



Transforming Financial Inclusion Using Behavioral Science

From Financial Access
to Financial Health

Authors:

Saugato Datta and Manasee Desai

December 2018



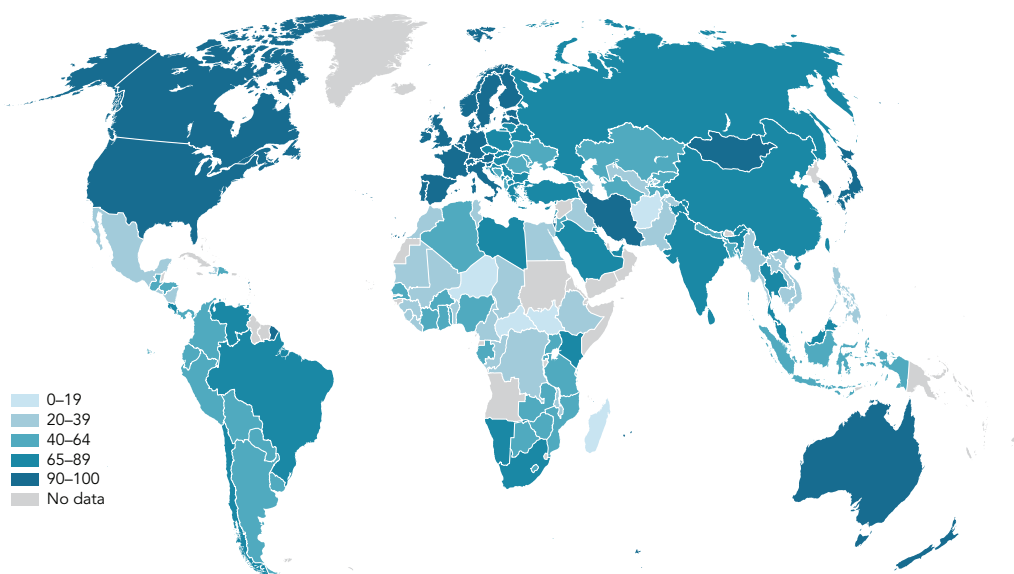
Striking achievements, pressing challenges

Technology and policy drive a revolution in access

Since 2011, around 1.2 billion people around the world who previously had no access to formal financial services have opened a financial account.¹ **Nearly 70% of adults worldwide now have at least one such account, up from just over 50% as recently as 2011.** This is nothing short of a revolution in the sphere of financial inclusion, which the World Bank defines as all people and businesses having “access to useful and affordable financial products and services that meet their needs.”²

This revolution happened in part because of policy innovation. In recent decades, policymakers have become increasingly focused on the importance of financial inclusion as a critical building block for poverty reduction. This has driven extensive regulatory changes and policy initiatives (such as the growth of banking correspondent models, the creation of basic or ‘no-frills’ accounts, etc.) aimed at making it easier for financial institutions to reach and serve those who have historically been overlooked, such as people with lower incomes, women, and those who live in remote places.

Today, 69 percent of adults around the world have an account
Adults with an account (%), 2017



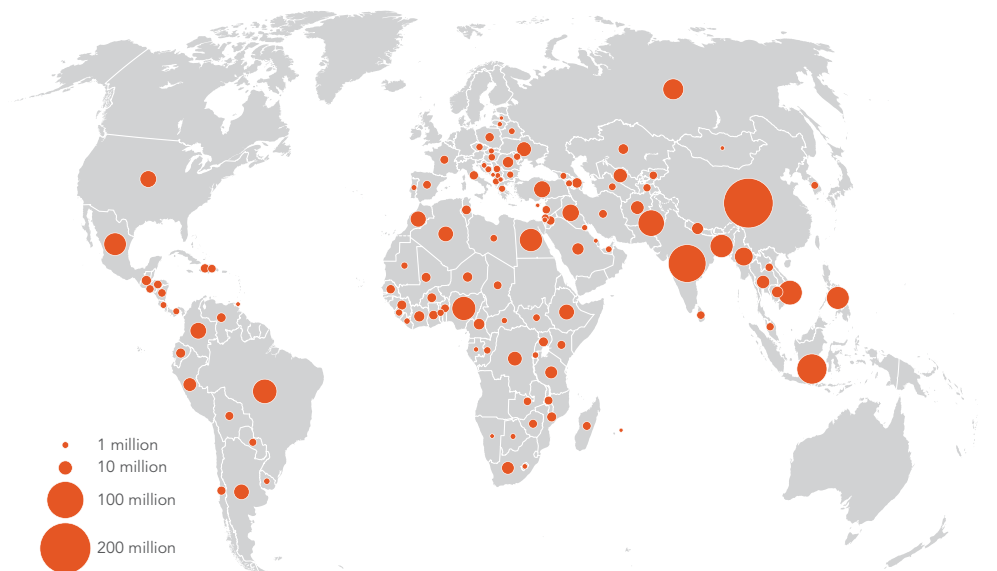
Source: The Global Findex Database 2017

¹ UFA 2020 Overview: Universal Financial Inclusion by 2020. World Bank Brief, available at: <http://www.worldbank.org/en/topic/financialinclusion/brief/achieving-universal-financial-access-by-2020>

² “Financial Inclusion: Overview”. World Bank. Available at: <http://www.worldbank.org/en/topic/financialinclusion/overview>

Technology has been another key driver of financial inclusion. The rapid expansion of mobile phone usage among people of all income levels has made it possible for institutions to reach and deliver services to the underbanked more efficiently and cost-effectively than before. This promise has brought forth hundreds of millions of dollars committed to developing new financial products, enabling not just traditional financial institutions but also fintech companies, telecommunications providers, microfinance institutions, and governments to come up with new solutions and products.

Two-thirds of unbanked adults have a mobile phone
Adults without an account owning a mobile phone, 2017



Sources: Global Findex database; Gallup World Poll 2017.

Note: Data are not displayed for economies where the share of adults without an account is 5 percent or less.

