

OPTIX

MetLife
Foundation

BFA

ROCKEFELLER
Philanthropy
Advisors

Future-proofing financial institutions for inclusion

How financial institutions innovate
to improve financial health

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REPORT



Introduction

Low-income households in the developing world struggle with financial health because their incomes are: low in volume, irregular in size, and unpredictably timed. To manage these challenges, they need diverse tools to build long-term resilience and opportunity, and take control of their financial lives. Microfinance institutions and cooperatives have been providing these services for decades; however, the environment in which these institutions operate has changed dramatically. Their customers are now digitally savvy, and they face increasing competition from agile fintech startups that leverage advanced technology.

To remain competitive, financial institutions need to future-proof by providing differentiated, tailored financial services and tools that can help households better plan and manage their finances. Improved financial health is also good for business; financially- healthy consumers are more engaged, have greater loyalty, and produce greater long-term revenue streams for financial institutions.

“

“Now, we’re into new products and different products. Mobile phones have just exploded, and digital is a new area. So, at each one of these iterations, we’ve asked institutions to change... or rather, their customers have asked them to change, but this is still a very difficult thing to do. Change is hard.”

- Evelyn Stark, MetLife Foundation

About the Report

In this report, we describe each area of work: future-proofing operations through digital innovation, future-proofing product performance and value, and future-proofing products through customer-centric design and behavioral economics -- in a separate chapter. In addition to describing the work, this report also presents in-depth case studies for each of the pathways OPTIX implemented. These case studies provide detailed narratives of the OPTIX approach and execution strategies, as well as of their effects on the institutions. These lessons can be helpful to many peer financial institutions who want insight into how to approach these topics themselves. We hope that by sharing the successes and failures of the OPTIX partners, we can provide food for thought for other institutions wishing to embark on similar journeys.

The OPTIX Project was co-created by BFA, MetLife Foundation, and Rockefeller Philanthropy Advisors.

About BFA: Founded in 2006, BFA is a global consulting firm leveraging finance and technology to innovate solutions for a sustainable and equitable world where people have agency over their future and their most pressing challenges are pro-actively addressed in a timely manner.

About MetLife Foundation: MetLife Foundation believes financial health belongs to everyone. They bring together bold solutions, deep financial expertise and meaningful grants to build financial health for people and communities that are underserved and aspire for more. They partner with organizations around the world to create financial health solutions and build stronger communities, engaging MetLife employee volunteers to help drive impact. To date, their financial health work has reached 9.9 million low-income individuals in 42 countries.

About Rockefeller Philanthropy Advisors: Rockefeller Philanthropy Advisors is a nonprofit that partners with individuals, families and institutions to help make philanthropy more thoughtful and effective. Since 2002, they have facilitated more than \$3 billion in grantmaking worldwide, establishing ourselves as one of the world's largest and most trusted philanthropic service organizations.

Acknowledgements

We would like to express our heartfelt gratitude to everyone who invested their time and effort in creating this report.

To start, we would like to thank our partner financial institutions — Acreimex, Banco W, CEP, SAJIDA Foundation — for their commitment to the OPTIX program, for embarking in a journey of self-improvement to better serve low-income customers, and for their willingness to share their learnings with other financial providers in the industry.

We would also like to thank our program sponsor MetLife Foundation, and our fiscal sponsor, Rockefeller Philanthropy Advisors, for their foundational support and belief in this program. Their involvement and direction were critical to shaping the program and making it a success.

Finally, we thank the team of BFA specialists for their dedication to this program, for supporting our partners, and for their commitment to creating lasting impact. The lessons highlighted in the report are the fruit of four years of their hard work. They are: Ashirul Amin, Sebastian Barrera, Daryl Collins, Laura Cojocaru, Jorge Hernandez, Natalia Gomez, Kelly Nguyen, and Gabriela Zapata. We also thank Kevin Rejko, Prateek Sankar, Malika Anand, and Akansha Kasera for their creativity in shaping, editing, and designing this digital report.

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Introduction





What is OPTIX?



MetLife Foundation and BFA created the OPTIX project in 2014 to help 4 socially-driven microfinance institutions and cooperatives in Bangladesh, Vietnam, Mexico, and Colombia to better understand their low-income customers & create appropriate future-proof solutions to serve them.

OPTIX combined data analytics, market research, behavioral science, and a thorough understanding of low-income customers to help financial institutions develop more relevant, cost-effective financial products and tools to improve customers' financial health. Since they began from different starting points, each institution took different pathways to achieve this transformation. They focused on improving customers' financial health by testing approaches in three core areas:

Chapter 1

Future-Proofing through Digital Innovation

OPTIX helped brick-and-mortar institutions leverage data analytics & technology to enhance operations and bring down operating costs. OPTIX developed dashboards to track business metrics, distribution channels for mobile money, and digital apps to onboard customers faster.

Chapter 2

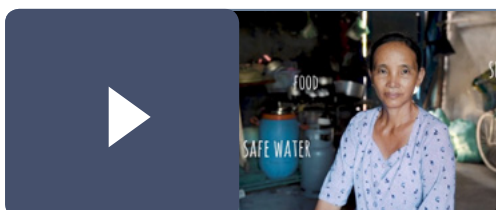
Future-Proofing Product Performance and Value

OPTIX helped institutions develop diverse portfolios of financial offerings with strong business cases. By re-combining products -- such as credit, savings, and investments -- or designing new offerings, institutions learned to sustain a broad set of financial products while creating value for customers.

Chapter 3

Future-Proofing using Behavioural Insights

OPTIX helped institutions put the customer at the center of their strategies. By leveraging user research data, human-centered design principles, and behavioral interventions, OPTIX designed solutions -- including financial service advisory apps to customize savings plans, & tools used to communicate and engage with customers -- that boost customers' financial health.



THE FUTURE IS NOW: STRATEGIES TO IMPROVE FINANCIAL HEALTH

WATCH THE VIDEO ON VIMEO <https://vimeo.com/317210602>

The OPTIX Process

The OPTIX program followed a 6 steps process to support financial institutions in transforming the way they serve their clients. The process included 6 elements:



- 1 **Analyze** FSPs portfolio to run segmentation analysis of their products to understand product and channel performance and customer's behaviors.
- 2 **Conduct** quantitative and qualitative customer research with FSPs' clients to understand their financial behaviors, preferences and attitude towards the financial institutions.
- 3 **Superimpose** product parameters, transactional and balance behavior, and unit cost analysis to determine bottom line impact of suggested pathway interventions.
- 4 **Based on** information collected, develop evidence-based solutions that enhance cross-sell opportunities for the institution and build better portfolios for the customers
- 5 **Design/build prototypes** of the solutions, co-designed with the institutions and the intended clients, end-customers or internal staff.
- 6 **Run pilots** with the institutions and track performance closely, monitor KPIs, iterate on design, and undertake corresponding staff training as needed.



The OPTIX Impact

OPTIX supported four socially-driven microfinance institutions and cooperatives to develop strategies that benefit their clients and also have a positive impact on the institutions' bottom lines. As a result, the OPTIX program has helped deliver improvements in both financial security & financial health for low-income customers. Progress on financial health can be considered on three key dimensions: resilience, control, and trust.

What is Financial Health?

Financial health is a measure of an individual's ability to weather shocks & seize opportunities, thanks to a consistent financial system.

The OPTIX program measured changes in financial health across three dimensions:



Resilience: Existence of reserves that can balance long- and short-term needs and satisfy the desire to have flexibility as well as returns, while having enough cash for emergencies.



Control: The ability to plan finances and manage income and expenses to reduce financial stress.



Trust: Confidence that financial institutions will help support customers in reaching their goals and improving their financial lives.

A business strategy oriented around improving customers' financial health can lead to organizational resilience, growth, and sustainability. By improving their customers' functioning in the three dimensions above, an MFI stands to gain higher savings balances, increased opportunities to cross-sell, higher employee satisfaction, a better reputation for the business, and higher customer satisfaction and retention, resulting in better customer lifetime value.*

* Center for Financial Services Innovation, Making the Business Case for Financial Health, March 2018, <https://s3.amazonaws.com/cfsi-innovation-files-2018/wp-content/uploads/2018/04/27001545/Making-the-Business-Case-for-Financial-Health-2018.02.28-2.pdf>

During the course of the project, we worked on more than 20 pathways (or interventions) to improve financial health for customers. The program reached more than 1 million customers in the four targeted countries, helping them build resilience, gain control over their financial lives, and increase trust in financial services providers. More specifically, OPTIX's accomplishments included:

 **1.1M**
low-income clients
reached by the project at scale

6 
financial tools
to improve customers'
financial health

 **8** redesigned
or new
financial services offered

 **~800k**
active customers
accessed savings products

 **12** digital
tools
to boost internal
efficiency

To get there, our work included:

4  new
partnerships
with fintech companies

220  GB
data crunched

120  staff skills
training sessions

4 bilateral
visits

3  global
conventions
of peer institutions

To learn more, refer to Conclusions chapter



The OPTIX Partners



The OPTIX Team with partner institutions

OPTIX worked with four partners: **Acreimex in Mexico, Banco W in Colombia, CEP in Vietnam, and SAJIDA Foundation in Bangladesh.**

These socially driven financial institutions were willing to make tradeoffs to pursue financial and social bottom lines; they also were flexible and open to change and willing to engage in a process of transformation to optimize how they serve customers in the digital age. Focused on customers, these institutions sought to offer multiple financial products and tools to improve customers' financial health, ensure customer retention, secure their niche against competitors, and more fully serve their customers.

OPTIX partner institutions have built valued relationships with hundreds of thousands of customers in their respective countries, have collected years of historical data about customers' financial behaviors, and have touch points to effectively serve customers in ways that build trust. They are the natural allies the OPTIX program sought for building both better portfolios of services for the poor and better ways to deliver them.



To know more about the partners, refer to Appendix: About the Partners



Chapter 1

Future-Proofing through Digital Innovation



Why go Digital?

While the world is becoming more digital and technological, brick-and-mortar financial institutions continue to depend on traditional approaches. This dependence limits their reach and the value they provide to customers, leaving their future uncertain. But brick-and-mortar institutions can embrace change and a more secure future, and OPTIX helped them to do just that.

As part of the OPTIX project, four financial institutions worked to become resilient and ready in the face of change and innovation in the digital age -- to become “future-proof.” The four OPTIX partner institutions learned to leverage technology to become more efficient, build tools that provide real benefits for their customers, utilize data to make better-informed decisions, and deliver faster & better products and services more conveniently. In particular, these four institutions worked to:

- digitize processes** To optimize and automate operations
- digitize channels** To optimize distribution and serve customers more quickly and conveniently
- digitize engagement** To optimize customer interactions
- digitize data and analytics** To improve products and services and grow their business

As part of OPTIX, the partner institutions tested approaches to digitization (either building tools internally or with fintech partners) and learned how to manage changes to finance and management processes. Since many institutions tend to think of digital transformation as a cost, OPTIX measured the return on investment associated with developing these digital tools. Finally, OPTIX worked on change management, helping to structure partnerships and making sure staff was on board with new processes. OPTIX selected interventions based on their potential to provide benefits for the financial institution and its customers.

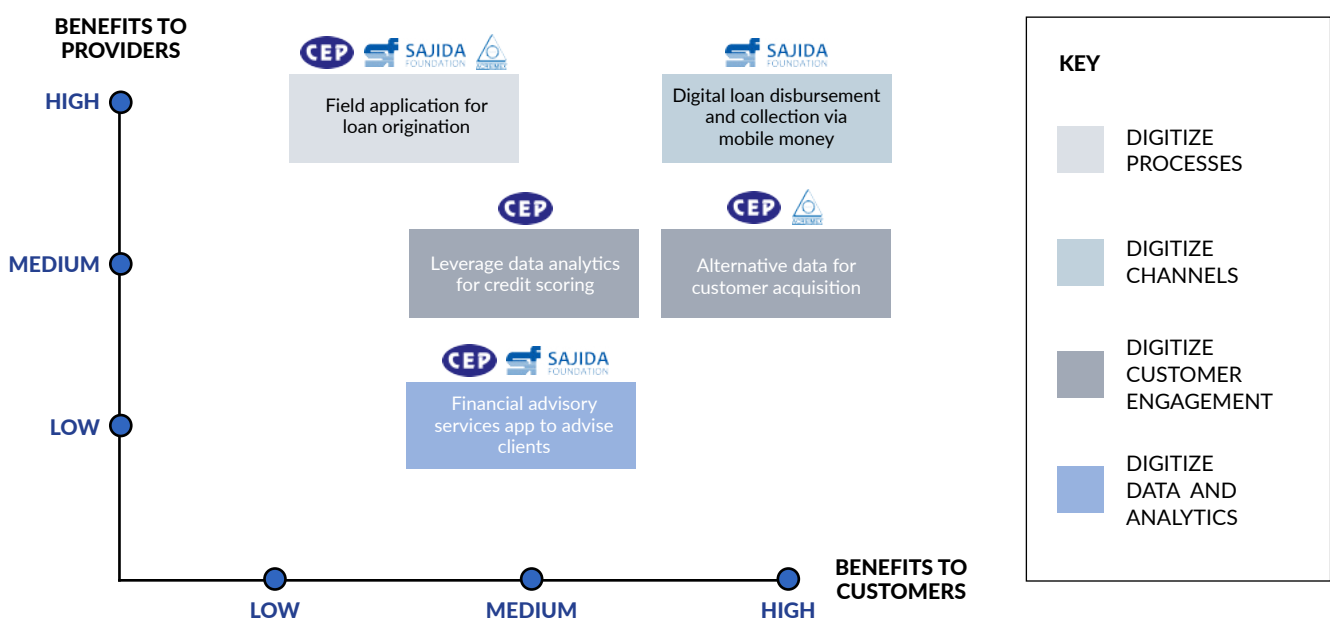


Figure 1.0.1. Digitization benefits to the FSPs and to the customers.

a. Digitize processes to increase efficiency

To better manage credit origination and future-proof operations, three OPTIX partners digitized their loan approval processes. With the OPTIX team, SAJIDA, CEP, and Acreimex designed & implemented digital apps for customer onboarding, loan origination, and loan management.

Field officers use the new apps to collect data directly from customers in the field, take photos of necessary documents, and upload them to an online system. OPTIX also integrated credit bureau checks and other analytics into the apps' functionalities. The apps drastically reduced loan turnaround times and standardized internal processes for loan approval. Costs went down for the institutions, and customers could access loans faster, helping them avoid more expensive informal options such as loan sharks.

Case Study 1.1

SAJIDA digitized its loan origination process by creating an Android app for loan applications and a web portal to manage the approval process. The app reduces loan origination time from seven days to two, and the portal allows staff to control each step of the approval chain. Managers no longer need to visit branches to approve good loan applications for lower amounts -- a time savings that enables them to make more on-site visits or address other issues at branches.



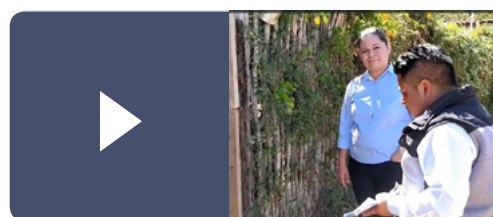
SAJIDA FOUNDATION DIGITAL ONBOARDING EXPERIENCE
DEMO: MICROCREDIT TO MICROENTERPRISE TO LOANS

WATCH THE VIDEO ON VIMEO
<https://vimeo.com/296818708>

Read the full case study at the end of chapter.

Case Study 1.2

ACREIMEX also developed a loan origination app that could halve the time it takes to approve new credits. The initial business case shows that the app reduces approval time from seven days to three. Previously, staff spent 22 percent of their time on this activity.



ACREIMEX LENDING APP DEMO:
GETTING LOANS TO CLIENTS FASTER

WATCH THE VIDEO ON VIMEO
<https://vimeo.com/296818486>

Read the full case study at the end of chapter.

Example

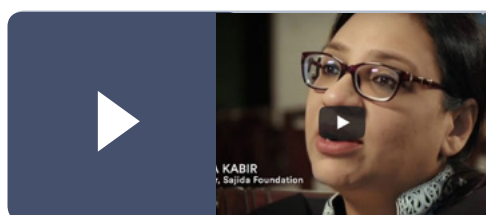
CEP in Vietnam went even farther by completely digitizing its poverty assessment survey, which is the foundation for all of its new-customer loan approval decisions. While some are worried that digitization will eliminate the human touch, 65 percent of CEP clients believe the app saves them time, and 41 percent say that loan officers using the app pay them greater attention. By automating some elements, tech actually humanizes CEP's loan approval processes -- an unexpected benefit of going digital.

b. Digitize channels to optimize distribution

Standing in line at the teller? Sitting around in a group and waiting to repay your loan on a weekly or monthly basis? Customers are increasingly dissatisfied with slow processes to make financial transactions and with the branch-led banking model. They seek more flexible and convenient ways to transact. Digital channels future-proof institutions by giving customers convenience, control, comfort, and reduced costs. By leveraging agent banking, mobile money, or other digital platforms, digitization can improve customer acquisition and the customer experience, concurrently driving down operational costs. Having multiple channels tailored to users' needs can encourage more regular use of financial services and generate benefits for financial health.

Case Study 1.3

SAJIDA is a pioneer in cashless microfinance. During OPTIX, the MFI integrated mobile money to disburse and repay loans. SAJIDA customers quickly embraced the flexibility and convenience that mobile-money based transactions offer. More than 50 percent of customers now transact at times outside of working hours, and female borrowers, who often navigate social and familial constraints related to their financial activities, enjoy repaying privately instead of in a group as they usually do in traditional microfinance models.



METLIFE FOUNDATION'S MULTIPLIERS OF PROSPERITY
IS SPURRING SMALL BUSINESSES IN BANGLADESH

WATCH THE VIDEO ON YOUTUBE

<https://www.youtube.com/watch?v=Z9HPVjMMoG0>

Read the full case study at the end of chapter.

Example

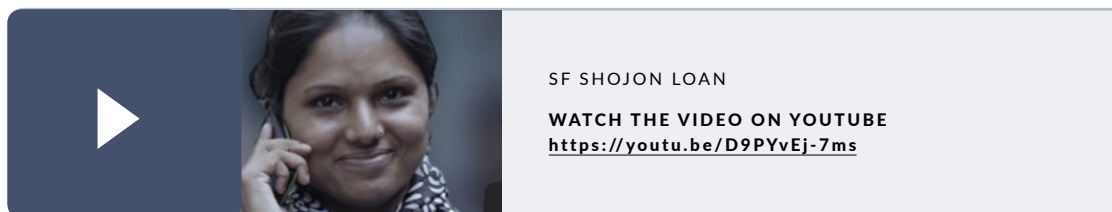
Banco W sought to strengthen its alternative service delivery channel proposition. OPTIX helped define an agent banking strategy across Colombia, using data and evidence to optimize savings and payment channels. By facilitating a peer visit to Equity Bank, Kenya's leader in agent banking, Banco W learned best practices in setting and managing alternative delivery channels. Banco W found that younger customers are more likely to switch to a non-branch channel, would choose a location to transact based on proximity to work/household, and are concerned about the safety of new channels.

c. Digitize engagement to optimize customer experience

Digital tools can future-proof the way financial institutions interact with customers. Financial services providers (FSPs) can leverage digital channels, customer data, and partnerships with fintech companies to offer tailored advice to customers and make use of alternative communication methods. FSPs can digitize engagement to send reminders, customize product offers, and tailor advice so that customers receive a more personalized touch and can more easily ask questions or voice complaints.

Case Study 1.4

SAJIDA & CEP developed the Financial Advisory Services (FAS) app to encourage customers to save by establishing clear targets and timeframes. With the FAS tool in use, 96 percent of SAJIDA customers feel that the staff explains savings product features more clearly.



Read the full case study at the end of chapter.

Example

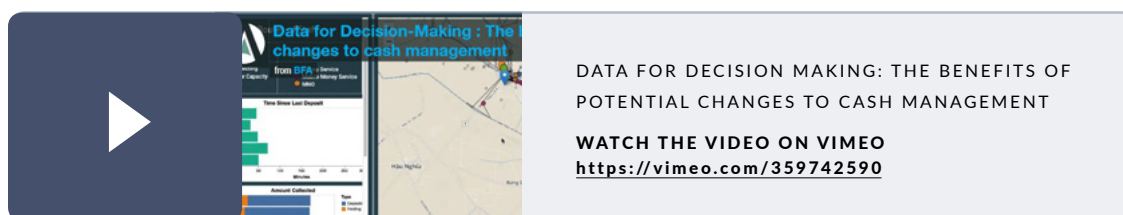
In Vietnam, 77 percent of CEP customers say the FAS app helped them figure out how much to save and how to make good financial decisions. Almost 64 percent of customers noted their appreciation for the extra time the tool gives them to chat with staff about other financial matters. This tool helps provide better guidance to customers and boosts their savings levels through reminders and high-touch interactions.

d. Digitize data for analytics

Among MFIs, much information -- particularly qualitative information on clients' background and circumstances, which is important for loan assessments -- remains stored in paper files. Remaining analog, for MFIs, is a missed opportunity to capture and analyze data to future-proof business processes and offerings via predictive models and automated analysis. Moreover, the digitization of data helps contribute to business cases for internal change and investment.

Case Study 1.5

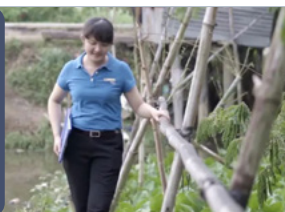
CEP considered utilizing mobile money agents as drop-off points for loan officers to deliver cash to loan customers. OPTIX developed an app to assess the location of centers and agents, relative to the routes loan officers use, to evaluate the impact of travel costs and times on this plan. The app indicated significant cost savings if CEP were to rely on agents located in strategic points along the loan officers' routes. Unfortunately, though, the project did not go forward because the business cases for both CEP and the mobile money agents were inadequate. Watch the live simulation of the geo-tagged routes of loan officers.



Read the full case study at the end of chapter.

Case Study 1.6

CEP also digitized its credit-scoring process, an essentially probabilistic calculation that can be executed reliably by a computer. CEP has a large customer database and has collected repayment data for more than 27 years. Unfortunately, past loan approval processes were slow, and did not make use of this data for decision-making. OPTIX built a scorecard that leverages this data to improve decision-making and increase the speed of loan disbursement to both returning and first-time customers.



CEP FAS APP DEMO: HELPING CLIENTS SAVE FOR THE FUTURE

WATCH THE VIDEO ON VIMEO
<https://vimeo.com/296818597>

Read the full case study at the end of chapter.

Example

SAJIDA extracted usage data from the Financial Advisory Services (FAS) mobile app to assess the app's impact on the bottom line. The FAS app collects detailed usage data, including when and where the app was used, actions undertaken, and which information was entered to simulate scenarios. These data were used to evaluate how well the app was working to orchestrate and support conversations. SAJIDA customers chose to save first for “emergency needs”, which featured in 31 percent of conversations documented via the app, then “for children”, which featured in 25 percent of conversations.

