



Contributions to this research report made by a member of The Financial Access Initiative research group.

The Financial Access Initiative is a consortium of researchers at New York University, Harvard, Yale and Innovations for Poverty Action.

NYU Wagner Graduate School
295 Lafayette Street, 2nd Floor
New York, NY 10012-9604

T: 212.998.7536
F: 212.995.4162
E: contact@financialaccess.org

SEED: A Commitment Savings Product in the Philippines

Nava Ashraf
Harvard University
ashraf@fas.harvard.edu

Dean S. Karlan
Princeton University
M.I.T. Poverty Action Lab
dkarlan@princeton.edu

Wesley Yin
Princeton University
wyin@princeton.edu

December 9th, 2004

Table of Contents

SEED: A Commitment Savings Product in the Philippines	1
1. The Purpose of Our Study	3
2. The Commitment Savings Product	4
3. Experimental Design.....	6
4. Results: Takeup of Product and Quantitative Impact	9
5. Qualitative Impact on Clients	12
6. Costs and Benefits for the MFI.....	15
7. Next Steps in the Study	15
8. Conclusion	16

The Purpose of Our Study

Microfinance institutions in developing countries increasingly offer a variety of savings products. Yet few studies have investigated the impact that savings product designs have on client savings levels. Since savings levels are generally considered to be low—from both client and institutional perspectives—this relationship must be better understood.

With this in mind, we undertook an experimental “action research” project to study how the design of a savings product influences both the type of client attracted to the product and the impact the product has on financial savings. We first designed a prototype savings account with novel commitment features. We then observed its effects using an experimental evaluation design. We were especially interested in gathering evidence to answer the following questions:

1. Would those who chose to open this account share certain characteristics? More specifically, would this product help people who expressed a desire to save but had a difficult time doing so due to lack of self-control (i.e., difficulty avoiding temptation to spend cash in pocket) or spousal-control issues (i.e., difficulty keeping funds in the household away from their spouse)?
2. Does opening this new type of account cause an increase in the total financial savings of the client? That is, do the features we have included in the account actually work to help households increase their savings?

The findings of this study have implications beyond the effect the product had on the lives of these particular individuals. Because we employed a rigorous experimental research design with random assignment of participants to treatment and control groups, we know that any increase in savings is *a direct result* of the product. We find a strong effect on savings that we can attribute to the product: after twelve months, average bank account balances increased by 80 percent on average for all who were assigned to the treatment group compared to those assigned to the control group. Those in the treatment group who actually opened the commitment savings product increased savings after twelve months by 337 percent.

The experimental design allows us to predict the increase in savings that would occur if this product were expanded to further clients of the microfinance institution (MFI). However, since only existing MFI clients were part of this study, we cannot predict what would happen if this product were offered to someone who never has had a bank account. Such an individual might be fundamentally different from someone who is “banked,” and these differences may significantly affect the way the product design works.¹

This paper proceeds as follows: Section 2 presents the commitment savings product; Section 3 presents the research design; Section 4 presents the results; Section 5 presents the cost and benefits for the MFI; Section 6 discusses next steps; and Section 7 concludes.

¹ It would be interesting and worthwhile to study the impact of a commitment savings product for the “unbanked,” but that is not covered in this project.

1. The Commitment Savings Product

Prototype Development

Developing the commitment savings product prototype to be tested was a collaborative process between the authors, several MFIs in the Philippines, and Microenterprise Access to Banking Services (MABS), a USAID-funded program. It consisted of several consultations between MFI coordinators and researchers on ten possible new savings products. These ten ideas were based on both implications of economic theory and anecdotal evidence from the field on successes in the informal banking sector. The ten ideas were eventually narrowed down to four or five possible products. These were then pre-tested among focus groups of clients from several MFIs throughout the country.

This focus group work was supplemented with consultations with the staff of the MFIs, in-depth interviews with clients, and eventually, market surveys carried out in three regions. The market surveys had two goals: to understand the supply of existing savings products in the market and to assess demand for new savings products among potential clients. On the basis of information from all of these sources, the researchers agreed on one commitment savings product and one MFI to implement the pilot test.

The SEED Account

The commitment savings product which emerged from the above process was a Green Bank SEED (Save, Earn, Enjoy Deposits) account. A SEED account was a savings account with the three unique critical design features, one regarding withdrawals and two regarding deposits. It is important to note that the interest rate paid on the SEED account was identical to the interest paid on a normal savings account (4 percent per annum). Thus, other than providing a possible commitment savings device, no further benefit accrued to individuals with this account.

Commitment Features: Withdrawal Restrictions

A SEED account required individuals to restrict their right to withdraw any funds in their own accounts until they reached a self-specified and documented goal. Clients could opt to restrict withdrawals until a specified date (e.g., in a month when large expenditures for their business, school, Christmas purchases, or a particular celebration were expected). Alternatively, they could set a goal amount and only have access to the funds once that goal was reached (e.g., if a known quantity of money was needed for a new roof). The clients had complete flexibility to choose which of these restrictions they would like on their account. However, once the decision was made it could not be changed, and the clients could not withdraw funds from the account until they met their chosen goal amount or date.²

² Exceptions are allowed for medical emergency, in which case a hospital bill is required, for death in the family, requiring a death certificate, or relocating outside the bank's geographic area, requiring documentation from the area government official. The clients who signed up for the SEED product signed a contract with the bank agreeing to these strict requirements. After six months of the project, no instances occurred of anyone exercising these options. For the amount-based goals, the money remains in the

Of the two goals, we conjecture that the amount-based one requires a stronger commitment to save. This is because in order to access the money, you must continue depositing until the goal is reached. With the date-based goal, one could simply open the account, never contribute, and then withdraw the funds once the specified date arrives.³ Of the 202 individuals who opened a SEED account, 140 opted for a date-based goal and 62 opted for an amount-based goal. Of the 140 date-based goals, 113 were under one year, with 24 of them being just before Christmas. (See Table 1)

In addition to choosing a withdrawal restriction, all clients were encouraged to set a specific purpose for the savings in their SEED account. This savings purpose was written on the bank form for opening the account, as well as on a “Commitment Savings Certificate” that was given to them. The reason for having them do this was that merely by having them specify a goal we might inspire higher savings due to mental accounting⁴ (Shefrin and Thaler, 1988; Thaler, 1990, 1985). If this were the case, it would imply that the impact observed in this study comes in part from this labeling of the account for a specific purpose.

