



FRANK BATTEN SCHOOL
of LEADERSHIP and PUBLIC POLICY



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APPLIED POLICY PROJECT

Improving lending to the
formerly incarcerated

PRESENTED TO

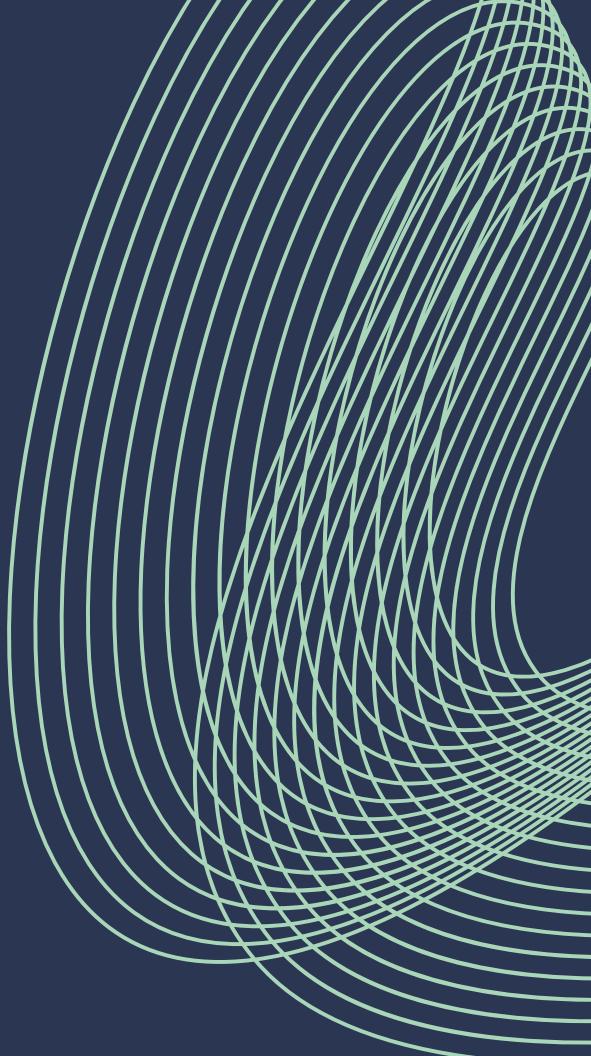
The Fountain Fund

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KEY TERMS

Client Partner - An individual who has received a loan from the Fountain Fund.

Financial Literacy - The ability to understand and use various financial skills, including personal financial management, budgeting, and investing.

Formerly Incarcerated Individuals - People who have previously been incarcerated and are reintegrating into society.

Microlender/Microfinance Institution - A financial institution that offers small loans to individuals who lack access to traditional banking services.

Rate of Return - The total amount of loan payments, including interest, made by borrowers, divided by the total amount lent, expressed as a percentage.

Reentry - The process of reintegrating formerly incarcerated individuals into society, often involving support services like employment, housing, and financial assistance.

Traditional Lender - A financial institution that provides conventional loans with stricter requirements than microlenders.

ACRONYMS

CDFI	Community Development Financial Institution
CHN	Crédito Hipotecario Nacional
FDIC	Federal Deposit Insurance Corporation
FF	The Fountain Fund
FII	Formerly Incarcerated Individuals
FMS	FICO Money Smart
GFF	Good Faith Funding
LFO	Legal Financial Obligation
MFI	Microfinance Institution
RCT	Randomized Controlled Trial
RR	Rate of Return
SBA	Small Business Administration
SP	Savings Program
VNB	Virginia National Bank
USDA	United States Department of Agriculture

EXECUTIVE SUMMARY

Formerly incarcerated individuals (FII) in the United States face significant barriers to financial stability, including limited access to affordable credit. These barriers contribute to a cycle of economic disadvantage, impeding reentry and increasing the risk of recidivism. The Fountain Fund (FF), a nonprofit microlender, seeks to address this challenge by offering low-interest loans to FII, supporting their financial independence and social reintegration.

FF's unique approach supports the formerly incarcerated by providing access to capital for a wide range of purposes and with few consequences for default, while most microlenders focus primarily on business investments and are more risk averse. This allows FF to meet the needs of FII more holistically, but comes with tradeoffs for sustainability. Only 60% of FF loans are fully repaid, compared to 90% or higher reported by other microlenders.

Evidence from other microlenders suggests that strategies designed to improve repayment without making loans more exclusive can be effective. Promising interventions include improved financial literacy training, client check-ins, and efforts to encourage clients to save through nudges or direct incentives. All four alternatives are found to be cost-effective for FF, promoting increases in repayment that outweigh costs, without introducing excessive barriers for client partners. Yet, client check-ins emerge as the most effective and feasible option, with an estimated 9.5 percentage point increase in FF's repayment rate and a cost of \$4,400 per month.

Regular check-ins foster stronger borrower engagement, provide early detection of financial challenges, and offer consistent support. This approach simultaneously enhances repayment rates and aligns with the Fountain Fund's mission of fostering financial autonomy. While in-house financial literacy training and savings programs also showed potential, they pose higher implementation costs or less beneficial outcomes.

The recommended strategy is to implement a structured client check-in system, prioritizing in-person meetings early in the lending process, followed by periodic remote check-ins. This balanced approach maximizes engagement while minimizing burdens to client partners, ultimately leading to improved financial outcomes and greater sustainability for the Fountain Fund.

By refining its client partner support practices, the Fountain Fund can better meet the needs of FII, empowering them to break cycles of poverty and contribute positively to their communities. Continued evaluation and adaptive strategies will be essential to sustain the Fund's impact and to further bridge the credit gap for marginalized populations.

THE FOUNTAIN FUND

This report was commissioned by the Fountain Fund (FF), an MFI operating in five American cities in the Northeast. The Fountain Fund is a 501(c)(3) non-profit organization which exists to improve the circumstances of formerly incarcerated individuals (FII) facing systemic barriers to reentry.

By providing FII with access to low-interest personal loans, FF seeks to improve FII's ability to meet their basic needs, achieve financial stability, and pursue their personal goals.



THE FOUNTAIN FUND

The Fountain Fund was founded in 2017 in Charlottesville, Virginia and funds its loans primarily through donations and recycled capital. In 2021, it established a second branch in Richmond, Virginia, in partnership with the Mary Morton Parsons Foundation. Further expansion came in 2022, reaching New Orleans, Louisiana, as a service of The First 72+, and opening a new office in Philadelphia, Pennsylvania, as a result of a grant from the GreenLight Fund. A second grant from GreenLight in 2024, led to the opening of a fifth location in Boston, Massachusetts. Over their seven years of operation to date, the Fountain Fund has administered 728 loans, ranging from \$55 to \$20,750 and totalling \$3,631,796 (Fountain Fund Downhome Data, 2024). Loans are typically offered for a three-year term at a rate of 5% interest, which lowers to 3% if client partners agree to have payments automatically withdrawn from a checking account. These interest rates are extremely low by traditional standards. The average rate for a personal loan in 2024 was 12.31% and could be as low as 7% for those with excellent credit scores and low debt-to-income ratios (Ceizyk et al., 2024). For those with poor credit scores, generally between 300 and 580, rates can be 30% or higher (DeNicola, 2024).

ACTIVE BORROWERS:	ALL TIME LOANS:	AVERAGE LOAN SIZE:	AVG. NEW LOANS / MO.	RATE OF RETURN
340	728	\$5,837	17	59%

Source: Fountain Fund Downhome Data, September 2024; Calculations in Appendix 1 & 2

Fountain Fund borrowers are referred to as client partners and can receive loans for a number of different purposes. Figures 1 and 2 show the seven major loan categories: business investments, legal financial obligations, emergency expenses, housing, education, opportunity, and transportation. The largest category by far is transportation, which accounts for more than half of FF loans, followed by housing and business investments. The diversity in loan purposes is one of

Figure 1:

Fountain Fund Loan Categories by Amount

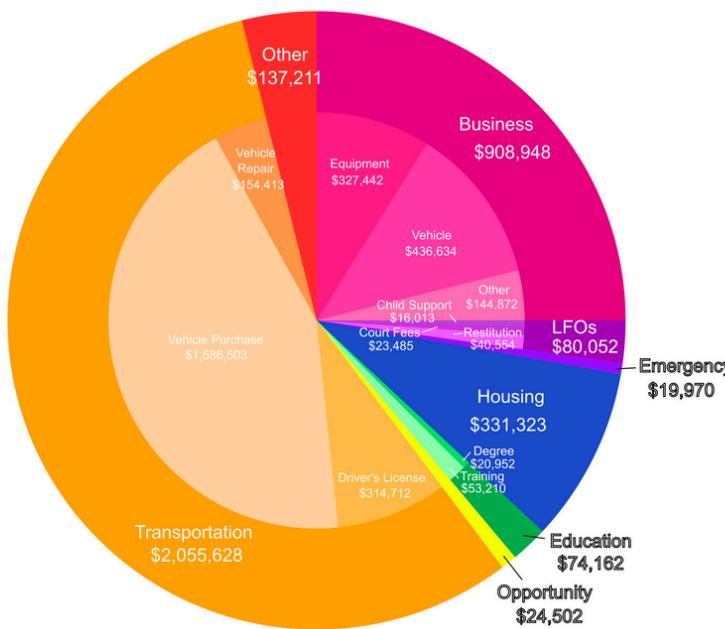
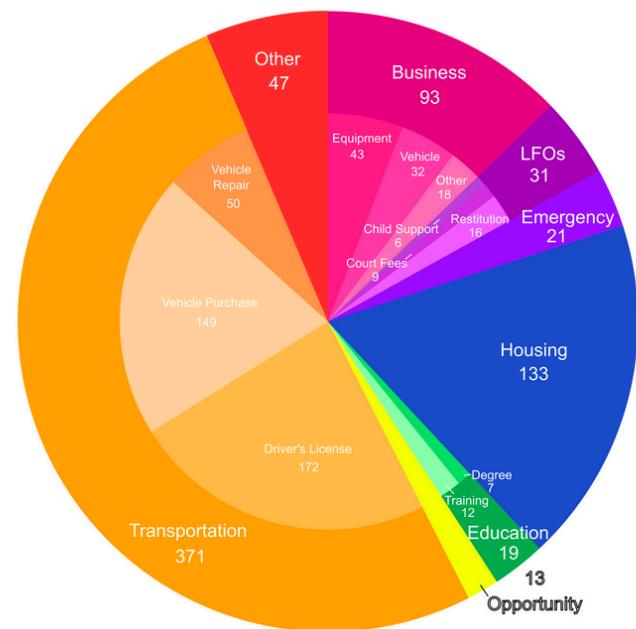


Figure 2:

Fountain Fund Loan Categories by Number



Note: Categories in figures 1 and 2 are those designated by the Fountain Fund

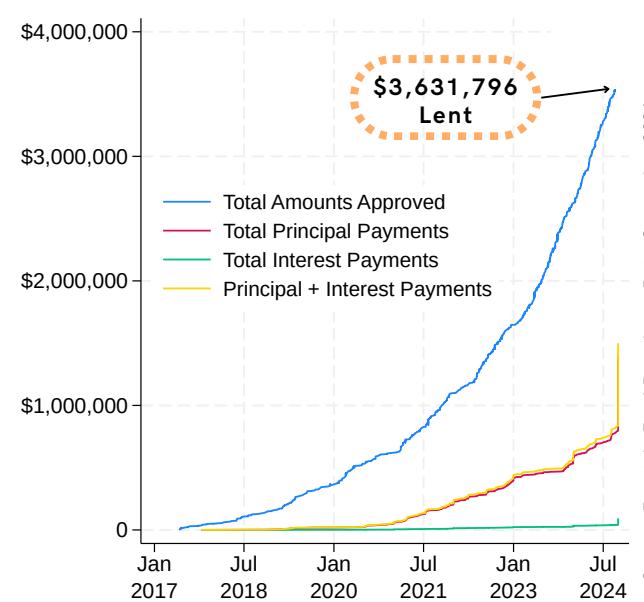
Source: Fountain Fund Downhome Data, September 2024

the most unique features of FF's approach to microlending, as in the vast majority of cases, MFIs cater primarily or exclusively to entrepreneurs. This difference allows FF to address more of the needs of FII than other MFIs are able to with their target populations. However, it also makes comparison with other MFIs more difficult and limits the applicability of microlending research.

Figure 3 demonstrates the growth of FF, since its founding in 2017, along with repayment trends. Though payments will always lag behind approvals, since approvals happen all at once and payments catch up over the three year loan term, the trend of consistent loan loss is evident.