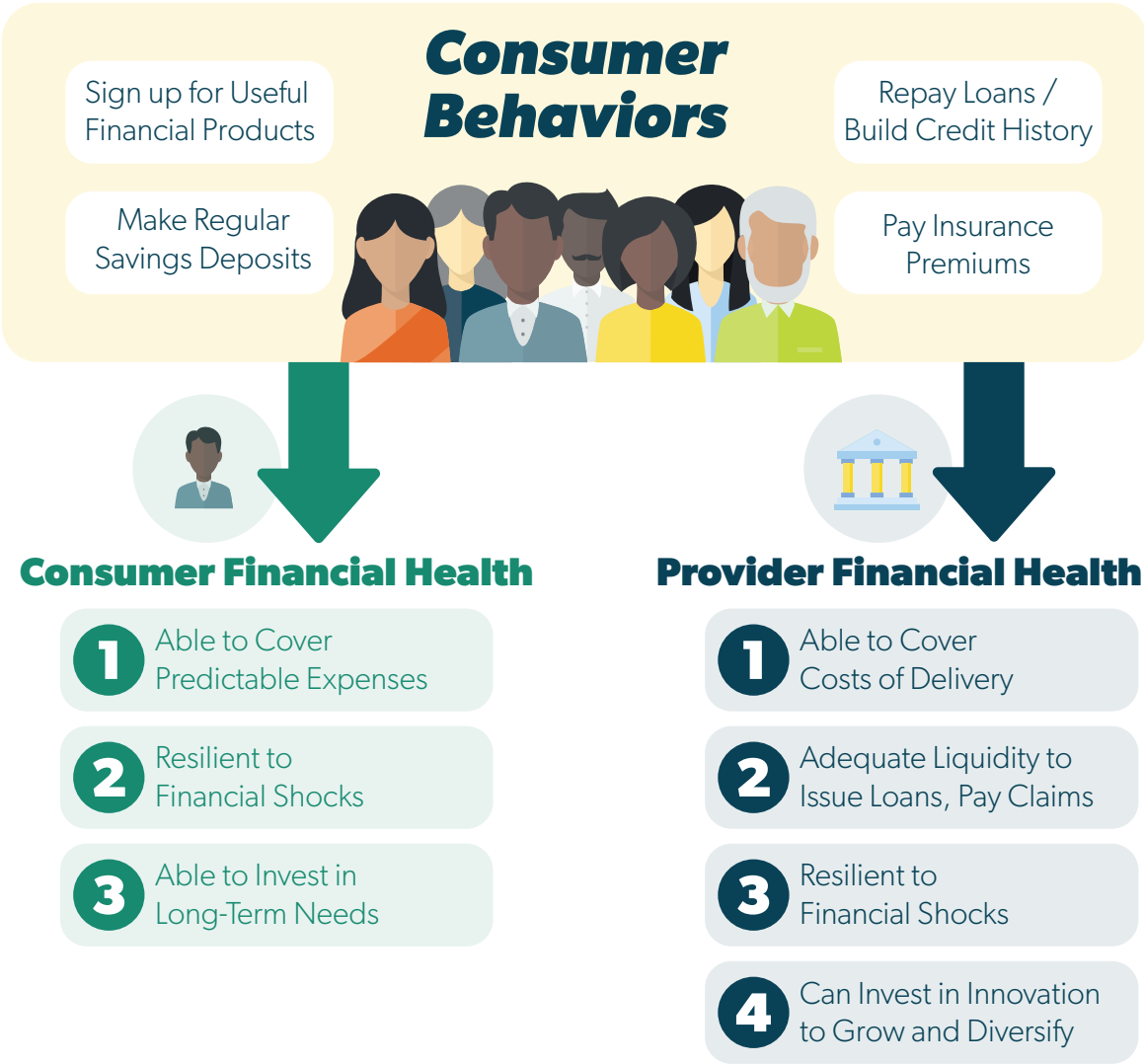
Source: [The Global Findex Database 2017](#)

Despite increased access, use remains low

Having a bank account only helps individuals if they use them. Yet even as policy-makers work to bring the remaining 1.7 billion unbanked people into the system, they face a new and pressing challenge: low engagement with, and use of, financial services by new users. **In India, where 310 million additional people entered the formal financial sector in the four years to March 2018, 48% of all bank accounts have never seen a single transaction.**³ This share is likely to be even higher among newly opened accounts. And while the problem of dormancy and non-use is perhaps most prominent in India, it exists in some form for people new to formal financial services in many countries around the world. While we found variable engagement rates in our recent work with 14 digital financial service (DFS) providers **across South Asia and Africa, the average proportion of accounts with activity was only about 25%.** It's clear that access and inclusion don't necessarily translate into use—and the ultimate goal of stronger financial health.

³ Asli Demirgüç-Kunt, Leora Klapper, Dorothe Singer, Saniya Ansar, and Jake Hess. 2018. Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution. World Bank.

This points to a troubling and unsustainable mismatch between innovation and impact. For consumers, low engagement rates mean that financial products are not fully helping them build the financial buffers that they need to mitigate emergencies or to invest in productive enterprise, and ultimately strengthen their financial health. For financial service providers, low take-up and usage can make serving the underbanked unsustainable. **By helping more people use the financial products and services available to them, the financial sector can better meet the needs of millions of underbanked people with an approach that is sustainable for the sector itself.**



The missing piece: the science of human behavior

Although increasing the use of formal financial services is a challenging issue, it need not be an intractable one. To do this, we must complement advances in technology and policy with an approach to financial inclusion that is driven by an understanding of human behavior. The reason for this is that the problems of low take-up and usage of well-intentioned new offerings arise in part because these products often fail to take into account the context and needs of the customers they serve. Research in the fields of behavioral science (which includes insights from economics, psychology and neuroscience) has revealed numerous behavioral barriers that prevent people from building their financial health—and **low-cost but impactful designs that can help overcome these barriers**. By better understanding how people (both customers and providers) process information, make choices, form preferences, and act on their choices, the institutions and people working to promote financial inclusion can make progress on closing critical gaps and address not only access but also action.

This report outlines two ways to apply behavioral science to financial health. The first is to identify and tackle the specific problems around take-up, engagement, and use of **existing financial products and services**. This includes addressing provider-side challenges (such as customer targeting and sign-up) using an approach to problem-solving that is rooted in an understanding of human behavior, and a commitment to rigorous, iterative, data-driven experimentation or A/B testing. Included in this report are case studies of work with providers and practitioners in the Philippines, India, Ghana, Tanzania, Kenya, Sri Lanka, Pakistan, and the United States which illustrate how the behavioral approach has moved the needle. In the process, we hope to show how this approach can both give providers new tools (such as behaviorally-informed outreach strategies or rapid iterative testing) to tackle persistent problems, as well as help make better-informed business decisions.



Second, examining financial behavior through a behavioral lens reveals opportunities to **design entirely new financial offerings** that are better suited to customers needs—particularly customers with low incomes, for whom many common behavioral barriers have a more serious impact due to the context of scarcity in which they live.

A behaviorally-informed approach to financial behavior has the potential to streamline innovation in financial inclusion. It can help FSPs make incremental progress on the critical issues undermining their ability to sustainably serve low-income customers, as well as help them identify when innovative products and services are needed. Improving existing financial products and services, and building new ones using behavioral science, can thus strengthen the sector's ability to build financial health for the historically underserved.



Challenges, solutions, and ideas for the future

Enrolling customers for a new product or offering is the first hurdle to clear when improving access and use of financial services. FSPs face many challenges in signing up, retaining, and activating the customers they seek to serve. But even after new customers enroll, many providers find themselves facing a new problem: much lower engagement and usage than anticipated.