Read more online by **BFA on MEDIUM**

An App, a Conversation and a New Account: A Novel Approach to Talking About and Tailoring Term Deposits



Figure 1.0.2. SAJIDA clients' savings goals



Strategic Fintech Partnerships for Digitization

Many financial institutions have low technical skills and a limited understanding of what it takes to undergo digital transformation. But even the best businesses find doing everything on their own impossible -- and sometimes it is just not strategic to operate solo, especially in a hyper-specialized world. OPTIX recognized that digital transformation calls for partnerships with other organizations with additive and complementary skills. Like a matchmaker, OPTIX facilitated partnerships with fintech companies to strengthen FSPs' ability to engage with customers and expand their reach to more underserved customers.

Example

Banco W in Colombia partnered with Juntos Finanzas, a startup that offers a 2-way messaging platform, to engage with customers & measurably increase account usage.

Juntos increased conversational touch points with the consumers & encouraged them to save more & more frequently, which translates into a higher lifetime customer value.

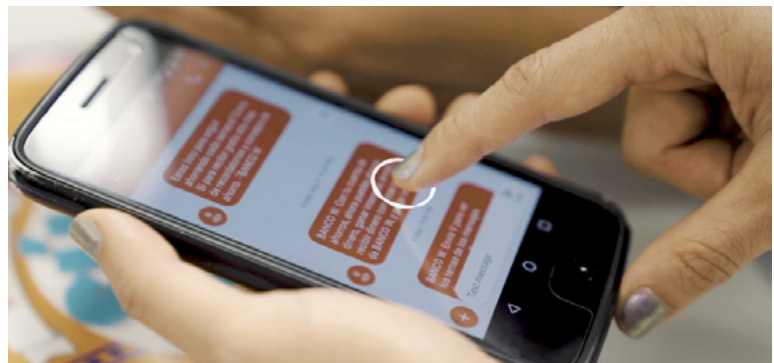


Figure 1.0.3. Banco W partnered with a fintech, Juntos, that sends text reminders to Banco W's customers.

Example

In Mexico, Acreimex partnered with Destacame, an alternative credit scoring company leveraging alternative data from utility bills and other sources to extend financial services to unbanked populations. Through Destacame, Acreimex was able to evaluate customers who would otherwise be rejected due to poor credit bureau scores. Two-thirds of an initial group of clients agreed to be scored by Destacame, and early results suggested that this scoring could allow clients to be evaluated positively in the absence of traditional bureau scores.

Read more online by **BFA on MEDIUM:**

[Three Steps \(and One BFF\) for a Perfect Bank-Fintech Match](#)



The ROI for Digitisation

Digital innovation, unfortunately, is not a free lunch. Digitization often calls for substantial investment over time. Given OPTIX's mandate to be data driven, the team concentrated on helping institutions develop ROI tools to clarify the impact of tech investments on FSPs' bottom line. Assessing the ROI of technology interventions helps institutions build the business case for pursuing digitization (or not).

Case Study 1.7

Acreimex used ROI analysis to evaluate the impact of the OPTIX loan origination app on its bottom line given the cost of developing and deploying it. The model OPTIX developed showed Acreimex that while the app costs MXN 275,000 (USD14,000) overall, that expense is recoverable simply via the reduction in unit cost per loan during the first year. From the second year onward, adoption of the app would create a stable cash flow of MXN 1,960,000 (USD100,000) a year.

Read the full case study at the end of chapter.

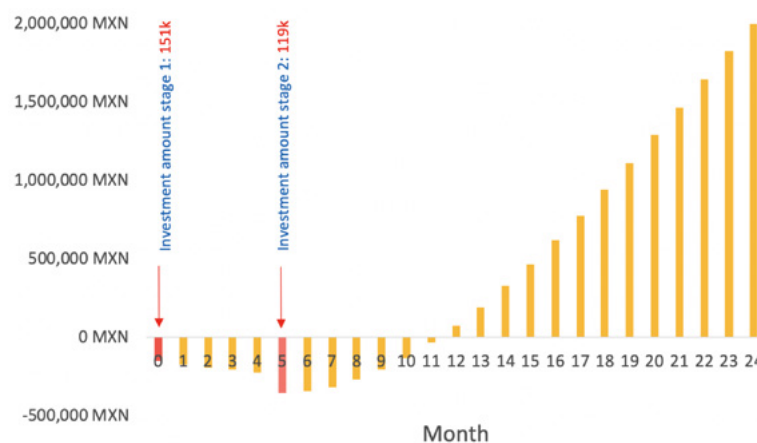


Figure 1.0.4. Acreimex's loan origination app cash flow over a period of 24 months.



Case Study 1.1

Harmonizing the Loan Origination Process for Faster Onboarding



PARTNER



COUNTRY



Digitization must be appropriate if it is to improve current processes. “Appropriate” means designing intuitive and user-friendly solutions. Solutions that add steps, ask for unattainable information, or slow down decision-making are likely to earn ire and eventual rejection by MFI operating teams. When OPTIX developed a loan origination app and web portal to streamline how SAJIDA graduates clients from microcredit to microenterprise, the team was careful to build on and from the approaches and processes already in place. This approach ensured that the solution was an improvement for all involved.

The Challenge

The SAJIDA Foundation is an NGO providing microfinance services to low-income customers in Bangladesh. The foundation graduates microcredit (MC) borrowers to become microenterprise (ME) borrowers if they show business acumen and want to move from a small, general-purpose loan to larger credits. These microenterprise loans can be up to 25 times larger than an MC loan. The graduation process is growing: Of 175,000 borrowers, 15,000 have graduated to the ME program, an increase of 20% from the previous year.

Graduation, however, included a paper-based onboarding assessment, spread over multiple days, which took hours to complete. This inefficient process involved multiple steps that frustrated busy microentrepreneurs. Moreover, different branches used different approaches to assessment based on who was mentoring staff on a daily basis, so the reliability of the information collected varied by the loan officer. For larger loans, the process required approval from a senior officer, which required that loan officers visit a branch or send the borrower’s file to the regional office.

SAJIDA needed a more efficient, standardized system through which to offer its micro-enterprise loans. Accordingly, the OPTIX team digitized the loan origination process by 1) creating an Android app to collect data, and 2) establishing a web portal to manage the approval process. The team carefully crafted these solutions to suit the language needs and approaches of loan officers, as well as the business practices of small enterprises.

Loan Origination App

Developing an app for loan origination included digitizing onboarding & assessment, and harmonizing the process to match funding with customer needs. At first, to ease the transition, OPTIX asked loan officers to fill out both the app and the paper application, so that officers could see how the two processes matched. This approach proved so cumbersome, however, that the OPTIX team quickly discarded it in favor of a full switch to the app.

The digital field application (DFA) that OPTIX developed captures information about the customer as well as the business that is being assessed (see Figure 1.1.1, right). The app allows the officer to input sales, cost of goods, stock value, and figures on debtors, creditors, and other sources of income & expenses. The app can also take photographs of the business facade, stocked shelves, warehouse, the customer's home, and other items that can serve as supporting evidence.

Because many small businesses do not engage in standardized record keeping, the app is designed to capture estimates in a way that is intuitive for their owners.

For example, to calculate monthly sales for the year, the ME officer asks for a total sales amount for a “good” month and one for a “bad” month -- figures that business owners typically recollect well. The officer then asks how many months are “good” and how many are “bad”, and requests an estimate of sales for the remaining “intermediate” months. This series of questions allows the app to produce a reliable monthly average sales figure within a reasonable margin of error.

A second qualitative assessment section of the app helps officers collect “reliable enough” information in the absence of time or skilled staff to do a comprehensive assessment. In this section, officers speak with the customer and others in the neighborhood, and then grade the applicant on: 1) reputation in the neighborhood, 2) behavior, 3) presence in business, and 4) experience in the business. This part of the app standardizes the judgment-call part of decision-making that is always critical to disbursing loans.

নতুন ঋণ আবেদন	
Hemanta Mukherjee, 34, কেস 0000	
মূল্যায়নের তথ্যাদি	
আবেদনকৃত ঋণ:	
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ঋণের পরিমাণ: ₳ 1,000,000	মেয়াদ: 18
আর্থিক তথ্য (মাসিক)	
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ভূসম্পত্তির মূল্য ₳ 6,100,000	অন্যান্য খরচ ₳ 8,700
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জামিনদারের তথ্য সম্পূর্ণ	মন্তব্য সম্পূর্ণ
<div>বাতিল সংরক্ষণ জমা</div> <div>• ≡ □ ←</div>	

Figure 1.1.1. A screenshot of an information page on the Micro-Enterprise Loan Origination Application

Web Portal

The web portal OPTIX created to complement the app consolidates & sequences the data generated by the app. Once an officer submits a loan application from the app, it appears in the queue in the portal to be reviewed by the staff members in the approval chain. The smallest loan applications can be approved by branch managers, while the largest loans need to be assessed by both the area manager and the regional manager, with final approval granted by the head of SAJIDA's Microenterprise Program.

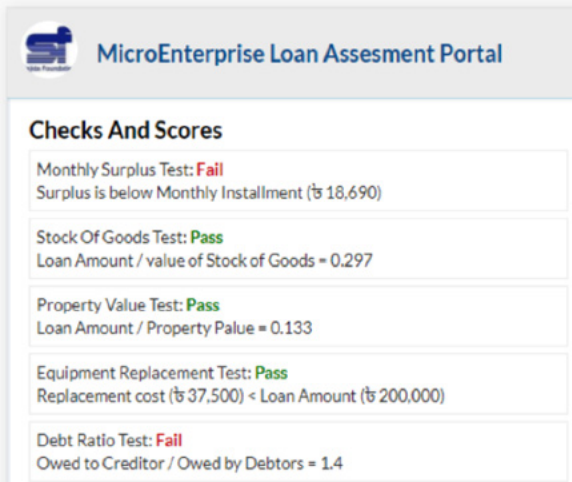
To consolidate the process and speed up the assessment, the app displays five specific checks based on the data collected (see Figure 1.1.2, right). While no application is automatically rejected if it fails one of the tests, the app requires the approver to note circumstances for applications with a negative test result.

The portal provides management with a bird's-eye view of all ME applications in progress. This allows on-the-spot quality control through immediate access to app content, enables officers to handle cases that have queued up for a period of time, and saves senior officers a significant amount of time as they no longer have to travel to branch offices to review loan files.

Next Steps

The quality of data used for loan origination decisions has improved markedly as it is captured in a standardized format for all applicants and checks are applied. When using paper, many ME officers entered figures that justified the loan amount they wanted to give. This is much more difficult now because of the app's sequential capture of information and because of the portal's five bottom-line checks.

Overall, OPTIX's microenterprise loan origination solution has harmonized how data is collected and assessed and reduced the time it takes for an existing SAJIDA customer to get a bigger, better loan for business. SAJIDA is now rolling out the solution in all of its branches.



MicroEnterprise Loan Assessment Portal	
Checks And Scores	
Monthly Surplus Test: Fail	Surplus is below Monthly Installment (₹ 18,690)
Stock Of Goods Test: Pass	Loan Amount / value of Stock of Goods = 0.297
Property Value Test: Pass	Loan Amount / Property Value = 0.133
Equipment Replacement Test: Pass	Replacement cost (₹ 37,500) < Loan Amount (₹ 200,000)
Debt Ratio Test: Fail	Owed to Creditor / Owed by Debtors = 1.4

Figure 1.1.2. A screenshot of a loan assessment result on the MicroEnterprise Loan Assessment Portal



Case Study 1.2

Faster, Cheaper Loans for Customers using a Loan Origination App



PARTNER



COUNTRY



Digitization has the potential to decrease costs to drive profitability. To deliver on this promise, however, institutions need to have a firm grasp of cost drivers as well as a careful approach to design, so that tech solutions fit within their processes and culture. For Acreimex, digitizing the loan origination process through a loan origination app has reduced the number of trips into the field for each loan application and allows officers to target home visits more strategically.

The Challenge

Most clients start their journey with Acreimex, a cooperative that serves low-income people in Mexico, with a group loan product called Crédito Grupal. The group loan product is Acreimex's largest product and is a success among clients. Despite these positives, Acreimex had concerns about the product's profitability and competitiveness.

Processing Grupal loan applications was cumbersome and time consuming for loan officers, who wrestled with paper-based processes to get approvals. BFA also found that uptake of Crédito Grupal was lagging way behind competitors' products because Acreimex took seven days to approve each loan. People who needed a loan more quickly went to competitors, even if it meant paying a much higher interest rate (up to 70 percent more). In addition, the product was extremely costly for Acreimex, making it almost unsustainable over the long term.

Acreimex had tried purchasing an off-the-shelf app to digitize loan origination. However, the ready-made app was not tailored to Acreimex's internal processes, nor was it designed with its end user - the loan officer - in mind. For example, the app could only be used on certain kinds of phones, so some loan officers had to carry two phones. Officers found this cumbersome, so they found workarounds to avoid using the app. As a result, Acreimex dropped the idea of using an app, and the push for internal efficiencies stalled.

When Acreimex joined OPTIX, the team set out to improve the Grupal product & to generate operational efficiencies. The cooperative ultimately changed two elements of the product design & also created

a customized loan origination app. While Acreimex loan officers previously used 60 percent of their time to originate loans, the app was designed to drop this percentage to 33 percent. Instead of seven days for approval, the app will eventually make disbursement possible in only 3.93 days (including one entire day of transportation time). Overall, the time Acreimex loan officers spend on loan origination will drop by 22 percent. With these changes, Acreimex loans can now be profitable on the first loan cycle rather than the eighth!

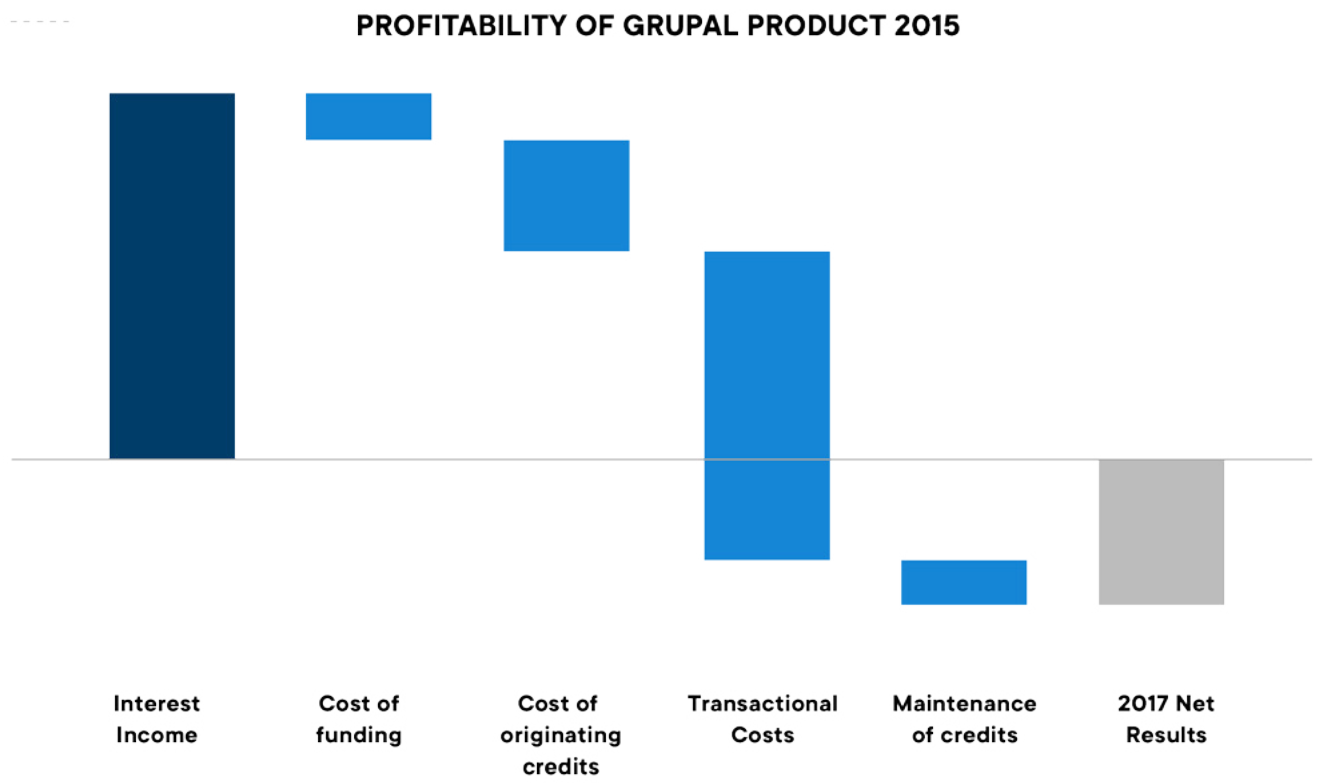


Figure 1.2.1. Grupal product profitability graph in 2015

Changes to Grupal Processes

The first change the OPTIX team made was to simplify the setup of new accounts for Grupal members. Previously, Acreimex opened additional accounts for new Grupal customers so that they would have automatic access to other services such as savings. The Grupal product has now been adapted to open three accounts at most. This change saved over MXN117 (USD6) in operational costs for each new Grupal credit account.

Second, the OPTIX team linked interest rates, formerly tied to the number of loan cycles, to the credit amount. This allowed Acreimex to earn an additional USD2 per account.



Field Officer Santiago gathers visual evidence of credit-worthiness for a new loan applicant.

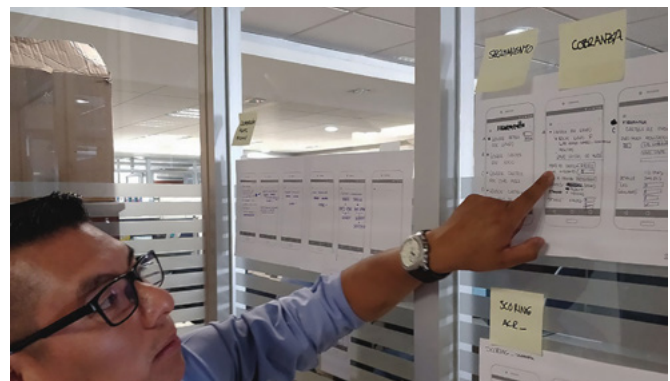
Loan Origination App

In addition to these changes, the OPTIX team created a custom loan origination app to simplify and accelerate loan approvals. BFA started by conducting a five-day research sprint, shadowing loan officers, interviewing staff and clients, and mapping the loan origination process. This research led to an “ideal journey map for loan officers” (see photo, below) that identified points along the loan origination journey that needed to be smoother, faster, and simpler.

After the research sprint, the process from sketch to refined product took three weeks. First, BFA’s OPTIX team crafted a generalized structure for the app and discussed its features with internal experts at Acreimex to gather feedback and ensure that it met regulatory and technical requirements. Next, they designed the app screen-by-screen, and made an initial prototype to define the content hierarchy, layouts, and general navigation. Finally, the team circulated the prototype to align staff expectations to ensure a smooth user experience and refine the app into a finished product.



OPTIX reviewed officers’ “ideal journey” and aligned it with the most important priorities in collective sessions with staff.



Acreimex staff reviewed the sketched wireframes of the ideal Loan Origination App.

The app that OPTIX designed for Acreimex was customized for its processes and culture, however it included several features that may be relevant for other providers.

Feature 1: Input New Customer Profiles on the Go

With the app, loan officers can create new customer profiles & verify customer IDs through the national registry while in the field. Moreover, customer information is automatically uploaded to the Acreimex system, saving the lengthy manual input processes.

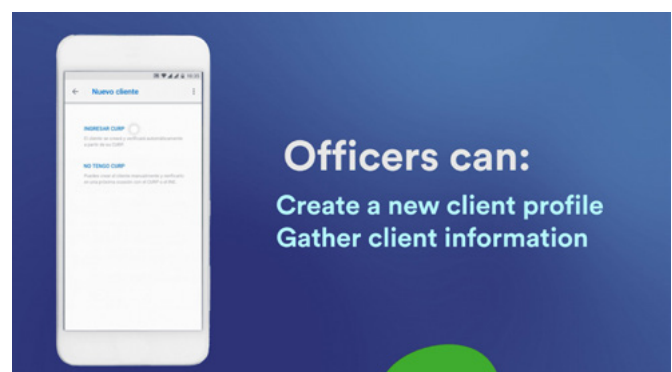


Figure 1.2.2 Demo of the loan origination app (part 1)

Feature 2: Query the National Credit Bureau Directly

The app allows loan officers to review applicants' profiles in the credit bureau on the spot. They can assess credit risk and decide whether to offer the credit while in the field, instead of waiting to query the system back at the bank branch.

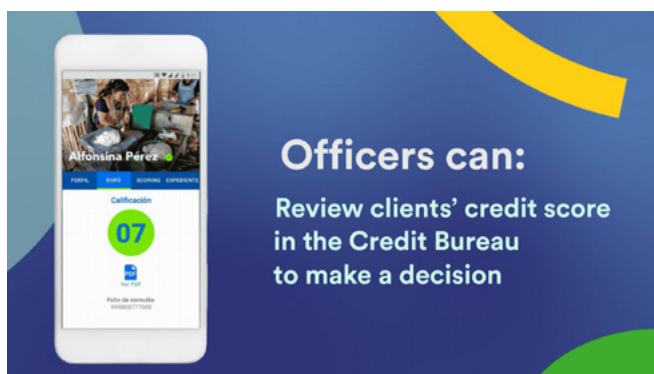


Figure 1.2.3 Demo of the loan origination app (part 2)

Feature 3: Review the Status of Outstanding Loans

The app allows loan officers to view their customers in the database right from their phones. This allows loan officers to evaluate each customer's repayment status, payment due dates, and any defaults at a glance, so they know which customers they need to visit.

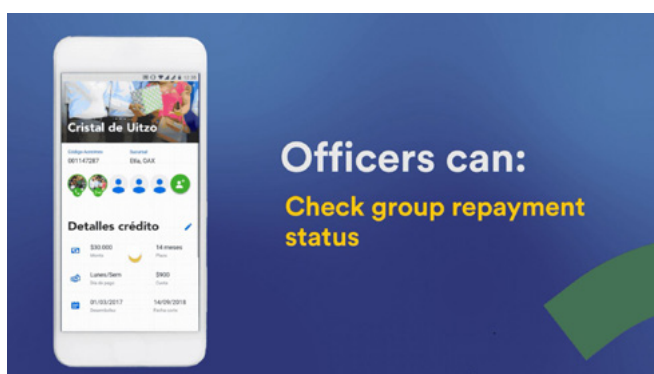


Figure 1.2.4 Demo of the loan origination app (part 3)

Next Steps

The app is in the final stages of development, having faced some delays due to an overhaul of the Acreimex MIS, which limited BFA's ability to develop the APIs and front-end in time to connect the app.

In the near future, the OPTIX team will run a four-week pilot as a dry-run exercise. The pilot will include a limited team of loan officers so BFA can gather their feedback, tweak final details, and get ready for a full launch with the entire team of 40 Acreimex loan officers.

Above all, OPTIX and Acreimex hope that customers will be able to get loans more quickly, especially at times when they need funds the most, and ultimately avoid the more expensive loan providers. In the long run, we hope low-income customers can build a healthier financial life and a deeper relationship with Acreimex.



Case Study 1.3

MFIs can leverage mobile money with careful change management



PARTNER



COUNTRY



Digitization is not just about operations but can also extend to currency itself, given the growth of mobile money and digital payments. Many institutions are considering whether to leverage mobile money for loan repayments as a way to decrease cash-handling costs.

The Challenge

While mobile money is promising for financial institutions, making the switch is not as simple as it sounds since integration with mobile money providers can be challenging and institutions risk losing touch with their clients. Digitizing the loan delivery channel is not just an easy switch, but an entire overhaul of the institution's operations and should be treated as such.