Figures 4.1 and 4.2 provide a more granular insight into the lifespan of FF loans. Some client partners borrow once, some multiple times. Some take out concurrent loans, while others choose to transfer old loans into new ones. These different journeys represent the diversity of borrowers, all with unique challenges and circumstances, that FF serves.

Figure 3:
Timeline of FF Loan and Payment Amounts



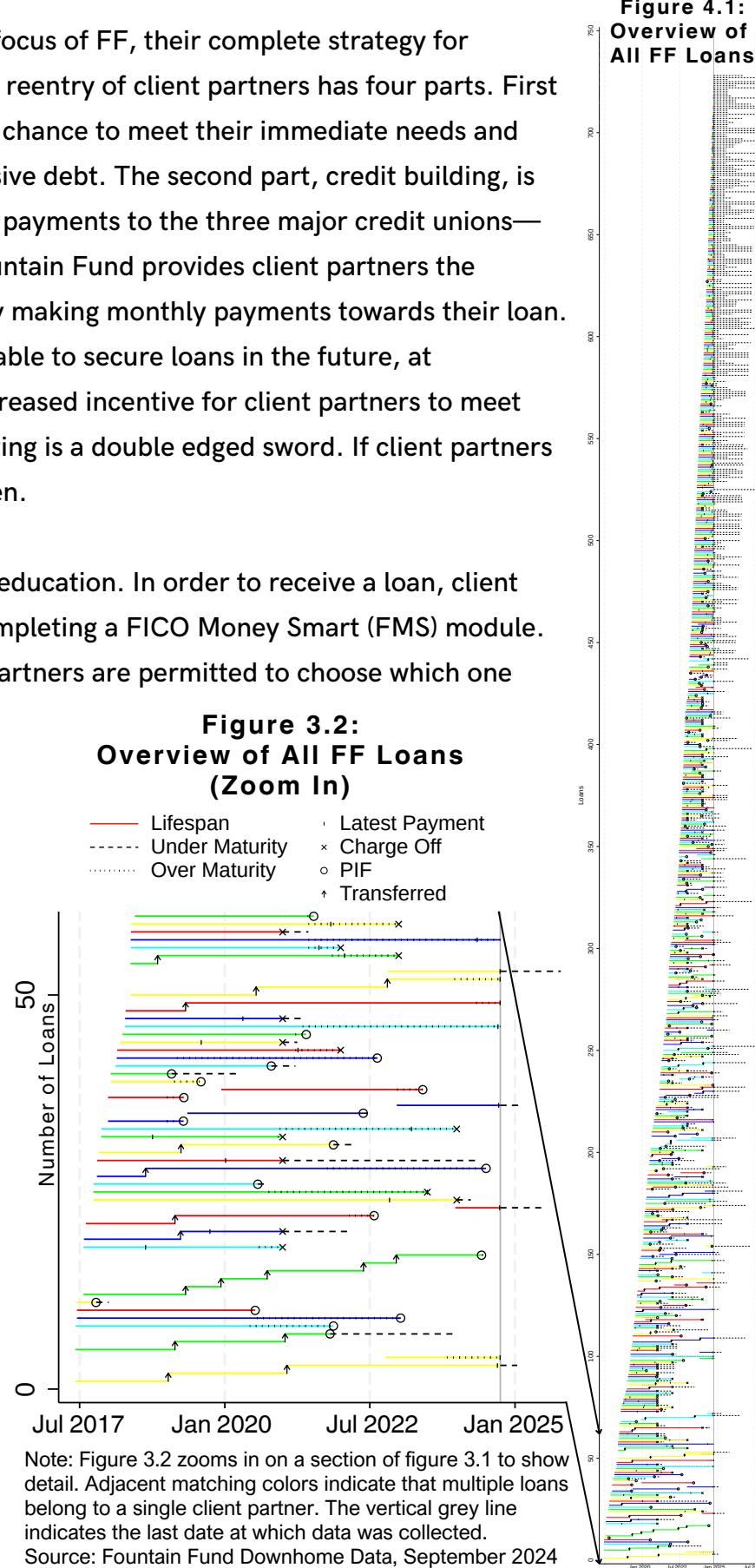
Source: Fountain Fund Downhome Data, September 2024

While low-interest microloans are the main focus of FF, their complete strategy for promoting the empowerment and successful reentry of client partners has four parts. First their loan program offers client partners the chance to meet their immediate needs and invest in their future, without taking on massive debt. The second part, credit building, is closely related to the first. By reporting loan payments to the three major credit unions—Experian, Equifax, and TransUnion—the Fountain Fund provides client partners the opportunity to improve their credit scores by making monthly payments towards their loan. Ideally, this will make client partners better able to secure loans in the future, at reasonable rates. Also, it may provide an increased incentive for client partners to meet scheduled payments. However, credit reporting is a double edged sword. If client partners miss payments, their credit scores can worsen.

The third aspect of FF's strategy is financial education. In order to receive a loan, client partners are required to present proof of completing a FICO Money Smart (FMS) module. There are 14 available modules, and client partners are permitted to choose which one they complete. FMS modules are available for free online, are self-directed, and are advertised to take between 1.5 and 4 hours to complete. Modules consist of instructional videos and individual activities.

Finally, the Fountain Fund helps client partners access other support services they might need by connecting them with non-profit and reentry organizations in the area. In Charlottesville, FF encourages its client partners to attend the monthly One Stop Shop event, organized by client partner and Director of Client and Community Engagement at FF, Martize Tolbert. One Stop Shop gathers representatives from many organizations under one roof, providing a place where members of the community, including client partners, can

Figure 4.1:
Overview of All FF Loans



receive a number of services. For example, attendees can have their driver's license reinstated by the DMV, apply for a loan from the Fountain Fund, and learn about apprenticeship opportunities in one afternoon. Even apart from the One Stop Shop event, FF makes efforts to connect client partners with the resources they need by referring them to a specific member of that organization through a personal introduction (Tolbert, 2024).

The purpose of this report is to identify and evaluate ways the Fountain Fund might improve the cost effectiveness of its operation, without introducing excessive burden onto its client partners. In doing so, FF can simultaneously improve client outcomes and serve more formerly incarcerated individuals.

INTRODUCTION

Formerly incarcerated individuals (FII) are regularly excluded from receiving traditional forms of credit, particularly bank loans, which limits their autonomy and opportunities for economic mobility (Aneja & Avenancio-Leon, 2019). This is one of many compounding barriers to reentry faced by FII which contribute to high rates of poverty and recidivism among the over 7 million FII in the U.S. (Bahr et al., 2010).

In 2017, the Fountain Fund (FF) was founded to promote the personal autonomy and economic mobility of FII by providing them with low-interest microloans. While the organization has found considerable initial success, receiving a large number of donations and expanding to 5 cities, it suffers from low repayment rates that threaten its long-term sustainability and continued growth. Though improving repayment would benefit FF, traditional strategies to increase repayment, such as collateral requirements and high interest rates, risk harming borrowers and making loans less accessible. Therefore, identifying strategies to promote timely repayment without sacrificing depth of impact is crucial for FF's long-term success.

Significant tradeoffs between sustainability and impact is a challenge faced by nearly all microlenders. However, certain unique features of FF, such as granting loans for non-business purposes, avoiding group lending, and extremely low interest rates, place it on the extreme of the impact side of the spectrum, compared to other microlenders. As a result, FF experiences an approximately 60% full-repayment rate, compared to the 90% or higher reported by other microlenders. While this commitment to depth of impact is a notable strength of FF, it also makes it vulnerable to fluctuations in grant and donor funding, as well as limiting its scope.

Fortunately, promising evidence exists for alternative lending strategies that improve repayment of microloans without harming borrowers. While many possible approaches exist, this report considers four interventions: in-house financial literacy training, client check-ins, savings nudges, and savings incentives. Published evidence for each alternative is used to estimate its impact on FF's repayment rates, while cost and accessibility for client partners are used to weigh alternatives. The report then examines the efficacy of each alternative in order to make a final recommendation for future interventions.

BACKGROUND

Credit is a crucial part of modern life, contributing greatly to both individual and societal welfare, particularly for those with low incomes and little savings (Guttmann, 2016). The ability to borrow against future earnings allows people to invest in productive goods like cars, homes, education, and starting or expanding businesses, all of which can increase their earning potential. This can help individuals to overcome poverty and lead them to more prosperous, self-empowered lives. Borrowing also helps people to smooth over temporary economic difficulties, such as the loss of a job or an emergency medical expense, preventing temporary setbacks from having disastrous long-term consequences. For society as a whole, credit allows citizens to be more self-sufficient, less reliant on social safety nets, and to contribute more fully to their communities. Without the ability to borrow, individuals would have poorer quality of life, economies would grow more slowly, and societies would be less prosperous as a whole (Weller, 2009).

Unfortunately, access to affordable credit is not a guarantee for many Americans, and not all households have the same opportunities to borrow. The price and availability of loans vary significantly by demographics. Both mutable (income, level of education, geography, marital status, etc.) and immutable (race, age, gender, ethnicity, etc.) characteristics can be correlated with loan access (Henderson et al., 2015;

- 46% of low income Americans are ineligible for loans
- 45% of Black households use traditional credit, compared to 75% of White households
- Payday loans cost 10x more than bank loans

L. Rice, n.d.; W. E. Rice, 1996; Weller, 2009). In 2015, the U.S. Consumer Financial Protection Bureau reported that 45 million people, nearly 20% of the U.S. adult population, have either no credit histories or such limited histories that they would be unlikely to secure a loan from a traditional lender (Kambara et al., 2015). These findings were also highly correlated with race and income. In low-income communities, 46% of people had "unscorable" credit histories, compared to 9% in upper-income neighborhoods, and Black and Hispanic people were 12 percentage points more likely to be unscorable than Whites. More recently, Goodstien et al. (2018) find that 75% of White U.S. households utilize traditional bank credit, compared to only 50% of Hispanic households and 45% of Black households. Black and Hispanic households are also much more likely to use high-cost nonbank products, such as payday loans, pawn shop loans, and rent-to-own services. Despite laws in many states restricting the maximum rates for payday loans, such loans typically cost between \$10 to \$30 for every \$100 borrowed, a rate more than 10 times

higher than most credit cards (CFPB, 2024). The fact that payday loans are used, even with such high fees, indicates the strong need for credit for America's poorest citizens.

Demographic differences in the accessibility of loans contribute to higher levels of poverty in minority communities, since without credit, poorer individuals cannot invest in income generating activities. This also undermines the ability of marginalized populations to participate in and benefit from economic growth, increasing the gap between the haves and have-nots (Hudon, 2009). Those without access to affordable credit experience less autonomy and reduced self-empowerment to improve their economic circumstances, keeping them dependent on charity and government services and leaving them vulnerable to systems designed to exploit the poor (Weller, 2009). In many cases, those without access to affordable credit turn to high-cost predatory lenders to cover emergency expenses, leading them to increased debt, further reducing future incomes and likelihoods of securing traditional loans (Goodstein et al., 2018). Another major consequence of financial exclusion is persistent poverty across generations with widespread negative implications for health, brain development, quality of life, civic participation, socioeconomic mobility, rates of crime and incarceration, and many other critical life outcomes (Books, 2004; Corcoran, 2009; Duncan et al., 2017; Mood & Jonsson, 2015).

PROBLEM STATEMENT

Formerly incarcerated individuals (FII) are particularly excluded from accessing affordable credit due to compounding barriers, such as increased debt, reduced earnings, and lending discrimination. The inaccessibility of credit for over 7 million FII in the U.S. contribute to financial instability, reduced social mobility, worse health outcomes, and higher rates of recidivism.

In some cases, background checks by private lenders and federal programs make FII completely ineligible for certain loans (Henderson, 2005). In other cases, risk-factors used by banks to determine eligibility make FII less likely to receive loans than other prospective borrowers.

Incarceration comes with significant barriers to employment, incomes, and housing, which commonly influence loan terms. Background checks by employers and lessors make it difficult to secure stable work and shelter. Rental housing often requires proof of income, and maintaining employment is difficult without housing, creating a self-reinforcing cycle of diminished opportunity (Orians, 2016). Those who experience incarceration also tend to have less education, fewer marketable skills, and sometimes behavioral or substance abuse problems, further reducing their prospects for stable employment (Bahr et al., 2010; Couloute & Kopf, 2018; Doleac, 2018). These factors compound with racial inequities, as Black Americans in particular are greatly overrepresented in the carceral population, by a factor of 6 (Wang, 2023).

