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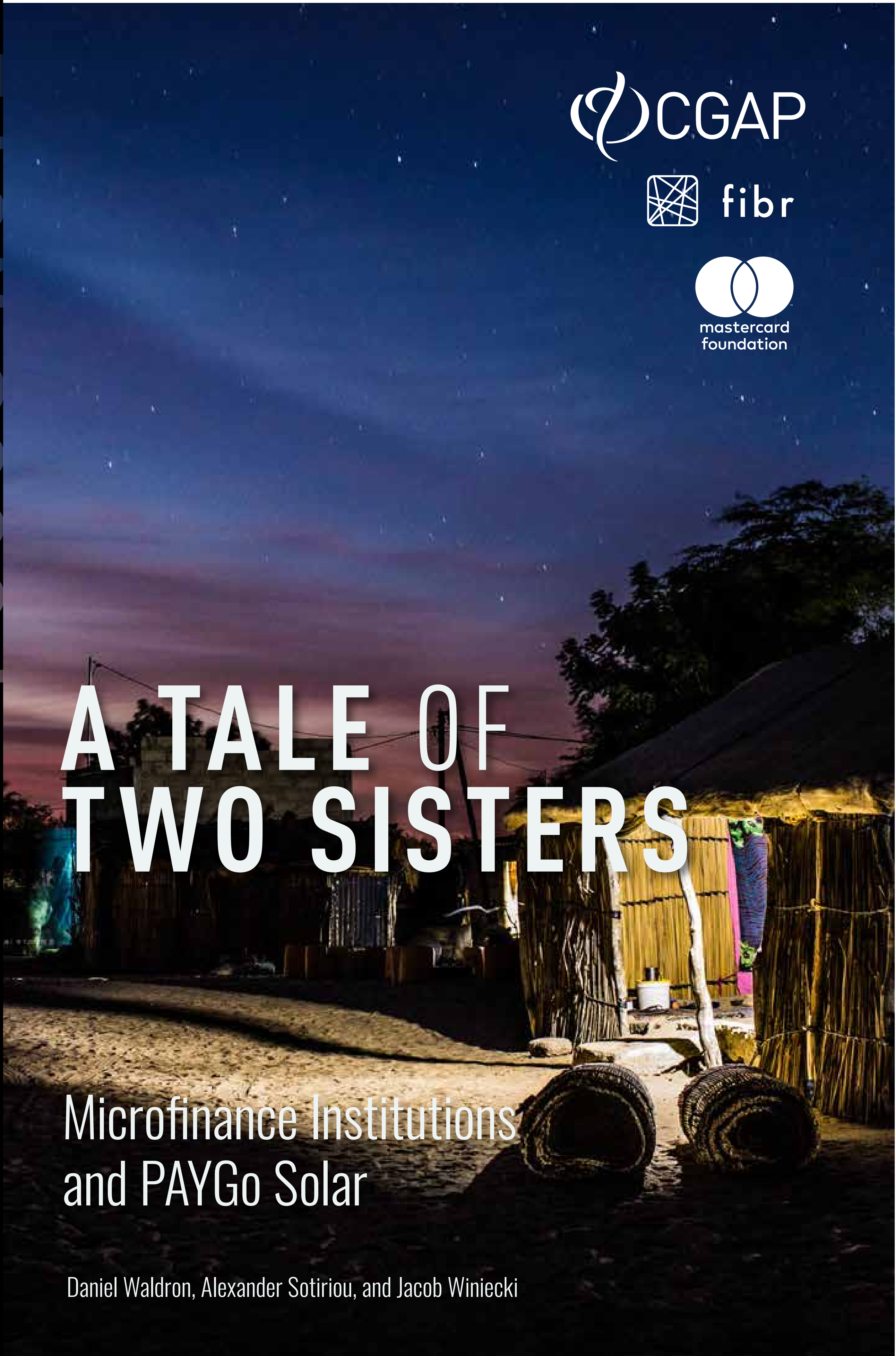

# A TALE OF TWO SISTERS

## Microfinance Institutions and PAYGo Solar

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# EXECUTIVE SUMMARY

**THESE ARE UNCERTAIN TIMES FOR MICROFINANCE INSTITUTIONS** (MFIs) in Africa. Not so long ago MFIs were the only source of credit for many low-income households. Now every week brings a new fintech firm eager to reach those same customers. Some would readily partner with an established financial institution to gain access to its client base. Others are less eager; they want MFI market share, now. Decisions on whether to compete or collaborate with new types of financial services providers and how to do so are some of the biggest challenges that MFIs face. This paper examines these dilemmas in the context of MFIs' reactions to a new and growing sector—pay-as-you-go (PAYGo) solar financing.

PAYGo solar has emerged as a new class of asset finance in Sub-Saharan Africa. It has achieved early success where microfinance failed. Two decades of pilots clearly demonstrated that MFIs are ill-suited to finance technically complex solar home systems (SHS) for customers outside of their existing base. In 2000, the German development agency GTZ (now GIZ) wrote: "Most microfinance institutions…do not fit the requirements of SHS finance." More recent efforts to have MFIs take over the financial side of PAYGo solar have had little success. Hugh Whalan, the CEO of solar power provider PEG Africa, believes that PAYGo financing is here to stay: "I don't see us ever outsourcing credit. Ever." Yet there are other MFI-PAYGo arrangements, beyond MFIs giving out PAYGo loans, that could add value.

Two global microfinance groups, Baobab and FINCA, have concluded that PAYGo financing can help them reach additional clients. Each group started a subsidiary business—Baobab+ and BrightLife, respectively—to distribute and finance PAYGo solar on their own balance sheet. These companies are financially independent of their local MFI affiliates but operationally aligned in many ways. As their PAYGo loan portfolios grew, their "sister" MFIs began designing financial services to offer new clients referred by PAYGo partners. The result was two MFI loan pilots for PAYGo clients.

The learnings from these pilots offer us insights into the future of MFI partnerships:

- New financial products offered to existing customers ought to create as little disruption as possible from the original service. Requiring clients to visit a branch or embrace a radically different repayment schedule can lead to confusion and attrition.
- Asset finance companies can bring new clients to MFIs, but serving them may require a shift in mindset. As one MFI executive in a pilot told us: "This is our first time lending to clients we do not know."

