Small changes, real impact:
Applying behavioral economics in asset-building programs

A report from the BETA Project
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Introduction

When was the last time you thought about how the details of your program affect your clients’ behavior?

Behavioral economics is the study of how people make decisions in a complex and textured world where details matter. It draws from the fields of economics and psychology, but brings a unique perspective that departs from each of these fields in important ways. Behavioral economics differs from standard economics because it uses a more realistic (and more complex) model for how we view people. It differs from psychology because it maintains a focus on institutions and the contexts in which decisions are made.

Over the last few years, the use of behavioral economics to inform program design has taken off in the asset-building community. Behavioral economics research suggests that situations of financial stress affect people’s decisions and actions in profound ways, making it difficult for them to attain financial stability and build assets. However, small adjustments can change individuals’ behavior.

While behavioral economics is a science, applying it in the field is still an art. How can the asset-building community best apply the lessons of behavioral economics to their programs?

The BETA Project

The Behavioral Economics Technical Assistance (BETA) Project is an initiative at CFED to build the capacity of asset-building programs that want to apply lessons from behavioral economics to their own program designs. In collaboration with behavioral design firm ideas42 and with funding from the Citi Foundation, we asked the field to send us their most pressing behavioral problems and chose three sites out of 99 applications. In 2013, the Project team applied ideas42’s behavioral diagnosis and design methodology to create and test a set of solutions aimed at behavior change at three partner sites:

<table>
<thead>
<tr>
<th>Service</th>
<th>Location</th>
<th>Problem Statement</th>
<th>Designed Solutions</th>
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<tbody>
<tr>
<td>Service</td>
<td>Location</td>
<td>Problem Statement</td>
<td>Designed Solutions</td>
</tr>
<tr>
<td>ACCION</td>
<td>TEXAS</td>
<td>Microlending</td>
<td>Redesigned statement with planning tools; email &amp; text reminders</td>
</tr>
<tr>
<td>Location</td>
<td>San Antonio, TX</td>
<td>Borrowers have difficulties making consistent, on-time repayments using the ACH electronic withdrawal system.</td>
<td></td>
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<tr>
<td>Problem Statement</td>
<td></td>
<td>Despite multiple payment options, clients in the Lease Purchase Program fail to pay their rent on time.</td>
<td></td>
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<tr>
<td>Designed Solutions</td>
<td></td>
<td>Monthly raffle with mailed reminders; late fee payment waiver</td>
<td></td>
</tr>
<tr>
<td>Financial Advising &amp; Product Integration</td>
<td>New York, NY</td>
<td>Low-income individuals sign up for accounts with affiliated credit unions during a financial education course, but do not fully utilize them.</td>
<td>Plan-making activities with a removable pouch and simplified account material</td>
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What we found at the three BETA Project partner sites is encouraging. Small changes to program design, inspired by behavioral economics, can have a significant impact on program effectiveness.
Moreover, many of the findings from the BETA project can be applied more broadly by the field:

- **Be preemptive.** Asset-building organizations often start engaging with clients only after a problem, such as a missed payment, arises. While in-person interactions with clients can be expensive, there are many earlier opportunities for engagement through other communication channels with clients.

- **“Buy” attention with incentives.** Incentives can be a powerful tool for behavior change, but not always for the reasons we expect. We often casually speak about how we need to “pay” attention—incentives can be a way of “buying” attention. Every day, there is a pile of things that we intend to do, and small incentives can move a given action to the top of that pile.

- **Promote action along with information.** Information alone rarely leads to behavior change. We often decide to do something, but fail to follow through. Organizations that seek behavior change should provide assistance and direct access to products and services to help clients reach their goals.

Beyond learning from our direct results at the three partner sites, our work through the BETA Project yielded interesting and important tips on how asset-building organizations can apply a behavioral perspective to programs and prepare their organization for change. Read more about our insights, starting with “Implications for the Field: Small Changes, Real Impact” on page 44.

In this report, we invite you to read about our process, go through the on-the-ground activities at each site, and learn about specific ways you can apply behavioral economics in your own program.

**Quick Reading: The BETA Project Brief**

Behavioral economics teaches us that attention is scarce. We think these results are worth paying close attention to. While this report should be considered the exhaustive guide to the BETA project, we have also prepared a short brief that provides highlights of the process, insights and results of the BETA project. The brief is available at http://cfed.org/assets/pdfs/small_changes_real_impact_brief.pdf.
Methodology: Behavioral Diagnosis and Design

The BETA project applies ideas42’s Behavioral Diagnosis and Design methodology to help identify the barriers that impede desired behaviors and outcomes. At each of our pilot sites, the BETA Project employed a four-stage problem-solving process: define, diagnose, design and test.

Taking a behavioral diagnosis and design approach in the asset-building field prompts program designers to:

- **Think about the context in which decisions are made.** Understanding the context of decision-making can change how we view the problem at hand and illuminate new pathways for solutions.
- **Target the end-user experience.** To understand how clients make decisions in reaction to their context, an organization must examine the process that clients experience, from when they enter a program to when the program achieves (or fails to achieve) the desired outcomes.
- **Look for small changes that can offer real results.** Behavioral solutions often impose only minimal direct costs compared to solutions like offering direct cash incentives or match dollars. However, before moving forward with solutions, it is important to also test them for effectiveness.

**Step One: Define the problem we are trying to solve**

Many attempted solutions fail because we are trying to solve the wrong problem. When we see people behaving in an unusual way, we often make assumptions about the problem. Economists assume that the problem is faulty incentives. Educators assume the problem is a lack of understanding. Marketers assume that the problem is knowledge about a program. But when we operate under these assumptions, we close down other potentially powerful areas of inquiry. That is why our first step is to re-state the problem to open our minds to all possibilities.

Crafting a problem definition is as much an art as a science—there is no step-by-step set of instructions to follow. The assumptions we make about people change how we approach behavioral problems. If we clear our problem statement of presumptions, such as an assumption about the intentions behind a client’s actions, we will be able to take people as they are and design solutions that work.

In re-stating the problem, we need to think

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**Defining in the BETA Project**

To articulate a behavioral problem that is free of assumptions, we drafted an initial statement of each problem and then asked ourselves three key questions to refine the statement:

1. What is the specific behavior we are aiming to improve?
2. Are there any underlying assumptions about what the solution might be?
3. Does the scope of the problem need to be widened or narrowed?

We looked for data, information and feedback from clients and employees to help us answer these questions. We worked on the problem statement until we felt that it was clear, which typically took several revisions.
about what program outcome or outcomes we are aiming to improve. The problem should be defined without any underlying assumptions about what the solution might be (e.g., ‘People do not know enough about X, so they are not doing Y’; this assumes that not knowing is the problem). The problem should also be stated so that the desired behavior change can be easily inferred (e.g., ‘People are signing up for the savings account, but are not saving; we want them to use the account to build savings’).

**Step Two: Diagnose the behaviors and contextual details underlying the problem**
Diagnosis is where we aim to uncover factors and contextual details that might be contributing to the behavioral problem identified during the define step. We look for places where small differences in contexts could have a real impact. Finally, we think about how behavioral economics can explain the behaviors we observe. It takes place as an iterative process for charting the decisions and actions an individual must take to reach the desired outcome, constructing informed hypotheses about the psychologies at play and looking for evidence in the field that helps us refine those hypotheses.

Behavioral diagnosis is rarely complete with one hypothesis, but requires multiple iterations. Additionally, behavioral diagnosis will very rarely yield a single, clear answer for why people are behaving a certain way. Our goal here is not to pinpoint a precise cause of a precise behavior, but to better understand the key “behavioral bottlenecks,” or places where human behavior may be preventing someone from reaching their goals within a given context.

It is worth noting that the hypotheses below do not necessarily apply to every client, nor are the hypotheses mutually exclusive—more than one behavioral bottleneck could exist, and at multiple points within the process. In addition, these are a set of hypotheses, not the set of hypotheses. There are likely other hypotheses that one could come up with that might explain the behaviors. This is a set of hypotheses that are based on our conversations, observations and behavioral expertise.

**Step Three: Design Solutions**
We design solutions that we believe will help break through the behavioral bottlenecks observed during the diagnosis phase. During the design phase, we generate creative ideas around potential solutions to our problem. We also iterate back to our diagnosis and tease out details about the specific behaviors and context that might lead to additional ideas. Design flows from diagnosis, but there is not a one-to-one correspondence
between diagnoses and designs. Instead, we try to design solutions that can effectively ameliorate the diagnosed bottlenecks.

Designing in the BETA Project

To start, we dreamed big and got creative. We started with the question, “How would we ameliorate this problem if we weren’t subject to constraints?” To optimize the exercise, we created an open environment for all ideas and built upon generated ideas by constantly asking, “yes, and...?”

We refined the initial ideas to 5-6 design concepts and worked with the sites to determine what we could realistically implement, considering potential effectiveness based on past research and feasibility within the project timeframe.

We then created actual prototype materials for internal testing and client feedback when possible. We also developed detailed plans for implementation including process charts and staff guides.

Step Four: Test designed solutions

Behavioral economics shows that theory can be an imperfect guide and does not always match the real world. In order to make evidence-based decisions, we need to collect and analyze the evidence. Whenever possible, we run randomized controlled trials (RCTs) of our solutions. This allows us to make sure that our theory-driven designs have the desired effects in the real world.

It is worth noting that most field experiments do not yield satisfactory results. In fact, those that have had their impact rigorously measured have been shown to fail more often than not. Rigorous evaluation methods, especially the use of randomized controlled trials (RCTs), are the best way of determining if a solution was effective. In an RCT, only randomly-selected individuals (the treatment group) get the solution(s), while others (the control group) do not. Successful solutions in an RCT can be scaled up to other sites, provided that the diagnosed behavioral bottlenecks are similar across both sites.

However, not every new organizational procedure needs validation from an RCT. RCTs require limiting the solutions to a treatment group, careful data collection and analysis by trained statisticians. When these three requirements can’t be met, a simple comparison of outcome measures before and after a solution is implemented, along with feedback from clients and staff, can provide valuable information for strategic decision-making.

Testing in the BETA Project

To test the designed solutions, we first worked with the sites to identify outputs to measure and metrics for success. We then designed a custom experiment for each site. When sites have the ability to limit the solutions to a treatment group, collect rigorous data and work with our team on statistical analysis, we set up a randomized controlled trial. When these three conditions were not possible, we assigned clients into treatment and comparison groups. After analyzing the quantitative data, we also collected qualitative data (when possible) through interviews to better interpret the quantitative results.
Partner Site: Accion Texas

Helping Borrowers to Make Payments on Time

Accion is one of the largest microlenders in the country, lending to low-income consumers who are often shut out of traditional credit channels. Accion Texas provides individual business loans from $500 to $50,000 for startups and up to $250,000 for established businesses. All loan funds repaid to Accion are reinvested in the community.

Defining the Problem

The original problem statement provided by Accion was the following:

For individuals with credit scores lower than 522, having separated personal and business checking accounts almost doubles the probability of repayment in comparison to individuals that only have one checking account or have no bank account at all. Accion hopes to help the underbanked borrowers improve loan repayment rates so they can build or improve their credit and move up the asset-building chain.

When first exploring the original problem statement with Accion, we questioned whether the loan repayment rate was the most appropriate outcome to be focusing on. Compared to the industry average of 3.6% in 2011, Accion’s charge-off rate of 5% in 2012 did not seem problematic, especially when the vast majority of Accion’s borrowers are those who would not qualify for a loan through conventional credit channels. However, an Accion member stated that the portion of the organization’s portfolio that was at risk during 2009-2010 was as high as 30% (loans 30 days or more past due, including loans that have gone through extensions, restructuring or charge-offs). This indicated that more borrowers might struggle with on-time loan repayment than the charge-off rate suggests.

According to Accion staff members, Loan Officers and the Collections Team typically start contacting borrowers once they are five days past due. Not only is the amount of staff resources dedicated to working with these borrowers significant, but there are consequences for borrowers as well. Borrowers may be charged late and non-sufficient funds (NSF) fees, and may be at risk of damaging their credit score if Accion reports their delinquency. This led the BETA Project team to believe that the problem statement should focus on borrowers’ ability to make on-time payments.

1 For more information, visit http://www.federalreserve.gov/releases/chargeoff/.
We also found that segmenting borrowers based on their credit scores or banking status may not allow for an accurate diagnosis of the problem. First, these characteristics were observed during the time of the application, and the team did not know how these borrower characteristics might change throughout the three-to-four year term of the loan. Second, segmenting by credit score and banking status implies that these characteristics may cause the low repayment rate. It also limits the potential scale of our project by focusing only on a subset of borrowers, when there may be solutions that could impact all borrowers. We recommended removing these restrictions on the scope of the problem by credit score or banking status and expanding it to all borrowers.

Finally, we noted that Accion’s social mission is to help its borrowers achieve long-term financial stability and growth, which can be facilitated by encouraging them to build credit and gain familiarity with the conventional banking system. Accion’s borrowers are given the opportunity to accomplish both by making consistent and timely loan repayments using a bank account for automatic Automated Clearing House (ACH) withdrawals.

The final problem statement changed the focus to preventing current borrowers from becoming past due and entering the collections process, rather than on borrowers who were already past due on their repayment. Additionally, we focused on those borrowers who are currently on the ACH auto-withdrawal system (which accounts for 85% of Accion’s borrowers), rather than limiting the problem to those who had been already dropped from the system.

Ultimately, the organizational problem we addressed with Accion was:

*Borrowers have difficulties making consistent, on-time repayments using the Automated Clearing House (ACH) electronic withdrawal system.*

**Behavioral Diagnosis**

In conducting the behavioral diagnosis with Accion, the BETA Project Team identified four potential behavioral barriers (“bottlenecks”) that may prevent borrowers from paying their rent on time.
Bottleneck 1: Borrowers may forget to take the necessary steps to ensure that there are sufficient funds in the ACH account at the time of withdrawal.

Because Accion requires borrowers to use automatic ACH withdrawals for payment, borrowers need to remember to deposit sufficient funds before the payment date, and to make sure that the balance remains sufficient until the ACH withdrawal occurs. Three factors make this difficult.

First, borrowers may have the payment due date at the top of their minds and forget that they need to have money available in their accounts prior to the due date. They may be anchored to the salient payment date as the deadline to take action, when it is actually too late to make a deposit. They may be experiencing financial stress as small business owners, with cognitive burden resulting in greater propensity to forget. Second, even if sufficient funds have been deposited, borrowers also need to remember to avoid making any withdrawals from the account before Accion’s ACH withdrawal is processed. Borrowers may wrongly perceive that the action of “depositing” is same as the end goal of “paying,” leading them to stop actively managing their account balances once the deposit has been made. Finally, if a borrower cannot make a payment through ACH for some reason, the borrower is required to inform Accion at least seven business days prior to the payment date—a requirement that is difficult to remember.