The formerly incarcerated also tend to face high debt burdens and low credit scores. While incarcerated, people are not able to effectively service their existing bills and debts, leading to higher debt amounts and credit score decreases of 42-69 points on average (Aneja & Avenancio-Leon, 2019). Additionally, criminal convictions often include fines, fees, and restitutions, called legal financial obligations (LFOs), which are debts directly imposed by courts (Harper et al., 2021). Credit scores and active debts are one of the main factors considered by banks to determine loan eligibility. So, even without direct discrimination, FII have lower chances of securing a loan than most.

PROBLEM STATEMENT

Financial exclusion of FII contributes to compounding setbacks, as FII with high debts and low access to affordable loans face low wages, reduced ability to build assets, more poverty, worse physical and mental health outcomes, and higher rates of reincarceration (Adamson, 2019; Aneja & Avenancio-Leon, 2019; DeMarco et al., 2021; Diller et al., 2010; Ginapp et al., 2023). Additionally, barriers to capital access and their consequences for FII tend to be worst for low-income, minority men (Adamson, 2019; Avenancio-Leon, 2018; Harper et al., 2021; Maroto, 2015; Orians, 2016; Wamsley, 2019).

BACKGROUND ON LENDING INEQUITY

There is some debate around the causes of credit inequity in the U.S. Fair lending laws, such as the Equal Credit Opportunity Act (ECOA), prohibit lending discrimination based on race, ethnicity, religion, nationality, sex, marital status, age, and receipt of welfare (Federal Reserve, n.d.). Assuming that most reputable lenders adhere to federal law, some scholars suggest that racial disparities in credit access are systemic, meaning they are due to correlated household characteristics and geographic factors, rather than outright discrimination (Goodstein et al., 2018; Stuart, 2003). They argue that differences in income, education, and savings behavior are the main determinants of credit access and that these factors can be correlated with race and ethnicity, even when race is not the primary driver of inequities in credit access. As neighborhoods tend to share demographic characteristics, the effect compounds, since banks are less likely to establish branches in poor neighborhoods, while predatory lenders are more likely to do so. As a result, racially segregated neighborhoods experience reduced access to bank credit and an increased proximity to nonbank lenders, without being due to direct discrimination. On the other hand, discrimination in lending may still exist, despite federal law (Goodstein et al., 2018; Ladd, 1998). This distinction is important because it determines appropriate corrective actions to take to improve credit access for poor and minority populations, especially FII.

If direct discrimination accounted for a large part of unequal access to credit, then “ban-the-box” initiatives to prevent lenders from conducting criminal background checks, as well as greater enforcement of the ECOA, could be effective at improving credit access for FII. In their 2018 study of U.S. Census data, Goodstein et al. find that household characteristics, such as income, education, and savings, explain two-thirds of the Black-White gap in bank credit use and three-fourths of the Hispanic-White gap. A small portion is explained by neighborhood and geographic factors, and the remaining 15-24% is attributable to a mixture of direct discrimination, discouragement from applying, and cultural norms—i.e. using nonbank lenders because they are more familiar or because banks are considered untrustworthy. These results suggest that stronger anti-discrimination laws could be effective at reducing some of the lending disparities due to race and criminal status, but a large gap would still remain.

Existing evidence suggests that discrimination in lending against FII is largely systemic in that it is the result of lenders' pursuit of profitability and correlations between race, criminal status, and household characteristics. Since for-profit lenders do not internalize the positive externalities associated with lending to the poor—such as community economic growth, decreased reliance on government programs, less poverty, and less crime—these populations remain underserved and potential gains remain unrealized. Therefore, solutions should attempt either to make lending to marginalized communities more profitable or should establish institutions which include lending to the underserved as part of their mission. One approach that combines both of these options is that of microlending.

MICROLENDING

Microlending is a popular approach to combat a lack of access to traditional forms of credit, one that has gained significant traction in recent decades. Microlenders, also called microfinance institutions or MFIs, are institutions established to provide loan products to underbanked populations, often paired with supplementary services, such as financial literacy or entrepreneurship training. The concept was first established in Bangladesh in 1983 by the Grameen Bank (Yunus et al., 2010). Since then, microlending as a tool for poverty alleviation has grown massively in popularity. Though no formal accounting has occurred, the Microcredit Summit Campaign estimated 211 million clients worldwide being served by MFIs in 2013 (Microcredit Summit Campaign, 2015).

Microfinance institutions differ from traditional lenders in a few important ways, most importantly that they are mission, rather than profit, driven. This means that loan terms and prerequisites are designed to make loans as accessible and beneficial as possible to a target population that is underserved by for-profit banks. In many cases, MFIs aim to make only enough returns to break even, allowing them to remain operational, but otherwise offer loan terms that are as favorable as possible to borrowers. However, the role of profit can vary greatly by institution. Some MFIs are willing to take consistent losses on behalf of borrowers, to avoid restrictive loan terms or harsh punishments for default. In these cases portfolio losses need to be supplemented with external funding, such as grants or donations. Other MFIs may be more profit oriented, as some are funded by shareholders, for whom a positive return on investment is expected, creating the need to more carefully balance mission and profit.

Aside from funding sources, regional differences can have a large impact on how an MFI can operate. In developing regions, where formal banking systems and regulations are weak or non-existent, MFIs may operate more like a bank, taking deposits, offering interest, insuring against losses, in addition to offering loan services. However, other MFIs may not have the capacity to offer banking products like savings accounts, or financial regulation may prevent them from doing so. This is more common in areas with robust banking systems, where MFIs are established to serve an excluded subset of the population, as opposed to MFIs which act as the only lender in their region (Serrano-Cinca & Gutiérrez-Nieto, 2014).

Microlending is most popular in developing countries, and most formal studies of the practice have taken place in that context. However, many MFIs attempting to recreate the success of the Grameen Bank and similar institutions have been established in developing nations as well. The U.S. Treasury recognizes over 1,400 Community Development Financial Institutions (CDFIs), a designation that is somewhat broader than MFI, but similarly represents organizations which attempt to bolster economic development through access to capital (US Department of the Treasury, 2024).

In the U.S., MFIs are most often structured as nonprofit organizations and provide loans up to a maximum of \$50,000 (Pollinger, Outhwaite, & Cordero-Guzmán, 2020; SBA "Microloans"). Individual microlenders can have different goals and implement their programs in a wide variety of ways. For example, some MFIs have specific aims, such as to increase the number of cooperative businesses in an area, while others focus more generally on things like poverty alleviation or women's economic empowerment (Conlin, 2018). Microlenders often supplement loans with requirements that are intended to help borrowers be successful or to improve repayment, such as entrepreneurship training or group lending. These practices can, but do not always, replace traditional methods of improving repayment, since they are more favorable to borrowers than high interest rates, collateral requirements, and income requirements. While MFIs have the legal right to require collateral or to sue borrowers over defaulted loans, some elect not to pursue these avenues, as they contradict their desire to ultimately benefit borrowers. The particular lending practices, supplementary supports, and methods of collections used by an MFI depends greatly on its goals, funding sources, and legal status.

PROBLEMS IN MICROLENDING

Despite promising evidence in favor of microlending for improving credit access for people who have been excluded from traditional lenders, there is a major aspect of the approach which limits its ability to serve those most in need. Since microlenders rely on borrowers repaying their loans in order to serve more clients, they often face difficult decisions regarding the loss they are willing to accept. Some MFIs manage to be entirely self-sustaining with interest from loans making up portfolio losses, though this is a rare case, and it usually requires them to operate in conditions where they are the primary lender in a region (McIntosh & Wydick, 2005). This is achievable for MFIs in developing countries, where there is little competition in financial markets. However, for MFIs in developed countries like the U.S., it is harder to achieve self-sufficiency, as most profitable borrowers are already served by established lenders. In these cases, microlenders need to make up portfolio losses with grants and donations in order to remain operational. The lower MFIs' rates of return are, the more fundraising they must do to break even.

Microlenders in all settings face consequential tradeoffs between sustainability and impact, as it tends to be more cost effective to serve wealthier borrowers than poorer ones (Mersland & Strøm, 2010). Even in cases where poorer and wealthier borrowers are equally likely to repay, wealthier borrowers usually borrow larger amounts, so the administrative cost of loans is smaller relative to loan sizes, allowing rates of return to be higher as well (Serrano-Cincia & Gutiérrez-Nieto, 2014). While MFIs can increase their sustainability by catering to wealthier borrowers, doing so comes at the cost of serving fewer poorer clients, who are less likely to secure loans elsewhere and stand to benefit the most from access to capital (Taylor, 2011). On the other hand, MFIs which focus on serving as many poor borrowers as possible often struggle to be self-sustaining, making them too reliant on outside funding to address lack of access to capital at scale (Serrano-Cincia & Gutiérrez-Nieto, 2014). This is because fundraising must also scale with the size of the MFI, which requires increasing investment in fundraising for the MFI to remain sustainable. MFIs which do manage to be self-sustaining can use grants and donations to expand the number of loans it administers, without having to continually expend resources on fundraising to maintain its larger reach.

There is concern in microlending literature that MFIs will succumb to pressures to be more profitable, leading them to prioritize wealthier borrowers over poorer ones, a possibility referred to as "mission drift" (Armendariz & Szafarz, 2010; Taylor, 2011; Sun et al., 2013). Since MFIs exist to further economic development for the poor, mission drift suggests that microlending might be effective at helping the richest of the poor but will fall short in addressing the full extent of the problem. If those most in need of access to capital are excluded, then microlending presents only a very marginal solution to the problem.

Fortunately, empirical evidence suggests that individual MFIs do not tend to experience mission drift per se, in that they do not tend to move towards serving wealthier clients over time (Mersland & Strøm, 2010). In some cases, microlenders even take on poorer clients as they mature, as they are able to use their experience and profits from better-off borrowers to increase outreach (Serrano-Cincia & Gutiérrez-Nieto, 2014). However, these studies maintain that serving poorer clients requires MFIs to operate more cost effectively to be sustainable, lending credence to the conflict between strategies to improve repayment rates and the accessibility of loans for the poorest.

Many microlenders struggle to achieve the type of cost effective lending that allows them to sustainably lend to poorer members of their target populations, leaving millions of low-income Americans without access to affordable credit.

This can be due to the size of the MFI, the particular needs of the target population, or low rates of return, all of which can increase the cost of each dollar lent. A small MFI will tend to have higher administrative costs compared to the size of its loans. MFIs with vulnerable target populations, such as refugees or the formerly incarcerated, require more individual attention. Also, low rates of return make loans more expensive for lenders and reduce their ability to recycle capital into new loans. These three factors make it difficult for microlenders to effectively serve their target populations, increasing their risk of mission drift in an attempt to achieve sustainability or leading them to be highly reliant on external funding. External funding can work, but relying on it too heavily requires constant fundraising and becomes increasingly difficult as an MFI's scope increases.

The tradeoff between sustainability and impact is particularly troublesome for MFIs attempting to serve highly marginalized communities, such as the formerly incarcerated. Many FII have low financial literacy, meaning they require more individual attention from loan officers to help them understand loan terms, credit scores, etc. FII are also extremely susceptible to economic and personal disruption, such as the loss of a job or housing, mental health or drug abuse problems, parole violations, and re-incarceration. These factors increase the likelihood of FII defaulting on loans, increasing marginal cost for microlenders and reducing their ability to sustainably serve poor FII. Finally, FII are very poor on average, so the problem of sustainability arises when serving any formerly incarcerated population, not just the very poorest.

ALTERNATIVES OVERVIEW

This report evaluates four potential alternatives, identified from academic literature, that the Fountain Fund could adopt to improve its effectiveness towards its mission of granting economic opportunity to the formerly incarcerated. Each alternative will be explained in more detail in its respective section.

IN-HOUSE FINANCIAL LITERACY TRAINING

Currently, FF requires loan applicants to complete an online, self-directed financial literacy course on a topic of their choosing. By instead requiring applicants to attend an in-person training session, led by one to two FF staff members, FF can greatly increase the quality of learning and the sense of investment for client partners conferred by the training..

CLIENT CHECK-INS

By keeping in regular contact with client partners, FF can provide client partners with better support, identify potential problems early, and improve client partners' loan performance. Check-ins can be in-person or by phone, depending on the needs of the client partner and the discretion of the loan officer.

SAVINGS NUDGES

Poor Americans, especially FII, often struggle to save money, and savings rates are a major determinant of loan performance. By regularly encouraging client partners to contribute to a savings account, FF can help client partners develop healthy financial habits and make them more resilient against economic disruptions.

SAVINGS INCENTIVES

This alternative is similar to savings nudges, with an added incentive component. In order to further encourage client partners to save, FF can match savings up to 10% of a borrower's monthly loan payment.

CRITERIA

Alternatives are evaluated using three primary criteria—change in rate of return, accessibility, and cost to FF—each of which attends to a different aspect of the Fountain Fund’s mission.