- Innovations in credit risk management, such as automated underwriting or remote lockout technology, can reduce risk for MFIs but will take time to adopt.
- Partnerships must be structured to bring value to all parties. One MFI executive referred to her MFI as “the prettier sister” in explaining why they would not pay the PAYGo partner for successful referrals. But this is shortsighted; proper incentives, such as a share of interest income or a servicing fee, will keep partners motivated and satisfied.

Baobab and FINCA have taken two important steps to build more diversified, impactful MFIs. The first—creating the PAYGo subsidiaries—expands the universe of potential clients, and the second—offering MFI services to PAYGo clients—strengthens the financial institution at the center. Using this template, other MFIs could reach more customers through partnerships with asset finance companies, fintechs, and value chain players. They can also use these partnerships to create more value for existing clients, for example, by offering them financed SHS or smartphones.

Important to note is that when PAYGo operators who were not affiliated with MFIs (“nonsisters”) were asked if they would ever consider offering an MFI loan to customers who had completed their PAYGo loans; they refused. Respondents did not see enough value to justify giving up their best customers, were concerned that rival sources of credit could overburden their customers, or plainly viewed MFIs as competitors.

Luckily, these concerns only applied to credit from MFIs. PAYGo operators legally cannot offer insurance or savings, for example, and willingness to partner on these offerings could be significantly higher than for loan offers. MFIs should explore offering low-cost, low-risk products to PAYGo customers and even white labeling (or branding) them under the PAYGo firm. These partnerships can provide additional value for customers, stickiness for the PAYGo provider, and revenue for the MFI. Beyond PAYGo, there are many sectors in which these types of partnerships could unlock multiple small revenue streams for MFIs that have the potential to grow over time, with the customer relationship growing as the credit risk that the MFI would bear increases.

The MFIs that survive the next 10 years will not know every client personally. They will acquire customers through a variety of channels and service them through other channels. The institutions that are able to build the right bundles of partnerships, products, and channels will thrive—and will help their clients to do the same.

# INTRODUCTION

**THESE ARE UNCERTAIN TIMES FOR MICROFINANCE IN AFRICA.** Every week another start-up launches with the express goal of finding the fortune at the bottom of the pyramid, of reaching the low-income customers who are traditionally the target market of microfinance institutions (MFIs). The start-ups want to appeal to these customers with financial services that are faster, more convenient, and more tangible than those offered by MFIs.

At one time, MFIs were the only source of credit for many low-income households. Now, farmers in rural Africa can buy a new smartphone on credit, and that smartphone can connect them to an ecosystem of digital lenders.

How should MFIs respond? In 2016, Graham Wright, group managing director of MicroSave, was clear: "Very soon, if MFIs don't develop a strategy and implement fintech behind that strategy, I think they will simply become irrelevant and slowly but surely shrink and die" (Militzer 2017). Many fintechs would eagerly partner with an established financial institution to gain access to its client base. Others are less eager; they want MFI market share, now. Whether to collaborate with new types of financial services providers and how to do so are some of the most challenging decisions MFIs face.

This paper explores these dilemmas in the context of MFIs' reactions to a new and growing sector—pay-as-you-go (PAYGo) solar financing. It reviews the various strategies MFIs have pursued in the wake of PAYGo solar's growth: financing solar home systems (SHS) themselves, working with PAYGo companies, and starting their own PAYGo subsidiaries.

The paper examines case studies of two global microfinance groups that created their own PAYGo companies then attempted to build partnerships between those companies and their MFI affiliates. The process and initial results offer glimpses of a future in which MFIs serve their clients through several channels, with products seamlessly integrated into the offerings of carefully selected partners.

We hope that the insights from this paper can help microfinance executives as they seek out partnerships and synergies that will enable MFIs to continue playing a prominent role in the evolving landscape of financial services.

# MFIs AND PAYGO SOLAR PROVIDERS

**OVER THE PAST DECADE, A NEW CLASS OF ASSET FINANCE** company has emerged in Sub-Saharan Africa. These vertically integrated companies sell solar assets on a lease-to-own basis, using lockout technology to turn loan repayment into PAYGo service.[1] The sector has grown rapidly in recent years and has raised significant funding.

For African MFIs that operate in the same markets as PAYGo companies, these new providers of financed assets to poor borrowers represent a threat and an opportunity. They are a threat because they are lending to similar clients, can do so rapidly at great scale, are less tightly regulated, and (in some cases) have expressed a desire to compete in the broader financial services sector. They represent an opportunity in that they bring new clients into the formal financial system and allow them to build credit histories, collateral, and digital literacy. MFIs have explored a range of strategies for competing and partnering with PAYGo providers.

## Before PAYGo—Microfinance for solar

Microfinance for solar is not new. In 1993 the World Bank wrote: “Because [SHS] are characterized by high capital, yet low operating costs, financing is a key ingredient in making [SHS] affordable” (Miller and Hope 2000). In a 2004 review of 20 years of solar projects in Africa, Hankins (2004) wrote: “In theory, small targeted and rurally oriented micro-finance institutions would seem to be ideal partners in the development of [solar] markets.” For decades, various development actors have tried to enlist microfinance as a tool for scaling SHS. However, despite notable successes in Bangladesh and Sri Lanka, microfinance has not made a significant contribution toward SHS growth in Africa.

1 Vertical integration refers to the combination of more than one stage of production in a single firm. In the example of PAYGo solar, most firms combine distribution and financing, with some also involved in the design and production of the SHS and software.

The reasons for this lack of impact are many and debatable. Common refrains include:

- **Servicing.** SHS are complex assets, and technical issues rapidly become portfolio issues: "If the system doesn't work, people stop their loan repayments" (Nieuwenhout et al. 2001). MFIs often struggle to integrate the technical aspects of a client's experience with their loan servicing.
- **Consumptive vs. productive.** MFIs prefer to finance the working capital of productive businesses or income-generating assets to ensure repayment capacity of clients.[2] There is debate over whether SHS loans create sufficient net savings to cover their debt service (Zollmann et al. 2017; Urpelainen 2019). But perception is reality, and Morris et al. (2007) found that many MFIs "view energy purely as a consumptive product."
- **Limited outreach.** If MFIs view energy loans as consumptive, they are unlikely to extend them to new clients. "Consumption loans are often only offered to repeat clients who have demonstrated their creditworthiness" (Morris et al. 2007). For most rural Africans who do not have MFI accounts, these products are inaccessible.
- **Logistical challenges.** MFIs are not accustomed to financing consumer goods, particularly smaller products with thin margins that are too cheap, and depreciate too quickly, to serve as effective collateral. At the same time, many MFIs still run paper-heavy operations, which makes collecting regular cash payments from rural clients cumbersome and costly.