Given the challenges of integration, BFA helped SAJIDA Foundation develop software as well as process solutions to ensure that mobile money works for, and does not undermine, the institution and its customer relationships. The OPTIX team also suggested process adjustments to meet customer preferences and ensure a long-term business case. With these interventions, each month the mobile money channel currently handles between 20,000 and 24,000 transactions from 8,000 clients totaling BDT48 million (USD600,000). More than 17% of SAJIDA customers now transact at times more convenient to them.

The Case for Mobile Money

SAJIDA Foundation embraced mobile money (MM) as an alternative delivery channel in 2017 in partnership with Rocket, a digital financial service (DFS) offering from Dutch-Bangla Bank Limited (DBBL). This partnership allows customers (or members, as SAJIDA calls them) to make loan repayments at any small merchant who is a Rocket agent. Members using this service can make payments through the agents at a time and place of their choosing, increasing member convenience and comfort, and reducing overhead costs for SAJIDA.

For members to make their payments at mobile money agents, SAJIDA had to do away with payments during group meetings, a core aspect of the institution's operations. These meetings were unpopular and poorly attended. Field officers (FOs) reported that less than half of group members attended meetings regularly, and 87% of group members corroborated this observation in a subsequent OPTIX survey. The survey also found that only 7.7% of members looked forward to group meetings, and only 3.9% socialized at these meetings. These findings called into question the core purpose of group meetings, a practice that has persisted in microfinance in Bangladesh for decades based on the belief that providers need face-to-face contact with clients.

In contrast to the declining popularity of group meetings, mobile money is gaining in popularity. MM has become ubiquitous as a convenient, time-saving payments solution in Bangladesh, with bKash leading in a number of service offerings and DBBL's Rocket not far behind. The time seemed to be right to replace cash-handling at group meetings with MM-based transactions.

Software Solution

The first step for BFA/OPTIX was to create a middleware solution to connect SAJIDA's MIS with those of the mobile money operators starting with bKash, the number-one mobile money operator in the country. This was particularly challenging because SAJIDA's MIS was not centralized, and lacked the ability to accommodate APIs. Mobile money providers, in contrast, push out transactional information in real time that needs to be reflected in SAJIDA's systems instantaneously. OPTIX created the middleware as an interface between the two systems; the middleware communicates securely with the distributed systems through a custom-built interface at one end, while collating all transaction information from the provider(s) at the other.

Process Adjustments

Challenges started materializing almost immediately. These required process adjustments to improve the customer experience, address technological limitations, and proactively ensure proper change management within SAJIDA.

First, the account-opening process had significant pain points, since it added an extra task. SAJIDA members, who typically do not maintain a balance in their mobile money accounts, had to first deposit money into their MM wallets before they could make loan repayments. SAJIDA therefore changed from mobile money partner bKash to Rocket, which offers over-the-counter (OTC) transactions (allowing members to repay in one step) and removed hurdles for first-time MM users.

Second, SMS messages generated by MM transactions failed to instill confidence among users that their transactions had succeeded. SAJIDA introduced paper statements, providing an intermediate stage between a totally digital solution and the ubiquitous passbook, where loan officers had traditionally recorded repayments. Seeing their transaction history on paper gave members reassurance that their payments had been logged.

Third, early research with field officers surfaced concerns that, without group meetings, social capital among members would decline and repayment rates would fall. The OPTIX team responded by testing

the hypothesis. Group meetings were eliminated at one pilot branch to test for any problems. While observers did not note increased delinquency, a slow and steady erosion of social capital did indeed occur within the groups. Without face-to-face contact, FOs started losing touch with members, making recruitment of new members through referral more difficult. FOs complained about the time required to deliver account statements house to house, and about their inability to inform members of changes in policy and new SAJIDA services. Introducing new FOs to existing members also became difficult without group meetings. In response to these findings, SAJIDA replaced weekly repayment meetings with monthly group meetings.

The Impact

SAJIDA members have embraced the flexibility and convenience that MM-based transactions offer, suggesting improvements in financial health. Members make payments between 5 p.m. and midnight, and only 39% choose to pay between 9 a.m. and noon, when group meetings traditionally have taken place.

Members also repay larger amounts later in the day -- the average payment size is BDT1,600 (USD20) at 9 a.m. but BDT3,000 (USD36) at 4 p.m. SAJIDA's staff believes this is because small business owners want to "make their money work for one more day" and prefer to take liquidity out of the business in the afternoon. The flexible hours also allow FOs to recruit salaried workers who could not have attended morning group meetings.

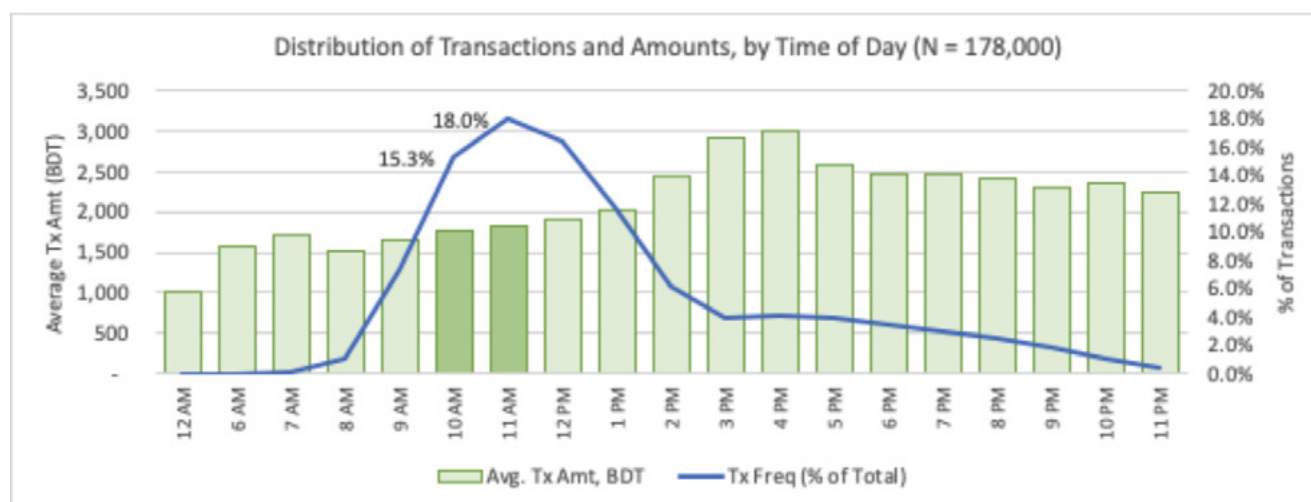


Figure 1.3.1 Distribution of number of transaction and amount of transaction by time of day

Female members, especially, have benefited from the mobile money solution. Women who borrow discreetly without their husbands' knowledge do not have to risk other members of the group disclosing their activities. Socially conservative women can transact at the neighborhood Rocket agent instead of interacting with predominantly male SAJIDA officers in their homes. And those who are better off can borrow to smooth over a temporary financial shortfall without losing face in the community.

The impact of mobile money transactions on business operations has been mixed. MM has made operations more efficient by eliminating overhead expenses associated with cash-handling and bookkeeping, drastically reducing the monitoring and auditing burden, and allowing real-time

decision-making based on data collection. Rocket's services, however, come with a 1% fee, which effectively translates to an 11% increase in the cost of servicing a loan and a 6% increase in a branch's expenses. For microloans with razor-thin margins, a 1% fee poses a real danger of pushing fees too high for profitability. SAJIDA is increasing FO productivity to counter this increase in costs

Additionally, SAJIDA worried that savings levels might have decreased after implementation of mobile money repayment. The average savings per member is indeed lower for MM users compared to non-MM users. Savings balances per member increased 12%-43% at the MM branches during the first six months of use, whereas savings at non-MM branches increased 55% and 91% during the same period.

Finally, FOs found that they had more time on their hands, but that they were also spending more time tending to clients who were late with payments. With implementation of MM, FOs do not physically handle the cash coming back to SAJIDA; instead, they have to track repayments on the portal to get a sense of how things are going that day. The team observed that FOs became stressed about repayment rates toward the end of each day, especially when members choose to pay after working hours. FOs felt that their portfolios were going badly, even though the numbers suggested otherwise. SAJIDA has recognized that staff at cashless branches are no longer loan- and savings-portfolio servicing agents but are more akin to troubleshooters and recovery agents. The MFI is thus engaging in appropriate re-training and support for FOs.



Case Study 1.4

Loan Officers As Financial Advisors with the FAS App



PARTNER



COUNTRY



Back-office calculations are a clear application for digitization. However, front-facing customer relations also can be improved with technology. Apps can arm loan officers with real-time data and information to tailor their communications, and can provide visualizations to help customers understand products more concretely.

OPTIX helped SAJIDA Foundation develop a Financial Advisory Services app to deliver financial advisory services to customers who are poised to take advantage of more advanced financial services. The FAS app supports loan officers with information and calculations, and gives clients concrete visual aids and simulations of advanced products.

The Challenge

Field officers (FOs) at SAJIDA Foundation, an NGO and microfinance provider in Bangladesh, are constantly on the go. They each have more than 300 customers to whom they disburse loans and collect repayments. They make five or six home visits each afternoon and act as financial advisors to many of their customers, who they get to know well over time. Unfortunately, their workload does not allow FOs to spend more time coaching clients, an activity many enjoy and that benefits customers. Field officers understand that their customers have rich financial lives, with needs, aspirations, and goals for both the short and the long term. They also know that customers do not always take advantage of SAJIDA's services to achieve their goals. For example, some customers have sizable amounts in their deposit accounts that could earn more if they were converted from simple savings into term deposits. However, giving this advice to customers is complex: Officers must explain tiered interest rates and know how to offer differentiated products.

The FAS App Solution

OPTIX and SAJIDA Foundation developed a Financial Advisory Services (FAS) app for field officers to put their knowledge and intuition about customers to better use while increasing their efficiency. SAJIDA Foundation's decision to develop the FAS app grew out of two realizations:

- **Identifying super savers:** Many individuals save diligently while servicing a microcredit loan, accumulating large amounts of regular savings. Yet, during field visits -- which focus narrowly on loan servicing and information collection -- officers do not know who these super savers are.
- **Pitching products:** Target-based narratives are a good way to discuss term deposits, but field officers find answering questions about expected incomes difficult, since the products use tiered interest rates. This shortcoming hampers pitches, particularly if members are aiming for a specific amount or comparing products from competitors.

The FAS app identifies these “super saver” customers and features simulations that demonstrate how advanced savings products work. It also provides field officers with user-friendly client information to facilitate outreach and help tailor conversations around savings.

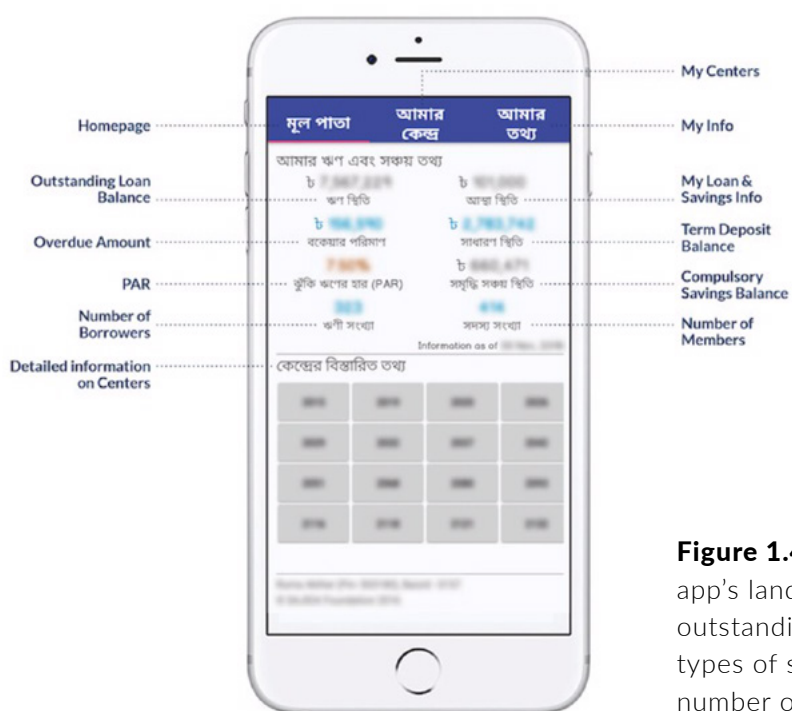


Figure 1.4.1 The portfolio summary on the FAS app's landing page displays the officer's outstanding loan balance, balances of up to three types of savings accounts, PAR rate, and the number of customers

FAS App in Action: Identifying Super Savers

The FAS app's landing page (see Figure 1.4.1) gives field officers a summary of their clients' loans and savings balances, and flags delinquent loans. Data pulled directly from the SAJIDA databases is in English, but the labels are in Bangla, making the interface intuitive for loan officers.

Process Adjustments

The center summary (Figure 1.4.2, below) appears as a dashboard in the app, displaying a list of all the members in that neighborhood who belong to the same group meeting, along with the status of their current loans and savings. The app gives each customer a rating of zero, one, two, or three stars. These ratings indicate the type of advice the loan officer should provide for that customer.

- **Zero stars:** Members who have less than BDT4,000 (USD50) in savings or who have withdrawn within the past year. Field officers should talk to clients about the importance of savings and long-term goals.
- **One star:** Members who have between BDT4,000 (USD50) and BDT4,999 (USD62.50) in their accounts and have not withdrawn in more than a year. These clients are clearly savers, but have not yet achieved the minimum balance for term deposits. Field officers help them focus on their long-term goals and encourage them to save the minimum level for the higher-interest-rate product.
- **Two stars:** Members who have between BDT5,000 (USD62.50) and BDT10,000 (USD125) in voluntary savings and have held that balance for more than a year. These clients are secondary targets, so officers may talk to them about long-term goals and term-deposit accounts.
- **Three stars:** Members who have more than BDT10,000 (USD125) in a voluntary savings account and have not withdrawn for more than a year. These super savers are the primary targets for term-deposit accounts.

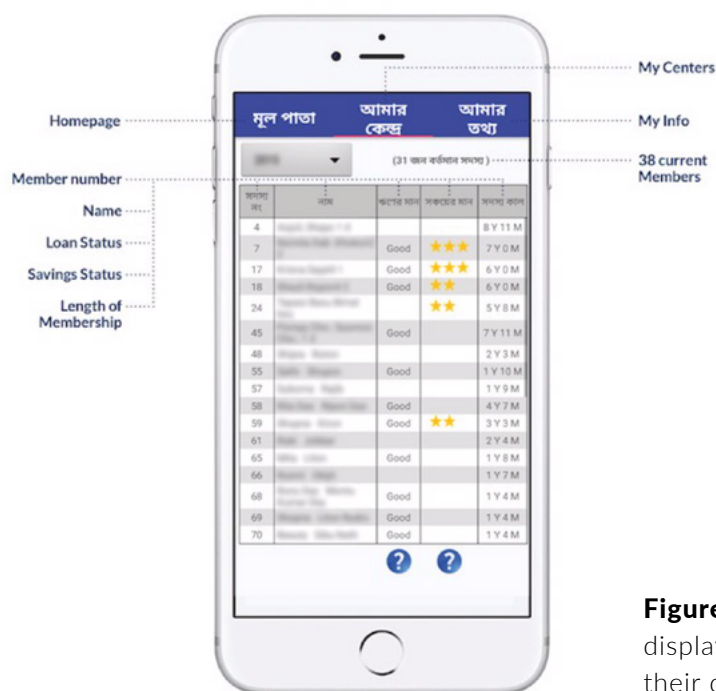


Figure 1.4.2 The FAS app's center summary displays a list of members with stars indicating their quality as loan and savings customers.

The center summary also displays the status of all outstanding loans in the group. Loans fall into one of three categories: good, overdue (i.e., somewhat behind on payments), and bad (i.e., recovery efforts have failed, and the loan will be written off soon).

The summary information allows field officers to quickly identify members with three stars and “good” loans to zero in on those who may be interested in upgrading from savings to term-deposit accounts.

From the summary page, clicking on any member takes the field officer to a page with details about that customer: current and previous loans; balances of compulsory, voluntary, and term-deposit savings; and the option to see more details. These client histories help officers and members, who like being able to see their entire portfolio at a glance. In addition, the stars seemed to have a motivating effect for members, an unexpected but welcome side-effect.

Officers may also choose to encourage a new savings goal using the target savings page.

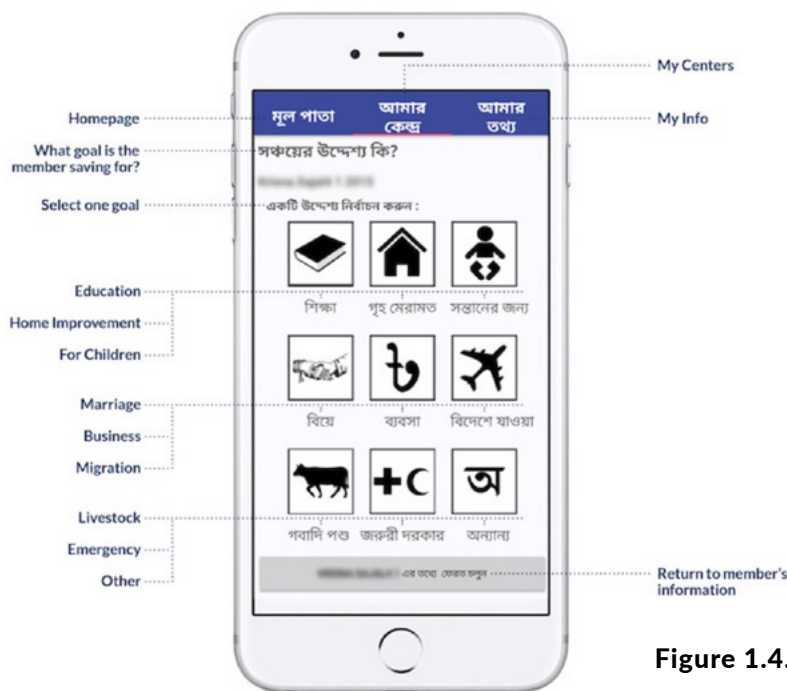


Figure 1.4.3 The FAS app's target savings page



“Wow, Ma, you have three stars!” crowed Nilufer Begum’s daughter as she and her mother pored over a handheld screen showing her loan and savings records with SAJIDA Foundation via the FAS app. Next to them, the field officer, Arif, explains that three stars are reserved for the best SAJIDA Foundation savers. Using the three-star system, he advised his customer on transferring some of her savings to a term-deposit account to earn more interest.

FAS App in Action: Savings Simulations

In addition to portfolio information, the FAS app offers two simulation tools: 1) one based on general income generation, and 2) another based on targets. These simulations allow officers to show customers future scenarios, telling them either how much they would save after a certain amount of time or how long it would take them to save up for something specific.

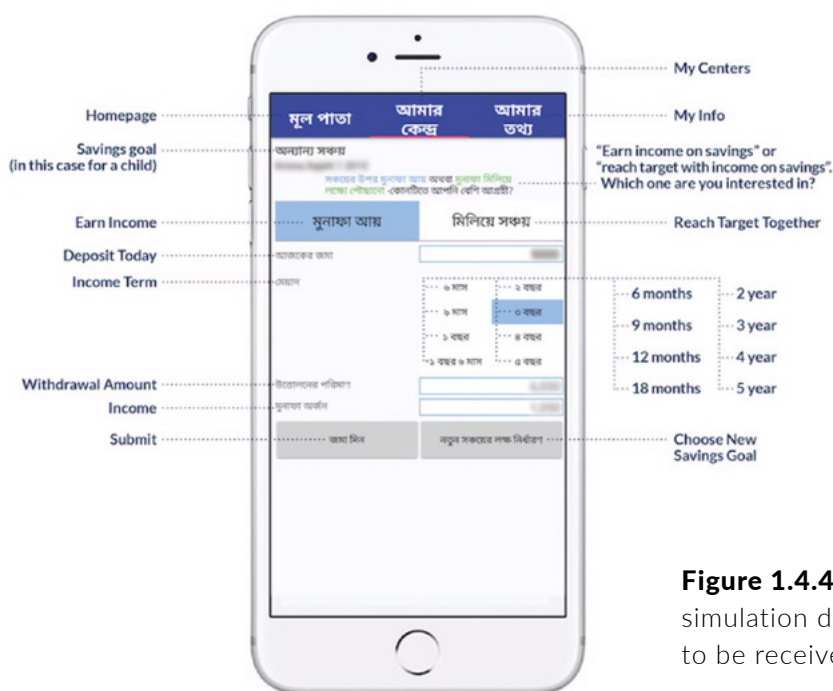


Figure 1.4.4 The FAS app's Income Generation simulation displays maturity amount and income to be received, given initial deposit and term.

Simulations of income generation using the term deposit income calculator allow field officers to show a client who has idle cash how much money they could earn in a term-deposit account. Typical term deposits offer higher rates of interest income than current accounts, with increasingly higher rates for longer committed terms. Someone saving BDT10,000 (USD125) for two years, for instance, will receive 7% interest per year, resulting in an income of BDT1,400 (USD17.50) and a total withdrawable amount of BDT11,400 (USD142.50).

Before the app, officers used a grid to show returns based on a few possible initial deposit amounts and terms. With the app, officers can input a specific amount that is relevant to that customer and display concrete income estimates in less than a minute.

The app also features a Target-Based Savings Calculator. While in the field, customers often ask questions like, “If I needed BDTx in three years, how much do I have to save now?”

Target-oriented savings pitches make savings tangible for users. SAJIDA used focus groups to identify nine typical customer goals: education, home improvement, children, marriage, business, migration, livestock, emergencies, and other. When considering target-based savings, the officer inputs how much the client would like to withdraw at the end of the period, and the simulator calculates how much has to be deposited today to generate that amount. To withdraw BDT10,000 (USD125) in two years, for example, the customer would have to deposit BDT8,772 (USD109.65) today, which would earn BDT1,228 (USD15.35) in interest over two years, allowing the member to meet her target.

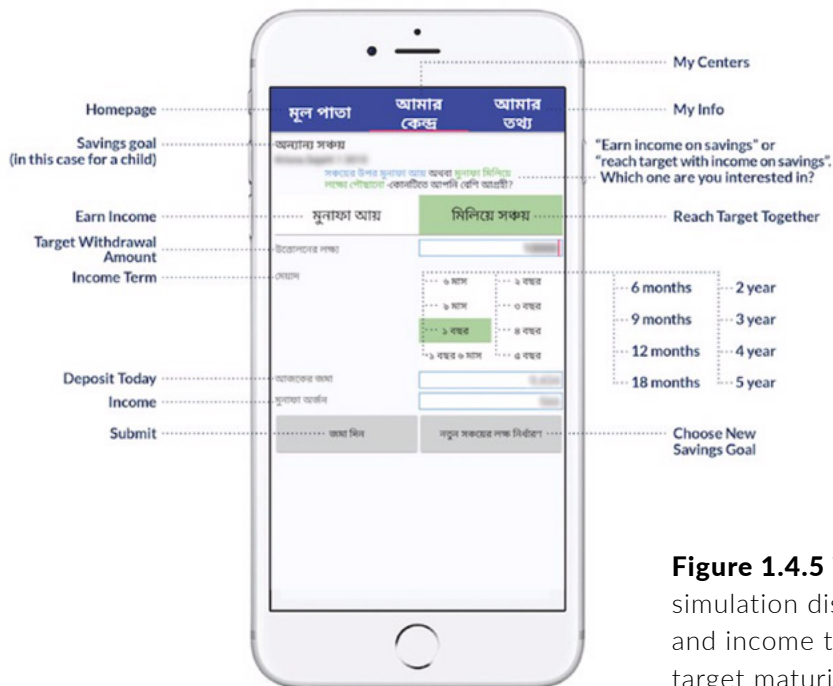


Figure 1.4.5 The FAS app's Target-Based Saving simulation displays the Initial deposit required and income to be received given a customer's target maturity amount and term.