Rate of Return

Rate of return (RR) is measured as the total amount of loan payments, including interest, made by borrowers, divided by the total amount lent, expressed as a percentage. A self-sustaining MFI has a rate of return of 100% or higher, while MFIs with less than 100% repayment must make up losses with grants and donations. The lower an MFI’s rate of return, the more resources they must expend on fundraising, decreasing their efficiency and impact. Rate of return has implications for both FF as an organization and for active client partners, as low returns suggests that many client partners are defaulting, indicating poorer client outcomes.

Implications for FF

A higher rate of return means that more capital is recycled, allowing FF to administer more loans overall and serve more FII. This is a compounding effect which significantly multiplies the impact of each dollar lent. As an example, FF’s baseline RR is approximately 60%, indicating that each dollar lent returns roughly ¢60. That ¢60 is then lent again, returning ¢36 and so on. Ignoring overhead and client onboarding costs and only focusing on the money used to fund loans, at a 60% RR, each dollar is ultimately recycled into \$2.50 total lent. As RR increases, this amount improves exponentially, as seen in Figure 2. At 60% RR, a 1 percentage point increase increases the total loan amount of each dollar by approximately ¢6. However, at 80% base RR, that same increase adds an additional ¢26. At 90%, a 1 percentage point increase adds \$1.11. Though improving RR becomes increasingly difficult as baseline repayment increases, the number of loans that can be administered increases exponentially. Therefore, increasing RR can allow FF to serve more client partners and to use more external funding to expand its scope, rather than to make up loan losses. Of course, RR is not the only determinant of cost effectiveness. Fixed and marginal overhead costs also contribute. However, strategies for improving firm efficiency are largely outside the domain of this project, and studies of microlending strategies tend to focus on loan and client outcomes, so rate of return will be the main measure used to estimate cost effectiveness.¹

1. Calculations for the numbers in this section can be found in Appendix 3-6

Implications for Client Partners

Rate of return is closely related to repayment rate, the number of client partners who fully repay their loans. A lower rate of return suggests that more client partners are defaulting. This has one directly negative effect on client outcomes, as when client partners make late payments or default on their loans their credit scores decrease. Part of FF's mission is to improve client partners' economic autonomy by improving their credit scores, so low RR indicates poor outcomes in this area. Loan defaults can also indicate that client partners have experienced a disruptive life event, such as job or housing loss, that lowered their income and consequently their ability to meet loan obligations. It could also indicate that client partners were not able to make effective use of their loans, as they did not generate enough economic returns to cover their loan obligations. However, these last two suggestions should be taken with a grain of salt, as it is possible that a client partner who has defaulted made excellent use of their loan and used it to further their own goals, but simply chose to default. Without good data on the reasons for client partners' defaults it is impossible to draw firm conclusions about the relationship between RR and client outcomes. Still, it is likely that a higher rate of default is correlated with poorer client outcomes on average.

Accessibility

Accessibility refers to the burden on client partners imposed by an alternative. There are many ways that microlending strategies confer costs to borrowers, including increasing the price of the loan by raising interest rates, preventing some applicants from qualifying due to collateral requirements, or introducing punishments for default. However, the alternatives considered in this report are designed not to add any direct monetary costs for borrowers nor to introduce additional barriers to the poorest FII. The main cost to client partners from each alternative is their time spent on training, completing check-ins, and engaging with new systems. Therefore, accessibility will be measured as the total hours an average client partner spends because of each alternative.

Time spent because of an alternative is significant because it is time that client partners could otherwise spend earning income or attending to other needs. Since FII tend struggle due to limited incomes, a difference of a few hours spent meeting loan requirements could have a meaningful impact on borrowers' lives. A very high time commitment, especially as a prerequisite to receiving a loan could discourage the most vulnerable FII, with the least time to spare, from applying or could overly burden those who do receive loans, reducing their effectiveness. Therefore, a strong alternative will minimize the time commitment for client partners and prospective client partners.

Cost

Cost is measured by the amount of money that an alternative will cost FF, measured in 2025 USD. Time spent by FF employees implementing an alternative is a primary driver of cost and is estimated at \$30 per hour, assuming that loan officers are paid \$60,000 per year on average and work 50 weeks per year at 40 hours per week². Some costs are ongoing while others are upfront. This report uses a 10-year time horizon, so upfront costs are first estimated separately then are averaged over 120 months and added to ongoing monthly costs for creating estimates of cost-effectiveness.

The main importance of cost is that money spent implementing some alternative is not being used to seed new loans nor on fundraising. If costs are very high, even if the returns are positive, it could be considered that the opportunity cost of immediately granting more loans is not worth it. While this is a valid concern, evidence shows that more efficient microlenders are better equipped to serve low income borrowers in the long run, so short and long term trade offs should be considered carefully.

Cost Effectiveness

A related measure to cost is cost effectiveness, which is estimated by dividing an alternative's estimated dollar increase in total monthly loan payments by its average monthly cost. This creates a direct measure of return on investment for dollars spent on each alternative and allows for easy comparison between alternatives. Dollar increases in loan payments are estimated using estimated increase in repayment rate, the average number of new FF loans per month, and the average amount of new FF loans.

While estimates of cost effectiveness are not explicitly provided in the section for each alternative, they are included in the "Comparison of Alternatives", where they provide valuable insight into each alternative's relative effectiveness.

2. The calculations for hourly rate of FF employees can be found in Appendix 7

ALTERNATIVE 1: IN-HOUSE FINANCIAL LITERACY TRAINING

Many MFIs utilize prerequisite training programs, courses which usually teach financial literacy or business skills that borrowers are required to complete before receiving loans from MFIs. The primary purpose of training courses are to confer concrete skills to borrowers which will ideally help them to be successful with their loans. For example, a financial literacy course would teach money management skills, like monthly savings, while a business course would teach practical entrepreneurship skills, such as networking and how to register a business.

The implementation of training courses can vary greatly between individual lenders. Some MFIs have minimal course requirements that require little commitment of time or money from borrowers, while others have much more stringent preconditions. For example, the Fountain Fund requires loan applicants to complete their choice of 1 out of 14 FDIC Smart Money modules (Viccellio, 2025). These modules are available for free online, are entirely self-directed, and take between 1.5 to 4 hours to complete (FDIC, 2022). On the other side of the spectrum, prospective borrowers from Good Faith Funding (GFF), an Arkansas based microlender, must complete 7 “Business and Orientation Training” classes prior to applying for a loan. Classes are offered every two weeks, cost \$20 each, and last 3 hours (Conlin, 1999). Compared to FF, GFF’s requirements are much stricter in terms of content and are more burdensome for applicants in terms of time and money.

There are two primary arguments for why stricter training requirements are beneficial and one against. First, courses provide participants with concrete skills which improve their ability to succeed with loans (Ahmad, 2023; Firafis, 2015). This translates into better outcomes for borrowers and higher rates of return for MFIs. The second argument takes into account commitment bias and the psychology of sunk cost which suggests that people are more likely to follow through on something into which they have already invested significant time, money, or effort. If borrowers participate in a 3.5 month course, spending \$140 and over 20 hours of their time to acquire a loan, as in the case of GFF borrowers, they are more likely to feel invested in their own success with that loan (Mullainathan & Krishnan, 2008).

The high upfront costs of lengthy training programs are not without their disadvantages. According to Conlin (1999), prerequisite courses often act as a screening mechanism for potential borrowers, rather than purely as a way of equipping them with more skills. Applicants who are less confident in their ability to succeed with a loan may be deterred by the high upfront cost of training requirements, discouraging them from applying in the first place. In this case, microlenders would benefit from higher rates of return, but at the expense of would-be client partners.

Evidence

While some of the available evidence is mixed, most studies find that training programs are effective at improving microlenders' rates of return. However, it is not always obvious whether the improvements are a result of the skills transfer mechanism, the sunk cost mechanism, or the screening mechanism. If positive results come from either of the first two mechanisms, then there is an argument to be made in favor of adopting this alternative, as the abilities of existing client partners to repay their debts would be improved. On the other hand, if improvements are the result of excluding certain borrowers, the arguments in favor of training programs would be much weaker.

In a research setting, randomized controlled trials (RCTs) are able to separate out the effect of the first two mechanisms from the screening mechanism, as the randomization of treatment and control groups eliminates self-selection bias. This allows us to determine the effect of training programs themselves on borrowers' repayment behavior. However, this is not a perfect solution, as it does not help to understand which mechanisms would be most at play during a real life implementation of increased prerequisites. In order to address this discrepancy, estimates of the effectiveness of training programs under RCT conditions can be taken as the results of the skills transfer and sunk cost mechanisms, while observational studies are taken to be the combined effect of all three mechanisms.

Table 1 presents findings from 4 observational and 3 experimental studies of the impact of training on loan default rates for MFIs. There is evidence that training programs improve MFI client partners' repayment rates, as 5 of the 7 studies find that training significantly improves repayment, 2 studies find no effect, and 0 studies observe a negative effect. However, it is difficult to certify the external validity of these studies for several reasons. For one, the specific training programs evaluated vary greatly in duration, intensity, and subject matter. Some studies evaluate a single program (Kinyondo & Okurut, 2009; Karlan & Valdivia, 2011; Pellegrina et al., 2021; Daniel

et al., 2017; Haile, 2015). Others look at the existence of training programs across multiple MFIs, meaning that they are evaluating many different programs at once (Endris, 2022; Bourlès et al., 2018). Also, all of the available studies concentrate specifically on the effects of business training or financial literacy training for those taking out business related loans. The Fountain Fund is unique among microlenders in that it gives many loans for non-business purposes—only a fourth of FF loans are for business purposes—further limiting the applicability of existing studies. This makes results less comparable and lowers our ability to estimate exactly how implementing a more intensive training program at the Fountain Fund would affect default rates.

Table 1: Findings from studies of the impact of training on default rates

Study	Country	Study Type	Training Type	Training Duration	Findings		
					Odds Ratio	Change in Default Rate	Change in Rate of Return
(Haile, 2015)	Ethiopia	Observational	Loan management	Two days	9.55	32.73 PP ^b	19.16 PP ^c
(Kinyondo & Okurut, 2009)	Tanzania	Observational	Loan management, financial literacy, bookkeeping	One week	2.26 ^a	17.14 PP ^b	10.04 PP ^c
(Endris, 2022)	Ethiopia	Observational	Financial literacy, business	Varies	3.00	21.43 PP ^b	12.55 PP ^c
(Bourlès et al., 2018)	France	Observational	Business	Varies		9 PP	5.27 PP ^c
(Karlan & Valdivia, 2011)	Peru	RCT	Business	~17 weeks		3 PP	1.82 PP ^c
(Pellegrina et al., 2021)	India	RCT	Loan management, business	5-6 weeks		9.2 PP	39.7 PP
(Daniel et al., 2017)	Ghana	Quasi-experimental	Business	5 days		None	9 PP

a. Odds ratio is calculated by exponentiating the results of a logit regression

b. Change in default rate is calculated from odds ratio. Formula in Appendix 8

c. Change in rate of return is calculated from default rate. Formula in Appendix 9

Adding to the limited applicability of existing studies, most of the MFI training programs that have been evaluated operate in developing countries, particularly in sub-Saharan Africa, but also in India and Peru. The economic landscapes of developing countries are much different than in the U.S., and studies of business training programs in developed countries tend to find weaker results, due to the increased complexity and competition present in those markets (Farlie et al. 2015; Bourlès et al., 2018). Only one of the 7 studies considered here was conducted in a developed country, France, and none were conducted in North America.

Despite limited direct applicability, most evidence supports the conclusion that training programs are effective at reducing default rates by equipping borrowers with the financial skills to properly manage their loans (Ahmad, 2023; Kinyondo & Okurut, 2009; Endris, 2022; Pellegrina et al., 2021). Further studies evaluating the relative importance of specific skills indicate that budgeting and loan management skills are important determinants of timely repayment, indicating that training programs should focus on these topics to maximize their effectiveness (Ameyaw-Amankwah, 2011; Mutegi, 2015).

Based on findings from the 7 studies considered, there appears to be a generally positive impact of training programs on full repayment rates. Observational studies also appear to find stronger effects than experimental ones, which is consistent with the assumption that experimental studies eliminate the effect of the screening mechanism. The effects found by experimental studies range from no decrease to a 9.2 percentage point decrease in defaults, while observational studies find between no decrease to a 33 percentage point decrease. As the difference between these findings is explained by the screening mechanism, it can be concluded that the screening mechanism accounts for roughly two-thirds of the effectiveness of training. Though, it should be noted that the relative strengths of these mechanisms could be affected by the specific training program implemented. A training program with a high time commitment will have a much stronger screening effect than those with a lower time commitment.