Many new customers rarely use the product they signed up for. For example, they may download a mobile banking application but then rarely if ever open it again. Or customers may use a product for a small subset of what it is capable of: perhaps they use a digital financial product to transfer money, but never use it to save money. Others may overuse some channels but under-use others: when customers sign up for a bank account, they often have access to services in-person, over the phone, and online, but many disproportionately use branch-based banking when they could save time using another channel.

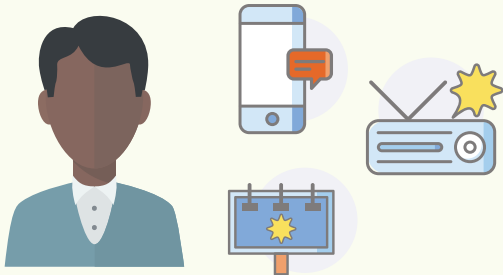
These patterns limit the utility of tools that could support people's financial health, and an abundance of inactive users makes it harder for FSPs to serve their customers sustainably. Crucially, **lack of use doesn't necessarily indicate that people don't want to save money or use financial products.** With a behavioral lens, it's clear that the journey from signing up for a financial product to better financial health involves people making dozens of decisions and taking many actions. Often, this journey involves people *not* making a certain decision, or not taking certain actions.

Low engagement, low usage and balances, and sub-optimal use of services are three areas where behaviorally-informed experimentation can improve each part of the customer journey. This section will detail how FSPs can leverage behavioral insights for improving existing products and services, including case studies that show how the insights can be applied in the real world. But we will also see that a behavioral lens can help providers rethink several aspects of how they do business and tackle some of the problems they face in rolling out and getting their products to be used by the customers they seek to serve, such as targeting hard-to-reach customer segments, or deciding whether or not to use a particular kind of outreach campaign.

Numerous Opportunities for Behavioral Improvements

DECISIONS ALONG CUSTOMER JOURNEY

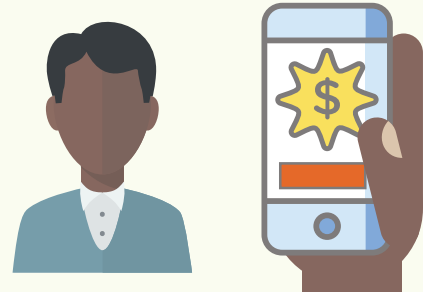
1 Learn About Product



YES →

NO ✗

2 Sign-Up for Product

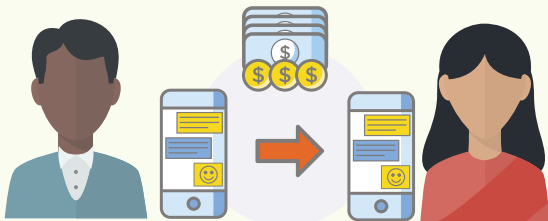


YES

NO ✗



4 Make Transfers/ Digital Payments



YES

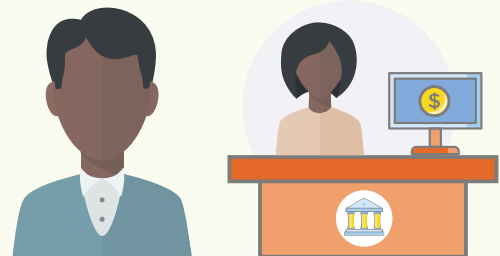
NO ✗



← YES

NO ✗

3 Make Cash Deposits



MULTIPLE BEHAVIORAL BARRIERS AT EACH STEP

YES ✓

Additional Decisions

HOW MUCH?
Amount to Deposit is Unclear

Focused on Fees Associated With Withdrawing or Transferring

FOR WHAT PURPOSE?
Savings Purpose is Abstract/Unnamed

HOW?
No Plan or Overconfident Plan for Saving Over Time

NO ✗

Status Quo Bias:
Switching from Current Method Feels Disproportionately Hard

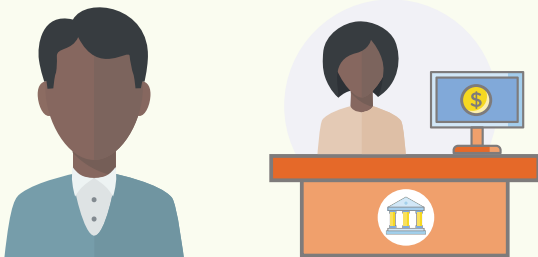
Insufficient Trust
in Long Run Access to Money

Too Many **Hassle Factors** Involved

Mental Model of Account as "Pass-through" Instead of Savings

Present Bias: Today's Needs > Tomorrow's Needs

5 Withdraw for Cash Payments



An Early Hurdle: Low engagement with formal financial products

Engaging with a financial product—for example, opening a mobile money application or visiting a branch or agent to check the status of an account—is a prerequisite for using it in ways that improve financial health. In the case of mobile money platforms, which many financial institutions now offer to increase accessibility, engagement is the first step toward customers saving and building balances, or even paying bills and transferring money. But from the data we can see that engagement rates with many mobile money platforms remain low, particularly among specific segments of the population, such as women.

Low engagement can seem puzzling at first. Why go to the trouble of signing up for a platform and then never use it? Analysts of the industry pose several potential reasons. People may sign up for a product without a clear intention to use it in the future. Once they acquire it, they may realize they don't have enough money on hand to make engaging with the mobile platform worthwhile. Perhaps the technology intimidates them, so they shy away from engaging with a digital product. These are all plausible explanations, and may be true for portions of the potential user-base of any product.

But behavioral science offers some vital, less obvious explanations. As we have found in our work, mobile money platforms may not be “top-of-mind” for customers at the moment they're performing certain financial transactions. Sometimes only a subset of the product's functionalities are salient to customers. They perceive (accurately or inaccurately) that their peers only use the product, or products of its nature, for certain purposes. If any of these hypotheses are valid in a given context, then small interventions—such as making use cases or even the product itself more **salient** (more prominent), or leveraging what behavioral science calls **social proof** (evidence of what others are doing)—could help increase customer engagement.

Rethinking Solutions to Low Engagement Through a Behavioral Lens

Most of the time, financial service providers try to increase engagement with their products through traditional marketing campaigns, small financial incentives such as airtime offers, or by broadening the range of ways in which users can access the product.

As the case below shows, using behaviorally-informed tweaks to messaging can help improve the success of such campaigns. But behavioral science also suggests other possible solutions: for instance, there may be opportunities to **provide signals that build trust** in the product—for example, using badges, testimonials, receipts (for instance, for successful payments or transfers), customer service numbers—along the customer journey.