While Accion’s borrowers receive monthly statements, these statements may not act as effective reminders. To make things even more difficult, the statements are sent out to borrowers at quasi-random times that depend on the availability of the Accion staff. Some borrowers receive statements two weeks prior to their payment date, while others receive them only a few days prior. If the statement comes too early, the borrower may forget about it by the time an action is required. Alternatively, if the statement comes too close to the payment date, it may be too late for the borrower to take action.

It is a universal human characteristic to forget, even when the consequences are large. We have limited cognitive capacity for attention at any given moment, and tend to remember the things that are salient to us. However, what is the most salient to us is not necessarily the most important or beneficial information. Additionally, even though we may remember the end goal, we may forget the preceding steps necessary to achieve it.

Sending clients a reminder is a way to help counter forgetting. It is important for reminders to be both salient (would stand out in the client’s mind) and well-timed (received at a moment when the client is able to take action).

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**Bottleneck 2: Borrowers tend to stick with the default payment date, even though it may not be ideal.**

In interviews, Accion staff members mentioned that changing the payment date was one of the most common loan adjustments that borrowers perform. However, many borrowers do not make the change until they have encountered an issue with payment, even if they already know that the previous payment doesn’t work.

When a borrower signs the closing documents, the first payment date is automatically set as the thirtieth day from the closing date, and the subsequent payments fall on the same date every month thereafter. The default loan payment date may not be ideal in the context of the borrower’s broader cash flow cycles. For example, if a borrower’s cash inflows typically occur too close to the payment date, the borrower may not have enough time to deposit the cash into the ACH account before the automatic withdrawal. Alternatively, if the cash inflow occurs too early in the loan payment cycle, the borrower may not plan properly or have difficulty maintaining enough funds until the payment date.³

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**Status Quo Bias**

Status quo bias can be observed in diverse realms, ranging from our daily habits to brand allegiance to health plans. Researchers share an anecdote of a colleague who chose the same lunch every day for 26 years: a ham and cheese sandwich on rye. On March 3, 1968, he ordered a chicken salad sandwich on whole wheat, and for the subsequent 20 years, ate chicken salad for lunch every day.

An analysis of actual choices on health plan enrollment confirms a significant status quo bias despite high importance and low transition costs. In addition to a very low rate of transfer among plans, the study found that existing enrollees continue to elect the incumbent plan rather than newer plans much more frequently than new enrollees.

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We often refuse to give up our current way of doing things in order to adopt a new way, even when the benefits associated with the change outweigh the costs. This may be because we have not yet faced difficulties with the current method, or because we do not realize that better methods exist. However, it may also be driven by status quo bias, which leads us to overweight the potential losses and underweight the potential benefits of a change, even when the benefits and the losses appear clear to an outside observer. To address this, a solution should not only actively encourage borrowers to assess their cash flow cycles, but nudge them to act upon it immediately.

**Bottleneck 3: Borrowers may be deterred by barriers associated with making deposits.**

Because Accion requires automatic ACH withdrawals for loan repayments, borrowers need to deposit sufficient funds before their payment dates. A borrower may think of depositing as a single action, but it is actually the result of many intermediary decisions and actions that need to be completed before the actual deposit can be made (i.e., borrower needs to set up automatic deposit or make in-person deposits at a branch or ATM). For frequent users of the banking system, we may think these hassle factors are trivial. However, for those who are previously unbanked,

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³ Although a borrower could pay early online using a credit card or a check, this option may not be salient. Or, the borrower may forget the requirement to notify Accion at least seven days prior to the ACH withdrawal if an early payment is made. (If Accion is not notified, the ACH withdrawal will occur regardless of the early payment.)

some of these seemingly trivial decision and action points may be consistently impeding them from making timely deposits. Accion does not formally discuss with borrowers which banks or accounts will work best for them.

It is easy for us to overlook certain hassle factors due to our inattention or overconfidence. For example, although a borrower may be familiar with the banking system, s/he may not feel the need to plan in advance to make a deposit. However, when the time to act actually comes, the borrower may find that s/he does not have a car to drive to the bank, or has misplaced necessary documents.

The psychological effect of hassle factors may be reduced by helping borrowers develop a step-by-step plan for depositing funds, so that the hassles associated with making a deposit seem less overwhelming to the borrower. Another option is to try to get rid of as many elements of the hassles as possible.

### Bottleneck 4: Borrowers may lack the intention to use the ACH account.

Accion requires auto-payment through the ACH system when a new borrower receives a loan. However, the method does not necessarily translate into automatic and successful use of the method by all borrowers. Many borrowers have dropped off from Accion’s default ACH payment method.\(^6\)

It is possible that some borrowers lack any real intention to use the ACH system, even though they sign up for the ACH accounts during the application process. In fact, they may not be choosing to use the ACH system at all. Borrowers may be asking themselves during the application process, “Do I want to sign up for the ACH account so that I can be approved for the loan?” as opposed to “Is the ACH a realistic method of payment for me?” Although the answer is “yes” in both instances, the choice the borrower is making is quite

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6 According to an analysis performed by Accion, although all borrowers are required to have an ACH account to be approved for an Accion loan, only 86% of the current borrowers are on the automatic ACH withdrawal system.

different. We must be careful not to assume that we know the decision that borrowers are making, solely based on the actions we observe.

In the current application process, there is not a clear moment when borrowers are actively encouraged to evaluate whether the ACH system is an appropriate/realistic method for them. Once the repayment starts, the borrowers may find themselves unprepared to deal with both the behavioral and structural barriers that prevent them from successfully using the ACH system. A solution could provide borrowers with tools that help them use the ACH system successfully.

Designing Solutions

With our behavioral diagnosis in mind, the BETA Project team worked with key Accion staff to brainstorm ideas for solutions and make decisions on which design concepts to move forward with and how to execute the selected designs. Decisions were based on discussions with various stakeholders related to the standard loan program including staff from various departments, borrowers and management. The main considerations at play when making decisions on what to test were whether or not the design concept was feasible given the BETA Project timeframe and the technology available to implement the design concepts. The following solutions were implemented and tested at Accion.

Redesigned Statement with Planning Tool

The BETA Project Team redesigned the monthly statement Accion sends out to its borrowers and included a planning tool for making deposits on a removable sticky note. Unlike the original statement, the new statement includes Accion’s customer service line at the top for ease of access, a picture of Accion’s CEO to build trust and reciprocity, the emphasized recommended date to check for sufficient funds, a simplified version of the borrower’s payment

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8 See Appendix 2.
status, a post-it note to help plan the deposit of funds, and clear, step-by-step instructions if the borrower wants to change their method of payment.

In redesigning the statement, the BETA Project team was mindful of the limitations of both Accion and the third party vendor that handles the printing and mailing the statements. The Accounting Team at Accion was asked to include a few extra fields in the weekly list of borrowers that it compiles and sends to the third party vendor. We also coordinated with the third party vendor to ensure that the new statement was printable and feasible for mailing.

**Email and Text Reminders**
Email and text reminders were created for Accion and sent out 10 and 3 calendar days preceding the payment date, respectively. If either of those days fell outside of Accion’s business hours, the reminders were sent on the closest preceding business day in order to comply with laws prohibiting lenders from contacting borrowers outside of business hours. Accion used ClickDimensions to manage the distribution of emails and Twilio for the distribution of text messages.

![Image of a friendly reminder email]

**Test Methodology and Results**

To evaluate the effectiveness of the designed solutions, the BETA Project team worked with Accion staff to conduct a randomized controlled trial (RCT), in which we randomly assigned borrowers into two groups: (1) the control
group that did not experience the solutions, and (2) the treatment group that experienced the solutions. The RCT allowed our team to statistically evaluate whether the solutions were effective at nudging borrowers towards making their loan payments on time.

For the experiment, Accion’s standard loan borrowers were divided into two groups: a control group of 899 borrowers that did not see any changes in Accion’s services, and a treatment group of 909 borrowers. However, due to some loans being paid off throughout the test period, we ended up with 730 borrowers and 740 borrowers in the control and the treatment groups, respectively, by the end of the testing period.

**Experiment Results & Analysis**

Our evaluation indicated that the solutions did not have a statistically significant effect on the overall sample when it came to paying on time. However, we found that we had a significant effect on borrowers with smaller payment amounts due, who might represent a “riskier” borrower population and therefore be worth targeting for on-time payment. We also found a lower average number of total non-sufficient funds (NSF) fees charged to borrowers in the treatment group—especially for those with smaller monthly payments.

**Results for Overall Sample**

First, we looked at the overall sample in the aggregate, including all borrowers in treatment and control groups. We found that although we

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9 When assigning borrowers to control and treatment groups, we employed a method known as stratification. This method ensures that individuals with select categories of traits are evenly split between the control and the treatment group, and thus increases the statistical power of our experiment. We took this approach because of our belief that at Accion, these traits may inherently drive the metrics we want to measure. The traits—or “strata”—across which we randomized were: (1) whether the borrower previously had an interaction with the Asset Protections team, indicating that they might be a “problematic” borrower; (2) which regional office originated the loan, reflecting differences in the borrower-lender relationships at different regional offices; and (3) the borrower’s auto-review score (AR Tier), which is used as an indicator of the borrower’s financial characteristics during loan origination.

10 For discussion on preparing for the implementation of the experiment, as well as the minor logistical disruptions faced during the implementation, please see Appendix 4.

11 We discuss the data sources and analytical methods in Appendix 5.
may not have had an impact on the overall on-time payment rate, we may have reduced the number of borrowers who are charged NSF Fees.

In the overall sample, on-time repayment, the number of late fees and interactions with the Asset Protections team did not change. During the testing period, 81% of payments due were paid on time, and 85% were paid within two days of the due date. Overall, we observed only a small effect of the solution on the treatment group: 82% of payments for the treatment group were made by the due date, compared to 81% for the control group. The differences between the two groups were not statistically significant.

The numbers of late fees charged to borrowers were also similar across the two groups in the overall sample. Borrowers are charged a late fee if their payment has not been completed within five days of the due date. During the testing period, 81% of borrowers were never charged a late fee. We found that the average number of late fees charged per borrower during the testing period was 22% lower in the treatment group than in the control group (0.483 in the control group vs. 0.375 in the treatment group), but this difference was not statistically significant.12

Finally, we looked at Asset Protection Activities because more on-time payments could theoretically result in fewer interactions between the borrower and the Asset Protection team. However, we did not find any significant differences between control and treatment groups. We looked at the average number of correspondence activities between the Asset Protection Team and a borrower during the testing period (two messages were counted separately even if they were regarding the same topic). The control group averaged 1.56 interactions, while the treatment group averaged 1.50 interactions (not statistically significant). Although the treatment group had a lower percentage of borrowers who had at least one Asset Protection Activity during the testing period, this difference was not statistically significant (28.3% in the control group vs. 26.5% in the treatment group).13

However, fewer NSF Fees were charged to the treatment group. Interestingly, the solution may have reduced the number of non-sufficient funds (NSF) fees incurred by borrowers. On the due date, NSF Fees are charged immediately to a borrower if there are not sufficient funds for the transaction to go through. Of the total number of borrowers, 10.4% were charged at least one NSF Fee during the testing period. We found a positive, statistically significant effect of the treatment on the assessment of NSF fees—the average number of NSF Fees charged during the testing period was 24% lower in the treatment group than in the control group (0.171 in control vs. 0.130 in treatment; p<0.10).13

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12 Borrowers who were never charged a late fee were counted as having a total of zero late fees.
13 Borrowers who were never charged an NSF Fee were counted as having a total of zero NSF Fees.
Results for Borrower Subgroups by Size of Monthly Principal Payment\textsuperscript{14}

With mixed results in our overall sample, we were interested in finding out whether our solutions might have had a stronger impact on a subgroup of borrowers. One compelling way to analyze this was to examine differential effects across borrowers who had larger or smaller payments due. We divided borrowers in quartiles using the size of each month’s principal payment as follows:

<table>
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<th>2\textsuperscript{nd} Quartile</th>
<th>3\textsuperscript{rd} Quartile</th>
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<td>$544.26 - $3341</td>
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<td>1,656</td>
<td>1,656</td>
<td>1,656</td>
<td>1,657</td>
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</tbody>
</table>

This quartile included almost half of borrowers with the two lowest tiers of auto-review scores (an indicator of credit-worthiness) and one third of borrowers in the lower half of Adjusted Gross Income—suggesting that this group may be “riskier” than the other quartiles of borrowers.

Repayment was timelier among treatment group borrowers with the lowest principal payments. In the lowest quartile of principal amount due, we found that more payments from the treatment group were made by the due date,\textsuperscript{15} and this difference persisted throughout the nine days after the due date. The treatment group had about a 4% higher payment rate on the due date, and the size of the difference peaks on the second day after the due date, with the treatment group having 6% higher instance of payment on the second day after the due date.

\textsuperscript{14} Other subgroups categories analyzed were payment method (ACH or non-ACH), Auto Review scores, income levels, education levels, and contact information on file (email address and/or cell phone numbers). The results from these subgroup analyses were not consistent and require further analysis.

\textsuperscript{15} In Quartile 2, a lower proportion of payments was made on time by the treatment group. However, unlike with Quartile 1, this difference did not persist, as it quickly disappeared within two days from the due date.
Payments Made on Due Date
(By Monthly Payment Quartiles)

Proportion of Payments Made on Due Date

<table>
<thead>
<tr>
<th>Quartile</th>
<th>Control</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartile 1*</td>
<td>60%</td>
<td>55%</td>
</tr>
<tr>
<td>Quartile 2*</td>
<td>70%</td>
<td>65%</td>
</tr>
<tr>
<td>Quartile 3</td>
<td>80%</td>
<td>75%</td>
</tr>
<tr>
<td>Quartile 4</td>
<td>90%</td>
<td>85%</td>
</tr>
</tbody>
</table>

Monthly Principal Payment, By Quartile

*Difference is statistically significant at p<0.10.
Fewer NSF Fees were charged among borrowers with the lowest principal payments.
Among borrowers in the first quartile, 84% were never charged an NSF fee. Between the treatment and control groups in the first quartile, we observed a statistically significant difference in the average number of NSF fees charged for borrowers who were charged at least one NSF fee. We should be wary of this result as the sample size is quite small.\(^{16}\) The average number of NSF fees charged to treatment group borrowers was 34% smaller than the control group—a greater difference between treatment and control than in the overall sample.\(^{17}\)

![Average NSF Fees Charged (By Monthly Payment Quartile)](image)

The treatment group had fewer late fees charged among borrowers with the lowest principal payments.
In the first quartile, 70% of the borrowers were never charged a late fee. We observe a statistically significant difference in the average number of late fees charged for borrowers who were charged at least one late fee. However, again, we should be wary of this result as the sample size is quite small.\(^{18}\) In the first quartile, the average number of late fees charged per borrower in the treatment group was 32% lower than the control group, and this difference was statistically significant (0.913 in control vs. 0.624 in treatment; \(p<0.05\)). This strengthens the evidence that we may have had a significant impact on this subgroup.