Table 1 reports a tabulation of the purposes given. Forty-eight percent of clients reported wanting to save for a celebration, such as Christmas, birthdays, or fiestas.⁵ Twenty-one percent of clients chose to save for tuition and education expenses, while 20 percent of clients chose business and home investments as their specific purposes.

Commitment Features: Deposit Options

On the deposit side, two optional design features were offered. First, clients could purchase a locked box (called a “ganansiya” box) for a small fee. This lockbox is similar to a piggy bank: it has a small opening to deposit money and a lock to prevent the client from opening it. Only the bank, and not the client, possessed a key to open the lock. Thus, in order to make a deposit, clients had to periodically bring the box to the bank. Out of the 202 clients who opened accounts, 167 opted for this box. (See Table 1)

Second, we offered the option to automate transfers from a primary checking or savings account into the SEED account. This feature was not popular. Many clients reported not using their checking or savings account regularly enough for this option to be meaningful. Out of the 202 clients, only two opted for automated transfers.

account until either the goal is reached and the funds withdrawn or the funds are requested under an emergency.

³ However, it should be noted that the amount-based commitment is not fool-proof. For instance, in the amount-based account, someone could borrow the remaining amount for five minutes from a moneylender in order to receive the current balance in the account. No anecdotal evidence suggests that this occurred.

⁴ Mental accounting refers to the way people mentally code, categorize, and evaluate financial outcomes. For instance, a person may mentally set aside \$10 to go see a movie on Friday. On Thursday, while shopping this person might be faced with a decision between buying a shirt that is \$40 and one that is \$50. Although she has \$50 in her checking account, she will purchase the cheaper shirt because in her head she only has \$40: she has already mentally put the \$10 for the movies in another account.

⁵ Fiestas are large local celebrations that happen at different dates during the year for each barangay (village) in this region. Families are expected to host large parties, with substantial food, when it is their barangay’s fiesta date. Families often pay for this annual party through loans from local high-interest rate money-lenders.

The MFI

We decided that the most appropriate MFI to pilot-test this product was the Green Bank of Caraga, a small rural bank located on the island of Mindanao in the Philippines. The Green Bank first opened in 1975 and in 1989 was bought by the Andaya family. In 1995, they opened a branch in Butuan City, the location for this action research project. Since 1997, the Green Bank has been rapidly expanding, both by buying other small rural banks as well as through purchasing licenses to open new branches. The bank is considered a leader in the rural banking community in the Philippines, having received several awards in the past few years from the Land Bank of the Philippines (a second-tier lender), such as the Most Profitable Rural Bank, the Most Outstanding Rural Bank, and the Best in Capital Build Up. In the first quarter of 2003, the bank had P1 billion pesos in assets (US\$20 million). Currently, the Green Bank has 18 branches and aims to have P3 billion pesos in assets in the next five years.

2. Experimental Design

The randomized control experimental design is critical to the proper evaluation of products like this, and hence we devote a section to explaining the procedures. The procedures can be thought of as a framework for evaluating any product innovation for which participation is voluntary, and the intent is to offer the product to existing clients of a financial institution.

There are four stages to developing and testing an innovative savings product:

- (i) Idea Generation: different pieces of information converge and point to client demand for a new savings product.
- (ii) Prototype Development: an institution studies the market more comprehensively, designs a prototype based on the findings, estimates the cost of providing such a product, and evaluates its institutional capacity for offering such a product.
- (iii) Pilot Test & Evaluation: the institution and its research collaborators implement a pilot test, which tests the market's acceptance of the prototype, as well as the functioning of the institution's systems in providing it.

The feedback from these processes allows planners to perfect the product and systems, and to develop a marketing/promotion strategy for launching to a wider audience.
- (iv) Product Launch: Lessons from stage (iii) are incorporated into the process and the product is offered on a much wider scale.

As Stages (i) and (ii) are described above, we now turn to Stage (iii).

In the pilot stage we study the effect of the product in a sample market using a carefully controlled study. It is in this stage we look for the answers to the two questions that motivated our study:

1. Would those who chose to open this account share certain characteristics? More specifically, would this product help people who expressed a desire to save but had a difficult time doing so due to lack of self-control (i.e., difficulty avoiding temptation to spend cash in pocket) or spousal-control issues (i.e., difficulty keeping funds in the household away from their spouse)?
2. Does opening this new type of account cause an increase in the total household savings of the client? That is, do the features we have included in the account actually work to help households increase their savings?

We carefully executed the pilot study using a randomized control design. This means that in addition to having both a group that is offered the SEED product (a “treatment group”) and one that is not (a “control group”), we ensured that the clients in the two groups were “identical” at the start of the pilot study. This was achieved by first randomly assigning clients to the treatment and control groups. In this way we can answer the questions posed above simply by comparing the savings outcomes of the two groups. This guarantees that measured differences in savings levels for clients in the treatment and control groups capture only the effect of the SEED account, and not the effect of differences in underlying savings behavior among clients in the two groups.

Randomization and Its Significance

Assigning people to treatment and control group randomly does not mean haphazardly picking them to be part of the study. Instead, careful thought must go into determining who the target population for the study is. After the target population is identified and made part of the study, the randomization is performed to determine who gets the treatment and who does not. In this project, we decided that our target population was existing clients. We obtained a list of all existing clients, then randomly chose which ones would be offered the product (“treatment”) and which ones would not (“control”).

To demonstrate why randomization is important, consider a situation where this is not done. Suppose that we offered the commitment savings product to all clients and assigned those who opened the account to the “treatment group.” Those who didn’t open an account, but were “similar” (e.g., similar prior balances, occupations) to those who had, we assigned to the “control group.” Suppose in order to determine impact we compared the results of the two different groups.