Equally, there may be ways to **simplify the process of making decisions along the user journey** (for instance, by providing information in ways that allow users to make quick comparisons between options) and facilitating actions (for instance, by making it clear how far along a multi-step process a user is, how many steps remain, etc.). Many of these ideas are summarized in our **“Digital Financial Services Adoption checklist”**, available online at <http://www.bhub.org/best-practice/digital-adoption/>

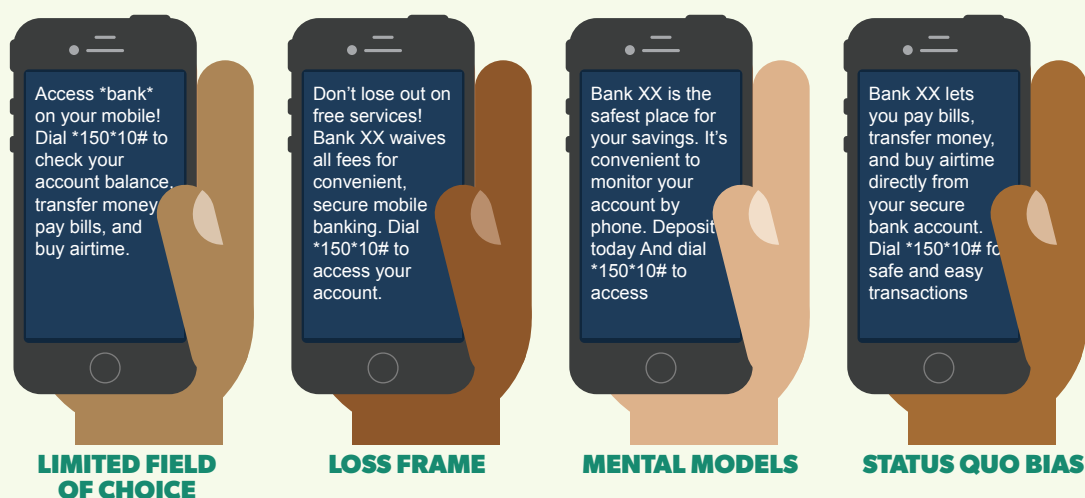
» CASE STUDY

Increasing Engagement with Mobile Banking in Tanzania

In Tanzania, we worked with a medium-sized commercial bank with around 200,000 customers. Having begun as a microfinance institution, the bank had a customer base that was disproportionately low-income, with low expected ticket size and balances (and a corresponding need to minimize transaction costs). Fortunately, mobile phone penetration was high enough in the country that the bank was able to introduce a mobile banking application that would enable customers to check their balances, pay bills, transfer money, and build balances without ever needing to visit a bank branch—saving them time and transportation costs.

By 2017—four years after the mobile banking platform was introduced—70,000 customers were signed up for the mobile banking platform. Unfortunately, the overwhelming majority of these clients never engaged with it: only 17% of clients had used the mobile service more than once a month in 2016.

As a first step toward tackling low engagement, we ran a month-long trial in which randomly selected subsets of customers received a behaviorally-informed SMS message that encouraged them to transact on the platform. A control group received no message.



Whereas only 13.3% of customers in the control group engaged with the mobile application during our trial, customers who received behaviorally-informed messages showed significantly **higher engagement rates of between 15.6% and 16.6%**. The most successful message was one that incorporated the idea of **loss aversion**—that losses loom larger in people's minds than gains—which resulted in a 3.3 percentage point higher engagement rate than the control group—almost a 25% increase. This trial demonstrates that even **a simple SMS message incorporating an insight from behavioral science can bump up engagement rates.**

Usage and Balances: a steeper challenge

Encouraging people to engage with financial products is only the first step toward supporting their overall financial health. Even if customers engage with a product, they may seldom leverage its full capabilities and ultimately build their savings. In the case of digital financial service products like mobile banking platforms, engagement can remain shallow. For example, in Tanzania, while we were able to increase basic engagement, most of this engagement came from people using only the most basic functionality of the mobile platform, such as checking their balances.

Like lack of engagement, there are some fairly traditional explanations for why individuals are not using a product. Indeed, they are similar: even a customer who does engage with a product may not have the cash to make deposits. Unease with technology might kick in even more strongly for an action like making a deposit or payment than for a simple act like checking balances.

Here too, behavioral science offers some interesting alternative explanations. Customers' mental model of a financial product might not make it conducive to building balances: perhaps they **view certain new accounts more as pass-through channels** for things like airtime, government grants, or remittances, than as vehicles for building balances. They may be **distrustful of the intangible nature of digital financial solutions as reliable mechanisms** for accessing their savings. Perhaps they are deterred from making regular deposits by the **lack of evidence about others' savings behavior**, which is private, compared to the high visibility of consumption spending. It is possible that they are affected by perceived **social norms** (informal societal rules), believing—again, accurately or inaccurately—that their peers do not use financial accounts to save. Or perhaps they are **anchored** (fixed to an often arbitrary amount) to particular thresholds below which making a deposit doesn't make sense. Finally, low income customers are known to **tunnel** (focus heavily on meeting day to day expenses) which may **heighten their awareness of fees** associated with moving money once it has been deposited.

The Difficulty of Building Long-Term Savings Balances

Beyond the reasons why people may not use specific financial products day to day or for particular functions (such as making deposits), behavioral science suggests a number of overlooked reasons why people **may fail to save for the longer term**. Long-term saving is hard for everyone, because we are **'present-biased'**—or **overly focused on today's needs and costs at the expense of benefits in the future**. This means that we tend to put off or defer actions that have a large future benefit but are costly in the moment—such as putting a share of our income into long-term savings, which means we have less today so we may be comfortable in our old age.

Beyond this, though, customers may have a hard time visualizing their future self, who will benefit from any saving they do today. Savings goals may be abstract. And **customers may find it difficult to develop a clearly articulated plan for how to achieve their future goal**. The case studies below show us some ways to address these issues.

But there are opportunities to leverage behavioral science more deeply—for instance, by **making people's future selves and their needs more vivid and salient to them in the present**, or by automating future saving behavior by **leveraging moments when people are feeling 'flush'**—such as when they have just gotten paid. So far, this has mostly been tried for people in developed countries who get regular paychecks—but the principle is as relevant for farmers and other informal-sector workers in developing countries, who too have periods of plenty alternating with periods of need. Finding ways for farmers or seasonal workers to commit to future savings at times when they are momentarily 'flush with cash' has enormous promise.

» CASE STUDY

Increasing Deposits on a Mobile Banking Platform in Nigeria

Our findings from working with Women’s World Banking and a commercial bank in Nigeria suggest that simple SMS messaging can help people make more deposits—another step toward building their savings balances.