Among borrowers with the lowest principal payments, the number of interactions with the Asset Protections Team did not change.
In the first quartile, a borrower in the control group averaged 2.4 interactions during the testing period, while a borrower in the treatment group averaged 2.2 interactions (not statistically significant). The treatment group had a lower percentage of borrowers who had at least one Asset Protection Activity during the testing period, but this difference was not statistically significant (37% for the control group vs. 40% for the treatment group).

\(^{16}\) We had a sample size of 188 borrowers, consisting of 86 borrowers in the treatment group and 102 in the control group.
\(^{17}\) Specifically, we saw an average number of NSF fees per borrower of 0.300 in control vs. 0.197 in treatment \((p=0.10)\).
\(^{18}\) Here we had a sample size of 336 borrowers, consisting of 162 borrowers in the treatment group and 174 in the control group.
What Did We Discover?

At Accion, we suspected that many borrowers were missing loan payments for a simple reason—some people were forgetting to take the right step at the right time. This suggested a simple (and low cost) solution: reminders. We worked with Accion to implement a reminder system and redesigned their communications in order to encourage action. Our efforts yielded results. While there were not significant findings in all of our metrics, we observed a decrease in NSF fees and an increase in on-time payments among the borrowers with the smallest payments.

Early engagement with borrowers through simple communications, including reminders, has the potential to help build good habits and encourage repayment. As organizations (including Accion) look to expand the range of borrowers they serve, they should also expand the range of communications they send.
Partner Site: Cleveland Housing Network

Encouraging On-Time Rent Payments

Cleveland Housing Network (CHN) is the largest nonprofit, single-family affordable housing developer in the United States. CHN builds vibrant neighborhoods and strong families through healthy affordable housing. The organization also offers extensive programs and services to help low- and moderate-income families build assets, reduce housing expenses and improve their personal financial situations.

Defining the Problem

The original problem statement provided by CHN was as follows:

The majority of residents come to CHN’s office to pay rent. This inconvenience causes late/missed payments, potential court costs and evictions, and missed opportunities for purchasing their homes. We hope to remove the barriers that cause clients to choose the in-person method rather than online. We believe there could be numerous barriers, [such as poor marketing, not enough proactive interaction, no access to high-speed internet computers, cumbersome or unintuitive systems, and not having or fearing to use bank accounts].

The initial problem statement made several presumptions that could limit the possibilities for diagnosis and design. First, the statement assumed that poor marketing, inconveniences, and lack of access to technology or suitable accounts were the major contributing factors to low payment rates, and that online payment was the solution. Second, it presumed that if more people signed up to pay rent online, they would be more likely to pay their rent on time. This second presumption is hidden, meaning it is implied rather than directly stated.

To refine the problem statement so that it was clear of presumptions and reflected the core organizational problem, we talked to CHN management to clarify whether signing people up for online payment was the ultimate goal. Management indicated that on-time rent payment was the goal, and that online payment was viewed merely as a means to reach that ultimate goal.

We then checked the second assumption by looking for evidence to better understand the nature of the problem. We asked for payment data in January 2013 (the preceding month) to compare the percentage of on-time payments among those residents who used the most common payment mechanisms. The data showed that 12% of residents who paid in-person paid on time, compared to 9% of those that paid by mail and 10% of residents that paid online.
These data on payment, though limited, suggest that the problem was broader than its original formulation suggests. The January payment data reveals that residents who use online payments are no more likely to pay rent on time compared to those who use other methods such as mail. Additionally, a substantial number of people who paid online continued to pay rent late. This led us to believe that while online payment may be one way to limit late payment, there may be factors other than choice of payment method that prevent residents from paying rent on time.

The revised problem statement eliminated the original presumptions and presented the team with a different target for change: rather than focusing only on online payments, we were now attempting to encourage residents to pay their rent on time through any payment method available.

The problem we ultimately addressed with CHN was:

*Despite multiple payment options, clients in the Lease Purchase Program fail to pay their rent on time, resulting in fees, potential eviction and missed opportunities for purchasing their homes.*

**Behavioral Diagnosis**

In conducting our behavioral diagnosis with CHN, the BETA Project Team identified five potential behavioral barriers (“bottlenecks”) that were likely preventing Lease Purchase Program residents from paying their rent on time.

**Bottleneck 1: Residents focus on their finances narrowly.**

CHN residents and staff often listed prioritization of bills or other expenses over rent as being a reason why residents do not pay rent on time. Respondents who have made this choice in the past say that during a crisis, they have to pay bills in the order of the immediate severity of the consequences (i.e., pay electricity bill when about to get service cut off).

A key finding of behavioral economics is that our mental capacities are limited. One of our limited capacities is attention. We can only attend to so many things at a time, despite the heavy demands the world places on

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us. Rather than pay attention to the world at large, we often focus our attention on our local environment, or our most immediate needs.

Research on how people make bill payment decisions finds that people, especially those who are experiencing financial instability, may pay bills in a way that costs them more money over time or puts them at greater risk for additional instability (such as a loss of shelter). In many ways, financial instability is a cognitive burden. Managing your finances is an easy task if your income is large, but can become overwhelming if your income barely covers expenses.

People may focus their attention on one bill at a time, or they may focus on the most immediate bill, or they may focus on paying off the most number of bills, rather than trying to manage strategies for their budget as a whole or focusing on the most important bills (e.g., shelter or car to get to work). While we cannot remove the other mental burdens of poverty, we can design processes to be as simple as possible to make it easier for residents to prioritize rent payment.

**Bottleneck 2: Residents consider their rent due date to be the tenth day of the month—the end of the grace period—rather than the first of the month.**

While the rent to CHN is due on the first of the month, many residents choose to pay it on the tenth, the day before a late payment is applied. In many respects, this is a good decision – if there are no negative consequences to paying a few days late, why not use the grace period preceding a fine?

However, many residents develop a flawed understanding of the rent payment process. Rather than thinking of the rent as due on the first, with a 10-day grace period, they think of it as simply due on the tenth. This was apparent in our conversations with clients who verbally referred to the rent as being due to the tenth, and was reinforced by the staff. In fact, the property managers made a special note of this phenomenon in our conversations with them. Behavioral economics refers to this process of changing a reference point as anchoring.

Thinking that the rent is due date is on the tenth rather than the first can have negative consequences for residents. First, residents have less capacity to respond to external shocks. A resident who has an unexpected loss of income (such as missing a shift due to illness) or sudden expense (such as a medical bill) will have less capacity to adapt their finances in response. However, had they intended to pay the rent on the first, they may have had enough time to pull together the money for rent.

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Second, residents lose the buffer they need to cope with mistakes they make. For example, take a resident who is paid on the eleventh of the month. On the tenth, they will report that they have not received their wages and do not have sufficient funds to pay their rent. As such, they must delay payment and accept the late fee. However, if they are always paid on the eleventh, they may also have been paid on the twenty-eighth, three days before the actual date the rent was due. If they planned to pay the rent on the first, they could have compensated for any error in judgment. A solution could help make the grace period effective by resetting residents’ anchor point to the first of the month.

**Bottleneck 3: Residents do not respond to the $25 late fee.**

Many CHN residents we talked to thought of the late fee as a minor cost. They accepted that they had paid the fine on multiple occasions, but did not think that it contributed a substantial financial burden over the rent payment due. For someone paying the median rent ($500), the additional fee does not seem like much. The difference between paying $500 and $525 seems trivial—even though it adds up over the cost of the year.

This is a cognitive error often exploited by car salesmen, who will offer small additions right before the sale—why not pay a just a tiny bit more to get heated seats? The price is trivial, compared to the price of the entire car. However, these prices can add up in a way that people have difficulty conceptualizing. If the price of heated seats (usually around $2,500) was presented out of context, we would find it much harder to justify the purchase. Similarly, we would not be upset about a $25 late fee attached for late payment of rent, even though we would find the same fee outrageous on a $75 telephone bill.

Because the fine “seems” to be low, it lacks power as a disincentive. But fines have another drawback—they change the nature of the transaction. Internal motivation (to be a good resident) is replaced by external motivation (to avoid the fine). These motivational systems effectively run on different tracks. Once someone conceptualizes a decision as a cost-benefit analysis, any internal motivations become irrelevant. A resident who takes care of their property and pays their rent late will likely think of themselves as a “good” resident—they waited a few days to pay their rent, and duly paid the “cost” of their tardiness. However, if there were no fee, it’s possible that they would have paid it on time; they don’t want to pay late and compromise their identity as a “good” resident.

Potential design solutions could increase residents’ response to the late fee by divorcing the presentation of the rent and fee payment, so residents do not make the comparison. Alternatively, design solutions could seek to create feelings of obligation for residents. For example, providing residents with small gifts could re-establish a personal relationship. As a consequence, residents may feel more obliged to pay rent on time.

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Bottleneck 4: Residents choose to prioritize other bills.

While CHN staff generally believes that rent should be the highest priority bill for residents, residents often disagree. Some prioritize other bills, such as car repairs, or prioritize bills by level of immediate consequences.

From a behavioral perspective, the resident has a choice: should they pay to repair the car immediately (and miss their rent payment) or take the bus for few weeks?

In some respects, this constitutes an emergency that justifies spending the rent money, an unexpected shock to their finances. In other respects it does not, and they should prioritize their rent, even if it is inconvenient for several weeks. Their decision will ultimately depend on how they value the consequences. How much do they value a shorter commute versus fulfilling their responsibilities as a renter, and moving on the path to homeownership?

Potential design solutions could attempt to convince residents that rent payment needs to be a priority. One method to do this is through direct communications. Additionally, there are opportunities to create small changes to the context in which residents make decisions that change how they evaluate their decision.

Bottleneck 5: Residents are not aware of, or do not act upon, the option of online payments.

CHN staff told us that they had informed residents of the option of online payment through multiple avenues: in-person, on the website, in the handbook and in the newsletter. However, several residents claimed that they were not aware of the option and, had they been made aware, would be using it.

It is likely that these residents heard or read about the option to pay online in the past. However, the information is not communicated to them in a way that encourages them to take action. They could have read about the option, formed an intention to sign up for online payment, but did not follow through. Perhaps they were busy, or simply didn’t have access to a computer at that point in time. Because the option was not communicated to them at a moment where they could take immediate action, they eventually forgot about the option altogether.

Potential design solutions could inform residents about the online payment option in a vivid and salient manner. Additionally, design solutions should place the communications in a context where residents could register immediately.

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Bottleneck 6: Residents do not understand the likely consequences of non-payment.
The road to eviction is long and winding. From the perspective of the resident, many of the steps in the process may be unclear. Furthermore, progress on many of the steps on the path toward eviction proceedings are based on subjective calls that can be made by the property manager, eviction counselor or other CHN staff.

This has two ramifications. First, it opens the potential for “strategic” interactions between the resident and CHN. The resident may try and hold out on paying the rent, knowing that it will take a long time to go through the eviction process. The resident can also attempt to demonstrate financial hardship, in which case it is possible for them to get assistance with payment. We do not focus on this, because it is largely outside the focus of the BETA Project. The potential for “gaming” the system involves weighing the costs and benefits of such a choice, and making the conscious decision not to pay. This may well be the case for some residents, but it does not explain the whole picture.

There is another likely reason that is behavioral in nature: residents have a biased estimate of the likelihood of eviction. Residents share information socially, including information about the eviction process. However, by definition, those who have avoided being evicted will still be in the CHN system, while those who have been evicted will have left. This leads to a selection bias—anyone a resident meets through CHN has not been evicted, by definition. A resident who asks their network about the process will find that most residents who have been threatened with eviction have overcome it.

This couples with the behavioral tendency towards overconfidence. People often assume that the worst case scenario will not happen to them and often fail to plan for adverse events. When problems strike, we are not prepared for them. Potential design solutions could reduce the complexity of the eviction process, or communicate with residents in a way that de-biases them from their current beliefs.

**Designing Solutions**

With our behavioral diagnosis in mind, the BETA Project team worked with key CHN staff to brainstorm ideas for solutions and make decisions on which design concepts to move forward with and how to execute the selected

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designs. Decisions were based on discussions with various stakeholders related to the Lease Purchase program including staff from various departments, property managers, residents and management. The main considerations at play when making decisions on what to test were whether or not the design concept was feasible given the BETA Project timeframe and CHN’s staff capacity, and the potential negative risk of unintended consequences for residents if a design concept was executed. The following solutions were implemented and tested at CHN.

**Monthly Raffles from April to July 2013 with a Grand Prize Drawing in July**

At the end of March, residents in the test groups received a letter from CHN announcing a new raffle program, *Play for Your Purse, Pay by the 1st.* Residents that paid rent by the first of the month were automatically entered into a drawing for one of two $100 cash prizes each month. Additionally, each time a resident paid on time, they were entered into a grand prize drawing held in July for free rent in August.

**Monthly Reminders about the Raffle**

In the months following the initial raffle announcement letter, residents received reminder mailings approximately five days before the first of the month. The content in the reminders reinforced the desired behavior of paying by the first and highlighted the raffle prizes. The May reminder was a refrigerator magnet that served as a more “permanent” reminder that could be placed in a visible location. In June, a postcard with the same graphic as the postcard on the front and a quote from one of the raffle winners was sent out. The final reminder was sent in July as a postcard with a modified graphic that announced the grand prize drawing.

**Emergency Late Payment Fee Waiver**

The BETA Project team designed waivers (with feedback and approval from CHN) that were distributed to residents by mail. Residents received a letter introducing the waiver program and communications reminding them of the solution. While residents were encouraged to turn in the physical waiver in order to avoid late fees, an additional field was added to CHN’s data systems to allow staff to track whether a waiver had been used. This made

24 See Appendix 6.

25 Of note, all Lease Purchase Program residents were eligible for the waiver, but for the BETA experiment, we only sent mailings and communications about the waiver to residents in the treatment group. The BETA Project team worked with CHN to develop a strategy for fielding resident questions about the waiver.
“cheating” the waiver system (for example, by creating photocopies) impossible. Additionally, it allowed the control group to participate in the program if they become aware of it. We viewed this solution as the most “high risk/high return” of our suggestions. Incorporating the concept of scarcity has been a powerful solution in many contexts. However, we recognized that the waiver could inadvertently activate the concept of “plenty” if residents interpret the waiver as being an additional waiver, on top of CHN’s regular waiver issues. As such, the details of the precise language used to introduce the waiver were carefully considered.