Next Steps

After piloting in two branches, the FAS app is now being deployed to other branches. SAJIDA Foundation continues to refine the simulation narratives based on uptake of target-based and income-generating term deposits. Furthermore, because a savings-oriented app alone does not have sufficient ROI, SAJIDA has decided to load the FAS app onto handheld devices that already have the loan origination app so that officers have easy access to both.



Case Study 1.5

Data for Decision-Making : The benefits of potential changes to cash management



PARTNER



COUNTRY



Data and digitization can be powerful tools for evaluating the business case of a potential change to operations. CEP considered utilizing mobile money agents as drop-off points for loan officers (LOs) to be able to distribute cash. To consider the possibility, OPTIX developed a GIS-powered app to assess the locations of centers and agents relative to the routes used by LOs. Simulations using the data collected indicated a strong potential for cost savings, but CEP did not implement the project because the business case was not adequate for the MFI or for the mobile money providers.

The Challenge

CEP clients live in remote communities, so loan officers (LOs) travel long distances to collect loan repayments and savings deposits. These trips take a fair amount of time and expose the LO to the risk of robbery. Due to the risks, CEP has prudential limits on how much cash an LO can carry before having to return to the branch office to deposit. Therefore, LOs end up making multiple trips back and forth from the field to the branch to comply with cash management policies.

As part of the OPTIX project, CEP explored the feasibility of LOs depositing cash collected during field visits with mobile money agents such as those affiliated with Momo, Payoo, and Viettel. As shown in Figure 1.5.1 (below), the branch office (blue pin) is far from group meeting centers (grey dots), while the agents depicted by colored dots (representing each of the different mobile money providers), are closer.

According to Figure 1.5.1 (on the following page), agents seem close enough for LOs to drop-off cash easily, but are they, really? And given that CEP is an extremely efficient outfit, would cost savings be sufficient to justify adding this step to the LOs' routine?

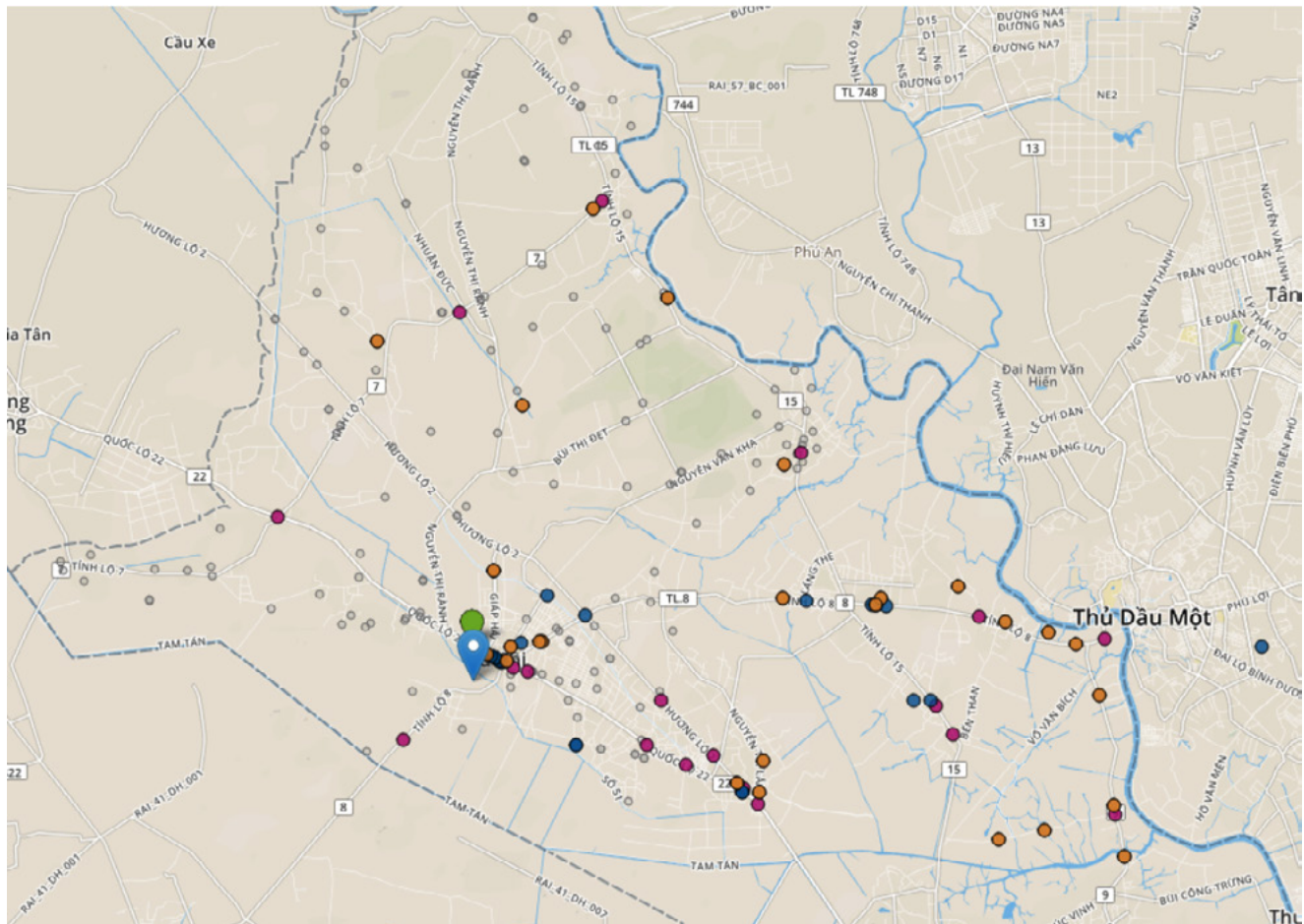


Figure 1.5.1 Map of CEP centers and branches, and mobile money agents.

Analyzing Potential Savings

OPTIX and CEP developed a lightweight app that captured:

- The nature of the point-of-interest (POI): branch, center, mobile money agent, or other
- The specifics of the POI: for agents, their affiliation with Momo, Payoo, or Viettel
- The latitude and longitude of the POI
- The trips the LOs make, mapping their tracks as they weave through roads and rice fields to the various centers

The app used this data to simulate the effect cash drop-offs would have on time & complexity. The app imposed a maximum amount of cash LOs could collect before dropping the funds off at the nearest mobile money agent. The simulation included a front-end interface (see Figure 1.5.2) that allowed CEP to observe how the “time since last deposit” and “amount collected” evolved as LOs went about their business.

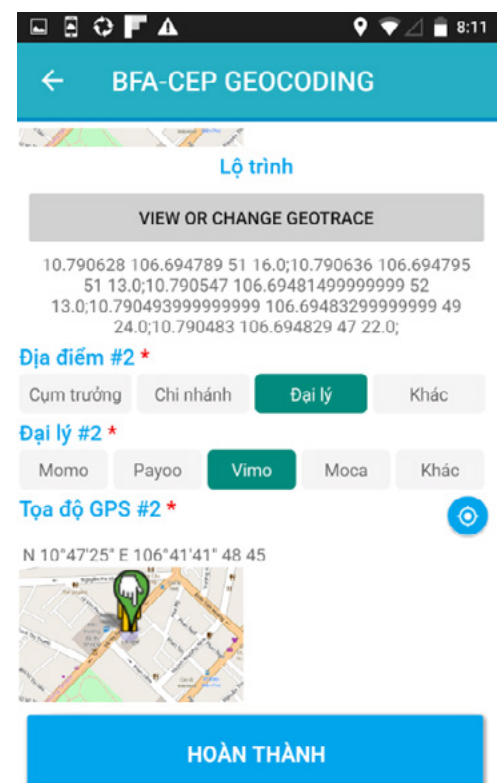


Figure 1.5.2 Screenshot of the geolocation app

The simulation demonstrated that:

- LOs would not have to carry cash for more than 45 minutes to an hour between drop-offs at mobile money agents.
- By the time they returned to the branch office at the end of the day, LOs would hold only 10% to 20% of the cash they normally would.

Even with tweaks to the maximum amount of cash in hand and the maximum time between drop-offs, the simulation showed that utilizing agents would save time in transit and protect LOs from the risks of carrying large sums of cash.

Conclusion

Even though the results of the simulation were promising, CEP chose not to incorporate cash drop-offs with mobile money agents. CEP could not come to an agreement with mobile money providers, who were uncomfortable with agents receiving large amounts of cash. The mobile money agents preferred that CEP customers make the deposits themselves, in smaller amounts and at less predictable times. CEP, however, was unable to consider individual customer drop-offs because of the center model it employs, and because the total transaction fees would be prohibitively high. CEP also felt that asking customers to deposit individually would decrease membership, since customer cost and effort would increase.

While a superior technology-based solution exists for loan officers' cash-handling dilemma, reality includes pertinent mitigating factors that ultimately nullified its advantages. CEP ultimately set up other partnerships that allow for efficient servicing of customers, leaving behind this lesson for its OPTIX peers: Always stress-test fintech solutions against the business case and for market fit.



Case Study 1.6

An App to Automate Assessment of Loan Applications



PARTNER



COUNTRY



Credit scoring and loan approval is an intuitive function for MFIs to digitize since it is essentially a probabilistic calculation that can reliably be executed by a computer. OPTIX helped CEP, a microfinance organization in Vietnam, develop an app-based scorecard based on machine learning techniques that leverage its database and feedback from loan-officers to streamline the loan approval process for clients.

The Challenge

CEP has a large database of customers and has collected repayment data for more than 27 years. Unfortunately, past loan approval processes did not make use of this data for decision-making and relied on slow, manual calculations. In response, OPTIX decided to develop an app-based scorecard that leverages this data to improve decision-making, thereby decreasing risk and increasing the speed of disbursement.

A digital scorecard is strong if the data that powers it is accurate and predictive. To design the scorecard, the team started by assembling a broad survey of indicators that could serve as proxies for repayment risk, and surveyed 883 clients, covering all 34 CEP branches. Simultaneously, loan officers assessed risk levels for those 883 clients in their traditional, manual manner. Through the traditional assessment process, officers approved 65% of customers for a loan, rejected 31%, and remained undecided about 4% (OPTIX collapsed the undecided applications into the rejected group for this analysis). The team then mapped the OPTIX indicators to the traditional results to identify which questions could mimic the results of the traditional risk assessment.

Interestingly, of the 28 indicators in the OPTIX indicator survey -- which included demographic indicators, loan purpose, income, social rating, etc. -- 12 had good predictive power for an eventual loan approval.

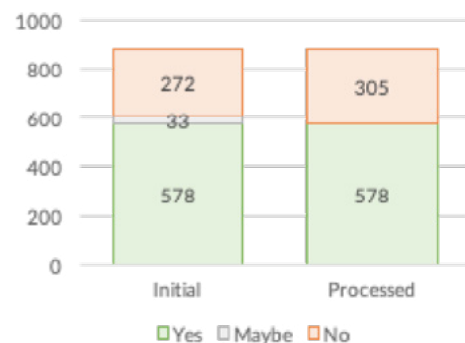


Figure 1.6.1 Graph of Loan Officer Decision

Variable in Order of Importance	Importance Score	Decision
Observed behavior		Confirmed
Reputation in neighborhood		
House ownership		
Assessed experience in business		
Household income		
Income stability		
Residence status		
Number of current loans from person		
Observed presence in business		
Number of current loans from (non-CEP) institutions		
Number of income earners		Tentative
Period current savings can cover basic needs		
Number of other HH members making repayments		Rejected
Age of applicant		
Length of stay at current residence		
HH improvements in last 2 years		
Marital status		
Main income source		
Friend or family current CEP member		
Number of dependents in HH		
Is HH head		
Gender of applicant		
Income frequency		
Electricity cut in previous year due to non-payment		
Purchased land in last 2 years		
Intended use of loan		
Business expanded in last 2 years		

Figure 1.6.2 List of variables for loan approval in order of importance.

The Scorecard

Of the 12 predictive indicators, subjective factors of observed behavior and reputation in the neighborhood most strongly correlated to loan approval. This may be because loan officers gravitate toward variables that denote stability -- e.g., homeownership, household income, income stability, residence status, experience in business, etc.-- which are also heavily weighted in social reputation. Demographic characteristics such as age, income source, gender, etc. did not correlate highly with loan approval.

Using a decision-tree approach, OPTIX was able to further narrow the 12 predictive indicators by starting the assessment with the indicators with the most predictive power. For example, if a client's observed behavior and client's reputation are deemed satisfactory (she owns a home or lives with family) and the household income is more than VND5.8M (USD250), then the loan is approved. Together these three indicators have sufficient predictive power that combining three high scores will meet the threshold for loan approval, eliminating the need for further questioning. However, if the client's behavior is so-so or unsatisfactory and her reputation is similarly mediocre, then the loan officer can utilize more of the 12 indicators to see if the application will ultimately cross the approval threshold. With this approach, loan officers can make decisions more quickly than anticipated using the scorecard approach.

Next Steps

After the initial testing phase, CEP deployed the digital scorecard across all its branches and integrated the scorecard into its client onboarding app. The client selection process for loan officers is now faster and more convenient as it is consolidated into one centralized digital system. Going forward, CEP plans to improve the scorecard's predictive power based on more and more digitized data, and refine it for new client segments.



Case Study 1.7

An ROI Model for Evaluating Digitization



PARTNER



COUNTRY



Technology can be a powerful tool, but it is not always a good investment. Given OPTIX's mandate to be data driven, BFA developed an ROI tool to help partners estimate the impact of tech investments can have on the bottom line. The tool helps model and build the business case for pursuing digitization (or not).

The Challenge

The OPTIX team helped Acreimex develop a loan origination app, but needed a way to evaluate the value of the technology on Acreimex's bottom line and the costs of developing and deploying the app. While Acreimex was happy with the app and its impact, it can be difficult for providers to weigh the costs of technology against its benefits.

ROI Model

The OPTIX team developed an ROI model for Acreimex's particular use, but it can be adapted to evaluate any operational changes that are designed to improve efficiencies in loan origination. The model takes into account the initial costs of setting up the digital tool as an investment, and then estimates the operational efficiency gains and increased business (e.g., new loans) those changes deliver, which could lead to higher returns.

In the case of Acreimex, the model suggests that the loan origination app will generate returns in two ways: 1) by increasing efficiencies in approving new loans (lower cost per loan disbursed), and 2) by providing resources -- through these new efficiencies -- to disburse new loans (additional loans disbursed). The efficiencies should reduce the unit cost per loan from MXN 13,500 (USD687) to MXN 8,130 (USD415) due to shorter origination times and an expected increase in the number of new loans.

Once the pilot test of the app is complete, the OPTIX team will then compare the predictions generated by this model (outlined below) to actual results.

Estimate 1: Digitization Reduces the Cost of Generating a New Loan

Since the OPTIX app allows for various elements of the loan approval process to be completed while the loan officer is in the field, it eliminates several trips back and forth to the branch, thereby saving time and money. To quantify these savings, the OPTIX team calculated how many trips Acreimex loan officers typically make to clients during loan origination, and how long each of these trips takes on average. Next, the team estimated how long the new process would take, and compared the two costs.

According to the model, field officers currently spend 33% of their time (8.25 days per month) on loan origination, and the app should allow them to reduce this to 26% (6.41 days per month).

	Before App	After App
Days per month per loan officer dedicated to originating loans	8.25	6.41
Cost of origination per officer per month	MXN2,473	MXN1,923
Cost of origination per loan	MXN13,500	MXN8,130

Figure 1.7.1 Costs comparison between before and after app integration

The OPTIX team estimates that these efficiencies will save Acreimex ~MXN 176,253 (USD9,000) in the first year and ~MXN 275,000 (USD14,000) in years two and three. These savings can finance the support and maintenance of the app, which is estimated to cost USD15,000 a year.

Estimate 2: Digitization Increases Opportunities to Originate New Loans

With greater productivity, loan officers will also have extra time to pursue new sources of income (i.e., additional loans). Currently, each loan officer disburses 3.6 new loans per month. OPTIX expects that this capacity will increase to 4.63 new credits per month, a jump of 1.03 loans a month per officer. These additional loans could increase Acreimex revenues by MX 470,000 (USD24,000) in the first year and by MXN 1,960,000 (USD100,000) in years 2 and 3.

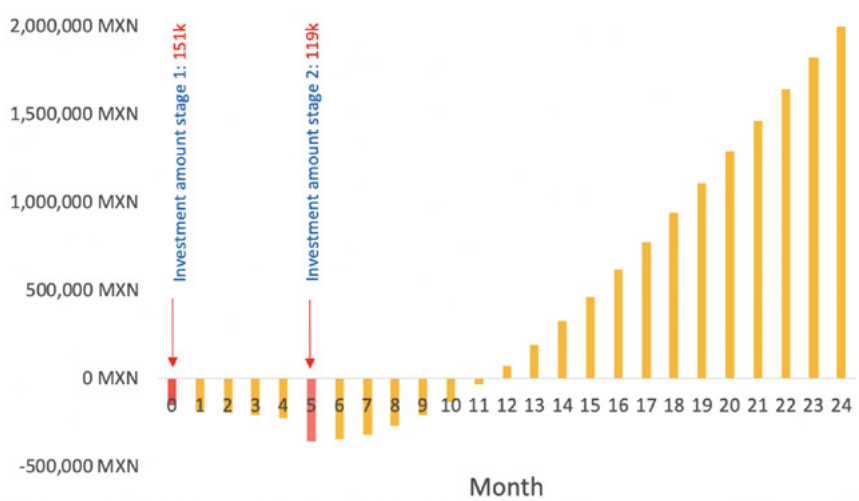
	Before App	After App
Days of activities required to originate Grupal loans	3.93	3.06
% decrease in origination time	22%	
New Grupal loans per loan officer per month	3.6	4.63

Figure 1.7.2 Comparison of other benefits to the institution before and after app integration

Projected Impact

On the cost side, the loan origination app generated an expense of MXN275,000 (USD14,000) overall. The ROI model suggests that this cost would be recovered during the first year. From the second year onward, use of the app would create a stable cash flow of at least MXN 1,960,000 (USD100,000) a year. Figure 1.7.3 (below) shows the cash flows per month of the project. They become positive in month 12, and the red columns indicate months in which OPTIX foresees significant investment by Acreimex.

Figure 1.7.3 Cash flow of the project over 24 months



Next Steps

The app is in the final stages of development, and OPTIX expects to execute a dry-run exercise with a limited team of Acreimex loan officers so that the OPTIX team can gather feedback, tweak final details, and get ready for a full launch with the entire team of 40 loan officers. With the results of the dry-run in hand, OPTIX will update the ROI model with actual results.



Chapter 2

Future-Proofing Product Performance and Value



Microfinance institutions often assume that certain products will be “good” for customers, leading them to offer simplistic cookie-cutter products without much diversification or tailoring for market segments. When products are not designed with hard data or customer research, they are not always relevant or sufficiently tailored, resulting in low uptake and high operational costs. The issue of cookie-cutter products is further exacerbated by growing competition in the form of customer-centric propositions from new fintech startups.

Uptake is also challenging because low-income customers tend to maintain relationships with multiple formal and informal financial services providers, instead of purchasing multiple products from one institution. From the customer’s perspective, having various relationships increases their chances of accessing money when they need it most. This is an obstacle for institutions that are looking to build their relationships with customers, because their customers are not accustomed to relying on one institution for all of their needs.

As competition increases, traditional microfinance institutions will need to future-proof their offerings by better tailoring and designing their products. Such tailoring can also help drive loyalty. If customers derive more value from products that are right for them, they may be willing to commit to one institution as a one-stop shop for their needs. So, how can institutions future-proof to enhance customer engagement and encourage use of multiple products? Data can help institutions figure this out.

Using Data to Identify Opportunities

OPTIX partner institutions offer credit, savings, and insurance products, but were not designing and combining products to maximize customer lifetime value. While these financial institutions capture a wealth of customer information in their MISs and have access to relatively easy, “free” insights into client behaviors, they were not utilizing the data. They lacked the time, capacity, and know-how to take advantage of data to inform their product strategies.

In the pursuit of optimal product portfolios for customers, OPTIX supported institutions to use evidence from data analytics, business-case analysis, and customer and staff research to:

- a. Develop evidence-based product combinations,
- b. Design products to meet customers’ needs, and
- c. Leverage data tools to monitor product performance.

DATA ANALYSIS

Payroll borrowers have low instances of delinquencies.

BUSINESS CASE

Institution A deducts clients' loan payments from the payroll which helps the institution keep its cash handling costs low.

BUSINESS CASE

The product is nearly twice (89%) as profitable per loan as the banks basic consumption loan.

DATA ANALYSIS

97% of payroll borrowers have a current account, but the average balance of these accounts is 1% of the loan amount.

DATA ANALYSIS

Payroll loan clients average current account balance is 47% of the average portfolio savings level.

CLIENT INSIGHTS

That is not to say that these clients do not save; they reported keeping 80% of their savings outside of institution A.

STAFF RESEARCHER

Staff says clients do not save with the institution because it is inconvenient to come to the branch, and because they already have current accounts with other institutions where they receive salary.

CLIENT RESEARCH

Clients are saving a median of 50% of savings with informal savings groups. They appreciate the discipline and convenience of such schemes.

**TO MEET THE NEEDS OF CLIENTS
AND SUPPORT THE INSTITUTION'S
BOTTOM LINE, OFFER MORE DISCIPLINED
AND CONVENIENT COMMITMENT SAVINGS
PRODUCTS TO PAYROLL SAVINGS PRODUCTS**

Figure 2.0.1. The OPTIX Process Map demonstrates how we integrate data analysis into the work with each institution.

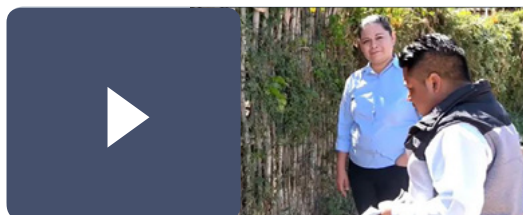
a. Develop evidence-based product combinations

Savings are extremely valuable for financial institutions and for customers, yet these accounts can be particularly difficult to sell and are unprofitable when balances are low. Given these challenges, institutions should look at ways to link savings and credit products to create profitable combinations and enrich customer engagement.

Case Study 2.1

Through a portfolio analysis, OPTIX realized that Acreinómina, a salary loan product that is offered to customers with reliable incomes, could be a vehicle to offer a longer-term savings product. Indeed, many payroll customers already save using other instruments or institutions, albeit not with Acreimex. With OPTIX, Acreimex built on the success of its payroll credit product to automate payroll savings, making it “painless” to save regularly. The Acreinómina customers who opted for automatic savings deductions had median savings balances of MXN1,807 (US D90) as compared to the MXN1,550 (USD80) among customers who only had the savings account. This product combination helped customers find discipline with their savings; as their money is put away, it becomes difficult to access and difficult to spend.