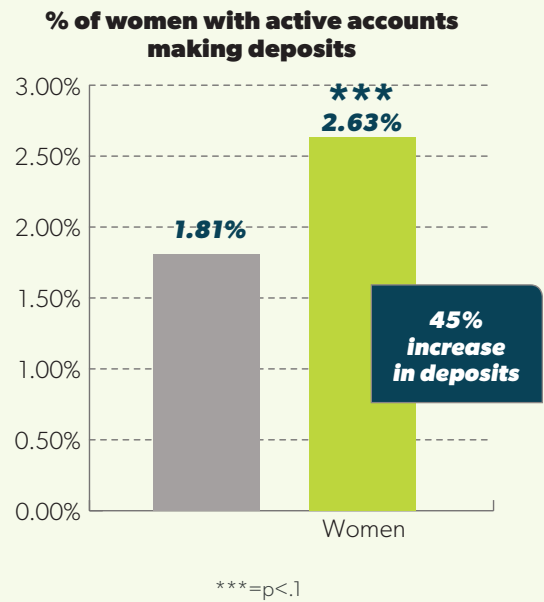
In Nigeria, norms-based messaging encouraged some sets of customers from our partner bank to make larger mobile deposits. For women who were already active users of the mobile banking platform, SMS messages leveraged an **injunctive norm** (a description of what one ought to do) and provided recommended savings levels in order to create the

perception of the account as a place to accumulate savings over time. These messages led to approximately **45% more ‘active women users’ making a deposit** than in the control group (2.63% of such women who received a message made a deposit, whereas 1.81% of equivalent women customers in the control group did so).

In other words, some women who had already engaged with the mobile banking platform, but thus far may not have seen it as a place to accumulate money, began to use it to make deposits into their account. Injunctive norms messages even got some women who had hitherto been inactive users to engage—0.53% of such women made a transfers or payments when they received the behaviorally-informed SMS, versus 0.09% in the control group. While majority of users did not start to make deposits, the intervention did result in more deposit-making among at least some classes of users. **Though modest, these results point to a low-cost intervention that can be used to engage segments of the population (women or inactive users) who are often difficult to reach.**



Injunctive norms framing prompted ACTIVE women to make DEPOSITS



» CASE STUDY

Increasing Savings Deposits in the Philippines

A bank in the Philippines sought to increase deposits among new customers who were opening savings accounts. Though the bank was able to encourage the opening of 34,000 accounts in a 15-month period, 58% of the accounts at the bank had not been used for even a single transaction since being opened.

A behavioral diagnosis process revealed that many clients opened new accounts without an intention or plan about how to use them and did not enroll in regular savings collection programs because they were not made salient when the account was being opened. Furthermore, savings goals were distant and abstract, and seemed less pressing than today's financial expenses and temptations.

With these bottlenecks in mind, we designed several enhancements or changes to the bank's onboarding materials: a new account opening form, a printed savings plan, reminders to make savings deposits, and a new savings calendar.

Redesign the Account Opening Process

1 Assign a **CONCRETE GOAL** to account

2 Make a **COMMITMENT** to meet goals with bank agent

3 Make a **PLAN** to meet goals in "Savings Calendar"

4 Get **REMINDERS** to keep savings plan and goal "Top of Mind"



The savings plan prompted new clients to identify a specific savings goal amount to steer clients away from anchoring to the minimum required deposit. Clients were then asked a series of questions about their plan to make their first deposit and future deposits. The plan also included a prominently displayed question asking clients if they wanted to sign up for free savings collections.

Upon completing the form, both the client and a member of the bank staff signed the savings plan form to create a feeling of commitment to the bank. Clients were allowed to take copies of this agreement home with them. The savings plan also allowed clients to opt-in to receive personalized SMS message reminders to make savings deposits. Lastly, clients were given a savings calendar, which allowed them to monitor their aggregate savings over time, with an emphasis on daily (rather than weekly) savings.

We found that clients who received the redesigned savings program with the new account opening form, savings plan, and savings calendar, **increased their final balances by 37%** compared with those in a randomly selected control group who did not receive the new program. These clients made **initial deposits that were 15% higher** than those in the standard savings program. They were also **22 percentage points more likely to initiate a transaction in the new account**, with 45% of clients with the redesigned savings program making a transaction compared to only 23% of clients in the standard program. In general, clients with the redesigned savings program made smaller and more frequent ongoing deposits as well as smaller withdrawals.

The challenge of sub-optimal use

In many cases, we see patterns of use that overly privilege certain ways of doing particular transactions (e.g., depositing money only in person or at a branch, when doing so over a mobile application is easier and cheaper). At other times, we may see people using certain products or platforms to perform some tasks (e.g., transfer money) while neglecting other functionalities (e.g., paying bills). Here, too, there are some intuitive possible explanations—perhaps people aren't aware of all of the product's functionalities, or perhaps they find online banking intimidating.

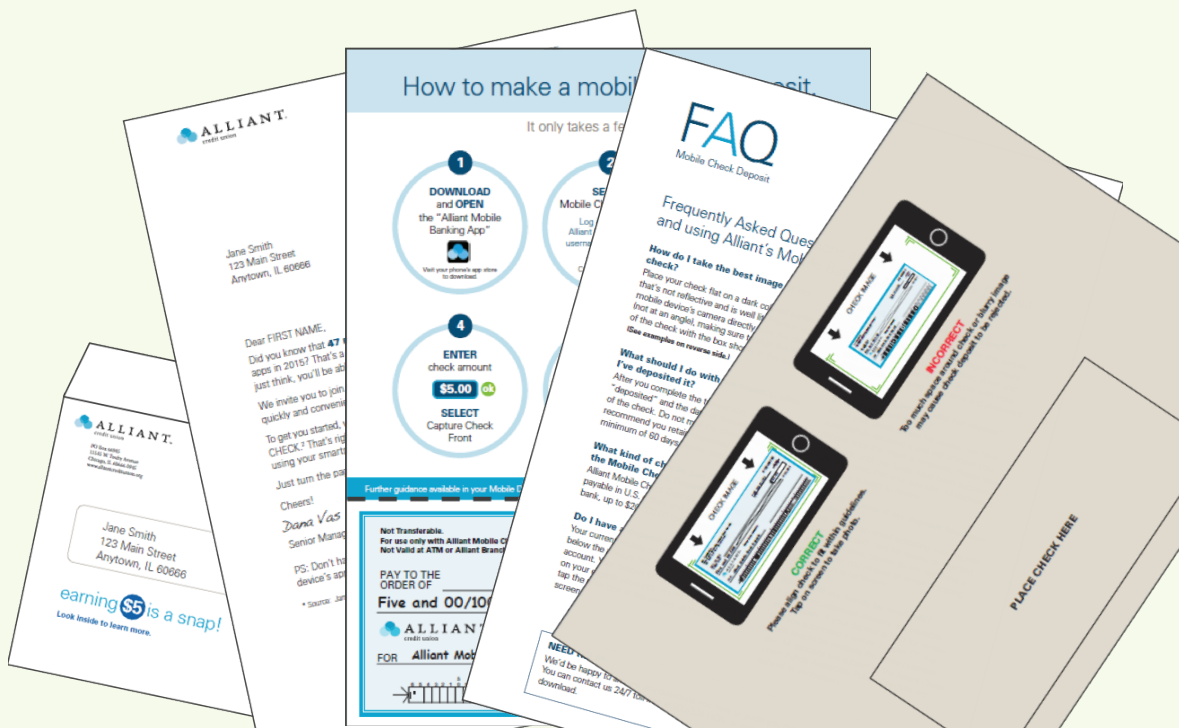
Once again, behavioral science offers some interesting alternative explanations for the observed patterns of behavior. Perhaps customers are anchored to particular ways of doing particular things: so they default to online banking for certain functions, but revert to visiting branches for others. Customers may be deterred from using new, less familiar channels by small **hassle factors**. Or perhaps customers are subject to **status quo bias** (overestimation of the difficulty of switching to a new method of doing something)—this can prevent potential customers from switching from cash to digital services, or from their existing mechanism for doing something to a new, potentially more convenient, product.