These barriers are well documented. In 2000, the German development agency GTZ (now GIZ) wrote: "Most microfinance institutions and programs that deliver financial services to the low-income population do not fit the requirements of SHS finance." Energy term loans from MFIs can still be found today, but they represent a relatively small share of the market and are restricted to clients in good standing.

## PAYGo solar and microfinance—Searching for synergies

MFIs could respond by offering to take over the financing side of the PAYGo operation and extending credit directly to an end client acquired by the PAYGo company. This proposal has been the subject of much discussion (Muench, Waldron, and Faz 2016; Le 2018). But, despite emerging examples such as BioLite's early pilots with Kenyan MFIs (Winiecki 2019) and a partnership between RBL Bank and Simpa in India (Lepicard et al. 2017), PAYGo operators have largely resisted giving up control of their financing.

Even where there is interest in such an approach, formidable obstacles to potential partnerships need to be addressed. Deposit-taking MFIs are more tightly regulated than PAYGo providers around key areas such as provisioning and consumer protection.

2 However, studies have shown that a significant percentage of ostensibly productive loans are in fact used to finance consumption (Roodman 2012).

They are ill-equipped to take over technical control of the PAYGo asset, making flexible financing a challenge. MFI underwriting is far more time-consuming and selective; it tends to winnow out (perhaps wisely) many potential borrowers. Lastly, PAYGo providers are not eager to give up their financing relationship with the end client. Hugh Whalan, the CEO of PEG Africa, flatly rejected the idea: "I don't see us ever outsourcing credit. Ever. It's core to our business, it gives us a platform that allows us to understand customers and therefore finance other things for them."

Yet there are other collaborative arrangements beyond an MFI giving out a PAYGo loan that could add value. The future for MFIs is likely to be multichannel: having a branch where MFIs can serve higher-margin urban clients and micro, small, and medium enterprises (MSMEs) will continue to be important, as will having digital and agent channels through which lower-income clients can access services. But new channels are needed to acquire clients and/or indirectly provide them with financial services. PAYGo solar can be one such channel.

Unbanked clients who pay off a PAYGo loan have a demonstrated level of creditworthiness, a repayment record that can be analyzed, and a unique type of collateral in the form of PAYGo lockout technology. PAYGo providers regularly consider these factors to offer additional credit for assets, school fees, or liquidity. But an MFI can offer an entire suite of complementary financial products that PAYGos legally or practically cannot, including savings deposits, insurance for crops or assets, and larger loans for working capital or business equipment. MFI–PAYGo partnerships can provide additional value for clients, stickiness for the PAYGo provider, and revenue for the MFI.

## Emerging MFI responses

Across Africa, global microfinance groups, such as Baobab Group, FINCA International, and Equity Group, have recognized the potential of PAYGo solar to reach new clients and complement their existing MFIs. Rather than pursue partnerships with unknown entities, they have opted to compete on a level playing field by establishing their own PAYGo-like subsidiaries.

One of the primary goals in creating these subsidiaries is to reach lower-income segments that are not served by MFIs and to eventually "graduate" them into MFI clients. This expectation creates an interesting tension for established MFI affiliates, similar to the one described above: should they provide the actual PAYGo financing for clients originated by their in-country "sisters"? Or should they collaborate on distribution and branding while maintaining separate balance sheets and exploring opportunities to upsell a microfinance product to a successful PAYGo customer? The sister MFIs in question are opting for a more complementary approach. The following explores the experiences of two MFIs that onboarded clients who completed PAYGo loans.

# LENDING TO PAYGO CUSTOMERS: THE EXPERIENCES OF BAOBAB AND FINCA

**LEADERSHIP AT BAOBAB AND FINCA OBSERVED THE RISE OF** PAYGo and came to similar conclusions: asset financing would be crucial for reaching more clients and achieving their social missions. They each started a subsidiary business (Baobab+ and BrightLife, respectively) to distribute and finance PAYGo solar assets for off-grid households. Baobab+ and BrightLife assumed the credit risk for their lending using their MFI balance sheet, which they managed independently of the MFIs'. As their PAYGo loan portfolios began to grow, the in-country MFI affiliates began strategizing to offer financial services to new clients referred by their PAYGo partners. The result was two MFI loan pilots for PAYGo clients.

In Senegal, CGAP partnered with Baobab Senegal, a deposit-taking MFI that began operations in 2007, and Baobab+, the solar retailer and PAYGo provider, to pilot small-scale lending from Baobab to unbanked clients of Baobab+.

In Uganda, Financial Inclusion on Business Runways (FIBR) collaborated with BrightLife, a wholly owned subsidiary of FINCA International that offers PAYGo solar, and FINCA Uganda, a microfinance deposit-taking institution (MDI) established in 1992, to enable BrightLife clients to access financial services through FINCA Uganda.[3]

3 FIBR is an accelerator program by BFA with the support of Mastercard Foundation to develop last-mile solutions for digital and financial inclusion in West and East Africa.

## Introduction to Baobab and Baobab+

Launched in Senegal in 2015 as a new brand of the global Baobab Group (formerly the MicroCred Group), Baobab+ was meant to offer added value to Baobab clients. Solar products were marketed to existing clients in good standing who could purchase them in cash or via top-up loans, which simply increased the outstanding balance of their existing microfinance loan.

Initial performance was better than expected, with over 17,000 solar products sold in the first 16 months of operations (Lepicard et al. 2017). At the same time, Baobab was cognizant of the rapid growth of PAYGo providers. These companies were leveraging digital payments, sophisticated customer relationship management systems, and unique collateral to reach lower-income customers. Baobab, which already relied on digital technology to deliver financial services, saw the potential to expand into a new business sector and serve poorer, more rural clients. Baobab+ CEO Alexandre Coster believes that with PAYGo lending, "you make people financially viable [clients] that were not so before."