However, by comparing an outcome, like savings balances, of this treatment group to the control group, could we confidently attribute the difference to program impact? No. It could be that the treatment group opened a SEED account because they were determined to save more (i.e., they had some “entrepreneurial spirit” which drove them to want to save). Those in the control group, on the other hand, did not share this passion for savings, as evidenced by not having opened the SEED account. So although these groups may *appear* alike on occupation, prior savings balances, age, education, etc., they differ

on one critical but *unobservable* characteristic: desire to save more in the future. This would make the comparison of this treatment to control group spurious, and would lead to false conclusions regarding the impact of the product itself on client savings. In this case we cannot isolate our product as the *cause* of a rise in savings. Thus we could not extrapolate from these results to make a policy prescription that banks can mobilize more savings by offering this particular product. If we were to rely on a poorly designed evaluation, we risk false claims of success, and false claims of success can lead to *misallocation of future resources*.

Random assignment into treatment and control groups solves this problem. Within a randomized setting, assignment into the treatment group is no longer correlated with the “desire to save” since those with a desire to save were just as likely to be placed in the control group as the treatment group. Remember, in our study, everyone offered the product, regardless of whether they took it up, was put in the treatment group. Those who were not offered the product formed the control group. With a sample size of two, this would not work. With a sufficiently large sample size, this strategy is effective.

Our Study

Our total original sample consisted of 4,001 adult Green Bank clients who had savings accounts in one of the two bank branches in the greater Butuan City area, and who had identifiable addresses. We randomly assigned half of these individuals to the “SEED commitment treatment” group. One-fourth of the clients were assigned to the “control” group. The remaining one-fourth of the clients were assigned a third group—the “marketing treatment” group. Clients in this group were given virtually the same marketing campaign as received by clients in the “SEED commitment treatment” group, except that the marketing was strictly limited to conventional and existing savings products of the MFI. The “marketing treatment” group serves as a “placebo.” That is, by comparing savings levels of clients in the “SEED commitment treatment” and “marketing treatment” groups, we are able to isolate the direct effect of the SEED product from the effect of the marketing campaign. Assuming the marketing campaign alone causes the “marketing treatment” group to increase their savings we can simply subtract that amount from the effect on the “SEED commitment treatment” group to determine the true impact of the product.

After the division into groups we verified that the three resulting groups were statistically identical based on preexisting financial data. The top half of Table 2 shows the results.

We then performed a second randomization to select clients to interview for our baseline household survey. The purpose of conducting this survey was to get an idea of clients’ motivations and to take a snapshot of their situation before the product was introduced. Note, however, that for instances where resources are more limited, a baseline survey is not necessary for the successful evaluation of the product. A properly executed randomization ensures that evaluation can be based on post-product offering savings data alone.

We randomly chose 3,154 individuals from the total sample to be surveyed and of those, 1,777 were found by the survey team and completed a survey. Of the individuals not found for the survey, the majority had moved (i.e., the surveyor went to the location of the home and found nobody by that name).⁶ The bottom half of Table 2 shows that all three groups were statistically the same on the observable differences.

Next, we trained a team of marketers hired by the Green Bank to go to the homes or businesses of the clients in the “SEED commitment treatment” group. During the visit the marketers were to stress the importance of savings to the potential client – a process which included eliciting the clients’ motivations for savings and emphasizing to the client that even small amounts of saving make a difference. At the end they were instructed to offer the client the SEED product.

Those in the “marketing treatment” group received the same marketing treatment as those in the “commitment treatment” group. That is to say, marketers used exactly the same script for both groups: members of both groups were asked to set specific savings goals for themselves, write those savings goals into a specific “encouragement” savings certificate, and talk with the marketers about how to reach those goals. However, those in the “marketing treatment” group were not offered (nor allowed to take up) the SEED product. If a “control” or “marketing treatment” group member asked to open a SEED account, they were denied by bank staff and told that clients had been chosen at random for a trial period after which the product would be available to all. These requests by “control” or “marketing treatment” group members were made fewer than ten times as reported to us by the Green Bank, and in one instance an individual in the “control” group did open a SEED account.⁷

After a given amount of time, with our data from the baseline survey and our observations of opening and use of accounts, we were ready to begin answering our questions.

3. Results

Question One: Who opened this account?

As stated earlier, we were interested in observing any commonalities there might be in the characteristics of individuals who opened this commitment savings account. To determine this, we collected data on gender, education level, previous banking activity, and other factors. Also, as one of our motivations behind the design of this product was to assist people in saving, we wanted to determine if this product would be especially appealing to those clients who had a desire to save but a hard time doing so. Many individuals express preferences for long-term investment or savings, but when cash is in

⁶ Note that this introduces a bias in the sample selection towards individuals who did not relocate recently.

⁷ This individual is a family member of the owners of the bank and hence was erroneously included in the study. Due to this family connection, the individual was dropped from the all analysis and summary statistics.

hand, it tends to get spent on something current. We believed that individuals who do this frequently could want a device that would commit them to saving. Our household survey included a set of hypothetical questions aimed at identifying such individuals.

Specifically, in the household survey we asked individuals to choose between receiving a set amount of money immediately and receiving a larger amount of money one month later (Benzion et al., 1989; Shelley, 1993; Tversky and Kahneman, 1986). For example:

Would you prefer to receive one month's salary guaranteed today, or one and a half months' salary guaranteed in 1 month?

Fifteen minutes later in the survey we then asked the question again, but this time with a different time frame. For example:

Would you prefer one month's salary guaranteed in 6 months, or one and a half months' salary guaranteed in 7 months?

There are four possible combinations of answers to these two questions, each listed below. We were most interested in answer number four, as we interpret it as a signal of a desire to save concurrent with a desire to spend money in the present.

- 1) One could answer that he or she would prefer the smaller amount immediately both now and in six months. This would indicate someone who was always impatient, willing to forego large gains in order to get money sooner rather than later.
- 2) One could answer that he or she would prefer to wait for the larger amount both now and in the future. This would indicate someone who was patient, always willing to wait in order to receive the larger amount of money.

Both of these first two types give answers that are consistent over time. That is, they demonstrate a consistent decision to either wait or not wait, and are not demonstrably less patient with respect to immediate tradeoffs versus tradeoffs in the future. The next two responses are not consistent, and indicate a difference in the way the same person values money over time.

- 3) One could answer that he or she is patient now and will wait a month for a larger amount, but then say that in six months he or she is not willing to wait a month for the larger amount.
- 4) One could say that right now he or she would prefer the smaller amount immediately but in six months it would be better to wait to have the larger amount. This set of answers approximates the thought process of a person who would like to save, but who has a harder time doing so when faced with the promise of immediate cash. He or she is anxious to have money to spend now, but can see the value of waiting to have a larger amount of money in the future. These are the people whom we were most interested in seeing whether they were more likely to open the SEED account.