» CASE STUDY

Increasing Mobile Deposits in the United States

In a project in the United States, behaviorally-informed solutions helped people use a beneficial mobile deposit channel that they had not yet tried. In this case, we were working with a credit union, whose members deposited most of their checks at their local branch or through the mail—which was both more time-intensive for clients and costlier for the bank than mobile deposits. As part of the experiment, people in the treatment group were mailed a letter encouraging them to try mobile deposits. The letter was behaviorally optimized in multiple ways. First, it was sent in an unusually shaped envelope, which helped to distinguish it from other mail. It was personalized, it highlighted necessary action steps, and it utilized a post-script—an area proven to draw the reader’s attention. The toolkit included a set of easy-to-follow instructions for making a deposit using the smartphone app, and a \$5 check to encourage people to try and make a deposit immediately.

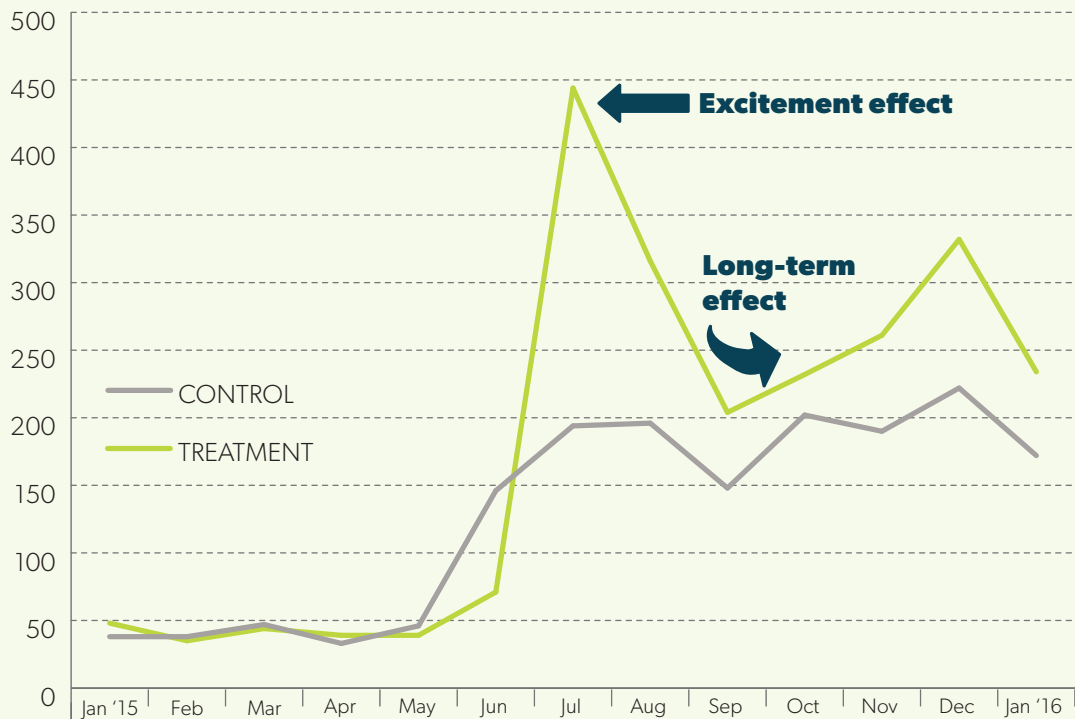
The Mobile Deposit Kit



These letters nearly **doubled the number of clients making mobile deposits for the first time** compared to members who received no communication about mobile deposits, from **5.8% to 11.7%**. It also proved to be effective at increasing usage of the mobile feature even after the initial mailer activity, indicating that **recipients may have changed their standard approaches in the long-term**. Given that this intervention cost less than \$1 per targeted client, it was a remarkably cost-effective way of making an existing channel more salient. This experiment also suggests that low-cost, non-digital strategies can encourage customers not only to engage with mobile banking, but to use it to make their lives easier and enable banks to serve them more sustainably.

Sustained usage (and increased share of wallet)

Mobile Deposits (per 1000 members)



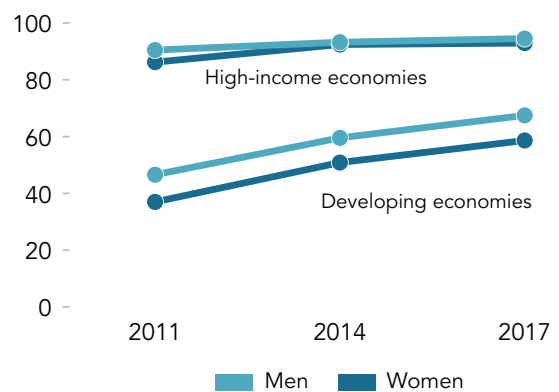
WHAT ABOUT PROVIDERS?

So far, we have focused on challenges faced by customers. But providers also face numerous problems that affect the sector. They have difficulty attracting different customer segments and struggle with motivating their agents. The approach of behaviorally informed experimentation can also help in these areas. And in some cases, it can lead FSPs to pivot to more productive strategies for customer and agent engagement than they might have been considering.



The gender gap in account ownership persists in developing economies

Adults with an account (%)



Source: [The Global Findex Database 2017](#)

Diversifying the customer base: serving people who are underbanked

Financial inclusion is fundamentally about bringing the unbanked or underbanked into the formal financial system—focusing on customer segments who have traditionally been left out. These segments include women, rural populations, and historically underserved ethnic and religious groups. Despite their best intentions, however, FSPs often struggle to target and enroll customers from these groups. Traditionally, they have focused on marketing campaigns—through SMS, radio, and billboard advertisements—to let people know about new services. But behavioral science suggests some alternative strategies that may be more effective at sparking action. As the case below shows, there are opportunities to leverage existing customers' networks in creative ways, for instance, by priming them to think about traditionally underserved populations as 'likely users' of a new product.

» CASE STUDY

Increasing uptake of a digital wallet among women in Pakistan

In Pakistan, ideas42 and Women's World Banking partnered with a large telecommunications company which offered a digital wallet allowing customers to perform a variety of financial transactions on their mobile phones, and saw exponential growth in their customer base across the country. Despite this, they found that only 10-15% of their customers were women. Since mobile-based financial services were also seen as a potential tool for empowering women to have more control over their financial lives, the provider sought to increase this proportion.