“The money is saving itself without having to worry about temptations to spend it.”
-- Mr. Torres, Acreimex customer



ACREIMEX LENDING APP DEMO:
GETTING LOANS TO CLIENTS FASTER
WATCH THE VIDEO ON VIMEO
<https://vimeo.com/296818486>

Read the full case study at the end of chapter.

b. Design products to meet customers' needs

Microfinance customers look for safe, liquid, private, respectful, convenient places to save, with possible access to credit. In addition to credit products, OPTIX institutions offered combinations of fully liquid savings accounts, term deposits (long-term savings), and recurring (or commitment) savings accounts. OPTIX institutions found that the reason for low uptake of savings products was often simple: poor product design that did not fully account for customers' needs. Thinking about creative ways to design products for low-income customers' needs and wants was therefore imperative.

Example

SAJIDA Foundation had developed a term-deposit product to allow customers to save a lump sum of money for a period of time (generally in anticipation of planned expenses). SAJIDA found, however, that 70 percent of customers were withdrawing well before their committed term, and nearly all were saving very small amounts. This made the product expensive for SAJIDA and ineffective for building the longer-term resilience of its customers. Leveraging data analytics and customer insights, SAJIDA

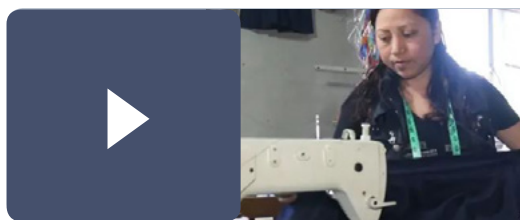
Foundation made tweaks to make the product more flexible, oriented to customers' needs, and affordable to both customer and institution. The redesign improved account openings and savings balances.

Read more online by **BFA on MEDIUM**

[How SAJIDA Foundation Practically Doubled Customer Uptake of Savings Accounts Using Evidence-Based Redesign](#)

Case Study 2.2

Acreimex was turning away many potential loan customers who had poor credit scores since they were juggling multiple loans. OPTIX and Acreimex saw an opportunity to offer a consolidated loan product that allowed Acreimex to buy a customer's debt from other institutions and refinance it at a lower interest rate. Customers then had a single easy payment to Acreimex instead of multiple payments at many banks, improving their overall financial health.



A ROADMAP FOR MORE & BETTER SAVINGS

WATCH THE VIDEO ON VIMEO

<https://vimeo.com/296312009>

Read the full case study at the end of chapter.

c. Leverage data tools to monitor product performance

Most financial institutions recognize that in order to future-proof adequately, data should lie at the heart of strategic decision-making. Not all analytical tools are fit for this purpose, so institutions need to select those that meet end users' needs and give institutions the kind of information they want to receive.

With technology playing an increasingly central role in every aspect of business operations, data can make a business more agile, more customer-centric, and ultimately more profitable. Financial institutions can leverage data tools, either off-the-shelf or customized, to make sure they keep an eye on their performance and product profitability.

Case Study 2.3

OPTIX helped Acreimex integrate data into its decision-making by creating a dashboard tailored to each of its team's users. The user-centric focus ensured the dashboard's usability and utility in the long run. The dynamic business-case dashboard balances robustness and simplicity, helping staff to: 1) identify and control the operational variables that impact the profitability of each product, 2) link strategic and financial planning to profit expectations per product, and 3) ensure profitability of newly designed products.

Read the full case study at the end of chapter.

Case Study 2.4

SAJIDA and CEP chose Tableau, an off-the-shelf data visualization product, to monitor the performance of its products. Tableau helps inform regular decision-making to improve product design and operations. Information on account opening, balances, account closures, repeat openings, and more is tracked at the portfolio level, as well as by time period, cohort, branch, and so on. This close monitoring and clear presentation allowed rapid fine-tuning of SAJIDA's term-deposit offerings, for example, which was not possible before. Paradoxically, the feature that made Tableau the online tool of choice was its ability to produce PDF reports that users can print and disseminate offline. While several SAJIDA and CEP employees know how to update the dashboard and a few more can query the database using Tableau Reader, the vast majority of users prefer hard copies.

Read the full case study at the end of chapter.

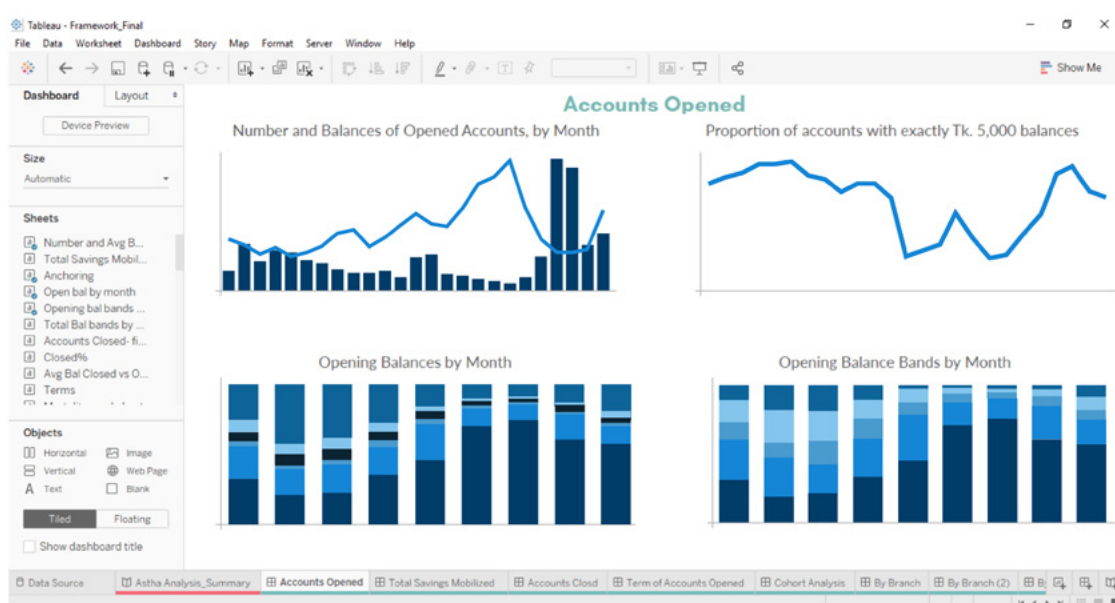


Figure 2.0.2. Screenshot taken from Tableau displaying the term deposit portfolio of an institution.



Case Study 2.1

“Stealthy” Saving: Building on Payroll Credit to Automate Savings



PARTNER



COUNTRY



Institutions want to drive uptake of their products. Savings are particularly valuable for institutions, but can be particularly difficult to sell (unlike credit, which sells itself). OPTIX helped Acreimex build on the success of its payroll credit product by automating payroll savings. Combining the two products made saving easier for clients and helped drive uptake of its AhorraMás y Más (A++) savings product.

The Challenge

Although Acreimex is a savings-based institution, some of its customers find it difficult to save regularly and build a savings habit. Given this challenge, Acreimex was looking for ways to combine its savings offerings with other products to help clients push through this barrier.

Product Combinations

Through portfolio analytics on customer transactions and product business-case analysis, the OPTIX team realized that Acreinómina, the cooperative’s flagship salary-loan product, could be a good entry-point. Acreinómina is a profitable credit product that is offered to customers with reliable incomes, and these customers were exactly those who could benefit from longer-term savings.

Acreinómina has been successful because repayments are automatically debited from the employee’s salary over a fixed term. Unfortunately, while the product is both profitable and widely adopted, it does not drive further engagement with Acreimex. Acreinómina customers see the loan as an incidental employer-provided benefit, not as a formal financial service. As a result, most Acreinómina customers leave the cooperative when they leave their employer -- without having used or acquired additional products from Acreimex. Some customers never even know what institution is providing the Acreinómina loan.

The OPTIX team realized that these payroll loan customers presented an opportunity to expand Acreimex’s outreach and profitability. Acreinómina customers have reliable income and could benefit from

longer-term savings. Moreover, many payroll customers already save using other instruments or institutions, but not with Acreimex.

Given that the loan product is so successful because it is so easy, BFA and Acreimex decided to pilot test an automatic, “painless” payroll savings plan with Acreinómina loan customers. The new A++ would deduct an additional amount from the customer’s salary to be deposited in a savings account.

Pilot of Automated Savings Accounts

Beginning in April 2016, BFA and Acreimex conducted a 12-month pilot with 15 partner employers already offering Acreinómina loans to their employees. Clients participating in the pilot selected a pre-determined amount to be directly debited from their salary at the same time as the Acreinómina loan repayment. This additional amount, typically between MXN100-MXN400 (USD5-USD28) per month, was placed in a A++ savings account with no penalties for withdrawal. The intention was that customers would use the account for medium- to long-term deposits

Members Signed Up for A++ and Continued to Use It

Acreimex set an adoption target of 30 percent of the 1,279 members eligible at the 15 pilot employers. As 38 percent of eligible customers (488 out of 1,279) completed at least one precommitted deposit into A++ savings, Acreimex exceeded its target by 17 percent. What’s more, customers ultimately made 78 percent of the deposits they committed to making when enrolling for the product. BFA believes that participation rates could easily be higher in practice, since many eligible customers did not visit the branch during the pilot sign-up period and so were not even offered the product. Customers who refused the A++ combination offer reported not having enough money to save or stated that they were already saving through another product, such as an employer-provided savings fund.

Members with Both Payroll Loans and a Savings Account Saved More

As seen in the graphs below, participants who had both a payroll loan (Acreinómina) and a savings account (A++) held higher median savings account balances and made more deposits than those clients with only one of the two accounts or neither. Acreinómina clients who opted in for the automatic savings deductions from their salary loan repayments had median savings balances of MXN1,807 (USD90) compared to MXN1,550 (USD80) for A++ clients alone.



Photo 2.1.1 Acreimex credit officers receive sales training. Photo courtesy Verónica Espinosa

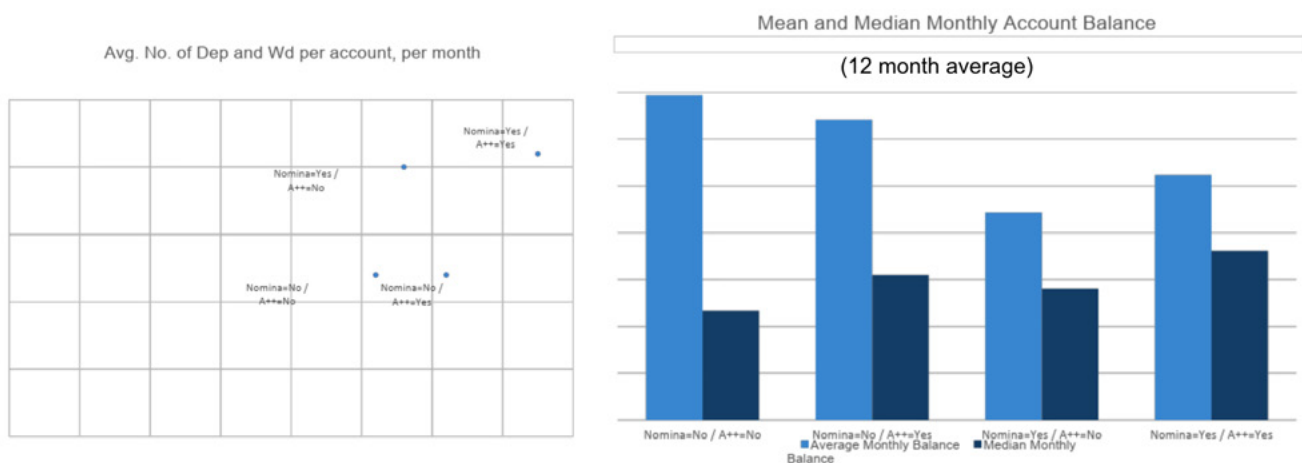


Figure 2.1.1 (left) Graph of the average number of deposit and withdrawal per account per month
Figure 2.1.1 (right) Graph of the mean and median account balance over 12 month average

Data analysis, however, revealed that clients who had both a payroll loan and the savings A++ account also had the highest numbers of deposits and withdrawals. Acreimex was concerned about “dump and pull” behavior, in which customers immediately withdrew their automatic deposits instead of letting the balance accumulate. Happily, they found that only 4 percent of A++ account holders exhibited this behavior.

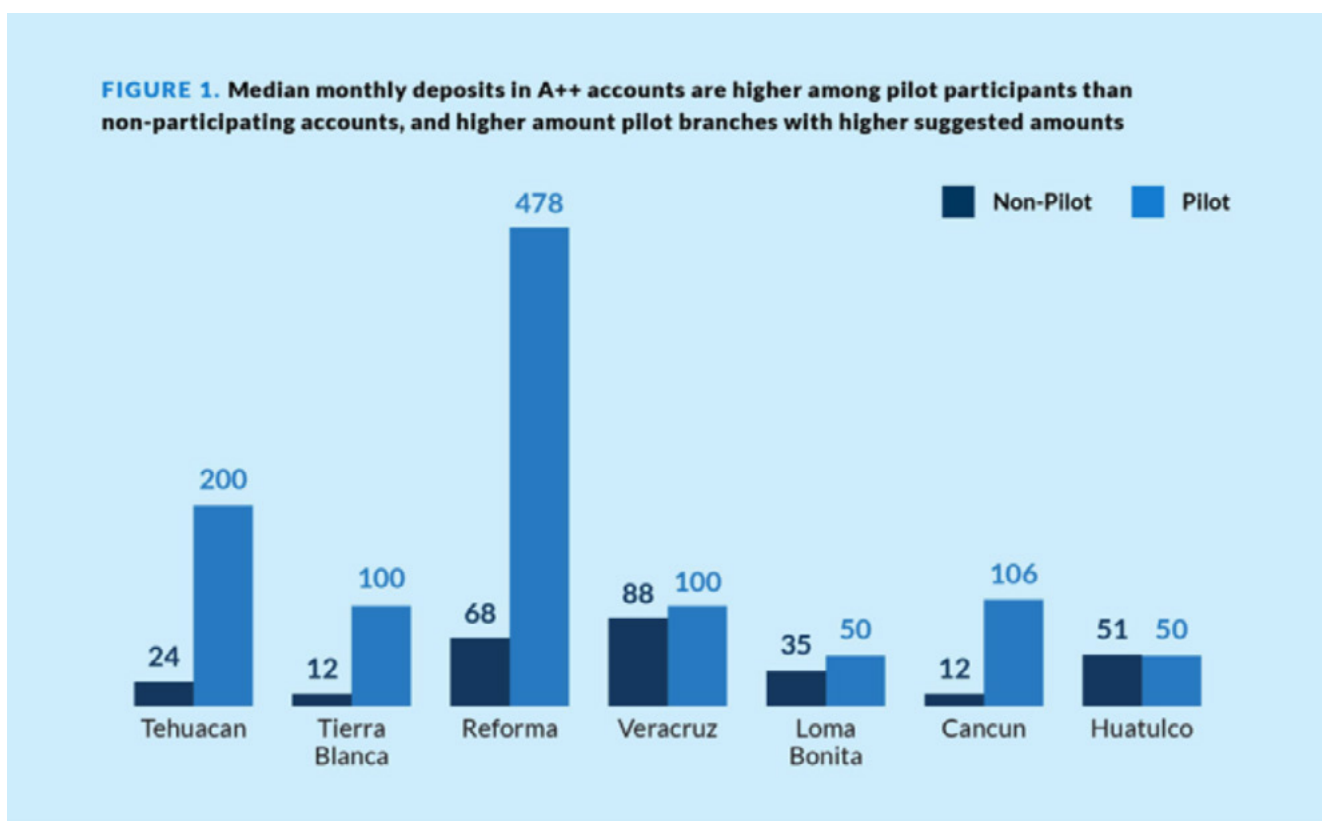


Figure 2.1.3 Median monthly deposits in A++ accounts at different branches

Customers like Automation

Customers reported that they like the savings product's stealthiness! In their minds, the automatic deposits allow A++ to sweep away their money, along with any temptation to spend it. As one customer noted, "If you have your salary handy, you spend it." A++ also eliminates the inconvenience of having to physically go to a branch to deposit funds.

Customers also like having access to funds for emergencies or unplanned spending. Nearly 70 percent of interviewees reported that they wanted to save long term without a predetermined withdrawal period. Automatic savings affords customers peace of mind by enabling them to amass a useful lump sum (plus compound interest) in the safety of a trusted institution.



Case Study 2.2

Tools for Developing New Products: Acreimex and Loan Consolidation



PARTNER



COUNTRY



Rolling out a new product is challenging and risky. Intelligent use of data and proper training, however, can make the process easier and smoother. OPTIX has developed a number of tools to help partners research and evaluate opportunities, pilot-test potential products, and develop systems to support new products. Acreimex deployed five tools described below to roll out a debt consolidation product among its members in Mexico.

The Challenge

When trusted, experienced customers were being turned away due to poor credit scores, the Acreimex leadership team realized the cooperative was missing an opportunity. A closer look revealed that these rejected customers had multiple loans from various institutions, leading to their low credit scores. Even so, the customers were motivated to take out loans with Acreimex because they trust the cooperative and want to take advantage of its lower interest rates.

Debt Consolidation as a Solution

The OPTIX and Acreimex teams came up with the idea of consolidating client loans. Acreimex would effectively “buy” the client’s debt from other institutions & refinance it at a lower interest rate. Clients would then have a single easy payment to Acreimex instead of multiple payments to many banks. In short, the debt consolidation product would significantly improve the financial health of clients by lowering interest rates and simplifying repayments.

To design & test the product, the OPTIX team developed and utilized the following five analytical and training tools to ensure sufficient rigor and to maximize insights.

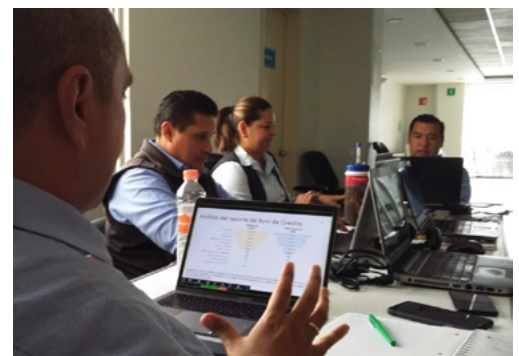


Figure 2.2.1 The Acreimex leadership team brainstorms ideas for product features.

1. Identification of the Target Population

The first task was to identify the target population for a debt consolidation product. Using credit bureau records and internal documents such as customers' addresses, employment, creditworthiness, credit accounts, and other attributes, the team identified clients with multiple loans. The 32,573 customers identified together accounted for 804,520 individual credits, revealing the extent of their indebtedness problem. Within this group, the team excluded loans that were already mature or were revolving lines of credit without pre-established limits. These filters revealed a target population for the debt consolidation product: 4,959 accounts belonging to 1,623 members with a combined balance of MXN181 million (USD9.2M).

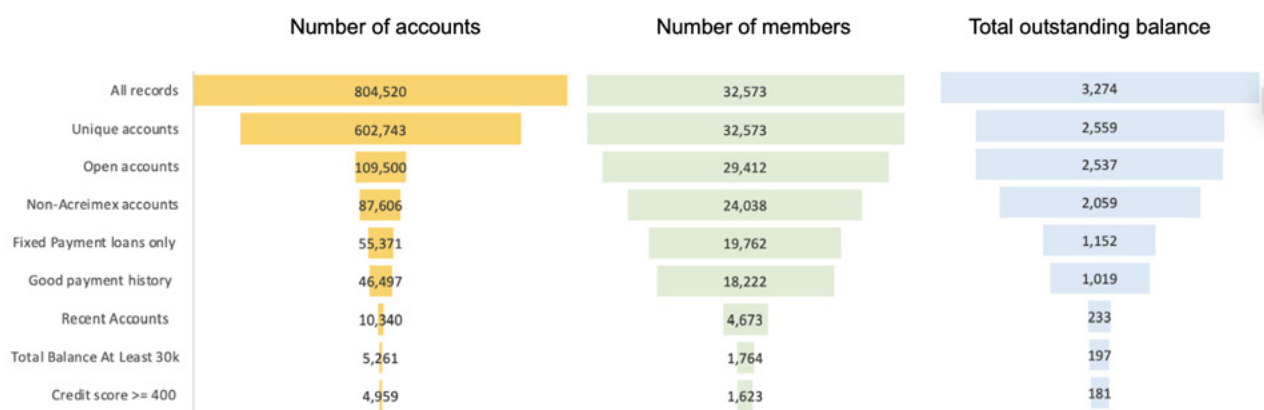


Figure 2.2.1 Number of accounts, members and outstanding balances that have a credit score over 400

2. Dashboard Tool to Evaluate the Business Case

Next, the team needed to understand how a debt consolidation product would affect the bank's balance sheet. Using its specially developed dashboard tool and consulting with the Acreimex management team, the OPTIX team analyzed the business case for the product and found that it had the potential to deliver a profit of MXN1,525 (USD80) per account.

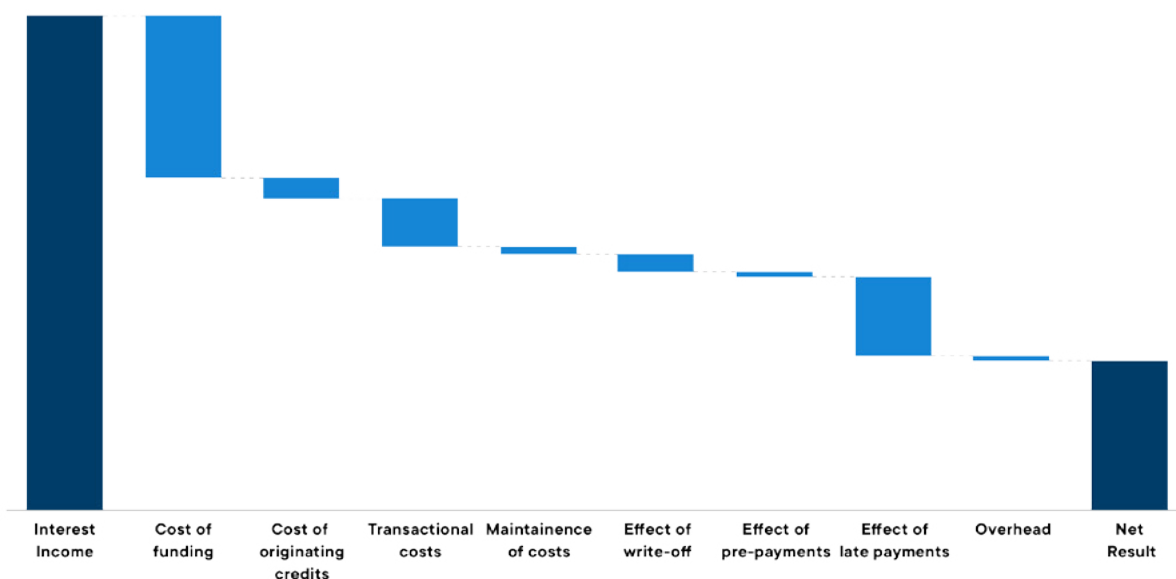


Figure 2.2.2 Graph displays an estimated product profitability per account

3. Simulator Worksheet to Analyze Pilot

Next, the OPTIX team designed a pilot test focused on a group of 719 accounts (total balance outstanding of MXN15,674,000 (USD800,000+) held by 400 members in main branches. As part of the pilot, OPTIX created an offline MS Excel tool to help loan officers sell the product and its benefits. The tool:

- Supported the sales pitch
- Conveyed the benefits of the debt consolidation product
- Ensured that clients had a clear idea of the benefits of the product and its conditions
- Helped prepare data for entry into Acreimex's systems
- Cleaned data published by the credit bureau by verifying data directly with members

5. Configuración nuevo crédito			
Valor del nuevo crédito	10,930		
Frecuencia	QUINCENAL		
Periodos	24		
Tasa de interés anual	28.00%		
Tipo de cuota	Cuota fija		
Intereses totales	1,687		

Presiona acá para calcular, cuando cambies alguno de los valores de frecuencia, periodos ó cuota fija

6. Cuadro resumen comparativo			
	Con tus créditos de otras instituciones	Tu nuevo producto de Acreimex (I.V.A incluido)	Diferencia
Valor de la cuota actual (mensualizada)	1,100	1,073	27
Duración del crédito (meses)	23	12	

Figure 2.2.3 This summary in the simulator shows how much Acreimex's members could save with the new product.