We also included similar questions for rice, and for ice cream (a good which is easily consumed – an ideal candidate for temptation) to test whether the context of these

questions influenced the prevalence and predictive power of the answers. The results are shown in Table 3.

Conclusions on Question One: Who opened this account?

Education and income predict take-up of the commitment savings product. Individuals who have received some college education are more likely to open an account. Those in the middle income categories are more likely to open the account than those in the highest and lowest income categories.

We also find that “answer-four” type women are significantly more likely to open a SEED account: those women who answer in this way are 17.2 percent more likely to open an account than women who answer in some other way. No similar effect is found for men.

Question Two: Is there an impact on savings?

The second set of questions dealt with the actual impact this product has on savings account balances. To answer these, we looked at clients’ financial data.

Conclusions on Question Two

We find that the product had a strong positive impact on savings when we compare results for those offered the product to the randomly chosen control group that was not offered the product. After six months, average bank account savings increased by 46 percent in the treatment group as a whole (i.e., the “commitment treatment” plus “marketing treatment”) relative to the control group. This corresponds to an average increase of 164 pesos (approximately \$3USD) per treatment group member. After twelve months, average bank account balances increased by 80 percent⁸. (See Table 6, Panel A) Those in the treatment group who actually opened the SEED account increased savings after six months by 192 percent, which corresponds to an average increase of 690 pesos (approximately \$13.80USD). After twelve months, their savings increased by 337 percent. (See Table 6, Panel B)

Although the nominal amounts are small, as a percentage of prior formal bank savings the product impact is significant. In terms of purchasing power, a doctor’s visit in this area of the Philippines costs about \$3USD, public school fees are \$3/year plus \$4/month for special projects, and a one-month supply of rice for a family of five costs \$20.

Furthermore, “commitment treatment” group participants are 11 percent more likely than “marketing treatment” group participants and 12.3 percent more likely than “control” group participants to increase their savings by more than 20 percent (See Table 7⁹)

⁸ The coefficient on assignment to the commitment treatment group of P235 is positive and significant at the 90-percent level. This estimate corresponds to a 46 percent increase in savings for the commitment treatment group relative to the control group. After 12 months, the coefficient estimate is P411 – positive and significant at the 90-percent level (Table 4, Column 3), which corresponds to an 80 percent increase in savings for the commitment treatment group relative to the control.

⁹ Table 7 reports the outcomes of ordinary least squares regressions for cutoffs in savings changes of greater than 0 percent and greater than 20 percent. The treatment effect can be interpreted as the additional

4. Clients Tracking: SEED Follow-up Qualitative Survey

The purpose of the qualitative survey was to investigate the changes in household welfare experienced by SEED clients that are difficult to capture econometrically. *Note that these are not necessarily causal.* Here, we describe the changes reported by the SEED clients. We do *not* compare these responses to those of a control group. SEED has three unique features seldom found in formal savings products: first, clients were offered to use a lockbox to save at home; second, clients were asked to set a goal (either

amount-based or time-based) for their savings; and third, clients were not allowed to withdraw until they reach the goal. Besides the impact of SEED on savings amount, we are interested in how SEED has affected the well-being of the clients and their families.

Out of 202 SEED clients, we were able to reach 187 for the follow-up interview. The interview consisted of questions regarding goals of savings, other saving mechanisms used in the household, means of household financing before they had SEED,

changes in their lives as well as in household members after using SEED, and satisfaction

Box 1. No More Debt:

The SEED account Helped to Pay Enrollment Fees for Her Children

My savings now is already P1000.00, so that I can save for my December. These are just little problems because when Christmas comes, you have to have something to spend for food and the clothes of the children, these things need to be given attention.

I have already withdrawn from SEED last June 2004. That was the promise, that it will be withdrawn because it is for the children's enrolment, to buy the things they need and their uniform. I have less expenses now for my children's schooling because there are only two of them who are studying.

Before, I had a hard time. I took a loan from Green Bank. I also had borrowed from lending institutions so that I could enroll my children. It really gave me a headache because my partner's work is on and off, his job is very unstable. The bank charges 5% interest per month while the lending institutions charge very high interest rate, 20%....If it had not existed, then where would I have gone? It has really helped. Before, I would borrow money. Now I don't anymore because I already have something saved. There is really a big change because I don't borrow money anymore with interest that's so high, up to the neck. ~~20%, is that easy for you?~~ The method of SEED has changed my saving (practice). I'll always think that I should have something to deposit because I plan to use it for something. They will collect it here at home, it will not be wasted and it will not be spent for just anything. It will really be saved.

I achieved my hope to pay for the enrollment of my children. I like it, because even a small amount can be saved. My money will not be wasted or gradually spent.

In the past twelve months, there have been changes in the way we make decisions regarding money matters in our home because now that I am a SEED member, if I have a goal where to spend (the money), it can really be done. I will not carelessly spend my money on worthless things and my husband helps in saving money.

probability that a client randomly assigned into the treatment group will save more than the cutoff percentage: the coefficient on commitment-treatment in Columns 1 and 3 can be interpreted as the impact of treatment relative to the control clients, and that in Columns 2 and 4 as the impact of treatment relative to marketing group clients. Both results demonstrate positive and significant impact. For instance, Column 1 tells us that a client offered the SEED commitment product will be 10 percentage points more likely to increase their savings after 12 months of intervention, and 9.6 percentage points more likely to increase savings by at least 20%.

level with the SEED product. Among those who were interviewed, 109 clients have used the account (i.e., made at least one deposit after opening the account) and 160 clients liked the savings method of SEED, while there are only 70 clients who thought this method actually worked for them.

The most successful clients deposited from their income and included SEED deposits in their household budgeting. One respondent said:

“The money that I saved in SEED came from my monthly income. Instead of spending it like before, now I save it in my SEED product... There are changes because I set aside a portion of my income for my SEED. I really make a budget for that account because it is for the education of my sibling. If it is not needed, I will not spend on it, I control myself, and I will really scrimp. Before, I used to save only a little. Now the increase in my income goes to SEED.”