Implementation

Evidence shows that training programs can be most effective at improving repayment if they focus on financial literacy and budgeting skills, rather than business skills (Farlie et al. 2015; Bourlès et al., 2018; Ameyaw-Amankwah, 2011; Mutegi, 2015). Also, to reduce the burden on client partners, as well as to avoid excluding potential client partners through the screening mechanism, courses should not be overly costly or time intensive, while still maximizing quality.

Currently, the fountain fund requires prospective client partners to complete an online, self-directed FICO Money Smart module of their choosing. The modules are free and take between 1.5 and 4 hours to complete. At their current intensity, these courses are far shorter and less directed than those present in any of the programs evaluated by studies. For this alternative, the Fountain Fund should seek to improve the quality and immersion of its training courses by presenting FICO Money Smart courses in a more directed way. By conducting in-house Money Smart classes, FF can improve the quality of training and to create a greater sense of investment for loan recipients. This would allow FF to present the course material in a more immersive way, allowing prospective client partners to ask questions, learn from peers, and better understand the important takeaways from any module.

When client partners take FMS courses by themselves online, they lose out on many of the important interactions that facilitate effective learning. This is well documented in the education literature. One meta-analysis of 122 separate studies found that small group learning was twice as effective as individual online learning across many different subjects and demographics of students (Lou et al., 2001). The effectiveness of group learning is the result of many factors, including the presence of peers, fewer technological barriers, and more direct feedback from educators. These results are also supported by more recent studies, despite the significant evolution of digital learning since the original study took place (Tomasik et al., 2021; Vaillancourt et al., 2022).

Small group learning tends to promote deeper understanding through discussion, collaboration, and multiple perspectives, allowing students to come away with a deeper understanding of the material. The presence of peers also serves to increase social support and accountability, which encourages students to stay engaged with the material. Furthermore, low-ability students have been found to benefit the most from small group learning, suggesting that the impact of this alternative would be highest for FF applicants who have the lowest financial skills to begin with.

Technological barriers are lower for small groups than for individuals. For one, students in groups tend to assist each other with navigating software and understanding the tasks that students are asked to complete. When online courses are taken individually, frustration with technological issues can harm student engagement and reduce effective learning. Additionally, students taking online courses by themselves tend to come away with a more surface level understanding, as their engagement with courses are often more mechanical, focusing on clicking through content and completing tasks rather than on developing a deep understanding of the material.

In-house FMS sessions would also allow FF to pick specific modules that best suit their current applicants. For example, Module 13: Buying a Home may only be helpful for a small subset of applicants, while modules like Module 6: Credit Reports and Scores or Module 8: Managing Debt would be more generally applicable. As the program develops, FF could observe and receive feedback on which elements of each module were most impactful, which would allow them to customize their course offerings with the best parts of each FMS module.

Evaluation

Rate of Return

Implementing in-house FICO Money Smart sessions would likely improve the quality of learning from FMS modules by a significant amount. The increased budgeting and loan management skills transferred by the sessions would likely improve client partners' ability to plan around their repayment schedules, translating into higher rates of return and better progress towards client partners' own goals.



The weighted mean estimated effectiveness of training programs in the 7 available studies, weighted by log sample size, is a 12.7 percentage point increase in returns.³ Assuming that the current, weak implementation of FMS courses improves repayment by a negligible amount, moving to in-person education adds the full estimated effect of training. It is likely that travel-time, breaks, and longer activities due to collaborative learning would increase the time investment for client partners. Assuming that the time commitment for client partners increases by about 2 hours, courses that used to take 1.5 to 4 hours to complete would now take 3.5 to 6 hours. While this is not an insignificant increase, it is very mild compared to the courses evaluated in studies, which ranged from two days to several weeks. For this reason, it is expected that the increased time investment would have a very weak effect on who chooses to apply for a loan, especially compared to programs which take weeks or months. This is good news for keeping FF loans accessible, but cuts the expected impact of the program by two thirds, since the screening mechanism is assumed to be eliminated.

After taking the weighted mean of the 7 studies of training programs, and dividing by 3 to remove the screening effect, in-house training is estimated to increase repayment rates by 4.31 percentage points. At a projected rate of 17 new loans per month and an average loan size of approximately \$5,900, this is the equivalent of about \$4,300 in additional payments per month.

3. Description of weighted mean estimated effect size can be found in Appendix 10

Accessibility

As previously discussed, in-house training would likely not exclude very many potential applicants, so accessibility remains high for this alternative. Still, it is important to consider what additional costs would be placed on applicants. For one, there is the extra time investment of 2 hours. For FII, who often struggle to make ends meet, 2 hours of lost time that they could be working for an income or attending to other needs might be significant. Additionally, there will be associated transport costs, which could induce a higher burden for applicants who need to walk or take the bus than for those with access to a car.

Cost

Implementing in-house FMS sessions would require one or two FF staff members to prepare and administer the classes, resulting in costs of time for employees and opportunity costs for FF, since employees could be doing other work during that time. However, these costs would likely be small compared to other options. An advantage of this alternative is that teaching materials are already available, so preparing the courses would require far less work than if they were developed from scratch. Assuming that each session takes a maximum of 2 hours to prepare and 3.5 to 6 hours to administer and that 2 staff members administer the sessions, sessions would require at most 16 employee hours per session. At minimum, if only one staff member attended the session and sessions were short, this alternative would require 5.5 employee hours per session.

2 Hours Per Client



\$0 Upfront

\$825 to 2,400
Per Month

Within each of the 5 FF branches, between 2 and 5 loans are administered per month on average. So, while training sessions should be conducted as needed based on current demand, it is unlikely that more than one session would need to occur per month. Therefore, we can estimate that this alternative will require between 27.5 and 80 employee hours per month to implement for all 5 branches. If employees' total compensation equates to \$60,000 a year, at 40 hours a week and 50 weeks a year, then one hour of employee time costs \$30. This results in costs ranging from between \$825 to \$2,400 per month to implement this alternative at all 5 locations. Of course, gradual implementation, starting at one branch to test the effectiveness of in-house training before adopting it at all branches is also an option. The cost of a limited implementation would be between \$165 and \$480 per month.⁴

4. Calculations for cost of in-house training can be found in Appendix 11

It should be noted that the costs estimated here are purely in terms of salary and that there are other costs to consider. If in-house training is conducted by current FF employees, then there is also the ongoing opportunity cost of what else those employees could be doing with their work hours. If new employees are hired to conduct the trainings, there are upfront costs of onboarding those employees.

ALTERNATIVE 2: CLIENT CHECK-INS

Client check-ins refer to any personal contact between borrowers and lenders that allows lenders to assess how client partners are faring with their loans or that serves as a reminder of the client partner's goals or responsibilities. Like training programs, check-ins can take a wide variety of forms, from occasional emails, reminding client partners of upcoming payment deadlines, to visits from loan officers, to personal mentorship programs. These check-ins often serve three purposes: to encourage timely repayment, to give the lender early insight into potential repayment problems, and to support the success of borrowers. Different types of check-ins may be more suited to one of these three purposes than the others, but all three are usually present in some form.

The literature on client check-ins offers three explanations for why check-ins might improve loan performance. First, they remind borrowers of their repayment obligations, helping to avoid scenarios where client partners forget to pay on time or where their other obligations distract them from their loan obligations (Daniel et al., 2017; Moulton et al., 2015). Check-ins also allow lenders to detect potential repayment issues early. If a client partner experiences a disruptive life event, such as the loss of a job, business failure, or a sudden medical expense, it may impact their ability to repay. In many cases borrowers who experience economic or emotional disruptions do not communicate them to lenders, either because it does not occur to them, they do not think it would help, or they are too overwhelmed by their present situation to consider it (Ganong & Noel, 2020; White, 2010). By engaging in client outreach, microlenders can identify disruptions before loans become delinquent and can help client partners manage them more effectively. This can involve restructuring payment plans or delaying payment due dates to allow client partners more leniency to deal with urgent problems. Finally, check-ins can promote proper usage of loan funds, as borrowers are less likely to direct funds away from their proposed use if they are aware of occasional check-ins (Aidoo & Mensah, 2018).

While client check-ins can be effective at promoting timely repayment, encouraging proper loan use, and detecting issues early, they also come with costs for both borrowers and lenders. For borrowers, check-ins may appear less like form of support and closer to a way of monitoring, creating the sense that lenders see them as untrustworthy and in need of supervision (Deville, 2015). This can damage the relationship between borrower and lender and contribute to borrowers perceiving loans as burdens rather than opportunities. This is particularly significant for

the Fountain Fund, as part of their mission is to improve client partners' sense of autonomy and self determination. However, borrowers' perception of check-ins as supportive versus supervisory depends greatly on their specific implementation, so it is possible to design check-ins to serve a more supportive role. For lenders, check-ins can be difficult to scale, as conducting visits, assigning mentors, or even checking in by phone becomes increasingly time-intensive as MFIs grow to serve more client partners.

Evidence

There is some evidence that client check-ins can be effective at improving repayment rates and decreasing defaults. However, studies are limited in scope, geography, and number. Table 2 shows the results of 5 observational and 2 experimental studies on how various types of check-ins impact loan performance.

Five of the studies examine creditor visits, when representatives from an MFI visit a client partner in person to check on their business performance, offer advice, and ensure loan funds are being used productively. Visits usually occur with prior notice at a borrower's place of business, but can also occur at their home or at a neutral third meeting space. These visits also serve as reminders for client partners to stay on track with their payments and as ways for lenders to identify early signs of repayment difficulties.

Of the 5 studies using creditor visits as interventions, four were observational, comparing microlenders which conducted visits to those which did not, and one was quasi-experimental. In this case, researchers assigned visits to some borrowers and not to others in the same cohort to improve comparability. However, the study is not a full RCT because who received visits was determined by loan officers, rather than by random assignment. The frequency of loan officer visits also varied across studies from twice per month (24 visits per year) to 1-6 visits per year. For some studies, no minimum or maximum number of visits was given. The countries where these studies took place are all developing, including Ghana, Malaysia, Kenya, and Vietnam. This presents a challenge for directly applying results to FF, since interventions may prove to have different levels of effectiveness in a developed economy like the U.S.

The remaining two studies assess different types of check-ins. In one case, the number of information requests—instances of a lender requesting information about a borrower's credit score, past loan performance, or financial statements from other banks—was used as a proxy for

loan monitoring. This study was observational and looked at the loan performance of commercial banks in Italy, rather than at MFIs specifically. For this reason, it is hard to tell if this study is more applicable to the Fountain Fund, because it takes place in a developed country, or less because it is a study of commercial banks.

In the second study, a unique intervention was used that combined a one-time online goal-setting module, occasional emails and letters reminding borrowers of their financial goals, and quarterly phone calls with a financial coach. During phone calls, advisors asked borrowers about their progress towards their goals, helped to revise financial plans, and reminded them about their payment obligations. Similarly, this study is of commercial banks, rather than MFIs, and the study specifically looks at the effect of its intervention on mortgage holders, making it more difficult to draw a direct comparison to FF. On the other hand, the study is an RCT which takes place in the U.S., increasing its explanatory power. This is another case where insights can be gained, but we should be wary of directly applying the study results to FF and its client partners.

Table 2: Findings from studies of the impact of check-ins on default rates

Study	Country	Study Type	Check-in Types	Check-in Frequency	Findings	
					Change in Default Rate	Change in Rate of Return
(Daniel et al., 2017)	Ghana	Quasi-experimental	Creditor visits	Twice per month	70 PP	50 PP ^a
(Aidoo & Mensah)	Malaysia	Observational	Creditor visits	Varies	Reduced	Not estimated
(Branzoli & Fringuellotti, 2022)	Italy	Observational	Information requests	Varies	5.41 PP	3.17 PP ^a
(Ha & Dang, 2021)	Vietnam	Observational	Creditor visits	1-6 per year	26.6 PP	15.6 PP ^a
(Kinyua et al., 2022)	Kenya	Observational	Creditor visits	1-6 per year	3.7 PP	2.2 PP ^a
(Moulton et al., 2014)	U.S.	RCT	Emails and phone calls	4 times per year	2.6 PP	1.5 PP ^a
(Shariff & Nawai, 2012)	Malaysia	Observational	Creditor visits	Varies	3.78 PP	2.21 PP ^a

a. Change in rate of return is calculated from default rate. Formula in Appendix 9

Out of the 5 studies of creditor visits, all of them found that visits significantly reduced default rates among MFI borrowers. One of the 5 studies used a probability model, finding that creditor visits reduced delinquency and default, but not suggesting that it did so by any specific amount. One study, in which participants received between 1 and 6 visits per year found that each visit reduced default rates by approximately 2 percentage points per visit and that the average treatment effect was 3.7 percentage points, across all numbers of visits. For more intensive treatments, the effects appear stronger. In the study by Daniel et al., 2017, borrowers received 2 visits per month (up to 24 per year), which was found to reduce default rates by 70 percentage points. These findings suggest that creditor visits are generally effective at reducing default among borrowers, and that more frequent visits may translate to greater reductions in default.