**Test Methodology and Results**

To evaluate the effectiveness of the designed solutions, the BETA Project team worked with CHN staff to conduct a randomized controlled trial (RCT), in which we randomly assign borrowers into groups: (1) the control group that does not experience the solutions, and (2) the treatment group(s) that experiences the solutions. The control group of 611 residents did not receive any information on either the monthly raffle or waiver. The first treatment group of 425 residents only received information about the monthly raffles (raffle only group). The second treatment group of 431 residents was assigned to receive information about the monthly raffles and the late fee waiver (raffle and waiver group).

We did not conduct a test of the waiver on its own. Our diagnosis suggested that the waiver could have two potential effects on rent payment: it could cause CHN residents to re-evaluate their choice of when to pay their rent, or it could reduce the disincentive to pay on time. We mitigated this in how the waiver was designed and communicated to residents, but we also decided to test the waiver on a small sample of resident who were also receiving the raffle (raffle and waiver group). Isolating the communications about the waiver to the second

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treatment group allowed the BETA Project team to look at whether or not the waiver would have a negative effect when rolled out alongside the raffle.27

While only residents in the test groups received the communications about the raffle and the waiver (if applicable), all residents that paid on time were entered into the raffle and were eligible for a waiver to maintain fairness across all Lease Purchase Program residents. Residents from the control group simply were not alerted of either solution. If a resident from the control group was selected in one of the raffles, they were discreetly notified of their win. Similarly, if a resident from the control group asked about the waiver, they were discreetly issued a copy.

Experiment Results & Analysis28
In our evaluation, we found a large overall effect for the raffle and reminders, which effectively doubled on-time rent payment. While the effects of the raffle attenuated over the course of the month, we still observed a small effect at month’s end. The effect was particularly strong on individuals whose primary source of income was Supplemental Security Income (SSI). The group who received the raffle and the waiver saw an increase in on-time payment, but no long-term increases over the control group.

The raffle doubled on-time payment.
Overall, the raffle treatment increased the likelihood that an individual who had not paid would pay on a given day by 9% (p<0.05). Zooming in on individual dates, we saw that this effect was especially strong at the beginning of the month. Only 8% of the control group had paid their rent by the third of the month, while 15% of the raffle group had, a difference of 6% (p<0.01). However, this difference attenuated over the course of the month. By the thirteenth, 71% of the control had paid, compared to 73% of the treatment group—a statistically insignificant difference. The effect was stronger at the end of the month, as 83% of the control group had paid their rent by the twenty-third, compared to 86% of the treatment group (p<0.05).29

We also looked at which groups seemed to be most affected by the raffle treatment. During the design phase, we had been concerned that residents on fixed incomes, such as those whose primary income source

27 Fifty-eight individuals were later excluded from the waiver treatment due to property manager concerns. These individuals had paid their rent late frequently in the past, and CHN believed that leniency on a late fee could lead to the resumption of late payments. However, we still count these individuals as part of the “raffle and waiver treatment” for the purpose of our “Intent to Treat” analysis. See Angrist, J. D. & Pischke, J. S. (2008). Mostly harmless econometrics: An empiricist’s companion. Princeton, NJ: Princeton University Press.
28 We discuss data sources and analytic methods in Appendix 7.
29 These results are reported with data from all months combined.
was Social Security, would have difficulty restructuring their finances in order to be eligible for the raffle. Surprisingly, we found the exact opposite. This group saw the largest shift in rent payment—and was the driver of the long-term effects we observed. For a group with a fixed income, the prospect of an additional $100 may be more enticing.

**The addition of a late payment fee waiver did not increase the positive effect of the raffle.**

When we compared individuals who received both the raffle and the waiver to the control group, we observed a short term increase in rent payment, but no long term effects. Rent payment by the third increased from 8% to 13% (p<0.01). However, there was no significant long-term effect. By the thirteenth, rent payment decreased from 71% to 69%, and by the twenty-third it was the same at 83% in both groups.

When we compared the raffle and waiver group to the individuals who received the raffle alone, we saw that individuals who received both the raffle and the waiver were 6% marginally less likely to pay their rent on time than those who had received the raffle alone (p<0.10). When we zoomed in to individual dates, we continued to see a decrease. On the third, 13% of the waiver group had paid their rent, compared to 15% of the group who received the raffle alone; however, the effect was not significant. By the thirteenth day of the month, 69% of the waiver group had paid their rent, while 73% of the raffle-only group had (p<0.05). Similarly, the waiver group declined from 86% to 83% (p<0.05).

We observed a decrease in rent payment in the waiver and raffle group when compared to the raffle only group, but no change when compared to the control group. This means that having the waiver and the raffle did not necessarily lead to worse effects than the status quo, but it doesn’t do as well as when the raffle is administered alone. It’s possible that the waiver alone would have had a negative effect when compared to the control group. However, it is also possible that it would have had a positive or neutral effect, but that there was a negative interaction effect between the waiver and raffle. For example, the waiver announcement may have diverted attention from the raffle announcement, negating its effect. The experiment design did not allow us to distinguish between main effects of the waiver and interaction effects between the raffle and the waiver.

**What Did We Discover?**

At Cleveland Housing Network, we noticed that many staff and residents described the rent as “due on the tenth.” In fact, it was due on the first, but had a generous 10-day grace period. While the grace period was intended to give CHN’s resident slack in order to manage their often-complex finances, it actually had an unexpected effect of making the time to take action more obscure. While CHN residents intended to pay their rent, they often delayed it to the last minute (as many people do when facing a deadline!).
We used a raffle to encourage on-time payment. The fact that it worked is not surprising. However, we think that the mechanism behind the raffle is more interesting than it appears. It was not (just) that people had an incentive to pay on time: the raffle drew people’s attention. People who normally procrastinated paid on time. People who normally only tried to pay on the tenth felt guilty for paying late. The concept of when you should pay changed substantially.

We often talk about “paying attention”; this project demonstrated that you can buy it. Incentives are not just about costs and benefits—they are about what we pay attention to when our minds are strained under many demands. This is exciting because it shows how we can change behavior using incentives, even when the incentives are trivially small.
Partner Site: Neighborhood Trust Financial Partners

*Increasing Usage of Credit Union Accounts*

Neighborhood Trust empowers low-income individuals to achieve their financial goals. By connecting them to affordable and transparent financial products and helping them adhere to a long-term financial plan, clients are able to reduce debt and build assets, increasing their long-term financial security. Neighborhood Trust’s Getting Ahead Program provides a comprehensive financial services model that integrates a community development credit union with an intensive financial advising and education program embedded within community organizations.

### Defining the Problem

The original problem statement provided by Neighborhood Trust was:

> 25% [of financial education clients] are “unbanked but bankable,” meaning that they do not have a bank or credit union account and also do not have any judgments that could lead to garnishment of any savings accumulated in these accounts. Within three months of receiving services, roughly 20% of this “unbanked but bankable” cohort will have opened accounts with formal financial institutions, largely low-cost or free accounts through our credit union partners. Unfortunately, however, only 40% of these account-openers actively use their accounts. Most of these new accounts sit dormant while their owners continue to use fringe financial services—check cashing outlets, money orders and payday loans.

The original problem statement focused on two specific, measurable outcomes for financial education clients: credit union account use and use of fringe financial services. We realized that this statement of the problem assumed that credit union accounts are perfect substitutes for fringe financial services after initial discussions with Neighborhood Trust (i.e., increasing account use would correspond to a decrease in use of fringe financial services). This is a faulty assumption, as many households in the US use both formal deposit accounts at banks or credit unions alongside fringe financial services. Refining our problem statement, we decided to focus purely on client account use without any assumption that this will necessarily lead to reduced use of expensive fringe financial services.

We also believed that limiting our solution solely to “unbanked but bankable” clients would unnecessarily restrict our sample size and prevent other client segments from potentially benefitting from a solution. As such, we

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explored barriers to account use for all clients who participate in the Getting Ahead financial education course and open an account.

With these two factors in mind, the refined statement focuses purely on client account use, without any assumption that this will necessarily lead to reduced use of fringe financial services, and includes the full client population. The organizational problem we finally addressed with Neighborhood Trust was:

*Low-income individuals sign up for accounts with affiliated credit unions during Neighborhood Trust’s financial education course, but do not fully utilize them.*

**Behavioral Diagnosis**

In conducting our behavioral diagnosis with Neighborhood Trust, the BETA Project Team identified four potential behavioral barriers (“bottlenecks”) that could prevent Getting Ahead participants from utilizing their accounts.

**Bottleneck 1: Clients may take action during the course to open an account, but not to start using the account.**

Client interviews conducted during our site visit suggested that some clients never visit the credit union or use their account after opening. One of these clients reported that she knows where her Financial Action Plan is, and frequently shows it to others to tell them about the course, but has never used the plan or her account.

Taking an action for the first time requires effort, in part because of two key psychologies. Status quo bias refers to our tendency to prefer the current state to a potential change, and to overweight the potential losses or costs associated with such a change. Hassle factors are small, seemingly insignificant barriers that impede action. For example, removing a requirement to notarize a form before submission could significantly improve the rate of form submissions.

Neighborhood Trust already structured the account opening process to eliminate as many hassle factors as possible and overcome status quo bias: account applications are included in the course curriculum, there are recurring and predictable opportunities for clients to gather necessary documents and meet with the Advisor to open an account (either during a 1-on-1 session or after each class session), and the Advisor can provide assistance for the client when filling out and submitting the form. The account opening action can be fully completed within the five-week period of the course with minimal time or action outside the course.

However, when it comes to using the account, no concrete prompts to begin using the account occurs within the five-week course period, and many hassle factors remain as a barrier to action (see “Bottleneck 2” for examples).
The existence of hassle factors may cause a client to procrastinate and put off tasks related to using a new account in favor of more familiar options.

Providing information alone is often not sufficient to facilitate action. A study of low- to moderate-income families completing the FAFSA (the Free Application for Federal Student Aid) found that providing assistance with filling out and submitting the form significantly impacted submission and enrollment rates, while providing only information without assistance had no significant effect. This suggests that clients may need more than just information to start using an account. The steps taken to facilitate account opening (removing hassle factors, completing the action during the course) should be carried through to the other steps of behavior change and actually guide clients into active account usage.

Bottleneck 2: Clients may be deterred by hassles associated with accessing the account on a regular basis.

The convenience of account access appears to be an important factor for clients, and was the chief reason cited during client interviews for using check cashers. A Neighborhood Trust study indicated significant correlation between account dormancy and distance from branch. Some workforce development clients systematically move to a different area after they graduate from the program, but their accounts are typically housed at a credit union which has only two ATMs that accept deposits.

Small barriers to accessing the account may be acting as hassle factors and discouraging clients from regular use of the account, even after clients have used the account for the first time. A major hassle factor is the requirement that deposits only be made through the Neighborhood Trust branch or its on-site ATM, severely limiting deposit-making abilities for clients without direct deposit. Aside from geography and timing issues, other hassle factors involve identifying and using alternative means of account access: clients may forget to bring their debit card for POS or ATM transactions; the CU24 network ATMs accessible by Neighborhood Trust clients off-site are difficult to identify because they are not branded with the Neighborhood Trust logo; online banking is only available in English, which makes it difficult for Spanish-speakers to utilize without a translator.

Again, these hassle factors increase the likelihood of clients procrastinating and telling themselves that they will use the account “next time.” This suggests that geographic and operational barriers like these are not insurmountable. To reduce cognitive costs associated with account use, clients could engage in simple plan-making to map out precisely how and when they will visit the credit union, perhaps in conjunction with another activity to increase convenience. Simply practicing using online banking or visiting more convenient off-site ATMs could also demonstrate to clients that the associated financial costs may not be as severe as they perceive them to be, and encourage clients to use these alternative access points.

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32 The two ATMs that accept deposits are located in the two branches of the credit union. Of note, the credit union does have a relatively extensive network of ATMs where clients can access cash without paying a fee, but these ATMs do not accept deposits.
Bottleneck 3: After the course ends, the client’s attention shifts away from the account, and there is nothing that draws the client’s attention back to the account.

Credit union accounts are “top of mind” for clients during the five weeks of the Getting Ahead course, when they are deciding whether to open the accounts, actually opening accounts, and focusing on the financial education curriculum. However, once clients graduate from the course, their attention will likely shift back to their daily lives, and the client’s intention to use the account (or even the existence of the account) may be forgotten.

We all forget things from time to time—even very important things. We have a limited capacity for attention and often focus on what is most salient, or what stands out relative to the many details passing through our minds. Unfortunately, what stands out in our minds is not always the most important or beneficial detail on which we should focus.

There is minimal systematic outreach to the client after the Getting Ahead course that could function as a reminder. Follow-up communication from Neighborhood Trust is conducted at the discretion of the Financial Advisor on a case-by-case basis and is limited by that Advisor’s capacity. Outreach efforts tend to focus on financial issues raised by the client during their 1-on-1 session—issues not likely to be account usage. The only systematic follow-up with clients is the mailing of the letter they wrote to themselves, three months after the course, at which point approximately one-third of client contact information has already become outdated. In this letter, clients often focus on their general financial situation and write messages of motivation, not necessarily including any specific reminders for action. From the credit union side, account statements could serve as reminders, but they are only sent out on a quarterly basis (unless delivered electronically). Client addresses could be outdated, or the client may never open their mail.

As a result, clients may be forgetting or experiencing inattention. Sending clients a reminder to use their accounts could help address this. It would be important for this reminder to be both salient (would stand out in the client’s mind) and well-timed (received at a moment when the client is able to take action and actually facilitates that action). To increase salience, reminders could specifically address financial goals or actions the client had previously selected. This reminder could take the form of text messages, emails or phone calls, or could be incorporated into existing materials like account statements. There are also operational changes that could be made to ensure that outreach was more effective, such as following up with clients more quickly after the course ends to maintain up-to-date contact information.

Bottleneck 4: The client may be opening an account for reasons other than using the account, such as social pressure or viewing the account opening as an action they are expected to take.

The Getting Ahead curriculum emphasizes the importance of “having” an account early on in the course. Clients may feel that they have accomplished an important component of the course simply by opening the account. Incorporating the account opening process into the course and 1-on-1 session—almost as a default component—may not be effective if clients lack an intention to use the account.
Clients could also be opening accounts to access other products and services. Anecdotally, managers at NTFCU and Brooklyn Coop report that many clients open savings accounts so that they can qualify as a member and thereby adopt other products, such as the Super Saver CD (a high interest savings CD) or credit builder loans. Even the name of the “Gateway Banking Package” (the basic checking and savings account bundle) suggests that these accounts serve as a door to somewhere else. In this case, the account serves as a means to an end, and the perceived benefits are not contingent upon account use.

Finally, the visible opening of accounts after the course sessions may influence clients to open an account, but not necessarily to use it. Peer pressure is a well-understood influence on human behavior, as many of us have felt the urge to conform or avoid standing out from the crowd. However, people can also interpret others’ actions as an indication of what constitutes acceptable or desirable behavior. If someone’s decision or action is influenced by what others are doing, social norms may be at play.