71 among 109 SEED users (65%), including this client, indicated that SEED has brought some changes to their households. The change that respondents most frequently acknowledged is the improvement in their saving behaviors. Many of them noted that they never saved before, that they no longer waste money on unnecessary things, and that they do not ignore small coins anymore. Thus, a large part of savings in SEED are new savings brought by behavioral changes rather than shifted from other saving mechanisms.

There are other changes that SEED has brought to successful clients. There are several respondents who reported that household decision making regarding money matters changed and gave them greater control over budgeting. There were others who commented that they no longer need loans to buy food and to send children to school (See Box 1). A few clients also added that SEED helped them to become more self-confident and that their families are happier without constant worry for money. These responses emphasize that having adequate savings contributes not only to their material well-being but also to mental well-being.

On the flip side, 79 of the respondents (42.5%) indicated that they never used the SEED accounts after their initial deposit of 100 pesos. Their main reasons for the negligence of the accounts are: no money to save (50%), too busy/bank is too far (12.5%), and forgot about the account (10%). One respondent explained:

“I really liked the method of saving in the SEED product. Before when I did not have a can (lockbox), even if I found 5 or 10 cents, I just ignored them. But now that I have experienced the can saving with SEED, I really save whatever centavos I find because I can just drop these in the can. However, in the past 12 months, there is really no change because I was not able to deposit in the SEED account. I really forgot about it because I took care of our farm. Besides that, I really have difficulty in saving now. You cannot think of saving anymore because you first take care of food and of supporting children in school. I even have difficulty giving them fare daily.”

Another respondent said:

“The savings was for my child’s (high school) graduation expenses and college needs, but I was not able to continue with it because of the lack of time. I find it a big hassle to go to the bank... I really find the bank far. They should have had assigned collectors to collect from their clients... [but] I like the purpose of the SEED product because I saw that it really helps people a lot.”

While there is little room for direct intervention in encouraging savings in the first case, the latter response clearly points to the need for better service accessibility. Many of

these non-users still wanted to continue with SEED, noting that making small deposits and saving with withdrawal restriction are good ideas. In fact, 80% of those who never used the account said that they liked the saving method of SEED.

These survey responses evoke several implications for saving patterns of the SEED clients. First, the accessibility of deposit services could further encourage them to save. Note that the better accessibility of the services could potentially encourage savings for over 20% of those who did not continue depositing (they were either too busy or they forgot about the account). There are several respondents who specifically mentioned that had there been deposit collectors coming by their houses, they would have made deposits. Dispatching deposit collectors may incur a large cost for the service provider; however, in the case of Green Bank, we have found that the benefit of expected increase in savings far exceeds the cost of employing collectors. In fact, the next phase of our research includes the impact assessment of deposit collectors on the SEED clients.

Secondly, the lockbox appears to be effective for some in improving their savings. For many clients, lockboxes affected their saving practices by encouraging small and frequent deposits at home. One client says:

*Box 2. Happier Family Gathering at Christmas
SEED Changed Alegria Namit's Saving Pattern*

I have already saved P800.00 in the SEED account now. I joined the membership because I wanted to get the money in December and spend it on December 29 so that my family can get together.

I was able to withdraw last Dec. 29, 2003 because my term goal was six months and I signed for the membership last June. I withdrew it for Christmas celebration. I cooked some food so that my children and grandchildren will be happy. I had the same expenses in the food preparation when I did not have the SEED, but I was able to give gifts to the children now that I joined the SEED. I did not borrow (money) at the time because I had a one-month bonus from my pension.

I do not have another account that is like the SEED. There is really a change in our lives and in my family because we were happier when we got together and we received gifts in December, and my children and I became closer. There is really a difference in my life because I was able to give gifts and I was also able to prepare a celebration in the New Year. We were happy because I had cooked. Before, I could not give gifts because the money was not enough.

I really like the method of the SEED because I can achieve my goal; I like it because I can really save, and I can fulfill my needs. I will try hard to continue depositing in my savings so that I can withdraw again in the next December. It has really changed my saving practice because I cannot withdraw it easily. There is a time when I can withdraw; you cannot withdraw it anytime.

~~It really helps; I can save the money because I cannot withdraw it until December — that is when I will use the money.~~ If the money is kept at the house, it will be used, and even if it is in the bank that is not a SEED account, I can withdraw it anytime. But with this one, you can't.

It is really good because even if I saved only a little, I really use it for what I meant it for, just like the last December. I can depend that I'll have something to spend, and I can achieve what I want to do with the money. I will try hard to save; every month I deposit P200.00 in the SEED. I really need to be able to deposit so that I can achieve my goal. And I will not impulsively spend my money on worthless things because there is already something that I really want to achieve, I have plans.

"It is easy to save because even if you will drop in small amounts (coins), you will not be embarrassed because you will only deposit that when (the can) is already full. (If you go to the

bank every time you want to save) you will just waste the travel fare. It would be better if you will just put into your can the money that you will spend on the fare, it can add up to your savings.”

Particularly, for lower income group, the use of lockbox has helped them achieve their saving goals: among the clients with household income less than the sample median, 43% of lockbox users agreed that the SEED improved their saving behaviors as opposed to 34% among all respondents. On the negative side, however, there were 10 people who reported that their money in the lockbox was stolen by family members or neighbors before it could be deposited at the bank. Many of those whose money was stolen responded that they were discouraged and stopped saving. These unfortunate episodes underline the importance of safe saving.

Finally, the clients’ responses to the goal setting and withdrawal restrictions of SEED emphasize that different product designs work best for different types of people. The SEED account was designed specifically for the hyperbolic people—more impatient now than in the future—to use the product as a commitment device. People who successfully saved with SEED attributed the two commitment aspects (goal setting and withdrawal restriction) as the keys to their successful saving (See Box 2), while several of those who failed to save commented that they did not like SEED for its withdrawal inflexibility. Long-term commitment is unavoidable for the poor, who can only make small deposits, to save for large, lump-sum expenditures—such as college tuition for children, renovation of the house, and hospital costs in the case of emergency, and these large expenditures could affect the welfare of households dramatically and lastingly.