Baobab+ now offers PAYGo solar in Senegal, Mali, Côte d'Ivoire, and Madagascar. It leverages the Baobab Group's existing footprint in each market and plans to expand further.

## Bringing together Baobab+ and Baobab

Staff at Baobab and Baobab+ believed that many clients who demonstrated an ability to consistently pay for PAYGo products would benefit from access to formal savings and credit at an MFI. The sister companies came up with the following partnership structure (see Figure 1):

- Baobab+ would share repayment data for customers who had finished paying a PAYGo solar loan.
- Baobab would develop an algorithm that would score those clients and set a borrowing limit based on repayment frequency and timeliness.
- Baobab would offer its existing Taka loan to Baobab+ customers. The Taka product:
    - Has a 90-day, unsecured line of credit with a flat interest rate.
    - May be disbursed through multiple channels (agent, branch, or mobile).
    - May be repaid at any time, with increased loan limits for repayment in < 30 days.
- Clients would be offered the Baobab product over the phone by a call center representative. Those who accepted the offer would have to go to a branch to open an account.
- At least for the initial pilot, Baobab+ would receive no compensation.

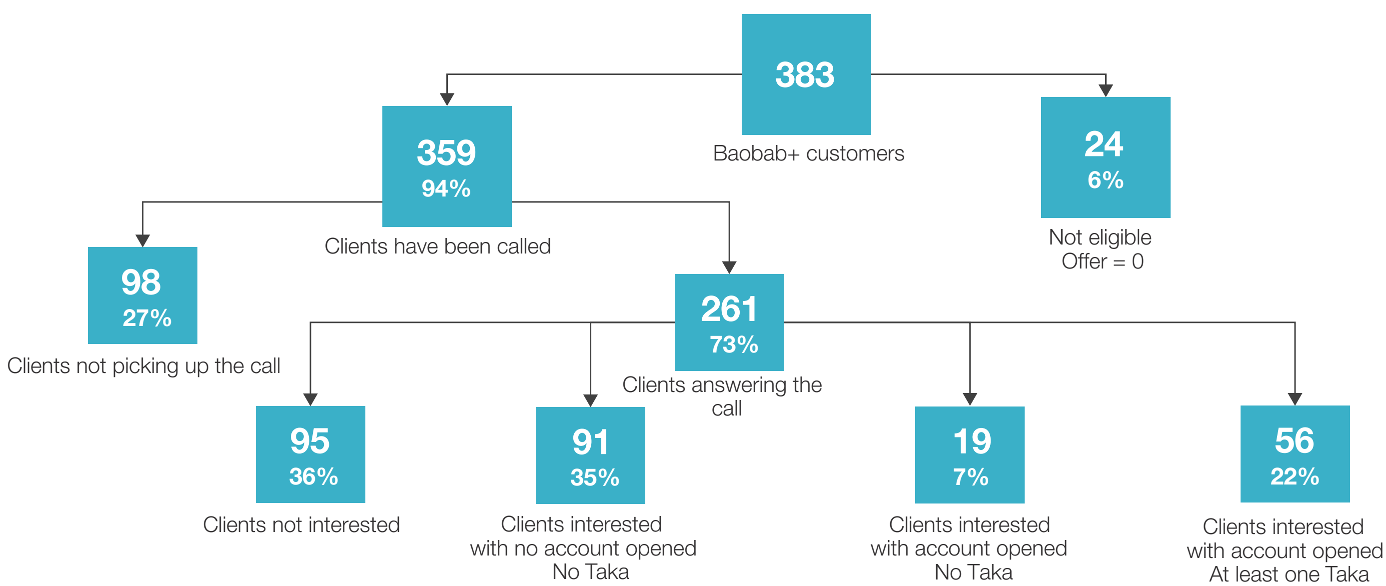
FIGURE 1. **Customer Journey from Baobab+ to Baobab**


## Results

In July 2018 Baobab Senegal began contacting Baobab+ customers who had completed their loan and been scored. The geographic focus was limited to Ziguinchor, in the Casamances region. A total of 359 clients were scored and deemed eligible; 261 of them were reached over the phone. Of these, 166 were interested in a loan (see Figure 2).

From this point, operational issues likely limited uptake. Baobab's core banking system was unable to open an account and disburse a loan in the same day. While this could be fixed in the long term, for the pilot it meant that clients had to make one trip to a branch to open an account and a second trip to receive the loan. Fifty-five percent of interested clients did not go to a branch to open an account. Eleven percent made the trip to the branch to open an account but did not make a second trip to get the loan. In the end, 34 percent of interested clients—22 percent of those who had received the offer—eventually took out a Taka loan. This is in line with Baobab's average intake levels and is expected to increase as the process becomes streamlined.

FIGURE 2. **Target and uptake numbers for Taka pilot**




Source: Baobab.

TABLE 1. **Taka pilot repayment**

| | Taka cycle | Repaid on time | Past due |
|---|---|---|---|
| 56 Baobab+ customers generated 91 Taka loans (84 repaid and 7 past due) | 1 | 50 | 6 |
| | 2 | 28 | 0 |
| | 3 | 5 | 1 |
| | 4 | 1 | 0 |

Source: Baobab.

By December 2018, Baobab had disbursed 91 Taka loans to 56 Baobab+ clients for a total amount of $5,200. Half the borrowers went through more than one cycle, with the pilot ending after four rounds. About 7.7 percent of all loans disbursed became more than 30 days past due (see Table 1), which is likely not sustainable for loans of this size (the average pilot loan was $57).

However, Baobab believes this performance can be improved in future pilots by limiting Taka offers to clients within a serviceable distance of a local Baobab bank agent who can disburse loans, collect payments, and follow up with delinquent accounts. Using Baobab+ agents to reach clients and/or PAYGo technology as collateral are other ways to reduce credit risk.

Baobab is in the process of launching additional pilots in Senegal and elsewhere, with the hopes that it can become a viable product in the future.