Social norms can be especially effective when the action itself is visible. Although account opening conducted during a 1-on-1 session between a client and a Financial Advisor is less visible, clients may see other class participants filling out forms, bringing documents to class or meeting with the Financial Advisor after class to open accounts. In a short-term pilot where an external party came in to open accounts during the actual class session in full view, Neighborhood Trust saw a significant increase in accounts opened, suggesting that social norms could be powerful here.

This suggests that clients may not have an explicit intention to use the account coming into the course. However, this does not mean that the intention cannot be formed. Active use of the account during the course may demonstrate value for clients in a way that simply providing information or listing benefits could not. While the effect of social norms among course participants is likely to fade after clients exit the group setting, social norms could still be useful if incorporated into communications with clients following the course.

Designing Solutions

With our behavioral diagnosis in mind, the BETA Project team worked with key Neighborhood Trust staff to brainstorm ideas for solutions and make decisions on which design concepts to move forward with and how to execute the selected designs. Decisions were based on discussions with various stakeholders related to the Getting Ahead class including staff from various departments, clients and management. The main considerations at play when making decisions on what to test were whether or not the design concept was feasible given the BETA Project timeframe, logistical limitations...
of pop-up classrooms at various sites, and fit with the existing Getting Ahead curriculum and available class time. The following solutions were implemented and tested at Neighborhood Trust.

**Plan-Making Activities**
The BETA Project team created plan-making activities that corresponded with each class. The primary purpose of the activities were to facilitate usage of accounts during the Getting Ahead program (e.g., open a Gateway account, make a savings deposit, visit a NTFCU branch), but also to ensure the fit of the activities with the existing curriculum and diverse client base. As a result, some activities that were not related to account usage (e.g., reduce spending, refinance or renegotiate my debt, create your own plan) were also created. Because clients could have accounts from a variety of places, the plan-making activities were created so that they could be used by clients at any financial institution.

To further integrate the plan-making activities into Neighborhood Trust’s program, parts of the Getting Ahead curriculum were modified so that there was a more seamless fit. Additionally, Financial Advisors that facilitated the plan-making activities received a plan-making index that outlines the corresponding activities with each class, a guide to the design concepts and in-person training.

The plan-making activities for each class were provided for the Financial Advisor prior to the respective class. Clients were told that the plan-making activities were a part of the Getting Ahead program in the first class, and each class spent approximately 15-30 minutes on the plan-making activities. Students were encouraged to select a plan-making activity in each class and asked to report back on their progress in the subsequent class.

**Removable Pouch**
A detachable pouch was included in the program binder so that clients could take plans with them on the go. Clients were encouraged to take the plans they were executing, put them in the pouch and carry it around with them. The pouch also had the side benefits of being seen as an extra gift, potentially inducing good will with clients.
Simplified Account Materials

In addition to in-class activities, materials that facilitated account opening and usage were also created. We created an account information card for those that opening Gateway Banking accounts at NTFCU or Brooklyn Coop in order to easily store account information and provide maps and hours for the branches. We also worked with credit union representatives to customize direct deposit forms for Getting Ahead clients and create an automatic transfers form for NTFCU so that their clients could set up automated savings. These materials were mostly used by Financial Advisors during their one-on-one sessions with clients.

Test Methodology and Results

To evaluate the effectiveness of the designed solutions, the BETA Project team worked with Neighborhood Trust to divide Financial Advisors teaching the Getting Ahead workshops between April and July 2013 into the treatment group and the comparison group so that some clients experienced the solution and others did not.

Comparison Group
(200 clients; 7 advisors; 24 workshops)

Treatment Group
(163 clients; 4 advisors; 14 workshops)
In total, 363 clients completed the Getting Ahead course between April 1, 2013, and July 31, 2013. Since the plan-making and pouch components of our solution were conducted at the class level in a group setting, randomizing at the individual client level was infeasible. We considered randomizing at the Financial Advisor level, but the small number of Advisors and clients meant that our statistical power was severely limited in this case.

We opted instead to systematically assign Advisors to treatment and comparison groups based on Advisor and site characteristics. While we lose the statistical rigor of randomization, this approach gives us more balanced treatment and comparison groups with a defined set of characteristics that we can incorporate into our analysis. This assignment of Advisors resulted in 200 clients (consisting of 24 workshops taught by 7 Advisors) being assigned to the comparison group and 163 clients (consisting of 14 workshops taught by 4 Advisors) being assigned to the treatment group.

Our data collection was further limited by the departure of one of Neighborhood Trust’s key employees. As a result of this departure, we were able to collect account transaction data only for clients who opened accounts at Neighborhood Trust Federal Credit Union (NTFCU), and not for any clients who opened accounts at partner credit unions.

To assess the impact of the solution, we collected and compared data on account opening and usage across the treatment and comparison groups, collected client feedback on the solutions via a survey and interviewed two Financial Advisors. While we have interesting results to share, it’s important to note that the results of the analysis for Neighborhood Trust are inconclusive due to a very limited sample size and the inability to conduct a randomized controlled trial.

**Experiment Results & Analysis**

The evaluation results suggest that the plan-making activities and pouch show promise as useful tools in Neighborhood Trust’s Getting Ahead Program. Client survey and Advisor feedback on the usefulness of the activities is mostly positive. Additionally, a direct comparison across the treatment and control groups show that clients in classes with the solution may be opening and using NTFCU accounts more than the comparison group, though our analysis is inconclusive due to the non-random assignment of workshops to treatment and control groups.33

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33 The BETA Project Team cannot be certain that differences between the treatment and control group are due to the solution and not due to other differences between the two groups.
Feedback from Clients and Financial Advisors Is Mostly Positive

In general, clients and Advisors say they like the plan-making activities and pouch. Advisors recommend continuing the solution with modifications.

Direct Client Feedback on Solutions

The supplementary survey given to Getting Ahead clients in the treatment group at the conclusion of the course produced positive qualitative responses regarding the solution, especially the plan-making activities. Of the 81 clients who responded to the survey, 92% completed a Planned Action during the course. When asked to rate the usefulness of the Action Plans on a 5 point scale, 99% of respondents ranked them as a “3” or higher, 83% ranked them as “4” or higher and 53% ranked them as a “5”.

Client feedback on the pouches was more mixed: 80% of respondents used the pouch which accompanied the plans, and 54% ranked its usefulness at “3” or higher.

Advisor Feedback on Solutions

In addition to collecting feedback from clients, we conducted interviews with two of the Advisors assigned to the treatment group to solicit their feedback on the solutions. First, both Advisors expressed uniformly positive opinions on the account information cards. One Advisor wondered aloud, “How did we not have something like this before?”

Advisor experience with the plan-making activities, however, seemed to vary by site. An Advisor working with residential workforce development organizations (for homeless or formerly incarcerated men) reported that creating plans consumed at least 30 minutes of class time, and that he needed to actively guide clients through the process. In addition, certain plans were less relevant for these clients, due to the structure of the residents’ payroll card system and the high proportion of clients facing garnishment issues. An Advisor at a different site, in contrast, reported needing only 7-10 minutes of class time for her clients to create their plans. This is likely due to stark differences in client populations among the sites, particularly in their levels of financial sophistication.

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34 See Appendix 12.
35 The other two Advisors assigned to the treatment group were unavailable for interview.
With respect to the pouch, Advisors felt that clients generally liked the pouch and that it could be a useful tool for clients to gather information at home (such as for account opening). Some clients reportedly view the pouch as a “gift” given out during the course. It may be worth emphasizing in Advisor training that clients should be prompted to take the pouch home and use it, not just leave it in the binder or use it for pens/pencils. One Advisor described the pouch as “low burden and medium reward,” meaning that the pouches are relatively low cost and provide moderate benefits to clients.

Overall, both Advisors advocated continuing to use the solution materials, with some customization needed to reflect differences in client populations. Without knowing the results of the evaluation, and based solely on their classroom experience, both Advisors speculated that the plan-making activities did result in higher rates of account opening.

More accounts were opened at sites that used our designs.

Keeping the sample size and evaluation design limitations in mind, we found some key differences in outcomes between treatment and comparison groups. The treatment group exhibited higher rates of account opening and account use than the comparison group, among those clients who were offered an account at NTFCU. Specifically, 33 clients in the treatment group who were offered an account at NTFCU opened an account (representing 53% of the total treatment group clients who were offered accounts at NTFCU), compared to 20 clients in the comparison group who were offered accounts at NTFCU (representing 19% of the comparison group who were offered accounts at NTFCU; p<0.001).

The higher rate of account opening in the treatment group was also reflected in a course evaluation survey where clients were asked whether they opened an account at any of Neighborhood Trust’s partner credit unions that offer the Gateway Banking Package (not just NTFCU).

Account usage was also higher in the treatment group.

For clients who were offered an account at NTFCU, clients in the treatment group were more likely to complete multiple transactions (two or more transactions) in that account than comparison group clients during the testing period (April 9, 2013 – July 31, 2013). That is, 32 clients in the treatment group who opened an account at NTFCU had multiple transactions in that account (representing 52% of treatment group clients who were offered an account at NTFCU), while only 15 clients in the comparison group who were offered an account at NTFCU had multiple transactions in that account (representing 15% of...
the total comparison group clients who opened an account at NTFCU; \( p<0.001 \). For this analysis, we included any withdrawal or deposit as a “transaction,” and excluded any reversals, overdraft fees or error corrections.

On a per monthly basis, clients in the treatment group who were offered NTFCU accounts also had more transactions than clients in the comparison group. Including clients who were offered, but did not open NTFCU accounts, as having zero transactions over the testing period, clients in the treatment group average about 11 transactions per month, compared to 1.4 transactions per month in the comparison group (\( p<.001 \)).

![Graph showing comparison of transactions per month at NTFCU between treatment and comparison groups.

While comparisons between the treatment and comparison groups are encouraging, because assignment was non-random, the differences in outcomes could reflect differences in the student populations, how the classes were conducted or differences between the Advisors.\(^{36}\) To explore this further, we conducted a regression analysis to control for some of these differences. In the initial analysis, we find that treatment was associated with about 9 more transactions per month, significant at the \( p<.05 \) level.\(^{37}\) This indicates that the treatment was associated with more transactions per client in any given month.

Next, we controlled for fixed effects such as the Financial Advisor teaching the course, the timing of the classes and the client population served at each site. Because the populations each site serves differ, the fixed effects attempts to

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\(^{36}\) While we can control for differences in observed variables in our statistical analysis, differences due to variables that we are unable to observe could still be affecting our results. Please see Appendix 10 for more details regarding our data sources and analytical methods.

\(^{37}\) The first step was to estimate a simple linear model of the effect of treatment on number of transactions. As previously mentioned, we were unable to randomize at the individual level, so our next iteration of the model clustered standard errors by client workshop.
isolate any effects that are due to treatment from the difference between site populations. In this model, treatment is associated with fewer transactions, but this finding was not statistically significant. 38

Though the evidence is encouraging, the regression analyses reinforce the point that we cannot conclusively say that the differences between treatment and comparison groups were purely due to the solution.

**What Did We Discover?**
We complemented Neighborhood Trust’s Getting Ahead program with plan-making activities and materials to encourage active use of the accounts that were opened during the course. Because the assignment to treatment and control was not random, our results are not conclusive. But they are suggestive—and what they suggest is important.

There are many barriers to taking action, and prompts to create simple plans can help people eliminate these barriers. We saw substantial increases in account use. These findings are not at the high level of statistical rigor used in academic research, but are very credible when compared to common practices such as using a before and after study, anecdotal evidence or a “gut feeling.” Furthermore, we are seeing similar results in other studies (such as a similar effort with Grameen Bank). 39 Increasing financial capability will require hard work—not just in educating people, but in encouraging them to take action.

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38 See Appendix 10 for details on our regression results.
39 Research conducted by ideas42; report forthcoming.
Implications for the Field: Small Changes, Real Impact

What we found at the three BETA Project partner sites is encouraging. Small changes to program design, inspired by behavioral economics, can have a real impact on program effectiveness:

- **At Accion, we saw that simple reminders can reduce non-sufficient funds (NSF) fees and increase on-time payments, especially among the most vulnerable borrowers.** The impact on “risky” borrowers is particularly significant in light of Accion’s mission to reach this underserved population, but it has larger implications as well. Many organizations and companies are trying to responsibly (and profitably) provide credit to this population. Access to credit is important; it can help vulnerable borrowers grow a business, stabilize the amount of money they have each month and deal with emergencies. Improving repayment behaviors among this borrower segment could reduce costs and help justify expanding services to this population.

- **At Cleveland Housing Network, we saw that short term incentives can affect long term behaviors, increasing on-time payment and possibly decreasing evictions.** The fact that these effects persisted throughout the month, even after late fees were applied, suggests a more profound effect on behavior than mere financial motivation. Countless programs and products have payment (or repayment) problems in the asset-building field. Structuring incentives to grab attention can substantially increase payment levels, and we saw preliminary evidence of a longer-term effect from this program. If we find that this effect scales, it has the potential for massive impact.

- **At Neighborhood Trust, we saw that simple plan-making facilitates action, and observed a promising increase in people’s utilization of accounts.** While our results at Neighborhood Trust were indicative in nature due to small sample size, similar efforts to prompt action at Grameen Bank resulted in similar-sized effects on savings account usage but at a statistically significant level. Neighborhood Trust, like many financial counseling providers, has already gleaned many lessons from behavioral economics. Behavioral techniques have proven effective in encouraging people to sign up for savings accounts. But now providers face the next problem: how do we help people use these accounts and reap the rewards of saving? While our results are preliminary, the large effect size is encouraging. Sites providing financial education should marry their education efforts with concrete steps to assist people in taking actions (such as through simple plan-making) that move them towards a stronger financial position.

These effects are not just statistics. There are real people who benefitted from the BETA project: entrepreneurs who avoided NSF fees, families who did not get evicted and individuals who began the path towards savings.

Moreover, the solutions were relatively inexpensive, with direct costs of less than $5,000 at each organization. The primary cost was the investment in staff time to work with our team in diagnosing the problem and designing solutions. All three sites have decided to continue to use some form of the tested solutions in the future. The findings speak volumes about key ways that other asset-building programs can make small adjustments to deal with these common problems and have a real impact.

The beneficial impact of the designed solutions from the BETA Project seemed to skew towards specific client segments. These specific segments were likely impacted because of the specific context in which they were operating. For example, behavioral solutions can often be meaningful for the most vulnerable clients because those
clients are often dealing with the highest cognitive demands. At Accion, the biggest effects were detected on a group with the lowest principal payments (who are generally lowest-income and least creditworthy by lender standards). Reminders may be most helpful for those in difficult financial situations, because they have much more to remember. At CHN, the biggest effect was detected among fixed income residents, suggesting that people who have the hardest time shifting their finances may respond to small incentives the most. At Neighborhood Trust, previously unbanked clients could especially benefit from plan-making around account usage, since the many steps around using an account were largely unfamiliar to them.