In the earlier econometric analysis, we identified that SEED had positive and significant impact on savings amount. This section summarized the implications of the follow-up qualitative survey conducted at the end of 12 months. Responses from the SEED clients suggest that commitment devices that SEED has provided—lockbox, goal setting, and withdrawal restriction—not only increased the amount of savings, but also affected other aspects of household welfare, including their saving behaviors, household decision making, and well-being of household members.

5. Costs and Benefits for the MFI

The cost to the Green Bank of offering this product was minimal. With small optional information system modifications, any bank that offers normal savings products can also offer this product at negligible cost, aside from those of marketing the product. This product does not necessarily require special marketing, although its efficacy without special marketing needs to be tested.

The benefits to the bank are two-fold. First, a wider set of products that service the needs of the consumer generates a more stable, loyal client base. This type of client loyalty is important for the long term stability and growth of the Green Bank. Second, the deposit mobilization provides the Green Bank with a good source of capital for on-lending.

Based on the pilot, it seems that the benefits greatly outweigh the costs.

6. Next Steps in the Study

This study has generated a series of questions we would like to have answered:

- What effect, if any, does a savings balance increase have on household welfare?
- How exactly is it that people are better off with more savings?
- Will the effect of the product diminish over time without constant reminders?
- Exactly which product features generate the outcomes we observed (i.e., is it the lockbox or the withdrawal restrictions that matter most)?
- Will different less intense marketing strategies have an impact on take-up and/or use of savings?

Over the summer, we conducted a follow-up survey to determine whether there were significant differences in overall household savings as well as household welfare between the three groups. Improvements to individual and household welfare suggested by the qualitative interviews with SEED clients can be tested with the follow-up survey, which will reveal the extent to which some of the factors identified in the qualitative survey are now different among the treatment and control groups. The results of this survey are forthcoming.

As for the other questions, we are working with Green Bank to determine which product feature is most important for mobilizing savings, through offering variations on the product, and varying the types of marketing used for the product.

Lastly, given the impact we have already seen, we are looking into the possibility of replicating this product at other banks. In the meantime, Green Bank can confidently move to the launch stage and offer the product more broadly.

7. Conclusion

Our new commitment savings product design was successful in raising total savings balances both in households that opened an account and at the MFI. Since the study employed a randomized control design, we can safely say that the increase in savings was *caused* by the product design.

The study shows that women who demonstrate a desire to save but a difficulty in doing so are significantly more likely than others to open such an account. There is no similar effect among men. This could be because women in the Philippines are typically responsible for household finances, thus, they have to be more proactive in figuring out ways to overcome their difficulty to save since their failure affects the entire family.

The large and significant effect of the SEED product on increasing savings underscores how important targeted and specialized products, with appropriate and client-focused design, are to mobilizing savings. In addition to showing us the effects of this particular product, this study is a prototype for how to create and test product innovations that not only lead to robust and reliable results for that lender, but provide a public good to the microfinance community worldwide.

Tables

Table 1: Clients' Specific Savings Goals

	Frequency	Percent
Christmas/Birthday/Celebration/Graduation	97	48.0%
Education	42	20.8%
House/Lot construction and purchase	21	10.4%
Capital for Business	20	9.9%
Purchase or Maintenance of Machine/Automobile/Appliance	8	4.0%
Agricultural Financing/Investing/Maintenance	4	2.0%
Vacation/Travel	4	2.0%
Personal Needs/Future Expenses	3	1.5%
Did not report reason for saving	2	1.0%
Medical	1	0.5%
Total	202	100.0%
Date-based goals	140	69.3%
Amount-based goals	62	30.7%
Total	202	100.0%
Bought Ganansiya Box	167	82.7%
Did not buy Ganansiya Box	35	17.3%
Total	202	100.0%

Table 2. Summary Statistics of Variables, by Treatment Assignment
Means and Standard Errors

	Control	Marketing	Treatment	F-stat P- value
A. PRE-EXISTING FINANCIAL DATA				
Client Savings Balance (hundreds)	5.307 (0.233)	4.990 (0.234)	5.027 (0.174)	0.554
Active Account	0.360 (0.022)	0.363 (0.022)	0.349 (0.017)	0.861
Barangay's ¹ Distance to Branch	21.865 (0.818)	23.230 (0.884)	22.708 (0.656)	0.541
Bank's Penetration in Barangay	0.022 (0.002)	0.022 (0.002)	0.019 (0.001)	0.372
Standard Deviation of Balances (hundreds)	4.922 (0.364)	4.975 (0.365)	4.960 (0.272)	0.562
Mean Balances of Barangay (hundreds)	5.079 (0.463)	5.081 (0.464)	5.104 (0.345)	.884
Population of Barangay (thousands)	5.854 (0.207)	5.708 (0.207)	5.730 (0.154)	0.856
B. DEMOGRAPHIC DATA FROM SURVEY INSTRUMENT				
Education	11.642 (0.160)	11.358 (0.160)	11.713 (0.119)	.200
Female	0.616 (0.017)	0.547 (0.017)	0.600 (0.013)	0.011
Age	42.051 (0.620)	42.871 (0.622)	42.108 (0.463)	.556
Impatient (near)	0.808 (0.040)	0.890 (0.040)	0.869 (0.030)	0.309
Those who want to save but have difficulty (250)	0.203 (0.019)	.224 (0.019)	.201 (0.014)	.586
Those who want to save but have difficulty (300)	0.130 (0.016)	0.149 (0.016)	0.140 (0.012)	0.705
Enterprise Owner	1.746 (0.020)	1.708 (0.021)	1.738 (0.015)	0.374
Sample Size	469	466	842	1777

¹ Barangay is very similar to a village


Standard errors are listed in parentheses below the means.