## BrightLife and FINCA Uganda

BrightLife was founded in 2013 by FINCA International as part of its FINCA Plus agenda and in direct response to the massive energy access gaps seen in Sub-Saharan Africa. BrightLife's initial goal was to distribute and sell clean energy products, primarily through FINCA Uganda's Village Banking™ groups. Consumer financing, if any, came in the form of top-up loans from FINCA Uganda, and BrightLife sales staff operated in tandem with FINCA Uganda loan officers.

Unfortunately, success was limited, in part because of the way top-up loans were structured. FINCA Uganda borrowers were more willing to default on their energy loans because they felt they were a lower priority compared to their business loans. In addition, borrowers incurred little, if any, penalty—as long as they repaid their primary loan. At the same time, the parallel rise of the PAYGo solar sector in Uganda convinced FINCA International and BrightLife that a different business model might prove more effective.

In 2017, BrightLife entered into partnerships with several product and software companies and began selling solar lanterns and home systems on a PAYGo basis. BrightLife finances sales on its own balance sheet and offers PAYGo financing to any eligible customer, not just FINCA Uganda clients. In the short term, this allowed BrightLife to reach a much wider base of potential clients. In the long term, BrightLife envisions that these clients will be graduated to FINCA Uganda, which is in the process of shifting to a leaner digital operation. As of the beginning of 2019, BrightLife has sold approximately 10,000 solar products in Uganda, 40 percent of which were on a PAYGo basis and the rest on a cash basis.

## FIBR project

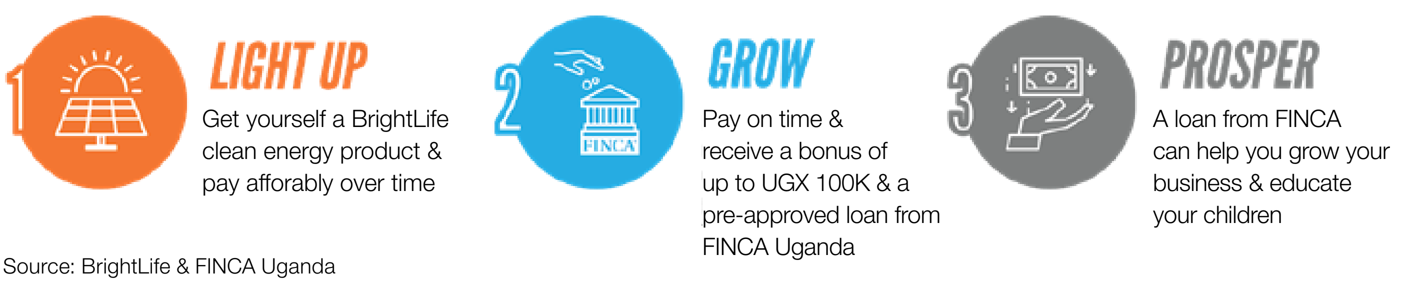
Beginning in 2017 and continuing throughout 2018, FIBR partnered with BrightLife and FINCA Uganda. The primary objective of the partnership was to develop a product and customer experience that would enable BrightLife clients to access savings and credit from FINCA Uganda, based on their repayment history for a solar asset or cookstove.

The resulting approach is called Prosper. It has the following features (also see Figure 3):

- A PAYGo loan for an SHS, with standard product and conditions, but priced higher to allow the customer to build up savings during repayment.
- A lump-sum rebate (funded by the price increase) earned by the customer when they pay off their PAYGo loan.
- Option to transfer the rebate directly to the customer or deposit into a savings account with FINCA Uganda.
- Automatic approval by FINCA Uganda on a 12-month term loan for borrowers who complete their PAYGo obligation on time and in full. The loan limit will be determined by the PAYGo loan amount, payment frequency, and delinquency.

A Prosper pilot began in March 2019. As of June 2019, 372 clients had taken out a Prosper loan. Initial repayment rates indicate that Prosper is performing similarly to other solar loans in the BrightLife portfolio. Because of the consecutive nature of the loans, full data on the uptake and repayment of FINCA Uganda's loan offerings to PAYGo borrowers will not be available until the end of 2020.

FIGURE 3. **Flyer explaining the Prosper customer journey**




Source: BrightLife & FINCA Uganda

# KEY INSIGHTS

**THESE PILOTS SHOW THAT INNOVATIVE MFIs ARE FINDING WAYS TO** increase their impact and revenue sources. They are achieving this by using new technologies and business models and by leveraging the core assets of an MFI: deep client knowledge, experienced credit risk management, and an inclusive vision of economic development.

Baobab and FINCA have taken two important steps. The first—creating the PAYGo subsidiary—expands the universe of potential clients and the second—offering MFI services to PAYGo clients—strengthens the financial institution at the center. These are not radical leaps, rather, they are gradual shifts that build off previous work MFIs have done in agricultural input finance and water supply and sanitation finance, both of which required embedding financial products in the sale of physical assets. Using this template, MFIs could reach many more clients through partnerships with asset finance companies, fintechs, and value chain players, with the customer relationship proportionate to the credit risk that the MFI would bear.

Three factors will determine the success of these engagements: product design, credit risk management, and partnership structure.

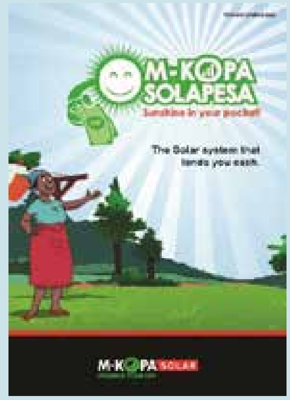
## Product design

As MFIs explore how they can work with this new group of clients, one key question is how to analyze PAYGo repayment behavior. Ideally the data would allow MFIs to segment potential clients and match them with appropriate financial products. However, PAYGo loans are unusual credit instruments, and it is not yet clear what conclusions a lender can infer from PAYGo repayments.

One approach is to emulate PAYGo companies in making follow-on loans that are as similar as possible to the original PAYGo loan (see Box 1 for an example). In Senegal, interviews with Baobab borrowers revealed that the short-term Taka loan was a good fit for traders or retailers working in established value chains: people who could quickly turn small loans into profits. On the other hand, potential borrowers who declined the offer of a Taka listed its short tenor, small size, and high costs as the main reasons for not borrowing. In future iterations, longer-term loans may allow for more investment while scoring refinements could lead to higher offers. PAYGo borrowers who paid off their loans have repaid a $100+ loan in 9–12 months; this may be a useful baseline in designing future credit offerings.