Two additional studies examine the effects of virtual monitoring on borrowers from commercial banks in Italy and the U.S. Though the direct comparability of these findings to the Fountain Fund is questionable, the studies both provide some evidence that monitoring can improve default rates by helping to keep borrowers on track with their financial goals and by serving as reminders of upcoming payments.

Implementation

Available evidence supports both in-person creditor visits and virtual check-ins as ways that the Fountain Fund might be able to improve its repayment rates. However, due to the limited direct comparability of studies to FF, it is difficult to say which would be the better option.

For in person visits, it is likely that these would need to be conducted at FF's offices, in a public space, or at the client partner's place of business, where applicable. Requiring that client partners be willing to meet loan officers in their homes could lead to uncomfortable situations and could be considered an invasion of their privacy. It is also important that check-ins factor in the needs and circumstances of the client partner, as asking client partners to travel to their local FF office too frequently could be a significant burden in terms of time and transportation costs. For these reasons, if this alternative were to be adopted, it is advisable that FF loan officers coordinate with client partners to find out what method of check-in works best for them. Loan officers could also use their own discretion to determine the frequency and method of check-ins. Client partners who prove that they are doing well with their loans may require check-ins by phone and only every few months, freeing loan officers to focus their energy on higher risk client partners.

It is likely that client check-ins will be most impactful towards the beginning of loans, when client partners first receive funds, are navigating repayment, and may need the most guidance. Therefore, I suggest that new client partners receive in-person check-ins once per month for the first two months, in order to iron out any difficulties that arise early as well as to build the relationship between borrower and loan officer. After the first two months, client partners and loan officers should collaborate to make a plan for the frequency and method of further check-ins.

Evaluation

Rate of Return

Client check-ins are likely to improve repayment rates by keeping client partners on track with their goals, by serving as a reminder for client partners to repay their loans, and by allowing the Fountain Fund to identify challenges early and to offer solutions. This alternative has the potential to improve client partners' relationship with FF, leading them to reach out more readily for advice or when they encounter difficulties repaying their loans. This can help client partners to pursue their own goals more effectively and prevent them from abandoning their loan responsibilities when disruptions occur. As a result, client partners' credit will improve more consistently and increased repayment rates will allow FF to serve more client partners.

↑ 9.5 Percentage Points

↑ \$9,500 Repaid Per Month

The estimated effect of client check-ins on repayment rates is 9.5 percentage points. This finding equates to an estimated increase in loan payments of approximately \$9,500 per month.

Accessibility

The burden of check-ins on client partners can vary by the mode and frequency of meetings. As



8 to 9 Hours Per Client

I have suggested that the first two check-ins be in-person during the first two months, each of these meetings will incur costs to the client partner in terms of transportation costs, travel time, and time spent in the meeting. Assuming that travel time to and from FF offices is 1 hour in total and meetings last 30 minutes, then each of these two meetings requires 1.5 hours of the client partner's time. Assuming further that subsequent check-ins occur by phone every 3 months on average and continue to last 30 minutes, then, over the course of a 3-year loan, client partners will spend around 8 or 9 total hours engaging with check-ins. Of course, this time investment can vary greatly according to client partners' access to transportation, the location chosen for in-person meetings, and the duration of meetings, in addition to mode and frequency.

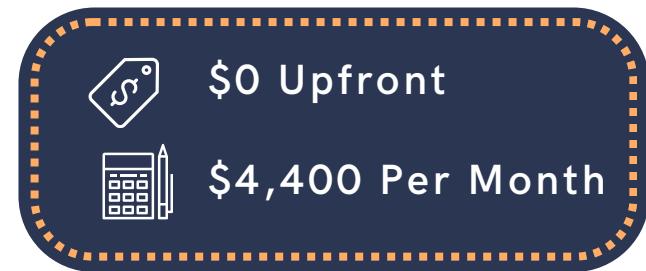
Cost

The time per client partner required for FF to complete check-ins is likely to be similar to that for client partners.

The only thing that would change the calculation would be whether client partners are travelling to meet loan officers or if loan officers are travelling to meet client partners. If

only two in-person check-ins are conducted and the assumed total travel time of 1 hour is correct, this difference will be 2 hours, though it could be more if additional in-person meetings are held.

In order to evaluate the cost to FF, I will assume that loan officers do a similar total amount of traveling to client partners, resulting in the same estimation of 8 to 9 hours of employee time per client partner. In monthly terms, loan officers would be spending an average of 14.5 minutes per client partner per month on check-ins.



Across five branches, FF has 340 active loans, meaning that, in total, approximately 82 employee hours per month would need to be spent on check-ins. Broken down by branch, Philadelphia would spend 17 hours per month on check-ins, New Orleans 11 hours, Charlottesville 36 hours, Richmond 17 hours, and Boston 1 hour. Unlike the in-house training alternative, which can have sessions of varying sizes, the cost of check-ins scales directly with the number of client partners. This potentially hinders the scalability of this alternative, as FF branches continue to grow. Using the same estimate of \$30/hour for FF employees as used in the previous alternative, implementing client check-ins would cost approximately \$260 per client partner over the full course of a 3-year loan. If FF continues taking on 17 client partners per month, the average rate between January 2023 and September 2024, then the ongoing cost of this alternative would be close to \$4,400 per month.⁵

Potential additional costs include the opportunity cost of employees spending their time on check-ins, rather than something else. Also, this estimate assumes that all client partners remain in contact and meet regularly with their loan officers until their loan reaches maturity. In some cases, loans will go above maturity, leading to more meetings and higher costs. In other cases, loans will be paid early, client partners and officers will decide to meet less frequently, or client partners will default and meetings will be unnecessary, leading to fewer meetings and lower costs.

5. Calculations for cost of Client Check-ins can be found in Appendix 12

SAVINGS PROGRAMS

Saving money can be difficult, especially for those with low incomes or poor financial habits. However, savings are extremely valuable for helping individuals absorb negative shocks, such as the loss of a job or housing or even milder unexpected expenses like car repairs. Particularly for FII and others with little access to affordable lending, savings can keep individuals from resorting to high-interest money lenders, preventing small shocks from spiraling into long term debt burdens.

In the case of microlending, borrowers with higher savings are much less likely to default on loans, as they are somewhat insured against shocks that would prevent them from meeting their monthly payment obligations. Some MFIs have attempted to encourage their borrowers to save more, in order to reduce defaults due to income shocks, by getting them to participate in savings programs. In some cases the savings programs are voluntary, such as for Crédito Hipotecario Nacional (CHN) in Guatemala. Every time a CHN borrower makes a loan payment, they are encouraged to contribute an additional 10% into a normal savings account (Atkinson et al., 2013). Though there are no penalties for withdrawing the saved money, this nudge-based implementation encourages client partners to save small amounts regularly, helping them to meet future financial obligations and to smooth over economic disruptions. However, in most cases, when savings programs are tied to microloans, they are likely to be mandatory for receiving loans. For example, SafeSave in Bangladesh collects daily deposits from its borrowers, who are then eligible to borrow twice their savings balance (Ashraf et al., 2003). In cases like these, savings act similarly to collateral, as SafeSave uses savings balances to make up losses in the event of default. This allows borrowers who would not otherwise be eligible for credit to receive loans, provided that they are able to raise half of the capital themselves.

While it is certainly good for MFI borrowers to save where they can, mandatory savings programs have significant drawbacks. Most importantly, they exclude the poorest members of the target population who can not afford to save enough to meet the requirements. Even for those who are able to save small amounts, loan amounts are often tied to the level of savings, restricting many to only very small loans. This is similar to the drawbacks for MFIs of requiring collateral. Secondly, requiring borrowers to keep money in savings directly limits the amount they can spend on investments in income generating activities, so it may hamper income growth or encourage borrowers to take out larger loans to compensate. Given that savings requirements may exclude a

large number of FII as potential client partners, it would be more appropriate for FF to consider an optional savings program than a mandatory one.

Evidence

There are few studies that directly assess the impact of savings programs (SPs) for microlenders on loan repayment rates, though the ones that do exist find promising results (Atkinson et al., 2013; Meher, 2017). However, there is strong evidence both that SPs increase the amount people save and that savings are a strong predictor of loan repayment (Ashraf et al., 2003; Fry et al., 2008; Peiris & Vardoulakis, 2013). These claims together support the conclusion that SPs operated by microlenders can be effective at lowering default rates and helping borrowers to insure themselves against disruptive events. Despite this, there is significant heterogeneity in outcomes for participants of SPs, especially for those with early withdrawal penalties, as many participants overestimate their ability to save or come to regret having committed their money to savings. One study in the Philippines found that, despite a large increase in the total amount saved, 55% of participants who voluntarily signed the commitment did not fully follow through on their savings commitment, and 28% never made a single deposit (John, 2014). As failing to follow through in this case resulted in a penalty of about one day's wages, this finding suggests that SPs can be highly effective for some and detrimental for others.

Table 3 shows the results of 5 studies of SPs, 3 of which are independent programs and look at the effect on savings rates while 2 are tied directly to microloans and estimate effects on both savings and repayment rates. Four of the studies are RCTs and one is observational, indicating that SPs paired with microloans are effective, but not quantifying the effect.

All 5 of the presented studies took place in developing countries, limiting their direct applicability to the Fountain Fund. In particular, many researchers discuss the influence that family members demanding money have on people's ability to save in developing countries. They often credit some of the success of SPs to the fact that withdrawal is restricted, allowing savers to tell family members that they can not access the funds. (Ashraf et al., 2003). In one case, farmers in Malawi were given access to both commitment accounts and ordinary savings accounts. Compared to the group that was only given access to ordinary accounts, these farmers saved 78.5% more money, but only 12.3% of the money they saved went into commitment accounts (Brune et al., 2016). The authors suggest that this was enough to give the farmers plausible deniability when family members asked them for money, allowing them to save more in total.

A different study discusses that SPs are more effective for women, since developing countries often have male dominated households, so SPs provide a way for women to keep money away from their husbands (Gugerty, 2007). The incentive to save in commitment accounts as a way of preventing family members from asking for money may still exist in an American context, but it is likely to be far less influential than in developing economies, where demands for money from family are very common (Meyer & Shera, 2017; Tumbe, 2011). This could lead SPs to be less effective for American microlenders like the Fountain Fund.

The literature does suggest other mechanisms of SPs which would better apply to FF. Ashraf et al. (2003) discuss how savings commitments can help borrowers build a financial cushion that can be used to cover loan payments during emergencies, reducing defaults due to sudden income shocks. Savings commitments can also help borrowers develop the habit of regularly setting money aside for future use and can reduce excessive reliance on credit, making borrowers more financially stable in the long run. Ashraf et al. also discuss how mandatory savings commitments can act as a screening mechanism to filter out high-risk borrowers, so we should be wary that SPs might come at the cost of accessibility, depending on their implementation.

Table 3: Findings from studies of the impact of savings programs on savings and loan repayment rates

Study	Country	Study Type	Tied to MFI	Penalties	Findings	
					Change in Savings Rate	Change in Rate of Return
(Brune et al., 2016)	Malawi	RCT	No	No early withdrawal, except emergencies	78.5 PP	1.6 PP ^a
(John, 2014)	Philippines	RCT	No	Chosen by user	2,056 PP	50 PP ^a
(Ashraf et al., 2006)	India	RCT	No	No early withdrawal, except emergencies	81 PP	1.8 PP ^a
(Atkinson et al., 2013)	Guatemala	RCT	Yes	None	419 PP	10.2 PP
(Meher, 2017)	Ethiopia	Observational	Yes	Withdrawal only after loan repaid	Increased	Increased

a. The ratio of repayment rate (R) to savings rate (S) in the Atkinson et al., 2013 study ($10.2/419 = 0.024$) is used to estimate how the effects from other studies might affect repayment rates.

All 5 studies presented in this table offer some evidence that savings programs could help FF clients put more money aside, reducing default rates and improving financial stability. Three of the studies are of independent programs which are not tied to MFIs or loan access. These studies indicate that SPs can be effective for those who voluntarily participate and allow us to make rough estimates of how repayment rates would be affected. However, the estimates for default rates are interpolated based on the results of only one study, so the starred numbers should not be relied upon too heavily. They are more helpful for suggesting a range of possible outcomes than for making accurate predictions.