It’s important to note that while the actual costs of the solution materials were moderate, implementation could be difficult for organizations with limited resources. As noted above, the BETA project imposed heavier requirements due to our timeframe and rigorous process. For the three partner sites, the behavioral diagnosis and design process, as well as the implementation of the solution, was time-intensive for staff, as they had to collect and distill a lot of information regarding the targeted problem. Nevertheless, we believe that many of these activities, such as regular data collection and analysis and gathering client feedback, could be (and should be) incorporated into normal operations to strengthen the organization.

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Lessons for the Field

Many of the findings from the BETA project can be applied broadly—they are not restricted to the individual sites in the BETA project. Three lessons in particular could be easily used by the field in program and product design:

1. Be preemptive.
Asset-building programs often turn their attentions to client (or have their first engagement) after a problem or crisis arises, such as a late payment. Assistance may not be sought until a client’s financial situation hits rock bottom. Waiting until a financial breaking point is not a cost-effective way to deliver services because the client is more likely to fall into a cycle of financial hardship and the organization ultimately spends more resources trying to remedy the situation.

Our solution at Accion focused on building habitual, timely payment patterns that fit into a borrower’s regular cash flow cycles as a preemptive measure to avoid problems down the road. Even more could be done to engage borrowers early on, such as through technical assistance services offered to entrepreneurs. Notably, our regular reminder system helped borrowers in the lowest quartile, who may have the most volatile financial lives.

More broadly, this finding suggests that organizations should aim to identify early behaviors that can be targeted before clients get into a problematic situation. In addition, organizations should remember that their program is only one aspect of their client’s busy lives, and bringing that program to the top of mind means grabbing their client’s attention from among other competing demands.

Ask Yourself
- Are there problems among my organization’s client base that could be tackled by targeting earlier behaviors?
- Am I overlooking any elements of my client’s life that may be influencing this behavior?
- Am I taking advantage of potential communication channels with clients?

2. Incentives “buy” attention.
Many insights from economics can be summarized as “people respond to incentives.” But sometimes incentives don’t work. They don’t work when people don’t know about the incentive. They don’t work when the incentive crowds out intrinsic motivation. They don’t work when the reward (or punishment) is applied in the future for an action that needs to be conducted right now.

The Cleveland Housing Network raffle increased on-time payment. However, we don’t believe that it is because of the financial incentive to pay on time. The expected value of paying on time was only $2. It’s unlikely that something like a $2 bonus would be effective, especially since CHN was already applying a $25 fee. Something else is happening.
Raffles are effective for two reasons. The first is that people typically overestimate small probabilities—we treat a 1% chance of winning like it’s a 10% chance. But there’s a more subtle reason raffles and lotteries capture our attention. If we’re strapped for cash, the possibility of an extra $100 (or month of free rent) seems enormous. Knowing this enables us to design incentives with a different goal in mind: capturing scarce attention. Most CHN residents intended to pay their rent on time, but that intention was not consistently acted on. The incentive in this case worked on the same principle as a reminder—it created a deadline that functioned as a small nudge in the right direction. Rather than thinking, “I will pay the rent tomorrow,” residents were prompted to take action to pay the rent immediately.

There are many ways that insights from behavioral economics can help us think about designing more effective incentives. Other research has shown that it’s often more useful to incent inputs rather than desired outputs (for example, paying students to read books rather than to get good grades\textsuperscript{41}) and that immediate rewards are more effective than delayed ones. Here we see that raffles are more powerful than regular payments. Carrots and sticks only work when people are attentive to them.

### 3. Facilitate action along with information.

Many financial institutions offer some form of financial education, counseling or coaching and spend significant amounts of resources and staff time to do this. However, studies show that such programs produce little to no measurable impact on concrete outcomes (account openings, increased savings, etc.).\textsuperscript{42} Education is an important first step, but these programs often assume that providing information is enough to facilitate behavior change for their clients. Research shows that providing assistance along with information has a meaningful impact on outcomes.\textsuperscript{43}

Neighborhood Trust emphasizes participant action in its personal finance course and has made huge strides in facilitating access to products and services for its clients prior to the BETA Project (e.g., including remote account opening during its Getting Ahead courses). However, the absence of sustained support beyond account opening compromises impact. Our simple plan-making solution produced promising results around helping clients continue to take concrete steps to use accounts and services.


\textsuperscript{42} See, \url{http://www.nytimes.com/2013/10/06/business/financial-literacy-beyond-the-classroom.html?pagewanted=1}.

The first step is pinpointing the desired actions and behaviors that the program is helping clients achieve. Then, consider whether it’s possible to provide direct assistance to clients to take these steps, or whether there are other mechanisms for guiding clients to achieve their goals (such as simple plan-making). By providing insightful assistance along with information, we believe there is a huge opportunity to help clients take concrete action and derive meaningful improved outcomes.

Ask Yourself

- Are there elements of my program where I assume a client will take an action step, but they fail to follow through?
- Are these opportunities where my program can provide assistance to help clients take those steps?
10 Tips from the BETA Project

In the BETA Project, our initial goal was to demonstrate how simple behavioral solutions can make asset-building programs more effective. However, our experience with the partner sites also yielded helpful tips for program design and insights on how it impacted their entire organizations on a more profound level. Here, we offer suggestions on how to design new program solutions with client behaviors in mind and enhance your organization’s capacity to integrate behavioral economics into their programs.

1. Put the problem before the solution.
New solutions are exciting and capture the imagination, but it is more important to clearly identify the problem you are trying to solve and have a deep understanding of the context. This means taking some time before implementing a new solution to clearly define the problem you are trying to address and attempt to diagnose the context and situation around the problem. For example, it might be tempting for other microlenders to try out text message reminders because they were helpful at Accion. However, if forgetting to ensure sufficient funds prior to payment is not a core barrier to on-time repayment at the other microlenders, text messages might not work.

2. Distinguish between the person and the situation.
It’s easy to attribute “bad behavior” to “bad people.” If someone doesn’t pay their rent or a loan, we assume that the behavior we observe originates in the person. When a driver cuts us off, we assume that it’s because they are inconsiderate. But when we cut someone off, we excuse our action if we are in a rush. However, human behavior is inextricably linked to the situation surrounding the person—we make decisions and act in response to our surrounding context. If someone doesn’t pay their rent or a loan, we assume that the behavior we observe originates in the person.

Social psychologists find that our behavior is usually driven by the context rather than by innate personality traits or characteristics. In one study, seminary students on the way to give a lecture encountered a homeless man looking for help. Those who had a few minutes to spare helped. Those who were running late ignored him—despite their lecture topic being on the Good Samaritan!

People who are normally very conscientious forget to do tasks when they are sleep deprived. People who are in a rush are less likely to be kind. Organizations should concentrate on situational—not dispositional—explanations of behavior.

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3. Don’t assume that actions reveal intentions.
Remember that our actions are not always optimally aligned with our desires or intentions. We may assume that if we see someone taking a certain action, that action is an indication of their intentions. Behavioral economics teaches us that this is not the case—we often behave out of line with our intentions. Likewise, we may assume that if someone has strong intentions, the strength of that desire is enough to carry people through to action. In fact, we often don’t follow through on actions that are important to us.

4. Understand the distinction between decision and action.
One of the most common mistakes people make is failing to determine whether a problem is related to decisions or actions. A person can decide to take an action, but then fail to follow through. Alternatively, a person might have trouble at the decision stage, far before it’s time to take action. Understanding the difference between the two is vital. Design solutions that are focused on decision problems will often not work on action problems, and the same is true in the opposite direction. When your client is not taking a certain action, take some time to carefully inspect why—it might not be for the reasons you think.

For instance, financial education programs often assume that their clients are experiencing a decision problem, and that providing knowledge will result in an informed decision, and then action. In fact, the barrier may be at the action stage: “I want to open a bank account, but I never quite follow through on the action.” On the other hand, efforts to apply defaults at tax time assumed that clients wanted to save their tax refund but were having a problem following through on the action, when in reality they had already made a decision to do something else with that refund.45

5. Look through fresh eyes.
We often become narrowly focused on our own role within an organization. More often than not, employees lose touch with organization-wide policies and practices, especially as those may evolve subtly over time. Clear your perceptions of how your program operates and start asking people around the organization how they manage client interactions related to the problem you are trying to address. Do not assume that you know how your policies and practices work; talk to the staff who are executing them on daily basis. Start asking “Why?” for every detail of your services and products. If possible, receiving input from an external consulting team can both confirm existing hypotheses that the organization had developed and disconfirm other hypotheses.

Overall, this process of looking through fresh eyes helps build confidence within an organization to make strategic decisions and prioritize initiatives. The Accion team had wanted to improve customer service and thought about upgrading data systems before, but needed a push to move forward (and has already implemented significant changes). The Neighborhood Trust team had many hunches about what was preventing clients from utilizing credit union accounts, but was able to confirm a subset of them. In the CHN case, late rent payments consumed a lot of organizational resources, but CHN hadn’t tracked data around late rent payments or prioritized solving this problem before because it wasn’t a primarily reported metric (such as vacancy rates or evictions).

45 See, http://cfed.org/blog/inclusiveeconomy/behavioral_economics_in_the_assets_field/.
6. Details matter.
Behavioral economics teaches us that small details have a much larger influence on behavior than we think. We often underestimate the importance of these details when we design programs. Take look at the details of your program on an excruciatingly low level, and think carefully about how they affect your clients. When considering a program change or initiative, be meticulous about planning for implementation.

Through the behavioral diagnosis process, Accion’s senior team members realized that none of them actually knew what the statement sent to borrowers looked like. Cleveland Housing Network management realized that rent reminders were only communicated annually and other interactions concerning rent were generally punitive in nature. Neighborhood Trust staff realized that the existing curriculum prompted clients to write down “Take Action” goals during each class, but then handed that paper to Financial Advisors and had no written reminder of what they wanted to accomplish. These seemingly small details are important, and making changes to these program features through our solutions had an impact on client outcomes.

7. Take a client perspective.
Often, products and services are designed to meet legal or funder requirements with little consideration for how clients may perceive or interact with them. A helpful exercise is to take yourself through the customer experience in your program. Role-playing as the customer and taking a close look at your products and services from a client’s viewpoint can yield helpful discoveries about how contextual features influence client behavior.

Adopting a client’s perspective can help an organization view its services and client interactions in a completely different light. It also helps to unify the perspective of teams across the organization and promote coordination. This is helpful to break down silos within organizations, across departments and roles. At Accion, the BETA Project prompted staff members to think carefully about the entire customer experience, from origination to repayment. At Neighborhood Trust, employees had to rethink which actions were necessary for positive client outcomes and how the workshop could be tailored to facilitate those actions. In the CHN case, some staff members were tunneling on a specific aspect of the client payment process (paying online vs. in person) without looking at the entire payment process from a client’s viewpoint.

8. Listen carefully, and verify what you hear.
Constantly seeking information about the decision-making context and feedback on potential solutions is an important component of the behavioral diagnosis and design process. However, it is important to remember that people often have trouble explaining or understanding their own behavior. For example, a study in the 1960s found that hikers who walked across a rickety bridge over a deep ravine were more likely to call a surveyor they met after crossing the bridge than those that met them on a stable part of the path. The hikers attributed asking out the surveyor to attraction, but researchers found that crossing the bridge caused a heightened state of excitement,
making hikers think they were attracted to the surveyor. The hikers genuinely thought they were attracted to the surveyor, but measuring their biological functions proved that it was more likely the physical exertion.46

To help validate people’s reasons for their behavior, be sure to check client statements on what they say they do against observations from data collected about their situation, rather than taking all statements at face value. In the BETA Project, we saw that while many Cleveland Housing Network (CHN) staff believed that they had communicated all the options for rent payment to residents, the residents were deciding not to use these options. Later, we found that many CHN residents were not aware of these options at all. These conflicting stories allowed us to triangulate to an important finding: many CHN residents had not read CHN materials and were not familiar with its context.

This tip also applies to yourself and your staff when thinking about the policies, procedures and client-facing processes at your organization. It is common for organizations to organically grow and change over time, so what you think is happening may (or may not) be reality. For example, at Accion, each group knew their own work well and thought they knew how other departments worked in the course of making and servicing loans. However, as we asked questions and explored detailed processes and policies, many new insights were illuminated, such as the format and process for generating monthly statements.

9. Focus on outcomes by paying attention to data.
Learning about client behavior requires being aware of the change you are seeking to make. Simply monitoring existing data can yield insights, without running complicated statistical analyses. Start by articulating the outcomes you wish your clients to achieve and pinpointing the specific behaviors that are required to achieve those outcomes. Make sure that these outcomes are being measured through your data system. Allocating resources to data management and analysis to determine what works can help improve your organization’s efficiency.

BETA Project partner sites made changes to the data management and analysis systems after working with the team. Accion upgraded and integrated their databases so that data would be entered more consistently and staff would have more access to a borrower’s history, allowing them to more easily and consistently provide customer service. Cleveland Housing Network started collecting data to understand rent payment behavior (e.g., exactly when rent was paid by client), a process they started on a basic spreadsheet for the first few months.

10. Seek advice from trusted sources.
New research and practices based on behavioral economics are quickly emerging. Seek information on new insights from behavioral research and strategies to apply the insights from behavioral economics experts such as ideas42, Innovations for Poverty Action and the Center for Advanced Hindsight. Additionally, learn about what other asset-building organizations are doing, check for resources and technical assistance from CFED, join the Assets &

Opportunity Network to share your behaviorally-informed design experiences and experiments and contact the BETA Project staff at BETAProject@cfed.org.
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## Appendix 1: BETA Project 2012-13 Timeline

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introductions between selected partner sites and BETA Project team by phone</td>
<td>December 2012</td>
</tr>
<tr>
<td>Initial site visits, problem refinement &amp; behavioral diagnosis</td>
<td>January 2013</td>
</tr>
<tr>
<td>Memo describing refined problem and behavioral diagnosis delivered to sites</td>
<td>Early-February 2013</td>
</tr>
<tr>
<td>BETA Project team design initial list of design concepts interventions, evaluation plan, and data collection process; deliver memo presenting interventions and research plans</td>
<td>February to March 2013</td>
</tr>
<tr>
<td>Second site visits and implementation of design solutions and experiment</td>
<td>Late-March to Early April 2013</td>
</tr>
<tr>
<td>Partner sites collect data on designed solutions</td>
<td>April to August 2013</td>
</tr>
<tr>
<td>BETA Project team analyze data, host a convening of partners and sites to discuss lessons learned, and report on findings</td>
<td>September to December 2013</td>
</tr>
</tbody>
</table>
Appendix 2: Accion Original Statement

Loan Number 99999

Due Date 05/21/2015
Current Amount Due $999.99
Total Amount Due $999.99

Your ACCION Texas Loan
Outstanding Balance $99999.99
Last Payment Amount $999.99
Last Payment Date 4/22/2013

Past Payment(s) Due
30 – 59 Days $0.00
60 – 89 Days $0.00
90 – 119 Days $0.00
120 + Days $0.00
Total Past Due $0.00

If you pay by Automatic Bank Withdrawal, this statement is for information ONLY!