To address this challenge, we tested behaviorally framed SMS messages sent to existing customers in order to encourage them to refer their friends and family as new customers. We found that hesitation to reach out to women, or see them as potential customers of DFS products, were among the main reasons why women were not typically referred through this channel.

Therefore, a subset of these messages were written in a "gender-centric" manner, priming individuals to think specifically of women within their networks who could be referred. In all cases, people who referred new customers received a small financial incentive, and so SMS messages highlighting this incentive were compared with those that did not highlight the incentive and instead used "behavioral framing".

Overall, we found that sending SMS messages with **social norms** framing was an effective tool for increasing customer referrals overall. In the first round of tests, messages highlighting financial incentives were the most effective, with up to 7.1% of recipients sending referrals relative to the 4.5% who did not receive messages. That said, those who instead received behaviorally framed messages, using **social norms, reciprocity, and priming**, increased referrals by almost as much (with 6.2-6.4% sending referrals), implying scope for further research into whether the financial incentives are a necessary expense relative to gains that could be had with behavioral framing alone.

These tests also revealed valuable insights around how to specifically encourage female customers to sign up for accounts through referral messages. In our first round of testing, we found that the **behaviorally framed SMS messages increased new female customer sign-up by up to 64% more than the firm's standard marketing efforts for the referral campaign.** We also found that messages with "gender-centric framing"—i.e., those that explicitly called out women as potential clients to be referred—were found to be most effective at attracting new female customers when they were sent to current female customers, rather than men. In a subsequent round of testing, we found that **combining incentive statements with "gender-centric" social norms messages resulted in an overall increase of between 3% and 11% in the number of women signing up relative to the firm's standard SMS message.**

Motivating Agents

Many digital financial services are not entirely “digital” in nature, and rely heavily on local agent networks to facilitate transactions with underbanked populations. Therefore, interventions that target agent behavior are potentially important for affecting broader outcomes. As before, while it is intuitive to think that low-performing agents are unmotivated or insufficiently financially incentivized, behavioral science points to other reasons—from non-salience of certain functions, misperceptions about the “norms” around effort or certain kinds of transactions, or lack of feedback about agents’ performance relative to their peers—that could affect how agents perform.



» CASE STUDY

Improving Agents’ Effort Allocations in India

In India, we worked with a fintech company that provides agent and loan management software to numerous large banks. Analysis of loan application data across these banks revealed an interesting pattern in which agents submitted the largest quantity of loan applications in the two weeks prior to their monthly quota deadlines, with considerably less activity happening in the first and fourth week of the month. This meant that loan officers were often racing to cover an entire month’s quota in two to three weeks. Given that the quality of these applications often suffered as the deadline approached, the fintech company recognized a need to help loan officers better plan their time over the course of the month in order to reduce stress, increase weekly productivity, and improve the quality (and perhaps variety) of borrower applications.

To do this, we designed a weekly goal setting tool on their app interface and paired it with a push notification that appeared in week one of the loan application cycle to alert officers to the planning task early in the month. Tests of these new features revealed that despite the fact that loan officers mainly skipped the prompts from week to week, a majority of them filled out an initial target goal. The data showed that there was a 3.2% and 4.2% increase in the total number of loan officers submitting loan applications in the first and fourth weeks, but that this result was statistically insignificant as the effectiveness of the intervention varied considerably by bank. For one of the banks, however, **loan officers receiving the planning prompts submitted 15% more applications relative to those who did not**, which was a significant difference. This experiment was, therefore, able to help the firm better understand how loan officers interacted with their app as well as identify partner- or region-specific dynamics that could guide future design changes on their widely-used interface.

Optimizing Business Decisions

In addition to creating designs based on scientific insights about human behavior, the behavioral design process relies heavily on administrative data and rigorous testing, where two or more ways of tackling an issue can be “A/B-tested” against each other and/or the standard approach. Beyond gauging the efficacy of new designs, **testing can help uncover details of the contexts faced by target customer populations, and can help providers establish whether their preferred way of tackling a problem needs rethinking.**



» CASE STUDY

Rethinking Engagement Strategies in Sri Lanka and Tanzania

In Sri Lanka and Tanzania, behaviorally-informed A/B testing helped FSPs uncover important insights about how to direct their efforts around the contexts of their target populations.

In Sri Lanka, we worked with a large telecom provider to test ways to increase customer “top ups” on their mobile money platform. Though the firm had 2.5 million customers who had downloaded the app, only 120,000 of these had performed a first top-up using the platform, with even fewer engaging in subsequent top-ups. To fix this problem, we attempted to nudge the firm’s field agents to ask their customers to top-up their accounts by sending a set of behaviorally framed SMS messages. These messages either reminded agents of their previous week’s top-up totals, informed them of the weekly totals of the highest performing agents in their network, or did both.

This experiment led to an unexpected, but important finding: the campaign had no significant effect on agent performance. Further investigation found that because the firm's agents were selling many products at once, their phones were often inundated with messages. This meant that spam messages from the various providers that the agents worked for served to effectively minimize the chances of them paying attention to this—or any—particular campaign. Though the intervention itself was not effective, the firm was able to gain valuable insights about their agent network's context, and could therefore redirect their campaign investments toward channels that were more likely to be effective at improving agent performance.

In Tanzania, we similarly ran A/B tests with a small commercial bank to understand whether financial incentives, verbal accolades, or a combination of both could increase engagement by the bank's customers with the mobile banking platform. We found that financial incentives were most effective at increasing engagement with the platform, both on their own or when combined with an accolade. However, the *types* of engagement that resulted were restricted to account and loan balance inquiries, neither of which were income-generating or sufficient to justify the cost of the financial incentives. Furthermore, the increase in engagement from the incentive program was similar in magnitude to the increase in engagement resulting from an earlier round of messaging that only used behaviorally framed messages. Therefore, as with the Sri Lankan example, the **A/B tests served as a cost-saving measure** as they were able to guide the bank away from investing resources in scaling an expensive program of financial incentives to their entire customer base.

Additionally, behaviorally-informed testing can help identify ways to optimize proven interventions by testing variations in their delivery. With the same Tanzanian bank, we ran another SMS campaign (without incentives) using some behavioral framing that had previously been found to be effective at creating engagement. We varied the frequency of messaging (1 vs. 2 messages per week) and duration of the campaign (1 week vs. 4 weeks), and found that the highest frequency, longest duration campaign was most effective at triggering interaction with the platform. Engagement was strongest for all treatment groups in the first week, with the magnitude decreasing over time. In this way, the A/B tests helped the bank narrow in on an optimal SMS campaign structure, and clarified the time horizon for its effectiveness.