Two of the studies presented directly assess the effect of SPs paired with microloans on loan performance. One of these studies uses observational techniques and concludes that CSPs are effective at increasing savings and loan repayment simultaneously, but it does not quantify its results (Meher, 2017). Additionally, the program being analyzed in Meher, 2017 is a combination of compulsory and voluntary savings programs, where borrowers were required to deposit a fixed percentage of their loan amount before receiving funds. In this way, the program acted both as a savings program and as a form of collateral. The SP in Atkinson et al., 2013 was also tied to microloans, but was entirely voluntary. Also, the study was conducted as an RCT, with direct estimates for the increases in average savings rate and average repayment rate. Of the 5 studies, Atkinson et al., 2013 is the most directly relevant for this alternative, though the others support its conclusions.

Available evidence indicates that commitment savings programs can be effective at getting microfinance borrowers to save more, leading them to be more resistant to economic shocks, less reliant on credit, and less likely to default on loans. The majority of evidence focuses on voluntary SPs, and voluntary programs avoid excluding potential client partners who would be dissuaded by required monthly savings. Additionally, mandatory savings would be difficult for FF to enforce. Therefore, FF should consider adopting a voluntary savings program. For this alternative, there are two proposed implementations. The first is a nudge-based savings program that is likely to have a small impact but be very inexpensive to operate. The second is a savings match program that would provide an additional incentive for client partners to save.

ALTERNATIVE 3: SAVINGS NUDGES

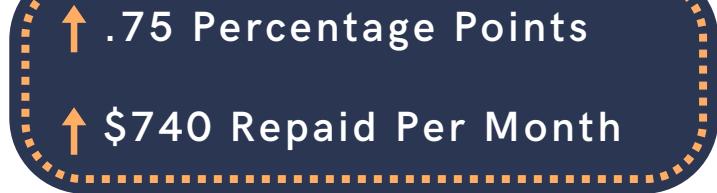
This alternative suggests adding a component to the online payment portal so that when client partners pay their loans online, they are prompted to contribute an additional 10% of the payment amount into a savings account. The prompt could include the exact amount that would be contributed, along with some bullet points about the advantages of saving money. For example, "1) Saving helps cover emergency expenses in the future; 2) Saving a little bit at a time is easier and builds wealth faster than waiting until the need arises; 3) Savings can be used to cover loan payments, in case you miss a month; 4) It's free, and funds can be withdrawn at any time."

Many client partners opt for loan payments to be automatically withdrawn from their bank accounts, as it makes them eligible for the reduced interest rate. Client partners make this choice when they are first approved to receive a loan. The Fountain Fund could effectively implement the savings commitment alternative by also asking client partners to opt-in to adding the additional 10% savings to their automatic payments. Presenting the savings commitment option at this early stage would allow FF representatives to inform client partners directly about the benefits of saving while assuring them that they will still be able to access their money and that they can opt-out at any time. This has the potential to be a powerful alternative, as automatically committing a portion of income to savings on a regular basis is a very effective way to save (Atkinson et al., 2013).

For the Fountain Fund to administer savings accounts itself would be legally and logistically difficult, so that is not likely to be a viable method of implementation. Instead, FF should connect with existing bank partners, such as Chesapeake Bank and Virginia National Bank, and request that they host client partners' savings accounts and waive any transaction or minimum balance fees. While this is not an insignificant ask for partner banks, it is likely that they will be receptive. Bank partners have already expressed their support of FF's mission, and hosting client accounts would be relatively inexpensive compared to donations they already give. For instance, a personal savings account at Virginia National Bank (VNB) has no minimum balance, zero maintenance fees, and a minimum opening deposit of \$100. All that VNB would have to agree to is to waive the opening deposit requirement.

*Evaluation*Repayment Rate

The most directly relevant evidence for this alternative suggests that a nudge-based SP could improve repayment rates by 10 percentage points, while also making client partners more resilient to disruptive life events and building healthy financial habits. Based on related evidence, repayment rates could improve as much as 50 percentage points or as little as 1.6, but they would very likely increase to some degree. However, since client partners tend to operate on tight budgets, and there is no direct incentive to participate, other than the existing benefits of saving money, it is likely that take-up would be very low. In the Atkinson et al. study, monthly reminders were effective at getting 30% borrowers to contribute to savings. Due to the low incomes of FII and the fact that many struggle to meet monthly payments, 30% take up is probably closer to a maximum, so 5% take up will be used as a more conservative estimate for this alternative. Additionally, the John, 2014 study will be excluded from the final estimate to avoid biasing the results, since its findings appear to be an outlier compared to other studies.



Using the same log sample size weighted mean effect size method as before, encouraging savings is estimated to increase repayment rates by 14.8 percentage points. However, this estimate drops to 4.5 percentage points when excluding the John, 2014 study, indicating that the estimate is not particularly robust. For this reason, the forecasted effect of encouraging savings should be taken skeptically. Also, because we are estimating that take-up is only 5%, a sixth of that from the Atkinson et al. study, the estimated effect is similarly reduced by a sixth to a .75 percentage point overall increase in repayment rates. Using the adjusted estimate, monthly loan payments are expected to increase by approximately \$740 per month under this alternative.

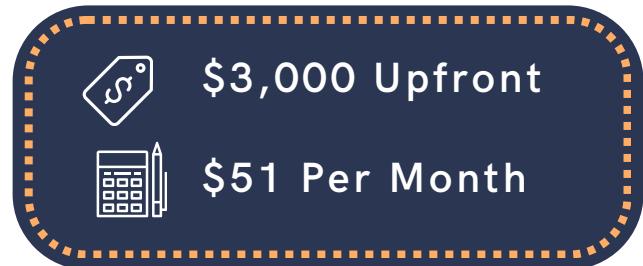
Accessibility

As savings commitments are optional under this alternative, and those who opt-in face no fees or restrictions, accessibility is likely to be very high. The only potential barriers for client partners are in figuring out how to access their savings when they are needed. For individuals who are unfamiliar with computers or online banking, this could prove to be a mild technological barrier. However, this barrier should be relatively simple to overcome. For this alternative, I will assume that participating client partners spend 2 hours on average learning how to access saved funds.



Cost

The cost associated with the commitment savings alternative lies primarily in managing savings accounts on behalf of client partners. If FF can get approval for bank partners to host client accounts, while waiving fees and opening contribution requirements, actually having the accounts would be costless. Still, some time and effort would have to go into setting up the partnership, opening accounts, helping client partners navigate online banking, and informing them about the savings option. All together, I estimate that it takes 20 hours of employee time at each branch to work with banks to establish this option and a further 2 hours on average per participating client partner to discuss and navigate savings. While it might take much longer for client partners unfamiliar with online banking, some will forgo this option altogether, keeping the average time cost per client partner low. At the previously estimated \$30/hour for FF employees, this alternative would have an upfront cost of \$3,000 and an ongoing cost of \$60 to orient each new participant. Continuing to assume that FF adopts 17 new client partners per month and that 5% participate, the ongoing cost of the program is estimated at \$51 per month.⁶



6. Calculations for cost of savings nudges can be found in Appendix 13

ALTERNATIVE 4: SAVINGS MATCHES

One barrier to the effectiveness of the savings alternative is that borrowers already struggle to make payments on time, and asking them to contribute an extra 10% may prove impossible in most cases. Of course this was also true in the Atkinson et al., 2013 study, which served low-income Guatemalans and still found significant positive results. Still, the effectiveness of this alternative could be limited by the specific circumstances of client partners. Therefore I will also evaluate an alternative implementation that includes an additional savings incentive. Specifically, FF would offer to match savings contributions up to a 10% of the client partner's monthly payment amount. So, if a client partner pays \$100 towards their loan and contributes an extra \$10 to savings, FF will match with an additional \$10.

This alternative would likely more than double the amount that client partners have in savings accounts, as FF would directly match their contributions, and more client partners would choose to save due to the incentive. Likewise, since the success of savings commitments at improving repayment is attributable to having spare money to cover missed payments, it is reasonable to expect that repayment rates would improve as well. However, a similar doubling of the expected impact of this intervention is unlikely. Client partners who would already have donated to a savings account under the original implementation would benefit greatly, without changing their behavior. Some client partners who would not have donated under the original implementation would now donate, resulting in more savings and greater repayment rates. A third group of client partners would not donate, even with the incentive in place, most likely because they cannot afford to put away the extra money every month. As these are the client partners that we are most worried about in the first place, it seems as if adding the incentive would not be particularly effective. If there were a large portion of client partners that could donate an extra 10% per month, but would not do so without a monetary incentive, then this alternative implementation could potentially double its effectiveness. However, if we expect that client partners who do not save do so because they can't, then the incentive would be both costly and ineffective, as it would only benefit client partners who already have some financial flexibility, who are the least likely to default.

*Evaluation*Repayment Rates

Despite this alternative being effectively free money for client partners who can afford to save, many FII have such low incomes that they will not be able to contribute to the savings match program. Therefore, this alternative can be expected to increase take-up from 5% to 30%, closer to the rate from the Atkinson et al. study, but should not be expected to cause 100% take-up. This will increase the effectiveness of the savings program back to the estimated 4.5 percentage point increase in overall repayment rates, still excluding the outlier John, 2014 study. Based on this estimate, this alternative is expected to increase monthly loan payments by approximately \$4,500 per month.



↑ 4.5 Percentage Points
↑ \$4,500 Repaid Per Month

Accessibility

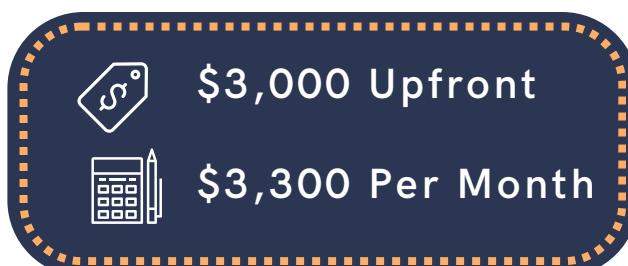
The same as accessibility for savings nudges, commitments are optional under this alternative, and those who opt-in face no fees or restrictions, accessibility is likely to remain very high. The only potential barriers for client partners are in figuring out how to access their savings when they are needed. For individuals who are unfamiliar with computers or online banking, this could prove to be a mild technological barrier. However, this barrier should be relatively simple to overcome. For this alternative, I will assume that participating client partners spend 2 hours on average learning how to access saved funds.



2 Hours Per Client

Cost

In addition to the upfront cost of \$3,000 and ongoing costs of orienting client partners to the program, this alternative implementation requires FF to match donations. The studies evaluated in this report suggest that savings commitment programs increase savings between a .8 to a 22-fold increase in savings, with the primary study by Atkinson suggesting that the control group increased their savings by 6 times, from the equivalent of \$4 to \$25 total savings during the course of the loan. Data from the Consumer Federation of America suggests that only 30% of American households in the bottom quintile of earnings have a savings account. Taking this as a very rough analogy for client partners, we can assume that 30% of client partners would donate to a savings account and that they would contribute the full 10%, to take advantage of the match. Therefore, at its current average monthly



\$3,000 Upfront
\$3,300 Per Month

payment amount of \$172, FF would wind up matching \$17 per client partner per month on average, for participating client partners, increasing costs per client partner to \$47. For total monthly costs, if FF continues at an average 17 new client partners per month with an average loan amount of \$5,838, and 30% participate in the savings match program for their full loan term, then FF will match \$2,977 in savings per month across all client partners. Continuing the assumption that each hour of an FF employee's time costs \$30 and that orienting a new participant to the program takes 2 hours on average, orientation costs are estimated at \$306 per month. In total, the estimated ongoing cost of this alternative is approximately \$3,300 per month.⁷

7. Calculations for cost of savings incentives can be found in Appendix 14

COMPARISON OF ALTERNATIVES

Table 4 lays out the estimated performance of each alternative according to the proposed criteria. As seen in the row labeled "Cost Effectiveness", all four alternatives have a positive ratio of benefit to cost, suggesting that any of them could be effective if implemented.