PAYGo flexibility is harder for MFIs to emulate; neither of the institutions in the two pilots tried. Although the flexibility would make financial reporting and provisioning difficult, some advocate for building more flexibility into microfinance loans (Karlan and Mullainathan 2006), and experiments with more flexible repayment have improved business outcomes and lowered default rates (Barboni and Agarwal 2018; Battaglia, Gulesci, and Madestam 2018). Offering loans like the one described in Box 1 could be a way to bring more PAYGo customers into the fold.

BOX 1. **M-KOPA's SOLAPESA loan**




One example of a follow-on loan that is purpose-built for PAYGo clients is M-KOPA's SOLAPESA loan in Kenya. SOLAPESA allows customers with a sufficient track record to apply for a cash loan from M-KOPA that is digitally disbursed to their mobile wallet. The per-day payment is the same as the borrower's original loan. A number of days, equivalent to the loan amount plus interest, are either added to their existing solar repayment plan, or the system is relocked (for customers who paid their initial loan). This loan mirrors the initial PAYGo loan, leveraging the lockout technology, flexibility, and existing repayment behavior.

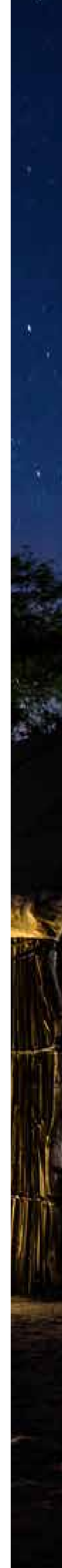
## Credit risk management

In the pilots described in this paper, MFIs were asked to assess borrowers and manage credit risk in a completely different way than they had in the past.

Across credit models, loan approval is based on the three Cs of credit: Capacity, Character, and Collateral. MFIs that practice individual lending rely heavily on in-person visits, conversations in the community, and individual cash flow analyses to assess character and capacity to repay. Some MFIs also require collateral, but their ability to collect and liquidate it is generally limited. Repayment is incentivized through the borrower's desire to access the next loan, their relationship with the loan officer, and their aversion to social stigma (Churchill 1999).

PAYGo solar companies manage credit risk differently from traditional lenders. Most companies rely on a deposit to screen customers; only those selling large systems assess customers' cash flows in detail. Default risk is mitigated by disabling the unit during times of delinquency, thus creating an additional incentive to repay. However, customers have shown a surprising willingness to be disconnected (Persistent Energy and Shell Foundation 2018), and companies are exploring other credit risk management strategies. These include building stronger relationships between agents and borrowers, developing follow-on financial products that can motivate repayment (cash loans, insurance, system upgrades), and enforcing tighter policies on repossession.

Baobab Senegal and FINCA Uganda agreed to assess potential borrowers based only on repayment data and information collected by the PAYGo company at the point of sale. This was a major departure from the traditional operating mode of MFIs. One executive at Baobab Senegal told us, "This is our first time lending to clients we do not know."



Discomfort with this risk emerged during the BrightLife-FINCA Uganda project. The original Prosper marketing material contained a guarantee that FINCA Uganda would extend credit to PAYGo borrowers who repaid on time. This created understandable reticence on the part of FINCA Uganda, which would be publicly committing to lending money to people it had never met (and might never meet). Eventually, the language was softened: flyers mentioned credit from FINCA Uganda but did not guarantee an amount.

Automated underwriting could lower costs and create higher conversion rates from PAYGo to MFIs. Lower costs will be a competitive advantage given the high cost of many digital loans (including from PAYGos), but MFIs are right to proceed with caution. Recent experiences with automated digital credit products in East Africa have yielded low repayment rates and added negative reports to many borrower's credit histories (Izaguirre et al. 2018). Decisions made when creating scoring models can lead to larger errors of inclusion or exclusion. Early on, MFIs may want to adopt simpler criteria for PAYGo customers, then follow up with a call or visit. This can help to build trust in the PAYGo data and ensure that customers understand the product on offer.

## Lockout technology

A controversial question that arose in both projects was whether to secure the MFI's loans on the PAYGo asset using the product's remote lockout feature. PAYGo providers frequently offer follow-on loans (such as the SOLAPESA loan described in Box 1) to borrowers who have repaid their solar loans, on the condition that borrowers agree to relock their PAYGo asset. This means that their SHS will be turned off if they miss a payment for the new loan, just as it was for the initial solar loan. MFIs in theory could do the same, but there are pros and cons to consider (see Box 2).

The reality is that given the small loan amounts and remoteness of PAYGo borrowers, traditional MFI credit risk management will likely not be possible. MFIs can always do a more rigorous evaluation for clients who want to borrow larger amounts. But if the goal is to reach a mass market, then automated underwriting

BOX 2. **Lockout technology for MFIs**

**Pros**

- Relocking the unit would likely reduce the probability of default, as it serves as a reminder and links repayment to use of the asset.
- PAYGo borrowers are accustomed to this mechanism.
- It allows borrowers to leverage their assets to acquire more assets or invest in a business.
- As a collateral mechanism, it is easily enforceable and reversible.

**Cons**

- Executives viewed the renewed lockout as unnecessarily harsh.
- Integrating an MFI's core banking system with PAYGo software could create challenges.
- Using the lockout could require additional compensation for the PAYGo.
- The lockout could encourage more flexible PAYGo-like repayment, which the MFIs did not want.
- Physical product issues would affect repayment, bringing in the same coordination problems discussed above.

and alternative mechanisms for risk management, such as lockout, are important to keep costs low and repayment high. Several rounds of experimentation will be needed to train a scoring model and operationalize lockout technology. But if MFIs are planning a shift to more data-based lending, this is a good place to start.

## Partnership management

The pilots revealed surprising ways in which the MFI and PAYGo companies were and were not able to align. At the executive and group levels, MFI leadership saw the potential to grow their client base and partner with an innovative, technology-driven lender, while PAYGo heads saw a cheaper source of funding and added value for their customers. This alignment had already translated into on-the-ground coordination: both Baobab+ and BrightLife staff operated out of MFI branches, thereby leveraging the client base and credibility of their MFI sisters.