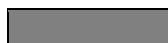
Table 3: Tabulations of Responses to Hypothetical Time Preference Questions

Money Preferences			Indifferent between 200 pesos in 6 months and X in 7 months			
			Patient X<250	Somewhat Impatient 250<X<300	Most Impatient 300<X	Total
Indifferent between 200 pesos now and X in one month	Patient	X<250	606 34.4%	126 7.2%	73 4.1%	805 45.7%
	Somewhat Impatient	250<X<300	206 11.7%	146 8.3%	59 3.3%	411 23.3%
	Most Impatient	300<X	154 8.7%	93 5.3%	299 17%	546 31%
	Total		966 54.8%	365 20.7%	431 24.5%	1,762 100%

Rice Preferences			Indifferent between 10 kg of rice in 6 months and X in 7 months			
			Patient X<15	Somewhat Impatient 15<X<20	Most Impatient 20<X	Total
Indifferent between 10 kg of rice now and X in one month	Patient	X<15	699 39.4%	50 2.8%	42 2.4%	791 44.6%
	Somewhat Impatient	15<X<20	234 13.2%	138 7.8%	35 2%	407 23%
	Most Impatient	20<X	162 9.1%	106 6%	307 17.3%	575 32.4%
	Total		1,095 61.80%	294 16.6%	384 21.7%	1,773 100%

Ice Cream Preferences			Indifferent between 0.5 gallon in 6 months and X in 7 months			
			Patient X<1.5	Somewhat Impatient 1.5<X<2	Most Impatient 2<X	Total
Indifferent between 0.5 gallon now and X in one month	Patient	X<1.5	831 47.2%	43 2.4%	33 1.9%	907 51.5%
	Somewhat Impatient	1.5<X<2	215 12.2%	109 6.19%	39 2.21%	363 20.6%
	Most Impatient	2<X	147 8.34%	66 3.75%	279 15.83%	492 27.92%
	Total		1193 67.7%	218 12.4%	351 19.9%	1762 100%

 Those who would like to save but have a hard time doing so

 Confused


 Those who would like to save but have a hard time doing so/Confused/Impatient (depending on exact response)

Table 4: Determinants of SEED Take-up

Probit

	All	All	Female	Male	All	All	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Time Inconsistent, Money	0.120*	0.101	0.161*	0.039	0.117*	0.135	0.239**	0.036
	(0.066)	(0.067)	(0.084)	(0.098)	(0.067)	(0.086)	(0.122)	(0.113)
Time Inconsistent AND Some College						-0.021	-0.089	0.006
						(0.075)	(0.090)	(0.117)
Some college	0.086**	0.093**	0.085*	0.079	0.083**	0.091**	0.109**	0.078
	(0.038)	(0.039)	(0.048)	(0.055)	(0.038)	(0.043)	(0.054)	(0.062)
Impatient, Now versus 1 Month	-0.032	-0.056	-0.033	-0.046	-0.034	-0.031	-0.032	-0.046
	(0.050)	(0.048)	(0.062)	(0.074)	(0.049)	(0.049)	(0.062)	(0.073)
Patient, Now versus 1 Month	0.067	0.019	0.035	0.110	0.068	0.067	0.037	0.110
	(0.072)	(0.071)	(0.088)	(0.110)	(0.072)	(0.072)	(0.088)	(0.110)
Impatient, 6 months versus 7 Months	0.098	0.169**	0.118	0.084	0.102	0.097	0.113	0.084
	(0.064)	(0.069)	(0.086)	(0.091)	(0.065)	(0.064)	(0.086)	(0.090)
Patient, 6 months versus 7 Months	0.020	0.068	0.057	-0.014	0.022	0.020	0.056	-0.014
	(0.064)	(0.063)	(0.080)	(0.093)	(0.064)	(0.064)	(0.080)	(0.093)
Female	0.134*	0.154*			0.106	0.135*		
	(0.077)	(0.079)			(0.092)	(0.077)		
Married * Female	-0.109	-0.095	-0.070		-0.116	-0.109	-0.071	
	(0.088)	(0.092)	(0.049)		(0.089)	(0.088)	(0.049)	
Married	0.055	0.043		0.061	0.058	0.056		0.061
	(0.075)	(0.078)		(0.066)	(0.075)	(0.075)		(0.066)
Number of household members	-0.001	0.002	0.002	-0.007	0.000	-0.001	0.002	-0.007
	(0.008)	(0.008)	(0.009)	(0.011)	(0.008)	(0.008)	(0.009)	(0.011)
Unemployed	0.024	-0.008	0.039	0.018	0.048	0.025	0.045	0.018
	(0.099)	(0.095)	(0.109)	(0.227)	(0.108)	(0.100)	(0.109)	(0.226)
Age	-0.002	-0.003*	-0.001	-0.003	-0.002	-0.002	-0.001	-0.003
	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)
Lending client from bank	0.003	0.000	-0.043	0.046	-0.008	0.003	-0.042	0.046
	(0.036)	(0.039)	(0.045)	(0.053)	(0.036)	(0.036)	(0.045)	(0.053)
Lending client with default	-0.030	-0.017	-0.021	-0.050	-0.028	-0.030	-0.025	-0.050
	(0.072)	(0.078)	(0.086)	(0.106)	(0.073)	(0.072)	(0.085)	(0.106)
Total household income	0.045	0.044	0.133***	-0.031	0.042	0.045	0.132***	-0.031
	(0.029)	(0.029)	(0.043)	(0.042)	(0.029)	(0.029)	(0.043)	(0.042)
Total household income squared	-0.007*	-0.007*	-0.024***	0.002	-0.007*	-0.007*	-0.023***	0.002
	(0.004)	(0.004)	(0.008)	(0.004)	(0.004)	(0.004)	(0.008)	(0.004)
Neighborhood Fixed Effects	No	Yes	No	No	No	No	No	No
Observations	715	715	429	286	715	715	429	286
Mean Dependent Variable	0.28	0.28	0.31	0.24	0.28	0.28	0.31	0.24

Marginal effects reported for coefficients. Robust standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 5: Determinants of SEED Take-up- Hypothetical Questions