Simulación de tu nuevo crédito con Acreimex							
Pago Nº	Fecha	Saldo Insoluto	Abono a principal	Pago a principal acumulado	Interés Ordinario	I.V.A. de Interés Ordinario	Cuota
0	12/10/18	10,930					
1	12/26/18	10,551	379	379	136	22	536
2	1/9/19	10,148	403	782	115	18	536
3	1/24/19	9,749	399	1,181	118	19	536
4	2/8/19	9,344	405	1,586	114	18	536
5	2/23/19	8,934	410	1,996	109	17	536
6	3/11/19	8,527	408	2,403	111	18	536
7	3/25/19	8,098	429	2,832	93	15	536
8	4/9/19	7,671	427	3,259	94	15	536
9	4/24/19	7,239	433	3,691	89	14	536
10	5/9/19	6,800	439	4,130	84	14	536
11	5/24/19	6,356	444	4,574	79	13	536
12	6/8/19	5,905	450	5,025	74	12	536
13	6/24/19	5,454	451	5,476	73	12	536

Detalles del producto	
Monto inicial del crédito	10,930
Frecuencia	QUINCENAL
Periodos	24
Cuota	
Interés anual	28.0%

Cuánto pagaría en total el cliente con Acreimex	
Pagos ordinarios a capital	10,919
Intereses	1,687
Pagos totales	12,606

Figure 2.2.4 The simulator automatically generates a new loan amortization schedule

4. Video Tutorials to Build Capacity

In addition to the traditional training sessions, the OPTIX team created a video tutorial to train new field officers and ensure that loan officers had permanent access to help.

Figure 2.2.5 An excerpt from the simulator video tutorial.

5. Worksheet to Collect Feedback

In parallel, for the purposes of the pilot, the OPTIX team collected as much information as possible on clients’ reactions to the product. The worksheet they created for loan officers to fill out before and after conversations with clients:

- i) records critical variables such as process times, uptake and cooperative members’ first reactions to proposal, and
- ii) collects information about the loan officers’ observations and experiences.

Figure 2.2.6 An excerpt from the Work-sheet to collect Feedback

The information collected via the worksheet helped the OPTIX team predict how successful the product would be by considering the following questions:

Members’ perspective	Acreimex’s perspective
<ul style="list-style-type: none">Do members understand the benefits of the product?When deciding on the product, are members able to access benefits for their financial health and aware of this option?Do members appreciate being with a single institution (Acreimex) instead of several institutions simultaneously?Do members appreciate the increase in liquidity due to the longer loan term?	<ul style="list-style-type: none">Do members show greater customer loyalty/positive feelings toward Acreimex?Are the risk profiles of the initial sample consistent with the payment behavior with the new Acreimex consolidation loan?Is the amount disbursed in line with that reported by the simulator?Were the uptake goals and profitability of the product met?What cross-selling opportunities were identified?

Next Steps

Currently, Acreimex is in the latter stages of a complex process of changing its core banking system. A full pilot exercise is scheduled for when these changes are complete. Acreimex’s senior management and board have high expectations about the results of the pilot and look forward to seeing this product implemented.



Case Study 2.3

A Dashboard Tool for Data-Driven Decisions



PARTNER



COUNTRY



Most financial institutions recognize that data should lie at the heart of strategic decision making. With technology playing an increasingly central role in every aspect of business operations, data can make a business more agile, more client-centric, and ultimately more profitable. OPTIX helped Acreimex integrate data into its decision making by creating a dashboard tailored to each of the team's users.

The Challenge

Advanced data-analysis tools are still relatively new and many institutions are still finding their way. Without data, institutions cannot make well-informed strategic decisions, often at high cost to themselves and to their clients. But how can an institution create an environment in which data-driven decision-making becomes the norm rather than the exception? Too often, data and technology are purchased, but not utilized. To avoid this outcome, institutions must craft data-analysis tools that meet the needs and preferences of users within the business to ensure that they are actually utilized.

Acreimex -- the Mexican savings and credit cooperative -- began using an Excel-based business-case model designed by the OPTIX team to analyze product profitability. The team soon discovered that simply providing an analytical tool to managers was not enough; they needed to refine and customize the tool's design with a user-centric focus to ensure its usability and utility in the long run.

Product Profitability Analysis to Trigger Interest

As a first step toward implementing data-driven decision-making within Acreimex, the OPTIX team created a new Excel-based tool to analyze the profitability of each Acreimex savings and credit product. The tool not only revealed each product's financial performance, but also enabled the team to zero in on the impact that key operational variables had on the overall cost and expense structure of the Acreimex portfolio. In addition, the analysis enabled the OPTIX team to evaluate ranges of values for income-generating variables.

The OPTIX analysis resulted in the innovative, proactive decisions the Acreimex team made to better

manage its product portfolio and increase product profitability described in the Debt Consolidation case study. The Acreimex team modified key aspects of their work -- including interest rates and credit origination costs of their flagship group credit product-- which made the loans profitable on the first loan cycle, rather than the eighth. This experience with the tool and its impact on the bottom line generated considerable interest among product managers.

Designing for User Needs

The initial interest in the tool and the analysis it delivered created many “Aha” moments, raising hopes that product managers might use the Excel-based tool independently. Contrary to expectations, however, use of the tool remained very low in the months following the initial exercise.

Conversations with users revealed that they had reservations about using an Excel file with innumerable spreadsheets containing advanced formulas. They feared they would ruin the file by inserting data into the wrong cell.

To ensure the tool’s relevance to the business decision-making process, the OPTIX team concluded that the design of the tool needed to take the requirements and preferences of end users into account. This meant understanding the relationship between the user and the business, and developing a user-friendly tool to drive usage. The challenge was to combine robustness with user-friendliness to create a tool that would be relevant in the long run.

Balancing Robustness and Simplicity

After some deliberation, the OPTIX team decided that an online dashboard would achieve the right balance between robustness and simplicity. The dashboard the team developed consists of a master file containing calculations, formulas, and advanced code interactions, as well as a mirror file that includes views personalized with only the information relevant to each user. An appointed “chief model manager” within Acreimex has unrestricted access to the model, while other users, depending on their role in the institution (savings coordinator, human resources manager, etc.), can only input information or access exit reports.

By allowing users differentiated access with views customized according to their needs, the dashboard enables users to easily interact with the tool to get results on their products’ profitability and determine the potential impact of changes to cost and revenue variables. Each user can see relevant information without becoming overburdened by functionalities unrelated to their particular role. The individualized interactions are completely independent of the master file and do not impact other users.

Dashboard views are narrowly restricted to the user’s role. For example, group loan analysts can access the dashboard module focused exclusively on products that are of interest to them, while the credit portfolio coordinator can see full overviews of the profit-generating variables for each individual loan product and for the portfolio as a whole. Similarly, savings and credit product coordinators can test and visualize the results of changes to interest rates, loan amounts, or savings balances, while the CEO, in turn, can see up-to-date analysis of the performance of all financial products, individually or

collectively. The selective access the dashboard provides to each user is especially important with regard to managing sensitive or confidential information, such as salaries and sources of funding.

To give the chief model manager confidence in the tool, he/she retains control over everything happening inside the model at all times. The process for making changes has inbuilt points of control as well as interactive authorization flows that automatically generate emails and approvals at the touch of a button. These processes ensure that users have confidence operating the tool.

Multiple Dashboards

OPTIX staff created a total of 7 personalized “dashboard views” for “input users” (managers and leaders who have permission to change inputs) and 41 for “consultation users” (officers & analysts who want to analyze data). Each file has unique access privileges, depending on the user type. Personalized dashboard views ensure that each individual has a clean and simple interface with the tool without sacrificing its overall robustness.

The dashboard also functions as a collaborative tool for data entry that allows each business area to provide information for the financial model separately. It also has additional analytical power, allowing Acreimex staff to conduct product profitability analyses of each officer’s portfolio according to financial and operational information that is easily and safely updated on a monthly basis. Staff can also use the dashboard to build business cases by combining different variables and perform sensitivity analysis for decision-making.

	Initial overall value	Adjustable value					
Month-Year	Jun 2017						
Average Balance	2,196	2,196					
Growth p.a.	0%	3%					
Average duration per account type (months)	29	50					
Interest paid to customer	2%	3%					
Interest received from treasury	12%	12%					
	Initial overall value	Value to modify	Year				
			1	2	3	4	5
1.1 Revenues			\$263.5	\$271.4	\$279.5	\$287.9	\$296.5
Interest income			\$263.5	\$271.4	\$279.5	\$287.9	\$296.5
Average balance (MEX)			\$2,196.5	\$2,261.4	\$2,329.2	\$2,399.1	\$2,471.1
No. of months in given year in which account is active			12.0	12.0	12.0	12.0	12.0
1.2 Direct expenses			\$447.0	\$420.7	\$440.4	\$461.0	\$482.8
Interest expense			\$65.9	\$67.8	\$69.9	\$72.0	\$74.1
Account opening	\$45.1	\$45	\$45				
Cards issuing	\$0.0	\$0.0	\$0.0				
Servicing savings accounts	\$45.5	\$45.5	\$45.5	\$47.8	\$50.2	\$52.7	\$55.3
Cash-handling transactions	\$34.77	\$35	\$265	\$279	\$293	\$307	\$322
No. cash-handling txs per active account p.a.	7.63	7.63	7.6308876	7.63	7.63	7.63	7.63
Non-cash handling transactions- e.g. transfers and sy	\$2.55	\$3	\$25	\$27	\$28	\$29	\$31
No. non-cash handling txs per active account p.a.- i	9.89	9.89	9.883156	9.89	9.89	9.89	9.89
1.3 Indirect expenses			\$51.5	\$54.1	\$56.8	\$59.6	\$62.8
Overhead	\$51.5	\$51	\$51	\$54	\$57	\$60	\$63
1.4 Net result			-\$235.0	-\$203.4	-\$217.7	-\$232.7	-\$248.7
1.5 Cumulative net result			-\$1,137.5				

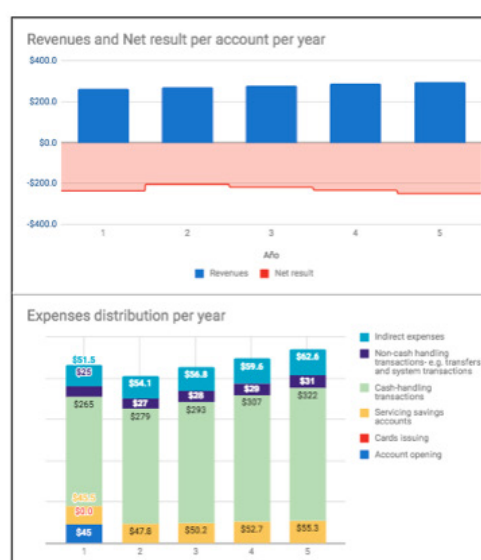


Figure 2.3.1 Screenshot of a sample dashboard (Source: BFA. Data for illustrative purposes only.)

	Initial overall value	Adjustable value
Month-Year	Jun 2017	-
Average Balance	2,196	2,196
Growth p.a.	0%	3%
Average duration per account type (months)	29	60
Interest paid to customer	2%	3%
Interest received from treasury	12%	12%

	Initial overall value	Value to modify	Year				
			1	2	3	4	5
1.1 Revenues			\$263.5	\$271.4	\$279.5	\$287.9	\$296.5
Interest income			\$263.5	\$271.4	\$279.5	\$287.9	\$296.5
Average balance (MEX)			\$2,195.5	\$2,261.4	\$2,329.2	\$2,399.1	\$2,471.1
No. of months in given year in which account is active			12.0	12.0	12.0	12.0	12.0
1.2 Direct expenses			\$447.0	\$420.7	\$440.4	\$461.0	\$482.6
Interest expense			\$65.9	\$67.8	\$69.9	\$72.0	\$74.1
Account opening	\$45.1	\$45	\$45				
Cards issuing	\$0.0	\$0.0	\$0.0				
Servicing savings accounts	\$45.5	\$45.5	\$45.5	\$47.8	\$50.2	\$52.7	\$55.3
Cash-handling transactions	\$34.77	\$35	\$265	\$279	\$293	\$307	\$322
No. cash-handling txs per active account p.a.	7.63	7.63	7.6308876	7.63	7.63	7.63	7.63
No. cash-handling transactions- e.g. transfers and sy	\$2.55	\$3	\$25	\$27	\$28	\$29	\$31
No. non-cash handling txs per active account p.a. > 1	9.89	9.89	9.8883156	9.89	9.89	9.89	9.89
1.3 Indirect expenses			\$51.5	\$54.1	\$56.8	\$59.6	\$62.6
Overhead	\$51.5	\$51	\$51	\$54	\$57	\$60	\$63
1.4 Net result			-\$235.0	-\$203.4	-\$217.7	-\$232.7	-\$248.7
1.5 Cumulative net result			-\$1,137.5				

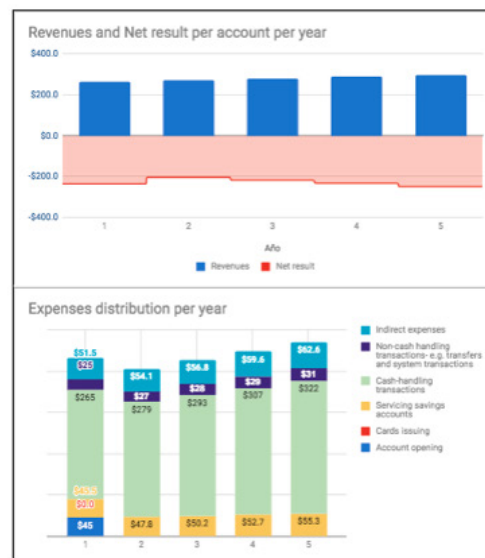


Figure 2.3.1 Screenshot of a sample dashboard (Source: BFA. Data for illustrative purposes only.)

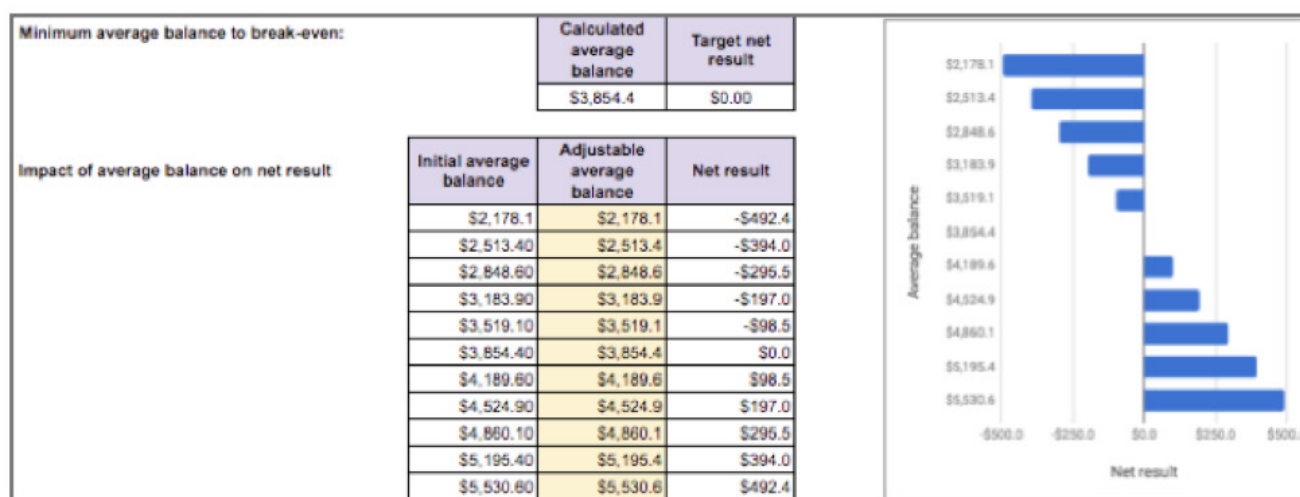


Figure 2.3.2 Screenshot of a sample dashboard (Source: BFA. Data for illustrative purposes only.)

Training for Usage

To further support usage, the OPTIX team created a comprehensive, straightforward manual to support onboarding and use. It details each activity, defines user roles, and establishes when each activity should be performed. Online summaries of the manual are tailored to each user and complemented by interactive explanatory videos that make it easier for users to operate the dashboard as part of their normal routines.

The OPTIX team tested the dashboard and its features with the relevant users during several training sessions. These sessions were excellent opportunities to collect valuable feedback to perfect the dashboard and ensure its successful and seamless usage.

	Initial overall value	Value to modify	Year				
			1	2	3	4	5
1.1 Income			\$8,374.5	\$3,130.9	\$0.0	\$0.0	\$0.0
Interest income			\$8,374.5	\$3,130.9	\$0.0	\$0.0	\$0.0
Fees							
1.2 Cost of funding (on average balance outstanding)			\$4,133.9	\$1,493.2	\$0.0	\$0.0	\$0.0
Cost of funding	10.55%	10.55%	10.55%	10.55%	10.55%	10.55%	10.55%
Average balance outstanding			\$39,174	\$14,150	\$0	\$0	\$0
1.3 Origination of credits							
Cost of originating credits			\$138	\$0	\$0	\$0	\$0
Number of credits originated in period (to account for renewals)			1	0	0	0	0
Unit cost per credit originated	\$138	\$138	\$138	\$146	\$164	\$196	\$247
1.4 Maintenance of credits			\$100	\$105	\$0	\$0	\$0
Number of credits active during the year			1.0	1.0	0.0	0.0	0.0
Unit cost per active credit	\$100	\$100	\$100	\$106	\$120	\$142	\$180
1.5 Transactional costs			\$69	\$70	\$0	\$0	\$0
Loan repayments			26	26	0	0	0
Cost per transaction	\$3	\$3	\$3	\$3	\$3	\$4	\$5
Disbursements			1	0	0	0	0
Cost per transaction	\$3	\$3	\$3	\$3	\$3	\$4	\$5

Figure 2.3.3 Screenshot of a sample dashboard (Source: BFA. Data for illustrative purposes only.)

Next Steps

Acreimex's dashboard users found that the tool helps them identify and control the operational variables that impact the profitability of each product, link strategic and financial planning to profit expectations per product, and ensure profitability of newly designed products.

Both direct dashboard users and Acreimex executive board members have noted the dashboard's usefulness, pointing out that it simplifies product profitability analysis to a degree they had not experienced before. The results have supported strategic decisions, the value of which should not be overlooked by institutions similar to Acreimex. The leadership teams plans to continue using it going forward.



Case Study 2.4

Using Tableau to Monitor Term-Deposit Product Performance



PARTNER



COUNTRY



Data is an integral part of designing products, and then monitoring their performance. Once redesigned products are rolled out, institutions need to carefully monitor results and usage to identify areas of success and areas of failure. With OPTIX, both CEP and SAJIDA Foundation redesigned their term-deposit products and then choose a data visualization product to track their performance.

The Challenge

When CEP and SAJIDA deployed redesigned products as part of the OPTIX program, the BFA team analyzed data to monitor performance, and identify inefficiencies and unintended consequences. However, with the end of the OPTIX engagement, the team needed to hand over these analytical responsibilities to the internal teams at CEP and SAJIDA. They choose a data visualization product, Tableau, to port the analysis BFA had been running on its Python-based in-house suite of software to the institutions on the ground.

Tools for Monitoring Product Performance

Tableau provides partners with a rich set of dashboards that allow them to monitor portfolio performance in great detail. These dashboards help inform regular decision-making to improve on the initial design of products and operations more generally. Information on account opening, balances, account closure, repeat openings, and more are tracked at the portfolio level, as well as by time period, cohort, branch, etc. This close monitoring and clear presentation allow rapid fine-tuning of term-deposit offerings, which was not possible before OPTIX.



Figure 2.4.1 Tableau training session led by BFA at SAJIDA Foundation

The platform (see Figure 2.4.2, below) is set up to accept data the institutions' management information systems, transform it into a format conducive for analysis, and refresh the visualizations monthly.

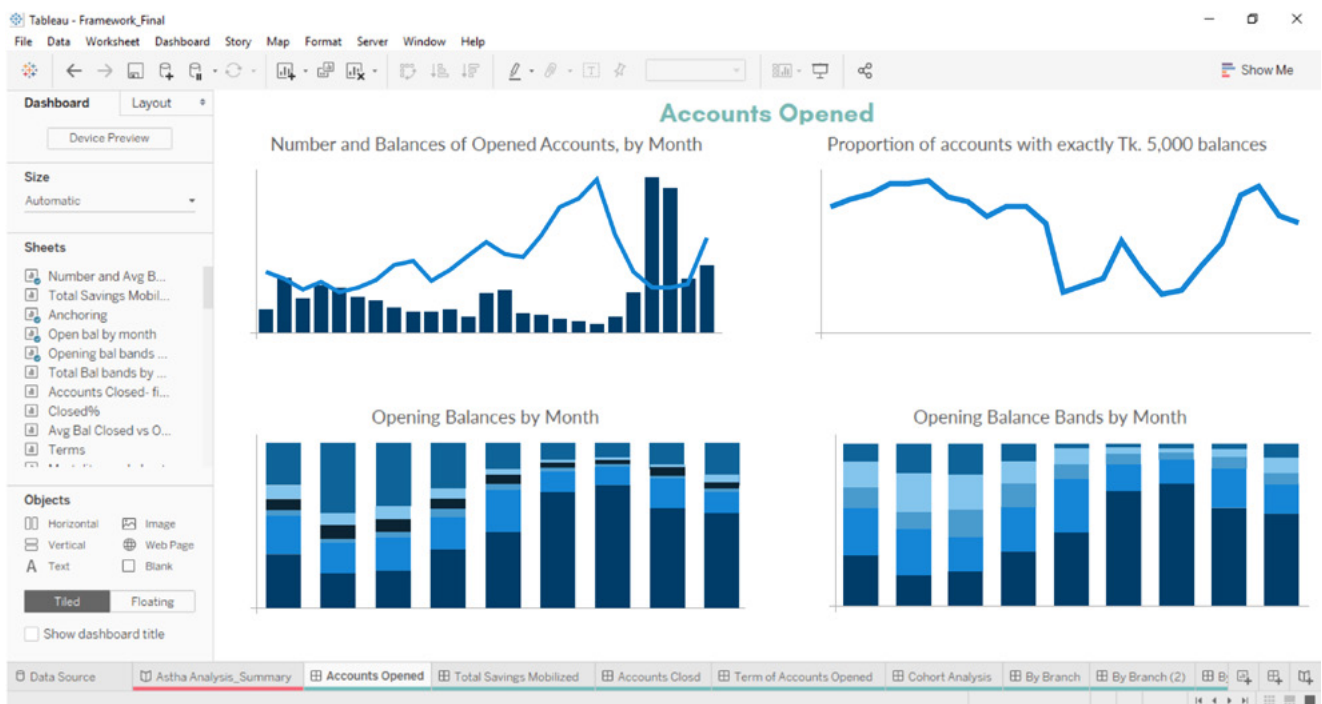


Figure 2.4.2 A sample of savings portfolio analysis on Tableau

OPTIX trained multiple staff members in the use of Tableau to ensure that both CEP and SAJIDA Foundation had sufficient internal capacity.