Building New Financial Products Using Behavioral Science

So far we have shown that testing can be a powerful tool and that small, low-cost tweaks to messages, products, or processes can have outsized impacts on take-up, usage, and financial health outcomes. But there is more to be done. **Using the behavioral design process to create entirely new products that maximize the likelihood of take-up and speak to the needs of target customers, can help financial health outcomes for consumers and providers alike.**

» CASE STUDY

Heuristics-Based Financial Training in India and the Philippines

With approximately 400 million micro, small, and medium enterprises around the developing world, successful small businesses have the potential to improve the livelihoods of millions of families. However, many entrepreneurs lack the necessary skills to manage the complex finances of a small enterprise. Traditional classroom-based financial education courses have attempted to tackle this problem for many years. However, despite their global popularity, these trainings have had very little impact on actual financial behavior, and are expensive to scale.

Behavioral science helps us understand why this might be the case, since it tells us that **increased knowledge does not always translate into action**, and the hassles associated with attending an in-person training for an entrepreneur (scheduling, transport, time away from managing the business) tend to suppress turnout.

Leveraging Mental Accounting to Facilitate Saving

In an ongoing study in Madagascar, we found that low-income recipients of a government cash grant saved more when provided with a simple nudge to divide their cash up into different ‘segments’, including one for saving. This idea leverages the behavioral concept of mental accounting, first developed by Nobel Laureate Richard Thaler, where people treat money differently depending on the notional ‘bucket’ into which they have put it mentally: money put into a ‘mental account’ for education is more likely to be spent on school supplies; money ‘mentally allocated’ to long-term savings is less likely to be withdrawn.

Behavioral economists Dilip Soman and Amar Cheema applied this idea to the Indian context and found that providing construction workers with physical envelopes to hold their savings had surprising effects. Those who were given their savings in two “partitioned” envelopes, actually increased their overall savings by 72% relative to workers who received their savings in only one envelope.

Furthermore, those who received envelopes with their children’s photos—perhaps resulting in a perceived link between the money and their children’s future—had 15% more savings than those who did not receive such envelopes. The combination of two envelopes and the children’s photos had the largest effect.

At ideas42, we are trying to take these concepts a step further by designing and implementing formal goal-linked and “partitioned” savings accounts with providers who seek to increase their customers’ savings deposits. At present, we are seeking to do this in partnership with a bank in India—but this concept could be implemented in many different contexts.

With this in mind, we developed the Financial Heuristics Training, a scalable interactive voice recording (IVR)-based training program that simplifies financial management lessons into easy-to-adopt rules of thumb and delivers them at the clients' convenience.

Key Features of the Training

- » *Replaces complex financial concepts with easy to learn and implement "rules-of-thumb"*
- » *Uses Interactive Voice Response (IVR) technology that can be delivered through basic feature mobile phones*

Tested using Randomized Controlled Trials

PROVEN IMPACT ACROSS THREE DISPARATE CONTEXTS*		
Dominican Republic	Philippines	India
		

**Dominican Republic heuristics training was classroom-based. Trainings in the Philippines and India were delivered through IVR.*

In India and the Philippines, listening to these messages **improved key financial management practices by between 2 and 8 percent** among clients who were offered the training, compared to those that were not offered it. Participants were highly engaged with the messages—on average, across both countries, **76% of clients picked up the training calls** and listened to at least 70% of the message. Furthermore, delivering the training via mobile phone was cheaper, particularly in India, where it cost about **67% less than the institution's in-person financial education training**. Overall, the automated, remotely accessible delivery mechanism meant that the training was also less burdensome for both the clients and the MFI providing trainings, relative to traditional solutions. **In the coming year, we plan to launch an off-the-shelf version of this product for the Indian market and will be identifying opportunities to translate the curriculum to new languages and countries.**

THE WAY FORWARD



Recent advances in the innovative design and delivery of financial products, especially those aimed at the underbanked in the developing and emerging world, have made it possible for millions more people to have access to products and services that support financial health. An understanding of behavioral science as described throughout this report can help to address some of the key challenges around client acquisition, engagement, usage, and agent management, allowing the impact of these advances to go farther in supporting people's futures.

Of course, behavioral science (combined with a rigorous use of data) can help companies **engage customers** more, **attract hard-to-reach customer segments**, and **bump up usage**. But it can also help providers **fine-tune their outreach strategies and information campaigns**—sometimes by changing track before making significant investment in an ineffective strategy. Carrying out more behaviorally-informed A/B testing—even just to carefully evaluate strategies that may seem intuitive—can have enormous benefits, helping companies use resources much more effectively.

But, as we discussed in the preceding section, there are important opportunities for innovation that remain unmet, with still much to be done to build financial products from the ground up that are truly informed by behavioral science and work within customers' contexts. Leveraging the behavioral perspective provides a useful way for providers to identify—and find innovative ways to address—a set of opportunities to create products and services that will truly build a thriving financial ecosystem. Doing this early in the development of new products, and using behavioral science to carefully investigate and understand customers' context, can help create innovative products to improve financial health for customers and support the sustainability of financial service providers.

About ideas42

We're a leader in our field with unique expertise and experience at the forefront of behavioral science. We use this to innovate, drive social change and improve millions of lives. We create fresh solutions to tough issues based on behavioral insights that can be scaled up for the greatest impact. ideas42 also educates leaders and helps institutions improve existing programs and policies.

Our work spans more than 35 countries and encompasses economic mobility, health, education, consumer finance, safety and justice, energy efficiency, and international development. As a global, non-profit organization, our partners include governments, foundations, companies, and many other institutions.

At its core, behavioral science helps us understand human behavior and why people make the decisions they do. It teaches us that context matters, that asking the right questions is critical, and that simple solutions are often available, but frequently overlooked or dismissed. We work to identify the subtle but important contextual details that can have a disproportionate impact on outcomes.

Visit ideas42.org and follow [@ideas42](https://twitter.com/ideas42) on Twitter to learn more.

For Contact: info@ideas42.org

Acknowledgements

We wish to thank the Bill and Melinda Gates Foundation, whose generous support enabled us to carry out many projects—including those in India, Pakistan, Sri Lanka, Tanzania, and Nigeria—discussed in this report. In addition, we gratefully acknowledge the past support of the Grameen Foundation who supported our work around savings in the Philippines and USAID Development Innovation Ventures (DIV) and Consultative Group to Assist the Poor (CGAP) who supported our work on the Financial Heuristics Training in India and the Philippines.

In addition, we would also like to thank our partners at banks and other FSPs, as well as research and implementation partners including Women's World Banking and the Busara Center for Behavioral Economics. Finally, we gratefully acknowledge the work of ideas42 team members and project managers, past and present, who have contributed to the projects discussed in this report: Piyush Tantia, Alex Blau, Jiyoun Han, Kanyinsola Aibana, Preeti Anand, Lois Aryee, Ximena Cadena, Nicki Cohen, Heber Delgado-Medrano, Marina Dimova, Aditya Jagati, Liana Johnson, Teis Jorgensen, Mukta Joshi, Huma Khan, Tina Razafinimanana, Mitra Salasel, Liam Speranza, Michael Stern, Raegan Tennant, Sarah Welch, and Josh Wright.