You can also make an online payment at www.acciontexas.org.

If your payment is to be effective on Monday, please be advised that your bank may set your payment aside on Saturday so that the funds will not be available to you.

To ensure proper credit, detach and return bottom portion with your payment. Please include your Loan number on your check, money order or cashier's check. NO CASH PLEASE!

☐ Check Box for change of address

New Address

Loan Number 99999

Due Date 05/21/2015
Current Amount Due $999.99
Total Amount Due $999.99
Amount Enclosed $
Appendix 3: Accion Designed Solutions

Redesigned Statement with Planning Tools

ACCION
P.O. Box 915222
Dallas, TX 75391-5222
www.acciontexas.org
'A partner in your success'

Loan # 99999
Questions about your loan?
Contact us at 1-888-215-2373

Janie Barrera, CEO

This Month’s Payment
Due Date: 05/21/2015
If paying by Automatic Bank Withdrawal,
we suggest you deposit sufficient funds by
Monday, 5/18/2015
Total Amount Due: $999.99

Payment History
Last Payment Date: 4/22/2013
Last Payment Amount: $999.99
Balance as of 4/30/13: $99999.99
Total Payment(s) Past Due: $0.00

For Automatic Bank Withdrawal Payments:
Try this simple tool to help yourself
pay on time and avoid fees!

Make My Accion Loan Payment
I will make a deposit at the bank
in the amount of $__________
on the following date and time:

(Day of Week), __/__/2015
(Month/Day) (Time)

Please post on your refrigerator

NOTE: Unless you are pre-approved by Accion to use methods listed
below, please notify Accion at least 7 business days before the Due
Date by calling 1-800-215-7373

Loan # 99999
(Include Loan # on your check, money order, or cashier’s check)
Due Date: 05/21/2015
Total Amount Due: $999.99
Amount Enclosed: $__________

Payment Method (NO CASH PLEASE)
☐Check ☐Money Order ☐Cashier’s Check
☐Online Payment: www.acciontexas.org/make-a-payment

Fill out if there is a change of address:
Email & Text Reminders
Email reminders were sent 10 days before the repayment due date.

Text reminders were sent 3 days before the repayment due date.
Hi Matt! Your Accion payment is due in 3 days. Check your bank balance today to make sure you have enough for payment. Accion
Appendix 4: Accion Implementation Preparation and Disruptions

In order to ensure a successful experiment, we created easy-to-follow processes to distribute statements and reminders to borrowers. For monthly statements, the Accounting Team created and sent two separate distribution lists to the third party vendor that prints and mails the statements—more for the control group, which received the original statement, and a second for the treatment group, which received the redesigned statement. We provided the necessary Excel formulas and instructions to the Accion staff, and we prototyped the process through multiple iterations to work out the kinks prior to implementation. For email and text reminders, an Accion staff member had to tag borrowers in the treatment group and schedule distribution dates in advance. We again created and walked through the process with the staff and prototyped the messages with the team to confirm that the technology was properly functioning before implementation.

We encountered a few unforeseen minor hiccups in our implementation. First, the team discovered that when borrowers changed their payment date, the new payment date was not updated automatically and immediately across the various databases. As a result, a few clients received reminders at the wrong time. The Accion team quickly worked out a process to update payment dates consistently across databases.

Second, the third party vendor misunderstood the number of post-it notes requested for the new statement and subsequently ordered too few. Thus, one batch of the statements was sent without the post-it notes while additional post-it notes were ordered. Third, Accion encountered a slight technical difficulty with ClickDimensions essential software for the email and text reminders, which led to a stoppage of reminders. However, this too was resolved after a few days. We had anticipated that there could be unforeseen disruptions, and designed an experiment that could absorb them. The BETA Project Team also closely monitored the data through the testing period, and do not believe the quality of the data was detrimentally affected by these minor disruptions.
Appendix 5: Accion Data Sources and Analytical Methods

Data Sources
Accion uses two primary data systems:

1. NLS (Northridge Loan System) Data: This database records all loan-related transactions at Accion, including payments. It is used to create many of the reports used in Accion’s operations and for their internal analysis. The datasets we used were: (1) the Transaction Registers, which includes all loan-related transactions, the date of transaction and the method of transaction, among other details; (2) the Payment Register, which is a subset of the Transaction Register that contains just the payment transactions along with the most up-to-date Due Date; and (3) reports retrieved by the Accounting Team to create the distribution list of monthly statements, which contains not only the breakdown of the amount due in a specific month, but also the amount of payment in arrears.

2. CRM (Customer Relationship Management) Data: It records all borrower and loan characteristics, as well as a record of any correspondence or interactions that occur between Accion and its borrowers. This dataset was initially used to stratify the random sampling. We also used the CRM to gather information on Asset Protection Activities.

Analytical Methods
We compared differences across the control and treatment groups first with all borrowers, and then among borrowers divided into subgroups based on the size of the monthly principal payment. We used t-tests to compare the mean of a given metric. The results of our analyses are reported in two forms. We discuss the effect size of the treatment, our best statistical estimate of how much of an effect the treatment has. We also report the p-value for our effect sizes in parentheses. The p-value refers to the percent chance of us observing a similar effect size due to chance alone. While there is no hard and fast rule, academic publications typically refer to p-values of 0.10 or less as “marginally significant,” p-values of 0.05 or less as “statistically significant” and p-values of 0.01 or less as “highly significant.”

Notes about Measuring the Proportion Paid in Relation to Due Date
Our most intuitive metric is looking at when each payment was actually paid in relation to its due date. We inferred the number of days a payment was late by taking the difference between the due date and the date actually paid. If a due date fell on a Saturday or a Sunday, we considered that payment to be due on the following Monday. This metric includes some “noise” since we only looked at the principal portion of the payments (i.e., not the interest or fee payments) to avoid over-complicating the analysis, and also because there are non-ACH payments that could have a lag between when the payment is made and when it is recorded.

Notes about NSF Fees
NSF fees are a relevant metric because: (1) our solutions targeted borrowers who are paying through the ACH, and reduced NSF fees could indicate fewer “missed” payments through ACH; (2) NSF Fees have serious consequences for borrowers, as being charged three consecutive NSF fees can lead to the borrower being kicked off the ACH payment system; and (3) a reduction in NSF fees could cut costs for the Asset Protection Team, since they start contacting the borrowers immediately after an NSF fee is charged.
Notes about the Borrower Subgroups by Monthly Principal Payment
We used the principal portion of the monthly payment for the following reasons: (1) it is a good proxy for the total monthly payment amount (correlation coefficient=0.95); (2) it matches our data structure better than total monthly payment amount; and (3) it is highly correlated with the total loan amount (correlation coefficient=0.81).

Of note, a correlation coefficient measures the strength and the direction of a linear relationship between two variables. Positive values indicate a relationship between x and y variables such that as values for x increase, values for y also increase. A correlation greater than 0.8 is generally described as strong, whereas a correlation less than 0.5 is generally described as weak.

We were mostly interested in looking at the first quartile for three key reasons. First, this group had a significantly lower proportion of on-time payments than the other three quartiles. When we looked at data from January to March 2013, we observed that 77% of payments by borrowers in the first quartile were made by the due date. The other three quartiles combined had 82% of payment made by the due date, a significantly higher on-time payment rate than the first quartile (p<0.01). Second, the quartiles appear to be loosely correlated with Accion’s Auto Review (AR) Tiers and the borrowers’ Adjusted Gross Income (AGI). Almost half of borrowers in AR Tiers 4 and 5 fall in the first quartile, which would be considered “subprime” or having credit scores under 550. Finally, if one looks at the borrowers in the bottom 50% in terms of AGI, one-third of them fall in the first quartile. Our analyses show that the new statements and reminders may have had a significant effect on this subgroup.

---

47 The difference was much starker during the testing period: the lowest quartile’s payments had an on-time payment rate of 68.9%, while the other three quartiles had an average on-time payment rate of 85.7%.
48 Correlation coefficient with AR Tier = 0.32; Correlation coefficient with AGI = 0.31.
Appendix 6: CHN-Designed Solutions

Letter announcing raffle to residents
Dear «NAME»,

**Play for your purse, pay by the first!** Between April and July, we are rewarding residents who pay their rent on time (on or before the 1st of the month).

Over the next four months (April, May, June and July of 2013), residents who **pay their rent on or before the 1st of the month** will earn an entry into a raffle. We’re giving away **two $100 cash prizes each month** and a **grand prize of FREE RENT in August**.

This means each month, two residents who paid their rent on time will win $100 cash prizes. Additionally, each time you pay your rent on time, you also gain entry into our grand prize drawing for a month of free rent in August. If you pay your rent on time every month between April and July, you will have 4 chances to win the grand prize.

**Make sure you pay by the 1st - don’t lose your chance to win!**

Why is it important to pay your rent on time? For you, a late rent payment means paying late fees (and in some cases, eviction). For Cleveland Housing Network, collecting late payments costs significant time and money – taking away resources that allow us to provide you with better programs and services.

Remember, you can pay in-person, by mail, or online at [http://www.chnet.com/pay-rent.aspx](http://www.chnet.com/pay-rent.aspx).

If you have any questions, please call (216) 574-7100.

Sincerely,

Cleveland Housing Network

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As a winner of a Cleveland Housing Network contest, your name and/or picture may be used for promotional, broadcast, or internet purposes. Employees of Cleveland Housing Network their affiliates, employees and immediate families of each are not eligible to win any contest.
Monthly reminders mailed to residents

Pay for your purse, Pay on time for the chance to win a $100 cash prize each month!

Offer valid from April through July 2013 only.

PLAY BY THE 1st

cleveland housing network

FREE RENT

The grand prize winner will be selected for one month’s free rent.

If you have paid by the 1st of the month (April through July 2013) each entry will be entered into the GRAND PRIZE drawing.

Citi Foundation

expanding economic opportunity
April 2, 2013

[Resident Name]  
[Resident Address 1]  
[Resident Address 2]  

Dear [Resident],

At Cleveland Housing Network, we want all of our residents to pay rent on time, but understand that some emergencies are unavoidable. To show support for our valued residents, we are providing you with an emergency late rent payment fee waiver, included in this letter.

If you have a financial emergency and are not able to pay your rent on time, simply use this one-time waiver to cancel the late fee! Bring your waiver to the rent window at the Cleveland Housing Network office, and we will cancel the late fee charged for that month, or provide a refund credit if you already paid the late fee. You choose when to use it.

The waiver can only be used ONCE to cancel a late fee, so you should save it for a rainy day. Store it with your other important documents, like your lease and financial information. Figure out when money will be the tightest, and use it that month. Remember, it can only be used once.

Each waiver is unique, and we are keeping records of when they are used. The waiver cannot be used to cancel any other fees or cancel an eviction, and it cannot be transferred to another resident. You must bring the waiver to the CHN office (2999 Payne Avenue, third floor) in-person in order to use it. You cannot mail in the waiver, use it over the phone, or give it to your property manager.

You must be a resident in good standing to use the waiver. You cannot use it if you are noncompliant with the terms of the rental agreement. That means you must pay the rest of your outstanding balance at the same time, or before, you use the waiver. The waiver cannot stop any other processes (for example, using it will not stop you from being evicted).

If you pay in person, bring the waiver along with your payment check to the CHN rent window. If you pay by mail or online, you should pay your full rent, including the late fee and come in the office to receive a credit. Otherwise your payment may not be accepted and will be sent back to you.

Remember, you can pay your rent in-person, by mail, or online at http://www.chnnet.com/pay-rent.aspx -- whatever works best for you. If you have any questions, please call (216) 245-2246.

Sincerely,

Cleveland Housing Network
Emergency Late Rent Fee Waiver

From: Cleveland Housing Network
To: [Jane Doe]
Tenant ID: [12345]

Use this waiver to cancel an already incurred late rent payment fee by bringing it to the rent payment office at Cleveland Housing Network.

This waiver is for one time use only. Your account must be in good standing. It cannot be used to waive any other fees or stop an eviction. You must bring the waiver in-person to the CHN office (2999 Payne Avenue).

You choose when to use it.

Date Used: __________________________
Resident Signature: ______________________
Analysis was based on administrative data provided by Cleveland Housing Network. Our primary outcome of interest was the date by which residents paid. However, the administrative data does not reflect date of payment with perfect accuracy due to processing lags and weekends that fall at the beginning of the month. For purposes of our analysis, we included individuals who had pre-paid their rent or had their rent paid through a subsidy program as having paid on the first of the month. We collected data until the 25th of each month, after which we did not expect to see differences in payment rates that were the result of our treatment, and at which point differences would not be interesting for the purposes of the program.

We generally used two statistical methods to examine the effects of the treatments. First, we tested for effects using a model that estimates the speed at which a discrete event, such as rent payment, occurs. This gave us a “big picture” view of the overall effect of the treatment throughout the month. With this method, we could report whether treatment increased the likelihood that an individual who had not paid would pay on any given day. Second, we conducted tests of proportions at key dates to determine whether more residents had paid their rent by a select point in time. This allowed us to “zoom in” to identify any effects that varied over the month. We tested for differences in the fraction of residents having paid by the third, thirteenth and twenty-third days of the month. We chose to test at these points of the month because they provide a wide range of dates and follow soon after especially important dates, such as the first (when rent is due) and the tenth (after which the late fee is applied).

The results of our analyses are reported in two forms. We discuss the effect size of the treatment, our best statistical estimate of how much of an effect the treatment has. We also report the p-value for our effect sizes in parentheses. The p-value refers to the percent chance of us observing a similar effect size due to chance alone. While there is no hard and fast rule, academic publications typically refer to p-values of 0.10 or less as “marginally significant,” p-values of 0.05 or less as “statistically significant” and p-values of 0.01 or less as “highly significant.”

Unless otherwise indicated, we examine both treatments independently. We compare the raffle-only group to the control group, and the raffle and waiver group to the raffle-only group. Our experiment design does not allow us to distinguish the “main effects” of the waiver from the “interaction effects” of the waiver and the raffle combined. All results are pooled from the data collected in each month.