The one feature that made Tableau the online tool of choice, paradoxically, was the feature that allows users to print out PDF reports for offline dissemination. While several individuals at the partner institution know how to update the dashboard and a few more can query the database using Tableau Reader, the vast majority of users are field-management staff who prefer PDFs. Other comparable tools did not offer PDF reports, or did so at sub-par quality compared to Tableau.

Although Tableau is quite user-friendly, it still has a robust learning curve. To encourage updating and active use of the tool, OPTIX organized a competition at CEP for staff to come up with the most interesting hypothesis to test on the platform.

Next Steps

CEP and SAJIDA have continued to use Tableau to generate reports and stay on top of product data and proactively respond when issues arise. This is the first step towards broader efforts to bring data-driven decision making at the heart of every operational and product-design change they do.



Chapter 3

Future-Proofing using Behavioural Insights



Financial institutions do not always understand why customers behave as they do. Why customers respond or utilize products in a particular way often seems mysterious. Banks and cooperatives sometimes design new products & then feel surprised when customers do not find the product appealing and do not use them. Or, they may make “improvements” to products, only to find that customers preferred the original version.

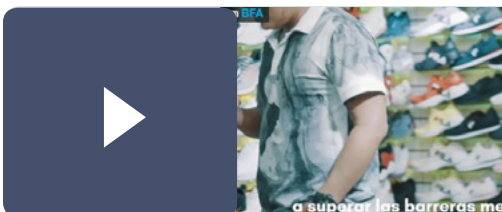
Behavioral science can help financial institutions future-proof by shedding light on these mysteries. Behavioral insights can reveal how customers approach their financial lives and explain how they understand and utilize financial products. These insights are especially useful for understanding why things may not be going as planned. After all, knowing why things are going wrong is the first step toward making them right. Once the underlying dynamics and reasoning are understood, the appropriate intervention or product can be designed to ensure institutions are properly accounting for human preferences and behaviors.

OPTIX helped its four partner institutions use behavioral concepts to put customers at the center of their thinking, improve their offerings, and create nudges toward better financial health. But OPTIX went beyond nudges, it pointed to important product design choices informed by behavioral insights that could lead to the desired improved behavior among customers. The OPTIX team designed and helped implement changes to make products work better for customers, ensuring that they are customer-centric and adapted to clients’ evolving needs.

Increasing Savings Balances Using Behavioral Design

For Acreimex, Banco W, and SAJIDA Foundation, low savings balances were a stubborn problem. With OPTIX’s help, the institutions applied behavioral principles to the core of product design, processes, channels, and marketing strategies. In particular, they made changes to make saving easier, more intuitive, and more attractive to customers through marketing materials, customer engagement campaigns, and product features.

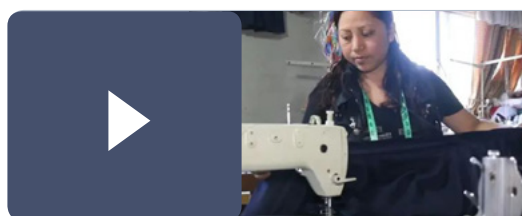
One clear way to future-proof is to incorporate behavior principles into marketing, advertising, and customer relationship management. How products are explained in marketing materials goes a long way in determining how clients ultimately use the product. For example, including images of larger-ticket items that clients could buy after saving can help clients understand that the purpose of the account is to save larger amounts.



EMBRACING CHANGE MANAGEMENT TO BETTER SERVE CUSTOMERS
WATCH THE VIDEO ON VIMEO <https://vimeo.com/296312001>

Case Study 3.1

Members of the cooperative Acreimex were not using the institution's savings product as hoped. Although savings deposits occurred alongside loan repayments, customers of their group credit product were not building larger, longer-term balances in their savings accounts; instead, they were withdrawing the full amount of their deposits at the end of every loan cycle. Rather than see Acreimex savings products as a valuable opportunity to earn interest and accumulate savings, the savings installments were perceived as a "cost" for obtaining a payroll loan. How could Acreimex incentivize clients to save over longer periods of time without withdrawing and eventually adopt long-term investment accounts? The OPTIX team divided the savings clients into two groups (one for less-experienced savers and one for those with more experience) and designed marketing materials that utilized behavioral lessons to convince clients to save greater amounts. The materials succeeded in convincing more than half of members to roll their savings balances over from one loan to the next (rather than empty the account). Moreover, 65% of experienced clients committed to increasing their savings deposits in each payment period.

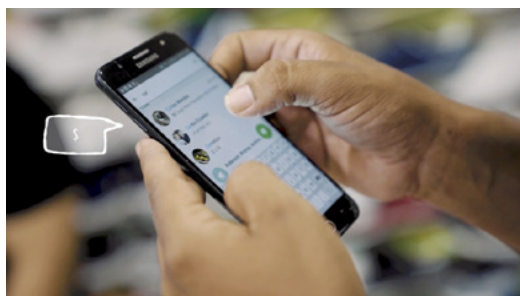


A ROADMAP FOR MORE & BETTER SAVINGS
WATCH THE VIDEO ON VIMEO
<https://vimeo.com/296312009>

Read the full case study at the end of chapter.

Case Study 3.2

Banco W contracted Juntos Finanzas to deploy interactive SMS campaigns designed to motivate greater savings. Juntos used behavioral concepts, together with machine learning capabilities, to design complex, interactive SMS conversations that improved the communication between Banco W and its clients. The Juntos team tested several behavioral approaches to arrive at an SMS intervention that successfully increased savings balances as well as customer engagement. Relative to an industry benchmark of 3-5 percent, Banco W clients engaged in 6-1 percent of conversations initiated by Juntos, and their savings balances increased by ~6 percent. Results were insignificant, however, in terms of increased retention.



Customer receiving text reminders from Juntos on behalf of Banco W.

Read the full case study at the end of chapter.

Behavioral principles can also be deployed usefully to future-proof product features such as balance requirements, time durations, defaults, and fees/penalties. Making products easier, more intuitive, and cheaper (at least in the user's perception) can convince customers to make the desired or "correct" decision. Incorporating these desired actions as defaults goes one step further by making the undesired action more difficult to choose.

Case Study 3.3

SAJIDA Foundation tried to address low savings balances by imposing a minimum balance. However, this “anchor” had the effect of motivating customers who were saving more to save only the minimum balance, ultimately bringing average balances down. OPTIX used behavioral principles to redesign SAJIDA loan officers’ training and marketing pitches to address the anchoring problem and increase savings balances to sustainable levels.



Loan officer at a SAJIDA's customer's shop

Read the full case study at the end of chapter.



Case Study 3.1

Nudging Savings Higher through Customer-Centric Marketing



PARTNER



COUNTRY



Marketing is often the primary means through which customers learn about and understand products. Using insights from behavioral economics, institutions can craft more compelling marketing materials that help customers understand their choices, make decisions, and create plans for the future.

When the Acreimex cooperative set out to increase savings among members, its efforts extended to the design and marketing of the product. Using behavioral principles, OPTIX designed brochures leveraging behavioral principles to explain Acreimex's Ahorramas y Más (A++) savings product and encourage its use.

The Challenge

Acreimex's customers using Grupal -- a group loan product -- automatically get an A++ savings account through which their loans are disbursed. Repayment terms are designed so that each installment includes a small deposit into the clients' savings account.

However, cooperative members tended to deposit very little (MXN25 or USD1.30, on average), and most withdrew their entire A++ balance at the end of each 16-week loan cycle (rather than let the savings balance roll over to the next loan cycle to accumulate larger sums). Members missed out on opportunities to accumulate interest, and members' lump-sum withdrawals were expensive for Acreimex in terms of both lending opportunities and overall portfolio quality.

Though members were not taking advantage of the Acreimex savings product, they did save outside of the cooperative using a variety of mechanisms, for example, by postponing debt collection from catalog product sales (thereby keeping that cash safe from impulse purchases), contributing to accounts at other financial institutions, lending money to people they trust, organizing or participating in traditional savings groups (tandas), keeping money with trusted relatives, investing in construction materials, or buying plots of land.

Acreimex members, the OPTIX team discovered, perceived the savings installments attached to their loan repayments as a “cost” of obtaining a Grupal loan rather than as a valuable opportunity to earn interest and accumulate savings. Members did not consider the A++ account a useful liquidity-management or goal-driven savings instrument, so their balances remained low and volatile.

Unfortunately, the design of the product inadvertently encouraged low balances by emphasizing a minimum deposit amount and inadequately explaining the benefits (e.g., 2 percent interest, no commissions, flexibility), and purpose of the account.

When the OPTIX team took a closer look at the Acreimex portfolio, they realized that this behavior was a bigger problem than just a missed opportunity for low-income customers. The portfolio volatility and low balances were making the Grupal product unsustainable. In fact, Acreimex only started to earn a profit on Grupal loans on the eighth loan cycle!

OPTIX’s analysis also showed that some clients were using fixed deposits to save elsewhere -- even as they emptied their AhorraMás y Más accounts. These clients wanted to “invest” their money but did not see the A++ savings account as relevant, even though it offered a competitive interest rate.

To address the problem of low and volatile balances, the OPTIX team used behavioral principles to design communication materials to encourage savings. In fact, two types of materials were developed; one for less experienced clients, and another for more experienced clients. The materials succeeded in convincing more than half of Acreimex members to roll their savings balances over from one loan period to the next (rather than empty their accounts). Moreover, the materials delivered to experienced clients resulted in 65 percent of them committing to increase their savings deposits each payment period.

Behavioral Brochures

Looking at client repayment records revealed two opportunities to improve savings behavior:

- 1) instilling good savings habits among new members, and
- 2) encouraging higher savings balances among experienced members who were looking to “invest.”



Figure 3.1.1 Samples of brochures that incorporated behavioral science principles to instill good savings habit and encourage higher savings balances

1) New Members

For new members, the team designed a brochure to motivate them to save more, taking advantage of the innovative design of the A++ product (in which loan repayments include an additional amount to be deposited in A++ savings). The brochure employed a number of behavioral strategies to establish good savings behavior from the start.

The OPTIX-designed brochure utilized a social proof strategy to leverage people's tendency to copy others. The brochure featured the photograph and story of a "typical" Acreimex member who has achieved her savings goals with A++. Since many members earn an income selling by tortillas, the woman featured was able to buy a tortilla press, a coveted but somewhat pricey productive asset.

The brochure also employed anchoring -- that is, the effect of an initial (and likely irrelevant) piece of information. In this case, the brochure suggested that members save MXN100 (USD5) during each weekly repayment period instead of the MXN25 (USD1.30) originally suggested. By suggesting that members save a higher amount, the brochure subtly convinced cooperative members to save more each week.

The right-hand side of the brochure provided space for members to enter their weekly deposits and total them each month, providing an opportunity to mark individual progress (and discouraging MXN0 entries). By asking account holders to chart out a schedule for making deposits, the brochure employed mental accounting. Similarly, by breaking the larger goal down into smaller deposits and helping each member visualize progress, the brochure helped individual members feel their goals were more attainable.

The back of the brochure featured images of coveted assets/purchases such as a television, educational courses, and vacations. These images helped make the savings goal less abstract and more tangible, increasing salience and therefore motivation to save.

**Te invitamos a convertirte en
INVERSIONISTA GRUPAL en solo 3 pasos**

PASO 1 Escoge tu plan de ahorros durante tu crédito grupal
PASO 2 Logra tu meta de ahorro
PASO 3 Apertura tu cuenta de inversión al final de tu ciclo de crédito

Nombre del socio

Nombre del grupo

\$ Ahorros acumulados ciclo anterior

Plan recomendado por Acreimex

Si mantienes tus ahorros en Ahorramás & Más

Solo necesitas \$ /semanal

Para abrir tu INVERSIÓN al final del ciclo con **\$2,000** (interés del 3 al 8.5%)

+

Crédito Automático Individual \$1,800

☐ Quiero este plan

*Tasa anual del crédito automático individual 15.65% + IVA

Si mantienes tus ahorros en Ahorramás & Más

Solo necesitas \$ /semanal

Para abrir tu INVERSIÓN al final del ciclo con **\$3,000** (interés del 3 al 8.5%)

+

Crédito Automático Individual \$2,700

☐ Quiero este plan

*Tasa anual del crédito automático individual 15.65% + IVA

Si mantienes tus ahorros en Ahorramás & Más

Solo necesitas \$ /semanal

Para abrir tu INVERSIÓN al final del ciclo con **\$6,000** (interés del 3 al 8.5%)

+

Crédito Automático Individual \$5,400

☐ Quiero este plan

*Tasa anual del crédito automático individual 15.65% + IVA

☐ No me interesa tener acceso a la inversión ni al crédito individual, prefiero ahorrar otro monto

2) Experienced Members

Among more experienced cooperative members, the team had observed an interesting behavior in the account data: some were using term deposit products to save larger amounts, even as they emptied their Ahorramas y Más accounts. These members tended to be in their sixth loan cycle (or beyond) and felt financially confident enough to look for more substantial opportunities to invest. This behavior indicated that experienced members might be motivated to save via A++ if the investment angle were invoked.

To this end, the team designed a brochure for experienced members that outlined three investment opportunities for members with slightly more capital on hand. The brochure employed choice architecture research, which suggests that displaying a less attractive option can highlight the strengths of a more attractive option, in an attempt to direct members toward the middle of three options.

Next Steps

While the final results of modified savings behavior at Acreimex have yet to be observed, initial results demonstrate the power of the brochures. Relative to a base of zero, 54.7 percent of newer members who have completed one or two loan cycles committed to leaving their savings to accumulate through the next cycle. Among the experienced “investor” group, 79 percent of members who have completed six or more loan cycles agreed to leave their savings in A++ at the end of the loan cycle! Moreover, 65 percent of these experienced savers committed to depositing a larger amount in order to take advantage of the higher-level account’s superior terms.



Case Study 3.2

Building Trust and Savings Balances, One SMS at a Time



PARTNER



COUNTRY



Like Acreimex, Banco W wanted to increase savings balances and account usage among its clients. OPTIX organized a project with Juntos Finanzas to test the impact of two-way SMS conversations designed with behavioral insights and enabled by machine learning, to encourage clients to save more. SMS is a potentially powerful way for institutions to engage and influence clients as it is low-cost, tailored, and consistent.

The Challenge

In 2015, when Banco W in Colombia joined OPTIX, the bank was struggling with large numbers of dormant and low-balance savings accounts. Although upward of 97 percent of the bank's microcredit clients had savings accounts, deposit balances tended to remain under USD10, even after four or five cycles of credit lasting several months each. The bank had tested several marketing strategies to incentivize customers to save through raffles and other incentives, but none of the initiatives was achieving much success.

“Clients in Colombia don’t have a culture of savings, and it is really difficult to communicate the value of deposit accounts and build a savings habit,” says María Fernanda, Banco W’s head of marketing.

SMS Conversations

The OPTIX team connected Banco W with Juntos Finanzas, a San Francisco-based startup that designs two-way text messages using machine learning to create personalized, direct real-time conversations with customers. Juntos Finanzas designed a series of conversations for the bank's customers to encourage clients to save more, and more often. The team identified topics that customers care deeply about and then used findings from behavioral economics research to draft tips and information to encourage good financial practices. The goal was to increase the average balance of the savings accounts by 15 percent across the portfolio and increase the activity rate of existing and active clients with savings accounts by 10 percent.

While the text message conversations had some effect on savings balances, rates of activity largely remained the same in the control and treatment groups. Effects on balances seemed to fluctuate in the medium term, so it is unclear if these effects will be sustained.

However, the messages were certainly effective in engaging customers and making them feel cared for. Relative to an industry benchmark of 3-5 percent, Banco W customers engaged in 6-15 percent of conversations initiated by Juntos. In all, 165,071 customers received 5,404,946 messages, resulting in 51,181 conversations with 18,764 customers. The most popular messages included instructions or information regarding customers' accounts (e.g., "receive information about all that you can do with your account").

Juntos designed the conversations around four types of behavioral concepts: social proof, use-case instruction, content marketing, and fringe benefits. Each type of conversation featured a variety of "conversation starters" and were designed to allow customers to ask the system for more information about product access and features. Among all of the conversations, 75 percent of queries were about access to credit, reflecting customers' underlying priorities.

Some behavioral techniques provoked more responses than others, with social proof generating the most activity. Social proof refers to the human tendency to copy others, especially when correct behavior is not clear. Juntos employed social proof by sending messages to Banco W customers that described an example client who had succeeded in saving toward a particular goal. Such a message might read: "Maria was able to buy a new sewing machine for her workshop using Banco W's savings account".

Although the social proof strategy increased deposit rates by only 1.4 percent, rates of response averaged 10.7-14.4 percent. In the third month of the pilot, customers in the social proof group withdrew less, resulting in balances that were 6 percent higher than the control group.

The second group of conversations focused on content marketing, using information on Banco W's savings products and informing customers of certain special offers. While the group receiving these messages had balances of 10 percent in the first month, they were equal to the control group by the end of the pilot period.

Next Steps

Since text messages are low cost, they are a promising way to reach out to clients with information and build trust. As many providers move to more low-cost, low-touch models for service provision, smart messages may be an especially powerful way to maintain contact and engagement with customers. Though the impact of the SMS messaging on savings balances was not high, the response rates suggest that clients like hearing from the bank via text and are happy to use this means to ask for and receive information, overall increasing their interaction with the bank. It was too soon to tell if this might increase overall customer lifetime value but the early signs are encouraging.



Case Study 3.3

When Things Don't Go As Planned, Behavioral Insights Can Explain Why



PARTNER



COUNTRY



Behavioral insights can help institutions understand what is actually happening when things are not going as planned. And knowing why things are going wrong is the first step to making them right. Once the underlying dynamic and reasoning is understood, the appropriate intervention can be designed to drive a desired behavior, for example, saving more frequently or higher amounts.

SAJIDA Foundation implemented a minimum deposit balance with the aim of increasing deposit balances -- but ultimately found that its balances decreased. Behavioral insights helped the OPTIX team understand the problem and design a response.

The Challenge

SAJIDA Foundation had planned that its term-deposit accounts would be a way for clients to hold a reasonably large sum for an extended period of time. OPTIX quickly found, however, that reality was falling short of these ambitions. The median account balance was only BDT2,000 (USD24), and more than half of account holders were saving very small amounts. Moreover, while term-deposit customers had signed up for a six-year period, 70 percent closed their accounts within a year.

To address the dual issue of low balances and poor longevity, SAJIDA had changed several features of its term-deposit product. First it imposed a minimum balance of BDT5,000 (USD60), an amount chosen as a compromise between actual low levels at the time and the amount needed to make the product sustainable (BDT10,000 or USD120). The plan was for the higher minimum balance to attract customers who wanted to save a meaningful lump sum and also bring in a smaller number of high-balance accounts to strengthen SAJIDA's term-deposit business case.

Unfortunately, the minimum balance requirement did not work out as hoped. In the first month after the new product's launch (July 2016), 66 percent of new accounts opened with a balance of BDT5,000 (USD60); overall, the portfolio had an average balance of BDT13,734 (USD165). Six months later,

by December 2016, 78 percent of the accounts opened had a balance of BDT5,000 (USD60), but the average balance stood at BDT8,912 (USD105). More and more, customers opened accounts at the minimum balance and no higher, while the average balance for all accounts opened in that month fell below the break-even level of BDT 10,000 (USD120).

What could have caused this downward trend in balances? Were SAJIDA customers unable to save a higher amount? Or was SAJIDA onboarding new customers who could only save the minimum balance? Had something happened to undermine confidence among members, so that they saved only the minimum? Or did something about how the product was pitched cause customers to maintain balances of only BDT 5,000 (USD60)?

Behavioural Insights to the Rescue

After OPTIX investigated and observed staff-client interactions, a cognitive bias known as anchoring emerged as the cause of the downward spiral. Anchoring occurs when an initial piece of information such as a suggested retail price has an outsized impact on individuals' eventual decision-making. Suggested savings amounts, loan repayment amounts, minimum balances, or even amounts casually mentioned by bank officers make anchoring a common phenomenon in financial services. While SAJIDA's anchor served to lower savings contributions in this case, anchoring can also be employed to increase savings.

OPTIX addressed the unanticipated cognitive bias through behavioral science. First, SAJIDA doubled down on mental accounting to right-size the balances. Field officers prompted clients to identify concrete purposes for their savings such as education, business expansion, or going abroad for work, as well as to consider appropriate amounts and terms. Economic theory suggests that having a mental account for savings, rather than saving just for the sake of saving or for the allure of interest payments, is likely to curb premature withdrawals as well as create an (anchor) goal amount that is realistic for the client.

OPTIX also employed another behavioral concept: social proof. Social proof refers to people's tendency to copy others, especially when the correct behavior is not clear. SAJIDA officers started telling clients how much clients like them had saved on average, providing examples of the correct behavior and also anchoring them to a higher savings amount.

Finally, while mentioning the minimum balance was mandatory to ensure full disclosure of all relevant terms for the product, field officers were re-trained to mention the minimum much later in the sales pitch and to also prompt clients to consider higher deposit amounts.

The effects of these changes was clear: The proportion of accounts at the minimum balance fell from 79 percent to 22 percent within a period of six months, and average balances increased from BDT8,912 (USD105) to BDT 20,393 (USD242) in the same period.