However, the crucial, complicated decisions about credit scoring, marketing, managing the client relationship, managing credit risk, and dozens of other details are made by mid-level managers. Mid-level managers are asked to juggle competing priorities and are evaluated based on performance. Connecting and aligning these managers proved far more difficult than at the executive level.

In one instance, a PAYGo manager was reluctant to offer MFI products to potential customers for fear of distracting from PAYGo sales. In another instance, MFI and PAYGo managers clashed over a request for the MFI to do a blanket evaluation of the PAYGo company's repayment data. Early expectations were that common ownership would help to alleviate many traditional partnership hurdles. But the reality is that fusing distinct operations creates friction, especially for companies that do not have corporate ties.

In both projects, managers and implementers from MFIs and their PAYGo partners had spent very little time together. They were not familiar with each other and were often reticent to share sensitive data. Yet when asked to work together and brainstorm ideas, teams came alive. Making time for key staff to meet and engage with their counterparts will pay dividends later, as will regular check-ins across the aisle and a dedicated project manager that sits between organizations. Well-designed incentives can also help motivate teams to work together.

# Partnership structure

In a 2013 presentation, David Porteous, founder of BFA, said "partnership" is an "abused and misused term" in financial services, where "true partnership is still rare." At the time he was speaking of partnerships between banks and mobile network operators, but his message is still relevant today.

Porteous laid out three fundamental elements for successful partnerships:

1. Partnerships are between businesses that have complementary, not competitive, positions in their core markets.
2. The partnership does not conflict with the parties' core businesses.
3. Partnerships answer the question: What's in it for me? (for themselves and for their clients).

The following questions can help expose the gaps in an MFI–PAYGo partnership.

### DO THE BUSINESSES HAVE COMPLEMENTARY POSITIONS IN THEIR CORE MARKETS?

**It depends.** PAYGo and MFI businesses both offer financial services to low-income borrowers, but for different purposes. MFIs do not do widespread lending for solar or other consumer goods. And PAYGo companies do not finance businesses, accept deposits, or offer many of the other financial services that MFIs do. But the emergence of nonsolar financial products such as SOLAPESA suggests that some PAYGo operators may view themselves as competitors in the broader consumer lending sector.

### DOES THE PARTNERSHIP CONFLICT WITH EITHER ENTITY'S CORE BUSINESS?

**Potentially.** MFIs are generally not in the business of financing SHS for unbanked clients—this is the core business of PAYGo solar companies. PAYGo companies can (and do) offer solar loans to MFI clients, but there are very few MFIs for which SHS loans are a major revenue source; it is not an MFI core business. On the other hand, MSME loans are not a core part of any PAYGo business today, even though some providers may want it to be.

However, for many clients these may be distinctions without a difference. Both personal and professional debts must be repaid with the same limited resources. PAYGo clients that join the MFI could be servicing more debt, and therefore they may be less likely to borrow from the PAYGo company again. This could impact the PAYGo's core business and make it less likely to partner with a fellow lender.

### DOES THE PARTNERSHIP ANSWER THE QUESTION, "WHAT'S IN IT FOR ME?" FOR EACH BUSINESS ENTITY AND ITS CLIENTS?

**No.** At least not yet. The two partnerships studied benefit the clients involved (they can now access formal financial services from multiple providers) and probably benefit the MFIs (assuming that those clients can generate sustainable profits). But there is not yet enough benefit for affiliated PAYGo companies, and nonaffiliated PAYGo operators may never see much of a benefit at all.

## How to think about PAYGo compensation in an MFI–PAYGo partnership

In both pilots, customers who had been acquired and serviced by a PAYGo operator were contacted by MFI staff, who offered them a financial product. The MFI received the customer's name, contact information, and repayment data from the affiliated PAYGo company for free (note that the PAYGo customer must agree to the information exchange).

There was a fundamental difference of opinion on the fairness and sustainability of this approach. One MFI executive said that the PAYGo company was already receiving substantial benefit just from its association with the MFI brand: "[The PAYGo company] is lucky to have us, and the value for them comes from that relationship."

In her view, the MFI had put a tremendous amount of work and resources into building a brand that was trusted by clients, and the value for the PAYGo company of being associated with their brand more than made up for any lost revenue. The same executive was frank in her appraisal of the current dynamic: "Right now, we are the prettier sister. In the future, maybe it will be different."

This point of view can be true in the short term and counterproductive in the long term. PAYGo companies are issuing relatively small loans to poor clients in remote areas, which is a costly proposition for them. They can and must do a better job of managing their credit risk, but poor rural customers are exposed to economic shocks that can make them inherently riskier borrowers. Most providers believe that eventual profitability will depend on repeat business, and it is reasonable to expect a drop in revenue for users that are referred to an MFI. Incomes are not high enough in these areas to service multiple loans simultaneously. PAYGos may not "lose" clients in these partnerships, but those clients may become less valuable.

PAYGo executives from both pilot companies are adamant that they need to be compensated for that lost value in order to defray the cost of client acquisition and provide a clear incentive for them to partner with the MFIs. Different types of compensation have been discussed:

- **Pay-per-lead.** The MFI pays a flat amount for every PAYGo client that takes a loan or opens a savings account, with larger amounts for more valuable products.
- **Revenue sharing.** The PAYGo company receives some or all of the interest income for the first loan that a converted customer takes out.
- **Servicing fee.** Should the MFI decide to rely on PAYGo technology and/or staff to help manage credit risk, it pays a fee to the PAYGo company for each active borrower.

The best solution will depend on the context and the institutions involved. For credit products that resemble PAYGo loans, it may make sense to have the PAYGo operator continue servicing the client. This approach is simple and could ensure that the credit management, which produced successful repayment in the first place, is continued.

One simple way to address the compensation issue would be for the PAYGo company to reach an agreement with a nonaffiliated MFI. An arm's length contract could help set a fair market price for customer acquisition. But this raises another important question.