	Probit				
	Dependent Variable = 1 if Respondent Opened SEED Account				
	All	Female	Male	Female	Male
	(1)	(2)	(3)	(4)	(5)
<i>Time Preference with Respect to Money</i>					
Time Inconsistent (Impatient Now, Patient Future)	0.123*	0.172*	0.025		
	(0.069)	(0.091)	(0.099)		
Time Inconsistent (Patient Now, Impatient Future)	0.039	0.015	0.062		
	(0.064)	(0.086)	(0.095)		
Middle Impatient, Now versus 1 Month	-0.036	-0.043	-0.043	-0.081	-0.055
	(0.050)	(0.068)	(0.074)	(0.063)	(0.068)
Least Impatient, Now versus 1 Month	0.044	0.018	0.069	-0.125**	0.067
	(0.078)	(0.107)	(0.114)	(0.060)	(0.068)
Middle Impatient, 6 months versus 7 Months	0.088	0.110	0.080	0.179**	0.083
	(0.065)	(0.089)	(0.097)	(0.083)	(0.084)
Least Impatient, 6 months versus 7 Months	0.046	0.062	0.024	0.170***	0.006
	(0.078)	(0.105)	(0.116)	(0.064)	(0.070)
Observations	715	429	286	429	286
Mean dependent variable	0.28	0.31	0.24	0.31	0.24
<i>Time Preference with Respect to Ice Cream</i>					
Time Inconsistent (Impatient Now, Patient Future)	-0.058	0.004	-0.149		
	(0.068)	(0.096)	(0.091)		
Time Inconsistent (Patient Now, Impatient Future)	0.030	-0.025	0.095		
	(0.073)	(0.096)	(0.111)		
Middle Impatient, Now versus 1 Month	-0.000	0.042	-0.065	0.039	-0.020
	(0.057)	(0.079)	(0.077)	(0.075)	(0.076)
Least Impatient, Now versus 1 Month	-0.085	-0.028	-0.185	-0.036	-0.006
	(0.089)	(0.118)	(0.131)	(0.066)	(0.074)
Middle Impatient, 6 months versus 7 Months	0.065	0.057	0.108	0.066	0.009
	(0.077)	(0.104)	(0.124)	(0.096)	(0.091)
Least Impatient, 6 months versus 7 Months	0.101	0.017	0.216*	0.032	0.047
	(0.083)	(0.115)	(0.122)	(0.070)	(0.078)
Observations	715	429	286	429	286
Mean dependent variable	0.28	0.31	0.24	0.31	0.24
<i>Time Preference with Respect to Rice</i>					
Time Inconsistent (Impatient Now, Patient Future)	0.073	0.077	0.083		
	(0.073)	(0.096)	(0.115)		
Time Inconsistent (Patient Now, Impatient Future)	-0.065	-0.026	-0.110		
	(0.063)	(0.094)	(0.076)		
Middle Impatient, Now versus 1 Month	0.112*	0.030	0.265**	0.011	0.243**
	(0.058)	(0.072)	(0.104)	(0.067)	(0.099)
Least Impatient, Now versus 1 Month	0.108	0.014	0.301**	-0.063	0.195**
	(0.088)	(0.115)	(0.133)	(0.061)	(0.078)
Middle Impatient, 6 months versus 7 Months	0.003	0.168*	-0.183***	0.203**	-0.148**
	(0.068)	(0.099)	(0.066)	(0.089)	(0.065)
Least Impatient, 6 months versus 7 Months	-0.055	0.049	-0.265*	0.117*	-0.131
	(0.090)	(0.114)	(0.143)	(0.065)	(0.084)
Observations	715	429	286	429	286
Mean dependent variable	0.28	0.31	0.24	0.31	0.24

Marginal effects reported for coefficients. Robust standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 6: Impact on Change in Savings Held at Bank
OLS, IV

PANEL A. INTENT TO TREAT EFFECT: OLS				
Dependent Variable:	Length 6 months		Length 12 months	
	Change in Total Balance	Change in Total Balance	Change in Total Balance	Change in Total Balance
Sample	All	Commitment & Marketing Only	All	Commitment & Marketing Only
	(1)	(2)	(3)	(4)
Commitment Treatment	234.678*	49.828	411.466*	287.575
	-101.748	(156.027)	(244.021)	(228.523)
Marketing Treatment	184.851		123.891	
	(146.982)		(153.440)	
Constant	40.626	225.476*	65.183	189.074**
	-61.676	(133.405)	(124.215)	(90.072)
Observations	1777	1308	1777	1308
R-squared	0.00	0.00	0.00	0.00

PANEL B. TREATMENT ON THE TREATED EFFECT: IV

Dependent Variable:	Length 6 months		Length 12 months	
	Change in Total Balance	Change in Total Balance	Change in Total Balance	Change in Total Balance
Sample	All	Commitment & Marketing Only	All	Commitment & Marketing Only
	(1)	(2)	(3)	(4)
SEED take-up	978.214**	207.699	1715.122*	1198.705
	(422.980)	(649.749)	(1017.890)	(951.878)
Marketing Treatment	184.851		123.891	
	(146.982)		(153.440)	
Constant	40.626	225.476*	65.183	189.074**
	(61.676)	(133.405)	(124.215)	(90.072)
Observations	1777	1308	1767	1308
R-squared	0.01	0.00	0.01	0.00

Robust standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 7: Increase in Savings
OLS, IV

PANEL A. INTENT TO TREAT EFFECT: OLS

Length	12 months			
	Binary Outcome Dependent Variable: = 1 if Change in Balance > 0%	Binary Outcome = 1 if Change in Balance > 0%	Binary Outcome = 1 if Change in Balance > 20%	Binary Outcome = 1 if Change in Balance > 20%
Sample	All (1)	Commitment & Marketing Only (2)	All (3)	Commitment & Marketing Only (4)
Commitment Treatment	0.100*** (0.025)	0.056** (0.026)	0.096*** (0.020)	0.064*** (0.021)
Marketing Treatment	0.044 (0.028)		0.033 (0.021)	
Constant	0.232*** (0.020)	0.277*** (0.021)	0.107*** (0.014)	0.139*** (0.016)
Observations	1777	1308	1777	1308
R-squared	0.01	0.00	0.01	0.01

PANEL B. TREATMENT ON THE TREATED EFFECT: IV

Length	12 months			
	Binary Outcome Dependent Variable: = 1 if Change in Balance > 0%	Binary Outcome = 1 if Change in Balance > 0%	Binary Outcome = 1 if Change in Balance > 20%	Binary Outcome = 1 if Change in Balance > 20%
Sample	All (1)	Commitment & Marketing Only (2)	All (3)	Commitment & Marketing Only (4)
SEED take-up	0.417*** (0.105)	0.232** (0.109)	0.402*** (0.080)	0.265*** (0.086)
Marketing Treatment	0.044 (0.029)		0.033 (0.022)	
Constant	0.232*** (0.020)	0.277*** (0.021)	0.107*** (0.014)	0.140*** (0.016)
Observations	1777	1308	1777	1308
R-squared	0.02	0.04	0.08	0.09

Robust standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