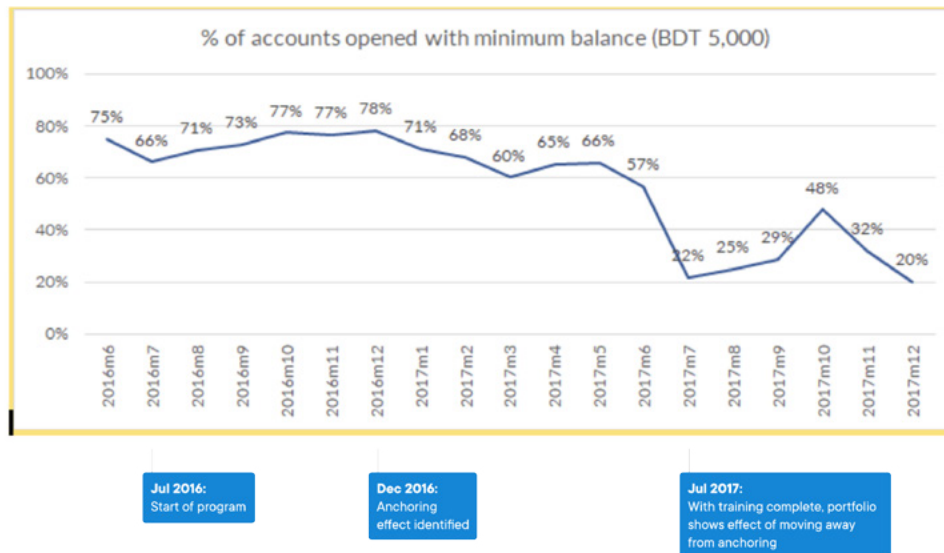


Figure 3.3.1 Percentage of accounts opened with a minimum balance of BDT5000 (USD60)

Next Steps

These measures were effective for SAJIDA, once again demonstrating the power of behavioral insights. While the first half of SAJIDA's story is a cautionary tale about inadvertently triggering an unwanted behavioral response, the second half is a story about how quickly recognizing the root causes of a problem and reacting thoughtfully and appropriately can right the situation. OPTIX hopes that SAJIDA will apply behavioral insights to other aspects of their product design and marketing.



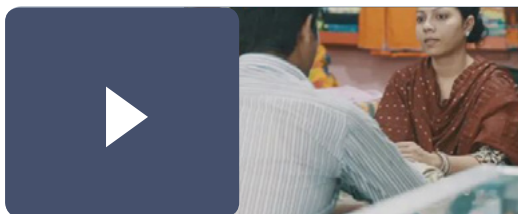
Conclusions



Over the course of four years, Acreimex, Banco W, CEP, and SAJIDA Foundation have fundamentally future-proofed the way they do business to remain competitive as the world leapfrogs into the digital age. In order to future-proof, these four institutions had to fully embrace the need for change, commit to change, and make the necessary investments to change. The strategies they pursued enabled them to provide more-differentiated and better-tailored financial services and tools to improve the financial health of low-income customers.

These MFIs' customer-centric and evidence-based approaches resulted in higher savings balances, increased opportunities to cross-sell, higher employee satisfaction, a better reputation for the business, and higher lifetime customer value, leading to growth & sustainability for the institutions. Customers, on the other hand, benefited from more tailored products, more convenient channels, and improved engagement approaches, which helped them build resilience, control, and trust in the institutions that serve them. After developing 20 pathways toward better financial health, 12 digital tools, eight product combinations, and four fintech partnerships; conducting 119 staff training sessions; and crunching more than 220 gigabytes of data, the OPTIX project reached more than 1 million people with low incomes across Bangladesh, Colombia, Mexico, and Vietnam.

As these financial institutions continue their journeys toward meeting the evolving needs of their customers, we hope that OPTIX has set them on the right path and that they continue to grow stronger.



IMPROVING FINANCIAL HEALTH OF PEOPLE IN BANGLADESH
THE OPTIX PROJECT REACHED OVER 1.1 MILLION LOW-INCOME CUSTOMERS
WATCH THE VIDEO ON VIMEO <https://vimeo.com/296312004>

Lessons Learnt

Lessons from BFA's experience with its OPTIX partner institutions can be helpful to many other financial institutions wishing to embark on a similar journey toward future-proofing and improving their customers' financial health. In particular, OPTIX has shown:

- **Customers need to be at the center of change.**

Understanding customers' behaviors, needs, and desires via data and research needs to be the core of any future-proof strategy if institutions are to design appropriate solutions that improve customers' financial health. By looking at the financial lives of customers, financial institutions can better grasp how they fit into their customers' lives and where they can play a bigger and more impactful role.

- **Enable informed decision-making with the right data, at the right time**

Going from a one-size-fits-all approach to customized offerings requires that field staff have the necessary information to make appropriate decisions. OPTIX provided data and other decision-making tools to make this happen, empowering institutions with the insights they needed to change.

- **Manage change within the institutions at all organizational levels.**

This is fundamental to enable long-lasting results. This can be done by providing incentives, selecting a broad range of internal champions for the projects, getting buy-in at the top, and encouraging candid discussions. Most importantly, institutions need to recognize that change management is a continual, iterative process and does not happen overnight.

- **Future-proofing is a journey, not a destination**

Institutions can follow many paths in order to transform their services, processes, products, internal practices, and behaviors and improve the way they serve their customers. Institutions can start by tackling the low-hanging fruit first and slowly prepare to fully transform digitally. However, in some cases, institutions need to also recognize when tearing off the Band-Aid is the most effective intervention. At times, drastic approaches are more effective to remove a legacy that stands in the way of exponential benefits for the institutions and their customers.

- **Measure the return on investment for institutions and for customers**

Digital innovation, unfortunately, is not a free lunch. It often calls for substantial investment over time. Given OPTIX's mandate to be data-driven, OPTIX helped institutions develop ROI tools to analyze and model the impact of technology investments on the bottom line. Assessing the ROI of technology interventions helps institutions build the business case for pursuing digitization (or not).

OPTIX's Impact on Customers' Financial Health

OPTIX reached more than 1 million customers in the four partner countries, helping them build resilience, gain control over their financial lives, and increase trust in financial services providers. The OPTIX team attempted to measure changes across the three financial health dimensions for the customers of each partner institution and drew the conclusion that the OPTIX interventions contributed to a positive increase in customer financial health along the three dimensions of resilience, control, and trust.



Resilience

New long-term savings accounts introduced by SAJIDA Foundation, CEP and Acreimex, along with an application (the FAS app) to help customers set their savings goals, show promise in building the resilience of customers over time:

- After 12 months, 75 percent of long-term savings accounts at CEP were still open and active, compared to the 50 percent account dormancy rate for accounts in most commercial banks.
- Account opening balances at CEP remained steady at around the VND30 million-

VND40 million (USD1,500-USD2,000) range at the median, representing a decent lump sum for CEP's average client.

- For 48 percent of SAJIDA's customers, the Astha term-deposit account was the first deposit account they have ever had. Since OPTIX commenced, customers have been saving twice as much as before, with balances rising from BDT5000 to BDT8500 (USD50 to USD97) on average in two years.
- Acreimex customers who committed to saving for longer to reach the opportunity to become investment savers contributed 70 percent more weekly. Also, Acreimex payroll customers who opted in for automatic savings deductions from their salary loan repayments to boost their savings accounts had the highest median savings balances MXN1,807 (USD90) , compared to MXN1,550 (USD80) for clients with only the basic savings account).



Control

The measures introduced by the OPTIX partner institutions to help customers manage their day-to-day expenses and develop savings habits show promise to help clients take and maintain control of their financial lives:

- The Loan Origination app helped Acreimex, SAJIDA, and CEP reduce loan approval times from seven days to two or three days, allowing customers to access cheaper credit more quickly when they needed it the most and avoid more expensive loan providers.
- According to 77 percent of CEP customers, the FAS app helped them set savings goals such as how much to save through the MFI's term-deposit product.
- Some 98 percent of CEP customers said that using MFI's term-deposit product helped them avoid spending unnecessarily.
- Of the SAJIDA loan customers who opted for mobile money solutions, 71 percent now make payments outside of formal working hours. The implication is that MFI customers value the ability to make payments on their own time and within their own schedules, another way to be in better control of financial decisions.
- Acreimex clients using the automated savings and payroll credit product said it helped them find discipline with their savings.



Trust

There are more tentative signs that the interventions helped customers gain greater trust in their financial institutions, possibly because trust is the most challenging aspect of financial health to measure. But several interventions hold promise:

- Of the customers who used the FAS and Loan Origination apps, 41 percent said that loan officers were able to pay more attention to their personal needs.
- Some 96 percent of customers who used the FAS app said that it helped the staff better explain the MFI's products.

OPTIX Impact by the Numbers

This assessment is informed by interviews with customers of each institution and an analysis of their financial data.



Resilience

Saving for the future and emergencies



Control

Planning day-to-day banking and debt management



Trust

Trust in banks & financial institutions

Financial Health Tools

- Banco W used Junto Finanzas' SMS Solution to encourage saving
- Destacame Alternative Scoring cleared more borrowers for Acreimex
- Loan origination app boosted efficiency at Acreimex, CEP and SAJIDA

Banco W clients that received SMS texts had an account balance **6% higher** than those that didn't.

67% customers won positive evaluations from Destacame's alternative scoring.

99% stuck with the SMS service. **41% customers** said loan officers who used the app paid greater attention to them.

37% Contribution to overall gain in financial health

Tools + Products

- CEP and Sajida paired long-term savings products with new goal-setting app

75% accounts remained open compared to 50% account dormancy at most banks
Average savings rose from **US\$ 50 to US\$ 97** in second year

77% CEP customers said the FAS app helped them decide how much to save through term deposit product.
98% said their term-deposit accounts curbed unnecessary spending.

96% customers said FAS app helped staff better explain product features.

28% Contribution to overall gain in financial health

Products

- Acreimex offered savings rollover product with access to automatic credit
- Acreimex payroll loan clients offered automatic savings option
- SAJIDA gave clients flexibility with mobile money solutions

Investment product clients saved **70% more weekly** than others.
Acreimex payroll clients saved a median balance of **1,807 pesos vs. 1,550 pesos** for other clients with only the savings product.

Acreimex customers said that **tangible goals** gave them a purpose to save
71% of SAJIDA's customers now making payments at times they choose

Mobile money offered **privacy** looked professional, and created trust in SAJIDA.

35% Contribution to overall gain in financial health

Contribution to overall gain in financial health via OPTIX program

48%

29%

24%

What Customers are Saying



"The savings goal sheet gave me the desire, it inspired me to save. It's helpful to learn about how much you need to save to, say, remodel the house, go on vacation, face an accident...The options (in the tracking sheet) were very tempting."

Carmen, Acreimex Customer

"Saving money with SAJIDA keeps me from spending my savings and helps me prepare for emergencies."

Liza, SAJIDA Customer

"Having a defined purpose for my savings helps me work towards my goals."

Mario, Acreimex Customer

"SMSs provided me with more information on different topics and brought savings top of mind."

Carlos, Banco W Customer

"When I was presented with more clear information about the product, I felt it generated trust and I felt safe."

Rosa, Acreimex Customer

"The automatic savings with the payroll loan repayments are so easy, it's like they're accumulating on their own, they can become matches to light up our dreams."

Fernando, Acreimex Customer



Appendix



About the Partners



Cooperativa Acreimex of Oaxaca, Mexico, is a financial cooperative that provides financial services to low- and moderate-income clients as well as micro, small, and medium enterprises. As part of OPTIX, Acreimex bolstered its customers' financial well-being by offering more effective product combinations, designing new products, and enhancing internal operations via digital tools.

BFA worked with Acreimex to:

- **Cross-sell a flexible savings approach to payroll loan customers** from 15 partner employers that offer Acreimex's Acreinómina loans to their employees. Pilot participants selected a predetermined savings amount to be directly debited from their pay at the same time as their Acreinómina loan payment.
- **Improve loan origination via a digital app** that shortens the registration and approval process period. The OPTIX team helped Acreimex assess the business case of selling to different customer segments and conducted workshops about how to build and use a business case.
- **Adopt behavioral interventions to increase savings** through a workshop with the Acreimex savings department introducing behavioral economics and run experiments testing product design and marketing.
- **Offer a loan consolidation product for indebted customers**, increasing portfolio offerings. BFA developed a simulator to show how much customers would gain and helped to design appropriate product terms.
- **Use alternative scoring for rejected potential loan customers** to better understand their financial situation. A partnership with Chile's Destacame, an alternative credit-scoring startup that analyzes utility bill payments and other data to assess the financial health of customers, helped Acreimex consolidate customer debts.
- **Build a digital dashboard to track performance** via a business-modeling web tool that enables Acreimex to visualize product profitability and the impact of cross-selling strategies in real time.

Highlights

- 30% of 1,279 eligible member/customers in a pilot with 15 employers adopted the AhorraMás y Más automatic savings product. Acreimex exceeded the uptake target by 27%, as 38% of eligible customers (488 out of 1,279) completed at least one precommitted deposit into savings.
- Customers made 78% of the deposits they committed to when enrolling for the AhorraMás y Más.
- Acreimex piloted the alternative credit-scoring methodology, in partnership with Chilean fintech firm Destacame, for 2,000 customers initially rejected for loans.
- Customers who have both an Acreinómina salary loan and an AhorraMás y Más savings account have the highest deposit and withdrawal counts.

- Median savings balances are highest when an Acreimex customer has both Acreinómina and AhorraMás y Más and lowest when the customer has only one of these products.

Financial Health Results



Resilience 67% of Acreimex customers reviewed with Destacame's alternative credit-scoring tool received positive evaluations.



Control Acreinómina payroll clients saved a median balance of MXN1,807 (USD 94) vs. MXN1,550 (USD 80) pesos for clients with only the AhorraMás y Más savings product.



Trust Acreimex earned a Net Promoter Score of 10 from customers, who said they would strongly recommend the Acreinómina and AhorraMás y Más products combination.



Banco W is a commercial bank based in Cali, Colombia. Between 1980 and 2012, Banco W traded as Fundación WWB Colombia, an NGO microfinance institution and the first Women's World Banking affiliate in Colombia. Banco W today has 143 branches across Colombia and currently serves 270,000 customers, of whom 210,000 are individual borrowers and 226,500 are depositors (165,000 customers are both borrowers and depositors).

As part of OPTIX, Banco W developed and implemented a new channel strategy, designed a new credit card product, and partnered with a fintech to increase savings balances for customers. Specifically, BFA worked with Banco W to:

- **Improve internal staff training and communications** by hiring a training organization and determining the content and presentation of an advisory app. BFA then linked Banco W with an appropriate information technology vendor and organized credit officer training.
- **Increase savings balances using a messaging service** developed by Juntos Finanzas, a startup specialized in boosting customer engagement via two-way SMS messaging interactions.
- **Develop a multipurpose debit/credit card product** with longer life cycles than traditional micro-credit programs and a way to build loyalty with customers. The card links to a customer's savings account to open a credit line.
- **Develop and implement a new delivery channel strategy** by learning more about Equity Bank's successful channel strategy.

Highlights

- 64 eight-hour workshops delivered nationwide.
- 1,300 employees including loan officers, branch managers, zonal managers, and regional managers took part in training workshops.
- Banco W piloted with Juntos Finanzas a two-way messaging service with 169,000 customers to increase savings balances.

Financial Health Results



Resilience Banco W customers who received SMS texts had account balances 6% higher than those who didn't.



Control 99% of all Banco W customers remained subscribed to the SMS service and liked receiving the messages.



Trust Reminders to save helped customers plan better for savings.



Capital Aid Fund for Employment of the Poor (CEP) was founded in 1991 as a nonprofit social institution by the Ho Chi Minh City Labor Confederation, a labor trade union affiliated with the Communist Party of Vietnam. In 2017, CEP changed its official status to become the first microfinance institution in southern Vietnam. CEP serves 328,000 customers through a network of 34 branches in urban parts of Ho Chi Minh City, as well as in areas of surrounding provinces in the Mekong River Delta. During OPTIX, CEP focused on digitizing operations to increase efficiency and launching a new long-term savings product.

Specifically, BFA worked with CEP to:

- **Offer a new term-deposit product for long-term savings** by redesigning product features, including term length and interest rate, and introducing withdrawal flexibility
- **Build a loan origination app to improve efficiency** as part of upgrading CEP's management information system (MIS). After an initial trial period, CEP introduced the loan origination app in all 34 branches in 2017. The app helps loan officers save time during the poverty assessment process and speeds up the loan approval process.
- **Refine CEP's marketing strategy through human-centered design**, recognizing communication needed to be improved at critical times in the customer journey.
- **Launch a new delivery channel**, thanks to a partnership between CEP and Saigonbank that allows CEP to provide electronic loan disbursement and collection services for its customers who are salaried workers in Ho Chi Minh City.
- **Develop a standard credit scorecard for new and existing customer evaluations** in order to facilitate standardization of the selection process across all branches and for all loan officers

Highlights

- 2,016 new accounts opened and 2,045 rolled-over accounts with total savings of VND393B (~USD20M), and an average account balance of VND87M (USD3,700) by the end of July 2018.
- ~5% of new accounts opened at the minimum balance of VND5M (USD220); 18% had opening balances of more than VND100M (USD4300).
- The loan origination app halved the time (largely for data entry) required to approve loans in the office .
- Piloted a payroll loan product in combination with an automated way to save through a flexible savings account with 400 customers via a Saigonbank partnership.

Financial Health Results



Resilience 75% of accounts opened during OPTIX period (2015-2018) remained open and active, compared to 50% account dormancy at most banks.



Control 77% of CEP customers said the FAS app helped them decide how much to save through the term-deposit product.



Trust 42% of customers said their loan officer paid them more attention; 46% said CEP helped them make better financial decisions.



SAJIDA Foundation launched in 1987 as a private, family-funded charity before transforming six years later into a nongovernmental organization (NGO). SAJIDA initially offered micro- credit services to poor urban women in Dhaka, Bangladesh. It has since broadened its portfolio to include sustainable, effective financial services and products that aim to improve quality of life for low-income urban and rural men, women, and households. SAJIDA Foundation currently has 198 branches and serves 325,000 members.

During the OPTIX project, SAJIDA Foundation focused on product redesign and process enhancement to give its customers better product options. Specifically, BFA worked with SAJIDA to:

- **Service loans via mobile money** so customers can collect and repay loans via mobile money partners bKash and Rocket
- **Redesign SAJIDA's long-term deposits** to encourage customers to save more via adjustments to the deposit term, minimum deposit amount, and product marketing strategy leveraging behavioral concepts
- **Build a financial advisory services (FAS) app** for credit officers to help them better advise clients on the merits of term-deposit products
- **Enhance staff's use of evidence-based decision-making** through training sessions on data analytics to help SAJIDA make better strategic data-based decisions.
- **Digitize the microenterprise loan origination system** to register large loans more efficiently.

Highlights

- At five cashless branches, savings collection per customer/member increased between 12% and 43% from September 2017 through July 2018.
- 7,564 members moved USD598,189 (BDT 50,500,000) through the system in May 2018. Monthly cash flows fluctuate due to various factors, but during the pilot period:
 - Between 7,200 and 7,500 members transacted
 - Transactions valued between USD575,000 (BDT 48,5000,000) and USD600,000 (BDT 50,600,000) moved through the system
- 11,221 new accounts opened since the OPTIX pilot started; total Astha account balance is USD1.18M (BDT 99M) by July 2018

Financial Health Results



Resilience For 48% of customers, the Astha term-deposit account was their first-ever deposit account.



Control 98% of customers said that using the term-deposit account kept them from spending their savings unnecessarily.



Trust 6% of customers felt staff explained product features in a way they could understand, thanks to the FAS app.



Glossary

Acreimex (Cooperativa Acreimex)

An institutional partner of the OPTIX program. Acreimex is based in Oaxaca, Mexico.

Acreinómina

A payroll credit product for Acreimex clients

AhorraMás y Más (A++)

A savings account tied to the Acreinomina account

Alternative credit scoring

A method of determining a person's credit score via his/her other data sources including mobile phone, utility bill, etc.

Anchoring

Anchoring is a cognitive bias used to study the bias a person carries by using irrelevant information as a reference point to weigh behavior and emotions

Banco W

An institutional partner of the OPTIX program. Banco W is based in Cali, Colombia.

Behavioral economics

A method of economic analysis that applies psychological insights into human behavior to explain economic decision-making.

bKash

bKash is a mobile financial service in Bangladesh operating under the authority of Bangladesh Bank as a subsidiary of BRAC Bank Limited.

CEP

An institutional partner of the OPTIX program. CEP is based in Ho Chi Minh City, Vietnam.

Content marketing

Content marketing is another form of marketing that places emphasis on creating, publishing, and distributing content targeted at a specific online audience.

Credit scorecard

Credit scorecards are mathematical models which attempt to provide a quantitative estimate of the probability that a customer will display a defined behavior with respect to their current or proposed credit position with a lender.

Credito Grupal

A group credit product for Acreimex clients.

Destacame

A fintech startup that offers alternative credit scores to the underserved populations in Mexico and Chile.

Digital Financial Services (DFS)

Digital financial services can expand the delivery of basic financial services to the poor through innovative technologies like mobile-phone-enabled solutions, electronic money models and digital payment platforms. (Source: <https://www.afi-global.org/policy-areas/digital-financial-services>)

Dutch-Bangla Bank (DBBL)

Dutch-Bangla Bank Limited is a bank in Bangladesh. DBBL is a joint venture commercial bank between local Bangladeshi parties by M Sahabuddin Ahmed and FMO, a finance company in the Netherlands.

Financial Advisory Service App (FAS App)

FAS App was designed to help the loan officers/field officers consult the term deposit product to clients more effectively via setting goals and reminders.

Field Officer (FO)

Field officer in this report is a staff of a financial institution. The field officer is often in charge of introducing products to clients, disburs loans and collect repayments, and interact directly with clients on other related matters.

Group meetings

In the context of this report, group loan members often meet once or twice a month to repay loans and to meet with the Field Officer/Loan Officer.

Group meeting centers

Locations where group meetings take place

Group repayment

Loan repayment collected in groups on a weekly or monthly basis

Juntos Finanzas

A global fintech company provides mobile communication solutions

Loan Officer (LO)

See definition of “Field Officer”

Mobile money (MM)

Mobile money is an electronic wallet service, which allows users to store, send, and receive money using their mobile phone. (Source: WorldRemit)

Machine learning

Machine learning is a method of data analysis that automates analytical model building. It is a branch of artificial intelligence based on the idea that systems can learn from data, identify patterns and make decisions with minimal human intervention. (Source: https://www.sas.com/en_us/insights/analytics/machine-learning.html)

Management Information System (MIS)

A computerized database of financial information organized and programmed in such a way that it produces regular reports on operations for every level of management in a company. (Source: <https://www.inc.com/encyclopedia/management-information-systems-mis.html>)

MetLife Foundation

Since 1976, MetLife Foundation has provided more than \$783 million in grants and \$70 million in program-related investments to make a positive difference for the individuals, families and communities we serve. Through all of our work – grant making, volunteer engagement and impact investing – our goal is to build healthier and stronger communities worldwide. Metlife Foundation is the donor of the OPTIX project.

Microcredit

A small loan offered by microfinance institutions to low-income population in order to help them become self-employed

Momo

A leading FinTech startup that offers a mobile wallet and payment application in Vietnam.

OPTIX project

OPTIX is an initiative co-designed by global consulting firm BFA and MetLife Foundation, and fiscally sponsored by Rockefeller Philanthropy Advisors. It aims to help financial institutions better understand the lives and needs of low-income customers and ensure they have the same opportunities to access financial products and services as people on higher incomes.

Payoo

An intermediary payment service provider in Vietnam.

Payroll savings

An pre-committed automatic savings product tied to an employee's monthly salary account

Payroll loan

A loan product with automatic repayment feature tied to an employee's monthly salary account

Rocket

A mobile banking product initiated by Dutch-Bangla Bank in Bangladesh

Salary loan

See definition for Payroll loan

SAJIDA Foundation

An institutional partner of the OPTIX program. SAJIDA Foundation is based in Dhaka, Bangladesh.

Term deposit product

A long term savings product at a financial institution.

Viettel

Viettel is one of the largest telecom and fintech companies operating in Vietnam.



OPTIX

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