---

Appendix 8: CHN Subgroup Analysis

In order to understand the populations among which the waiver worked, we conducted several subgroup analyses, testing the effects of the raffle program on different groups. Subgroup analyses are a useful tool for generating hypotheses on why we see the results amongst the full sample (Bloom and Michalopoulos, 2013).\(^{50}\) Subgroup analysis shows that:

- The raffle was 49.4\% more effective on residents whose primary source on income was Supplemental Security Income (SSI) \((p<0.01)\).
- The raffle was 35.0\% more effective on residents who were younger than the median resident \((p<0.01)\).
- The raffle was 30.8\% more effective on residents who did not have children \((p<0.05)\).
- The raffle was 9.5\% more effective on residents who had below-median income (among CHN residents) (not significant).
- The raffle was 6.2\% more effective on residents who had a rent subsidy (not significant).

We found the effect on residents whose primary source of income was Supplemental Security Income especially interesting. First, it was the strongest effect, both in the raw format presented here, and in simultaneous tests for interaction effects on multiple subgroups. Second, in the design phase of the project, we had been very concerned that it would not be possible for individuals on fixed incomes to re-arrange their financial flows in order to pay rent earlier. However, the opposite appears to have occurred.

As discussed in the design section, we believe the mechanism by which the raffle had an effect was in how residents’ attention was drawn to the first of the month, rather than the incentive component. In fact, the expected value of the raffle was only approximately $2. However, raffles and lotteries can have an outsized effect because the perceived value of a potential $100 far outweighs the expected value of $2. Raffles provide a highly salient incentive that effectively captures the residents’ attention. For the residents who have the least financial slack, the incentive is even more powerful—it represents the possibility of creating a small, but vital financial buffer.\(^{51}\)

The magnitude of this effect can be seen most clearly in that there is no attenuation in the effect size of the raffle over the course of the month. Of treatment residents relying on SSI as their primary source of income, 26.1\% paid their rent by the 3rd, compared to 14.9\% of control residents, an 11.2\% difference. By the 23rd, 91.4\% of treatment residents had paid their rent, compared to 79.6\% of control residents, an 11.9\% difference. The effect size is stable over the course of our analytic period.

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Appendix 9: Neighborhood Trust Designed Solutions

Index of Plan-Making Activities Used by Financial Advisors to Facilitate Classes

Plan-Making Index

Class 1
- Open a Gateway Banking Account
- Meet With My Financial Advisor to Explore Other Account Options
- Other – create my own plan:
  Ideas: Gather bank statement to bring to class 2; Put $XX in my savings account; Talk to my employer about a 401(k) plan; Do research on my long term financial goal

Class 2
- Set Up Direct Deposit
- Split Direct Deposit
- Find My Network ATM
- Open a Gateway Banking Account
- Other – create my own plan:
  Ideas: Look at fees and terms for my bank account; Put $XX in my savings account; Talk to my employer about a 401(k) plan; Do research on my long term financial goal

Class 3
- Reduce Spending
- Make a Savings Deposit
- Meet With My Financial Advisor to work on my budget, open a Super Saver CD, or open a Gateway Banking Account
- Other – create my own plan:
  Ideas: Gather documents for class 4; Put $XX in my savings account; Talk to my employer about a 401(k) plan; Do research on my long term financial goal

Class 4
- Refinance or renegotiate my debt
- Meet With My Financial Advisor to manage my debt, improve my credit, or explore credit products
- Visit the NFTCU Branch or Brooklyn Coop branch to explore credit products
- Other – create my own plan:
  Ideas: Put $XX in my savings account; Talk to my employer about a 401(k) plan; Do research on my long term financial goal
Make a Savings Deposit

Make a plan to visit your bank/credit union branch or ATM to make a deposit to savings.

Detach this sheet, fold it in half, and bring it with you on your visit.

Where is my ATM or branch? __________________________
Which day will I go? Su M T W Th F Sa Date: __/__/___
What time will I leave? Time: ___:___ AM/PM
How will I get there? __________________________
How much will I deposit? $____.____

Make sure your debit card is in your wallet, and remember your PIN.

Open Gateway Banking Account

Make a plan to gather documents to open a Gateway Banking Checking and/or Savings Account after our next class.

Detach this sheet, fold it in half, and bring it home to help you find your documents.

Which day will I gather the documents? Su M T W Th F Sa Date: __/__/___
What time will I gather the documents? Time: ___:___ AM/PM
Which documents will I bring?
- 1. Valid government issued photo ID or passport (must be unexpired; EBT card also accepted)
- 2. Proof of address (lease or any piece of mail that arrived at your home)
- 3. Social Security Number or ITIN (Individual Taxpayer Identification Number – if you don’t have an ITIN, the Credit Union will help you obtain one)
- 4. Minimum opening deposit for your Savings Account ($5)

DECEMBER 2013
BETA FINAL REPORT
Set Up Direct Deposit

Make a plan to set up your direct deposit with your employer.

Detach this sheet, fold it in half, and bring it with you on your visit.

---

**Which day** will I bring the information to work?
**What time** will I do it?
**To whom** should I bring my information at work?

(This is usually someone who works in payroll or Human Resources.)

---

**Bring My Direct Deposit Information**

Account Number: ___________________________
Routing Number: ___________________________

If you opened the Gateway Banking Package, bring the Direct Deposit Form that your Financial Advisor gave you. If you have an account elsewhere, bring a voided check!
Simplified Account Materials

INSIDE TOP

My Account Information

Account Number: ________________________
Routing Number: ________________________

My Online Banking

Website: http://www.neighborhoodtrustcu.org

User Name: ________________________

OUTSIDE FRONT (FLIP)

Email: ________________________
Phone: ________________________
Name: ________________________

My Financial Advisor

Neighborhood Trust Federal Credit Union

Address
1112 St. Nicholas Avenue
(at West 158th Street)
New York, NY 10032

ACI
M3, M100, A37

Hours
M T F 9 am–4 pm
Th 9 am–6 pm
Sat 10 am–2 pm

INSIDE BOTTOM

OUTSIDE BACK
Recurring Auto-Transfer Request

Date: ______________________
Member Name: ______________________
Transfer FROM account: □ Savings □ Checking
Account Number: ______________________
Transfer TO account: □ Savings □ Checking
Account Number: ______________________
Transfer Amount: $_________.
Start Date: ___ / ___ / ___

Frequency:
□ Monthly (Transfers will occur on the same calendar day of the month—e.g. 1st, 15th, etc.)
□ Every Two Weeks (Transfers will occur on the same day of the week—e.g. every other Friday)
□ Weekly (Transfers will occur on the same day of the week—e.g. every Friday)

Member Signature

Financial Institution: Neighborhood Trust Federal Credit Union
1112 St. Nicholas Avenue
New York, NY 10032

<table>
<thead>
<tr>
<th>Account Type</th>
<th>Account Number</th>
<th>Routing Number</th>
<th>Deposit Type</th>
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<tr>
<td>Savings (Share)</td>
<td>026083713</td>
<td></td>
<td>□ Full Paycheck □ ____% of Paycheck □ $ _____ Per Paycheck □ Remainder of Paycheck</td>
</tr>
</tbody>
</table>

Employee Name: ____________________________
Employee Address: ___________________________
Social Security #: ___________________________

Signature ________________________________ Date __________

Please contact us with any questions at 212-740-0900.
Appendix 10: Neighborhood Trust Data Sources and Analytical Methods

In total, we were able to obtain data through the following sources:

- Salesforce data collected by Neighborhood Trust consisting of client characteristics for Getting Ahead graduates (site, services used, Advisor, self-reported financial issue, banking status, etc.)
- NTFCU data at the transaction level, consisting of credit union account transactions completed over a monthly period
- NTFCU data at the account level, consisting of account characteristics and average balances over a monthly period
- Course evaluations distributed to 182 Getting Ahead clients in both treatment and comparison groups (see Appendix 11)
- A supplementary survey about the solution distributed to 81 Getting Ahead clients in the treatment group (see Appendix 12)

As discussed in the body of our report, in order to get a general sense of whether our solutions might be effective, we directly compared rates of account opening and rates of account usage between treatment and comparison groups. Because we were not able to access credit union data from partner credit unions, we were forced to further limit our account opening and usage analysis to only those clients who were offered accounts at NTFCU:

For our primary outcome of interest—number of transactions a month—we test for differences between the treatment and comparison group using simple and multiple linear regression models. First we report the results of a simple linear regression on our outcome of interest. Second, we report the results of a simple linear regression where we cluster the standard errors by workshop (our unit of randomization). Third, we report a final multiple regression analysis where we control for site-based fixed effects. This regression takes the form:

\[ Y_{ij} = \beta_0 + \beta_1 \text{Treatment}_{ij} + \beta_2 \varphi_j + \epsilon_{ij} \]

Where \( \varphi \) is a fixed effect for site and \( \epsilon \) is the error term.

As noted in the body of our report, while we can determine whether the differences between the treatment and comparison group are unlikely to be the result of chance, this is not the same thing as being able to attribute the causality of the difference to the treatment. Because assignment was non-random, the differences in outcomes could reflect differences in the student populations, how the classes were conducted or differences between the Advisors. While we control for differences in observed variables in our regressions, we are unable to control for any biases resulting from variables that we are unable to observe.

Comparison Group - Offered NT Accounts
(103 clients; 5 Advisors; 12 workshops)

Treatment Group - Offered NT accounts
(62 clients; 2 Advisors; 6 workshops)
The table below presents our results. Our first model estimates a simple linear model of the effect of treatment on number of transactions. This model shows that clients assigned to treatment sites had 9.5 more transactions/month than control sites, a finding that is statistically significant at the $p<0.01$ level. Our second model calculates clustered standard errors by workshop (since treatment was assigned to workshops directly, and individuals indirectly). This reduces the significance of the results to $p<0.05$. Model 3 incorporates site fixed effects, as we want to control for potential differences in the client populations that attend workshops at different sites. After controlling for site fixed effects, the effect of treatment is negative but non-significant. It is important to note that each of these models are valid examinations of the data, and no one result represents a “final say” on how to interpret the findings, especially given the difficulty of making causal inferences with a small sample size.

### Effects of Treatment on Number of Transactions per Month

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Effect</td>
<td>9.53***</td>
<td>9.53**</td>
<td>-9.59</td>
</tr>
<tr>
<td></td>
<td>(2.4)</td>
<td>(3.73)</td>
<td>(15.22)</td>
</tr>
<tr>
<td>Standard Errors Clustered by Workshop</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Site Fixed Effects</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.09</td>
<td>0.09</td>
<td>0.14</td>
</tr>
</tbody>
</table>

* - Result is significant at the $p<0.10$ level.

** - Result is significant at the $p<0.05$ level.

*** - Result is significant at the $p<0.01$ level.
Appendix 11: Neighborhood Trust Course Evaluation

Feedback and Graduation

Course Assessment and Feedback (anonymous)

Your opinion about the course:
1. Did this course meet your expectations?
   - [ ] Below expectations
   - [ ] Met expectations
   - [ ] Exceeded expectations

2. Please provide your opinion on each of the following aspects of the program:
   - Would you recommend this course to others? Why or why not?
   - Which class or activity had the biggest impact on your decision to take actions?
   - What topics were not discussed that you would have like to have covered?

Your opinion about the instructor’s ability to:

<table>
<thead>
<tr>
<th></th>
<th>POOR</th>
<th>JUST OK</th>
<th>SATISFACTORY</th>
<th>GOOD</th>
<th>EXCELLENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explain topics in an easy-to-understand way and answer questions effectively</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Encourage questions and dialogue</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Provide direction for activities and group discussions</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

Your opinion about your Financial Action Plan:

<table>
<thead>
<tr>
<th></th>
<th>NOT AT ALL</th>
<th>NOT VERY</th>
<th>SOMEWHAT</th>
<th>VERY</th>
<th>EXTREMELY</th>
</tr>
</thead>
<tbody>
<tr>
<td>How well-matched is your FAP to your individual situation?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>How likely is it that you will utilize your FAP?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

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Feedback and Graduation

Course Assessment and Feedback

Full Name: ___________________________________________ Date: ___/___/___

Current Financial Behavior: On a scale of 1 to 5 with 1 being the lowest and 5 being the highest:

- How stressed do you feel about your personal finances and debt in general now?
  1  2  3  4  5

- How challenging is it for you to manage your finances?
  1  2  3  4  5

Use of Financial Services (check all that apply):

1. Do you currently have a credit union/bank account?
   □ Yes, Savings Account
   □ Yes, Checking Account
   □ No

2. Do you have Direct Deposit?
   □ Yes, Savings Account
   □ Yes, Checking Account
   □ No

3. What products from the Gateway Banking Package have you opened?
   □ Super Saver CD at _____________________________
   □ Savings Account at _____________________________
   □ Checking Account at _____________________________

4. How many money orders do you buy per month? ________

5. How many times a month do you cash your checks at check cashing stores? ________

6. Approximately how much money per month are you currently saving? $ ________

All information requested on this form will be kept confidential within Neighborhood Trust Financial Partners, partner organizations and evaluators. It is intended solely for use in connection with record keeping and program evaluation.

Neighborhood Trust Financial Partners

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Appendix 12: Neighborhood Trust Supplementary Survey

**Feedback and Graduation**

**Course Assessment and Feedback (anonymous - continued)**

3. Did you open a new account during the Getting Ahead Course? (check all that apply)
   - Yes, I opened an account at Neighborhood Trust Federal Credit Union
   - Yes, I opened an account at Brooklyn Coop
   - Yes, I opened an account at another bank or credit union
   - No, I did not open a new account during the Getting Ahead Course

4. If so, have you used the account yet?
   - Yes, I have opened an account and have used it
   - No, I opened an account but haven't used it yet
   - Did not open a new account during the course

5. Did you complete one or more Take Action plans during the course?
   - Yes
   - No

6. Please rate how useful the Take Action plans were during the course (1 being the lowest and 5 being the highest)
   1  2  3  4  5

7. Did you use the pouch you were given in the first class to transport your Take Action plans?
   - Yes
   - No

8. Please rate how helpful the pouch was in helping you complete your Take Action plans (1 being the lowest and 5 being the highest)
   1  2  3  4  5
About the BETA Project Team

CFED empowers low- and moderate-income households to build and preserve assets by advancing policies and programs that help them achieve the American Dream. This includes buying a home, pursuing higher education, starting a business and saving for the future. We are a leader in providing data about household financial security and policy solutions, promoting programs on the ground and investing in social enterprises that create pathways to financial security and opportunity for millions of people.

*Project Staff: Pamela Chan, Anita Drever, Ethan Geiling, Ida Rademacher*

ideas42 is a unique behavioral ideas lab and consulting firm bringing together highly creative practitioners and industry and policy experts with world-renowned economists and psychologists from top-tier universities. Our mission is to apply our expertise in behavioral economics to invent fresh solutions to the world’s toughest social problems with the goal of improving tens of millions of lives.

*Project Staff: Hyunsoo Chang, Bill Congdon, Dan Connolly, Katy Davis, Matthew Darling, Josh Wright*

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*Project Staff: Daria Sheehan*

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