. While heavy overdrafters were just as likely as light overdrafters to sign up

for SSP, they were 12 percentage points more likely to drop out.

Study participants were surveyed before, during, and after the 18-month commitment period. In addition to the results of these surveys, researchers used administrative data provided by NVRB. The surveys and 18-month SSP commitment period took place from 2013-2015.

Results and policy lessons

High take-up and completion rates indicate that there was a broad demand for SSP among study participants.

Among all participants, SSP more than doubled balances at NVRB both during and after the commitment period, suggesting this type of product can be a powerful tool for mobilizing savings deposits. However, accounting for financial resources outside NVRB, there was no impact on total savings or savings net debt. There was also a significant increase in the share of respondents taking on new debt, which suggests some individuals may have taken out loans to offset their SSP contributions.

The effects of access to an SSP account differed in important ways depending on how often participants had overdrafted before the study:

For *heavy overdrafters*, the product increased savings at NVRB during the commitment period, but this effect disappeared after the commitment amount was released. Moreover, the product significantly decreased heavy overdrafters' other formal sector savings during the commitment period while increasing the rate of debt taking.

On the other hand, *for light overdrafters*, the commitment product significantly increased other formal sector savings both during and after the commitment period, with no significant impact on debt.There were substantial positive impacts on both total savings and net savings (savings minus debt) following the completion of the commitment period. Total savings for this group increased by 41 percent (596 GHS or US$157), while net savings increased by a 794 GHS (US$209).[7]

While SSP's impacts on finances were different for heavy and light overdrafters, its impact on overdrafts was similar across participants: while overdrafts decreased shortly after participants received the funds from their commitment accounts, SSP had no long-term impact on overdraft behavior.

Taken together, these results indicate that SSP's effects were different for different participants, with benefits accruing to those who exhibited "healthier" financial behavior before the study began. While economists have hypothesized that commitment savings products could be especially useful for people who struggle with long-term planning (such as overdrafters), these results suggest that alternative approaches may be necessary to encourage savings within this demographic. Given the nuance identified in this study, targeted marketing of commitment products like SSP may also be critical for maximizing positive impacts while limiting negative consequences.

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1. See, for example, Ashraf, Karlan, and Yin (2010,) or Dupas and Robinson (2013).

2. Exchange rate used in this section is from January 1, 2013, which is around the time the study began.

3. Buehren, Niklas, Virginia Ceretti, Ervin Dervisevic, Markus Goldstein, Leora Klapper, Tricia Koroknay-Palicz, and Simone Schaner. 2018. "Salary Delays and Overdrafts in Rural Ghana."*AEA Papers and Proceedings* 108: 449-452. DOI: 10.1257/pandp.20181014

4. International Monetary Fund, International Financial Statistics and Data files, atwww.data.worldbank.org/indicator, . Bank-by-bank data on deposit interest rates in Ghana can be found at http://giscentre.org/aprs/

5. International Monetary Fund, International Financial Statistics and Data files, at www.data.worldbank.org/indicator. Indicator is "inflation (annual average)."

6. The randomization was stratified by gender, bank branch, and above/below median overdraft usage.

7. Exchange rate used in this section is 3.8 GHS/US$1 to reflect the exchange rate at the time of the surveys conducted after the commitment period.