## Are partnerships like these possible between nonaffiliated parties?

When PAYGo operators who were not affiliated with MFIs were asked if they would ever consider a partnership structure akin to the ones described in this paper, they flatly refused. Respondents did not see enough value to justify giving up their best customers (see Box 3), were concerned that rival sources of credit could overburden their customers and reduce uptake of future products, and/or plainly viewed MFIs as competitors.

PAYGo companies have invested tremendous effort and capital in reaching underserved customers, and, in many cases, are failing to break even (at least thus far) on the initial credit product. Why would they want to give up customers who have demonstrated repayment ability? To justify such an arrangement to their shareholders, they would need to be compensated for the (discounted) lost lifetime value of those customers, a sum that may well exceed what MFIs could hope to make serving such clients. In short, the scope for replicating these partnerships with nonaffiliated PAYGo and MFI companies may be limited.

BOX 3. **Who owns the client?**

This was a constant refrain from both MFIs and PAYGos, which are each accustomed to having personal knowledge of their end clients.

Porteous (2013) answers the question: “Nobody ‘owns’ the client! Partnership is…about defining who takes liability for which actions and who can do what with the client.”

As a client’s capacity grows, the hope is that their financial needs will grow, too. It is unrealistic that one financial institution would meet all of these needs. Customers will eventually find a provider that offers the services they seek; better they do so through a trusted partner.

## Is cross-selling the future of MFI-PAYGo partnerships?

The answer is yes, but it applies only to non-credit offerings from MFIs. There is a range of possible MFI-PAYGo synergies to explore that could unlock value. Both sides can leverage each other’s assets to reduce costs, explore alternative financing structures, and cross-sell core products. PAYGo operators legally cannot offer insurance or savings, and willingness to partner on these offerings could be significantly higher than for credit offers. MFIs should explore offering low-cost, low-risk products to PAYGo customers and even branding them under the PAYGo company (also known as white labeling). There are many sectors in which these types of partnerships could add value for clients, create stickiness for originating companies, and unlock multiple small revenue streams for MFIs that have the potential to grow over time.

# RECOMMENDATIONS

The following recommendations are for MFIs and PAYGo providers that are contemplating or structuring strategic partnerships.

## MFIs need to find their fit in asset finance

There are large gaps in the African financial services market, particularly in asset finance. Those gaps are slowly being filled by innovative providers. And despite the long-standing position of MFIs in these markets, MFIs should not expect newer providers to hand over customers anytime soon.

If MFIs feel they should participate or compete in asset finance, then more experiments such as Baobab+ and BrightLife are needed. However, the partnership framework in this paper, where all roads lead back to a formal banking relationship with an MFI, should not be the only framework tested.

Financial services bundled with a valued good or service—what Apis Partners calls "contextual financial services"—have great value in their own right, and companies that specialize in offering them may rapidly scale. To tap into that potential, MFIs may seek to create affiliates (such as Baobab+ and BrightLife) that are empowered to compete in asset finance while offering white-labeled savings or insurance products to their customers. On the other end of the spectrum, MFIs could create dedicated PAYGo divisions, similar to credit card divisions of major banks, that also specialize in asset finance, manage to a different set of metrics, and have the freedom to operate within or outside of traditional client channels.

## Establish key integrations and processes early

There is a hard limit on how much strategizing can accomplish. Potential partners should align on high-level goals, create the minimum viable product that will accomplish those goals, then identify and execute the technical and operational integrations needed to pilot. The issues that arise during these integrations will do more to strengthen the partnership than any boardroom discussion. Even light experimentation may require a letter of no objection from a regulator, which is why regulators should be proactively engaged to address any concerns.

## Motivate the PAYGO company with proper incentives and keep its interests aligned

A pay-per-lead arrangement does little to incentivize the PAYGo company to bring the MFI strong potential borrowers or assist with future servicing. If PAYGo companies or other MFI affiliates receive a share of the interest income that is generated by MFI loans to their clients, they will be motivated to introduce MFIs to those clients. Additional servicing fees could defray operational costs, such as house visits or call center time.

## PAYGo providers need to improve their credit risk management and hit their targets

PAYGo companies do not necessarily need MFI-like repayment levels. In fact, given their technology and customer base, it might be counterproductive for them to insist on rigid repayment. However, more effective screening, more local interactions with borrowers, and more strategic repossessions of defaulted equipment would help companies get closer to sustainable levels of repayment. At the same time, it is incumbent on executives to be honest regarding their portfolio quality and repayment patterns and to educate MFI partners about the particulars of their business model. If PAYGos are going to service MFI loans, they will need to commit to service-level agreements and meet those commitments. None of these adjustments should come at the expense of fair treatment of customers and adherence to the sector's Consumer Protection Code, ratified by the Global Off-Grid Lighting Association (GOGLA).[4]

4 The Consumer Protection Code includes six key principles: transparency, responsible sales and pricing, good consumer service, good product quality, data privacy, and fair and respectful treatment. Learn more at https://www.gogla.org/consumer-protection

# CONCLUSION

**THE OPPORTUNITIES FOR MFIs TO ENGAGE IN STRATEGIC** partnerships and create new vehicles for serving clients will not end with PAYGo solar. Other companies are exploring novel ways to help low-income customers accumulate the assets that will help them escape poverty. Fintechs of all stripes will seek to modularize and optimize every link in the financial services value chain.

The MFIs that survive the next 10 years will not know every client personally. They will acquire customers through a variety of channels and service them through others. The institutions that are able to build the right bundles of partnerships, products, and channels will be the ones that thrive—and will help their clients to do the same.

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## About FIBR

FIBR is an initiative of BFA in partnership with Mastercard Foundation to create new ways to connect low-income populations to financial services that meet their needs. Rapid uptake of smartphones in these markets means we can digitize data about how individuals otherwise informally transact as employees, customers, or suppliers in their communities and with local businesses. The digitization of these trusted business relationships allows for new data that a broader range of providers can use to offer tailored financial products and services to the demographic. Learn more by visiting fibrproject.org

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CGAP is an independent think tank that works to empower poor people to capture opportunities and build resilience through financial services. We test, learn and develop innovative solutions through practical research and active engagement with our partners on building responsible and inclusive financial systems that help move people out of poverty, protect their gains and advance global development goals.  Housed at the World Bank, CGAP is supported by over 30 leading development organizations committed to making financial services meet the needs of poor people.

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