Table 4: Comparison of alternatives

Criteria	Alternatives							Unit	
	In-house Training		Client Check-ins	Savings Nudges		Savings Matches			
				All Studies	Without Outlier Study	All Studies	Without Outlier Study		
Rate of Return	4.31		9.51	2.47	0.75	14.84	4.47	Percentage point increase in repayment rates	
Return Amount	4,281.92		9,439.02	2,434.07	739.49	14,724.41	4,436.92	Dollar increase in returns on new loans per month	
Accessibility	2		8 to 9	2	2	2	2	Hours of client time per client partner	
	Low	Middle	High						
Upfront Cost	0.00	0.00	0.00	0.00	3,000.00	3,000.00	3,000.00	Dollars	
Ongoing Cost	825.00	1,600.00	2,400.00	4,382.43	51.00	51.00	3,283.14	Dollars per month	
Cost Effectiveness	5.19	2.68	1.78	2.15	32.29	9.73	4.45	Ratio of monthly return amount to monthly cost (upfront costs averaged as monthly costs across a 10 year period)	

The alternative with the highest ratio of benefit to cost is savings nudges, since its ongoing costs are extremely low and its upfront cost is averaged over a 10 year period. However, this alternative also has the smallest absolute impact of the alternatives, suggesting that it is highly cost-effective for those who participate, but it will make a very small difference overall. On the other hand, the savings incentives program has the lowest cost-effectiveness score, despite a 6-fold increase in absolute effectiveness compared to savings nudges. This is almost entirely due to the expense of

the matching program, which creates high ongoing costs. Still, encouraging client partners to save would have the additional benefit of helping client partners to build healthy financial habits, so it may benefit client outcomes in ways that are not captured by repayment rates.

Client check-ins has the highest absolute effectiveness out of the alternatives, but it is paired with the highest cost per month, due to the significant time investment required for loan officers to contact FF's many client partners. This leads it to have a cost-effectiveness score of \$2.15 per dollar invested, which is higher than savings incentives and slightly lower than in-house training but is still a clear benefit. Client check-ins also has the highest burden on client partners, in terms of the time they spend engaging with check-ins: 8 to 9 hours, where other alternatives only require 2. Still, it is important to keep in mind that accessibility is measured in terms of hours over the full 3-year course of the loan, so even the highest time requirement is relatively small in comparison. This is especially true for client check-ins, since the time commitment is spread out in 30 minute check-ins every few months, whereas the other alternatives require the time commitment all at once, near the beginning of the loan.

In-house training has a medium absolute impact on repayment rates, similar to that of savings incentives. Unlike savings incentives, it costs significantly less, even using a high cost estimate, leading it to an estimated cost-effectiveness score of \$2.68 per dollar invested. One advantage of this alternative is that it requires less time investment by loan officers than client check-ins and it requires less overall time commitment from client partners. It should be noted that, though in-house training was suggested to take between 3.5 to 6 hours to complete, this is only a 2 hour increase from the online FICO courses that are already required.

RECOMMENDATION: CLIENT CHECK-INS

Based on the performance of each alternative according to criteria, this report recommends that client check-ins be adopted, as it has the highest absolute impact on rates of return. This is an advantage for two reasons. First, a larger increase in repayment is indicative of better client outcomes, suggesting that client check-ins would not only be beneficial for making FF more sustainable but that check-ins would effectively support client partners in pursuing their own goals. Second, a larger monthly return means that FF can grow faster, allowing it to serve more formerly incarcerated individuals in the long run. One drawback of this approach is that the cost of client check-ins scales directly with the number of active client partners, which somewhat limits the alternative's scalability due to administrative hurdles. However, since check-ins appear to be highly effective, it is likely that returns will also scale with the number of client partners, so check-ins should remain cost effective indefinitely.

It should also be noted that only savings nudges and savings incentives are mutually exclusive, so there is potential for FF to adopt three of the four proposed alternatives. Since implementing a new program can present unexpected difficulties, especially for smaller organizations like FF, it is not recommended that multiple alternatives be adopted simultaneously. However, there is opportunity to implement in-house training and one of the savings alternatives in the future to further improve FF's impact. In fact, the improved relationship between client partners and loan officers as a result of client check-ins could be leveraged to determine which of the remaining alternatives would be most helpful to client partners.

While client check-ins is the official recommendation of this report, there are many reasons not to take the estimates presented here at face value. These include the limited applicability of existing studies to FF, the unique needs of FII that may not be present in other microlending scenarios, and the many assumptions that were required to generate effectiveness and cost estimates. A large part of FF's mission is to increase the agency and autonomy of client partners, as well as to serve them as effectively as possible. Therefore, client partners themselves should be consulted before adopting any alternative, as they will have more personal insight than a research report like this could possibly give. By including client partners on the decision about which, if any, alternative to adopt, FF can improve its ability to make an effective decision, while respecting the opinions and role of client partners in FF's success.

CONCLUSION

The Fountain Fund's commitment to improving financial access for formerly incarcerated individuals highlights a critical intersection between social justice and economic empowerment. Despite substantial barriers faced by FII in accessing traditional credit, the Fountain Fund's approach demonstrates that microlending, when thoughtfully implemented, can offer a viable pathway to financial stability and reduced recidivism.

This report has examined various strategies to enhance the Fountain Fund's impact while maintaining cost-effectiveness and accessibility for client partners. Among the alternatives considered, client check-ins emerged as the most promising solution, balancing improved repayment rates with reasonably small additional burdens on borrowers. While in-house financial literacy training and savings programs also showed potential, their higher implementation costs or smaller estimated impacts made them less favorable compared to the more flexible and supportive nature of client check-ins.

Specifically, client check-ins are estimated to increase repayment rates by 9.5 percentage points. If FF maintains its current scope of 340 active clients and average loan size of ~\$5,800, then such an increase in repayment would increase monthly returns by \$9,500. That is roughly \$28 per client per month, compared to a monthly cost per client of \$13, or \$4,400 per month in total. While this alternative has the highest cost to client partner's time, 8 to 9 hours over the full three-year loan term, the cost is still outweighed by the potential benefits to the sustainability of the program.

To ensure continued success, the Fountain Fund should prioritize refining client engagement strategies, incorporating flexible and individualized support systems, and engaging the input of client partners themselves. By doing so, FF can not only improve repayment outcomes but also strengthen the economic resilience of its client partners, ultimately contributing to their long-term financial independence.

Looking ahead, it will be crucial for the Fountain Fund to continuously evaluate the effectiveness of its interventions and adapt to meet the specific needs of FII. Through strategic innovation and a steadfast commitment to client empowerment, the Fountain Fund can continue to bridge the credit gap for those most in need.

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APPENDIX

1. Baseline rate of return

FF's current rate of return is calculated by taking the total amount of principal + interest payed on all non-active loans and dividing by the total amount lent. This comes out to

$$\frac{\$491,509.85 + \$30,841.08}{\$888,087.48} \approx .59 \rightarrow 59\%$$

2. Average loan size and average number of new loans per month

The average size of loans and new loans per month are calculated by the arithmetic mean of all loan amounts / months from January 1st, 2023 to September 30th, 2024. This was done to be more representative of FF as it is now, as opposed to including all loans / months since its founding in 2017.

3. Amount lent per dollar at a 60% rate of return

The calculation for this example uses an infinite sum and assumes that 60% of the amount lent is paid back and that all of the repaid money funds a new loan. Basically, overhead and transaction costs are ignored.

$$\sum_{n=0}^{\infty} .6^n = .6 + .6^2 + .6^3 \dots = .6 + .36 + .216 = \frac{1}{(1 - .6)} = 2.5$$

4. Increase in amount lent per dollar from 60% to 61% repayment

$$\sum_{n=0}^{\infty} .6^n = \frac{1}{(1 - .61)} \approx 2.56$$

$$\$2.56 - \$2.5 = \$0.06$$

5. Increase in amount lent per dollar from 80% to 81% repayment

$$\sum_{n=0}^{\infty} .8^n = \frac{1}{(1 - .8)} = 5$$

$$\sum_{n=0}^{\infty} .81^n = \frac{1}{(1 - .81)} \approx 5.26$$

$$\$5.26 - \$5 = \$0.26$$

6. Increase in amount lent per dollar from 90% to 91% repayment

$$\sum_{n=0}^{\infty} .9^n = \frac{1}{(1 - .9)} = 10$$

$$\sum_{n=0}^{\infty} .91^n = \frac{1}{(1 - .91)} \approx 11.11$$

$$\$11.11 - \$10 = \$1.11$$

7. Hourly rate for FF employees

40 hours per week x 50 weeks per year = 2,000 hours per year

\$60,000 per year / 2,000 hours per year = \$30 per hour

8. Converting Odds Ratio to Change in Default Rate

Baseline Odds Ratio for FF (OR_{FF}) = Default Rate / (1-Default Rate)

Change in Default Rate (ΔDR) = $-100 \cdot ((OR_{Study} \cdot OR_{FF}) / (1 + (OR_{Study} \cdot OR_{FF})) - (1 - Default\ Rate))$

9. Converting Change in Default Rate to Change in Repayment Rate

Number of Non-Active Clients: NC

Average Amount Defaulted On: AD

Total Amount of Non-Active Loans: TL

Change in Repayment Rate (ΔRR) = $(-\Delta DR \cdot NC \cdot AD) / TL$

10. Generating estimated impacts on rate of return for alternatives

Estimated impacts are calculated using the weighted mean change in rate of return of all relevant studies, where studies are weighted by the log of their sample size. This was done to give more robust studies more influence on estimates, but log sample sizes were used to allow small studies to still have an impact. The specific formula is

Weighted Mean Effect Size = $SUM(\Delta RR * log(n)) / SUM(log(n))$

11. Estimated cost of In-house Training

In-house training is estimated to take 2 hours to prepare + 3.5 to 6 hours to administer, per employee. If one employee participates and takes the minimum time, $2 + 3.5 = 5.5$ employee hours would be spent. If two employees participate and take the maximum time, $2 \cdot (2+6) = 16$ employee hours would be spent. Across 5 branches and at a cost of \$30 per employee hour, the cost of in-house training could range from $5 \cdot 5.5 \cdot 30 = \$825$ to $5 \cdot 16 \cdot 30 = \$2,400$ per month. The midpoint of these two numbers is $(825 + 2400)/2 = 1,612.5 \approx \$1,600$, which is used as the middle estimate for cost. If only one branch implemented in-house training, costs could range from $5.5 \cdot 30 = \$165$ to $16 \cdot 30 = \$480$ per month, with a middle estimate of $(165+480)/2 = 322.5 \approx \320 .

12. Estimated cost of Client Check-ins

One 3-year loan consists of $3 \cdot 12 = 36$ months. If each client requires 8 to 9 (8.5 on average) hours of check-ins over the course of their loan, then each client will require an average of $8.5 \text{ hours} \cdot 60 \text{ minutes per hour} / 36 \text{ months} = 14.17 \approx 14.5$ minutes of employee time per month. With 340 active clients, this would require $340 \text{ clients} \cdot 14.5 \text{ minutes per client per month} / 60 \text{ minutes per hour} = 82.17 \approx 82$ employee hours per month. However, in order to cost this alternative, I assume that check-ins will only be required for new client partners. So, I use the formula $8.5 \text{ total employee hours per client} \cdot \$30 \text{ per employee hour} = 255 \approx \260 per client. At 17 new clients per month, the alternative will cost $\$260 \text{ per client} \cdot 17 \text{ clients per month} = 4,420 \approx \$4,400$ per month.

13. Estimated cost of Savings Nudges

It is estimated that setting up bank partnerships takes 20 hours of employee time, costing $20 \text{ hours} \cdot \$30 \text{ per hour} = \$3,000$ upfront. It is also estimated that orienting a new participant to the nudge-based savings program takes 2 hours and that 5% of new client partners participate. At 17 new clients per month, $2 \text{ hours per client} \cdot \$30 \text{ per employee hour} \cdot .05 \cdot 17 \text{ clients per month} = \51 per month.

14. Estimated cost of Savings Incentives

It is estimated that setting up bank partnerships takes 20 hours of employee time, costing 20 hours • \$30 per hour = \$3,000 upfront. It is also estimated that orienting a new participant to the incentivized savings program takes 2 hours and that 30% of new client partners participate. At 17 new clients per month, 2 hours per client • \$30 per employee hour • .3 • 17 clients per month = 306 ≈ \$300 per month. Adding to the cost are the savings matches themselves. If 30% of new clients take up the program and if those who take up contribute the full matchable amount each month, then 17 new clients per month • .3 (uptake) • \$5,838 average new loan amount • .1 (proportion matched) = 2,977.38 ≈ \$3,000 matched per month. Taking into account both orientation and matching costs, the ongoing cost of the Savings Matches program would be \$300 per month + \$3,000 per month = \$3,300 per month.

15. Interactive Spreadsheet

A Google spreadsheet was used to generate rate of return, cost, and cost-effectiveness estimates for each alternative. A link to the spreadsheet is provided here. Users should feel free to make a copy and edit the variables in columns A and B, in order to estimate the effectiveness of each alternative under alternate conditions. For example, changing "FF employee total yearly compensation" from 60,000 to 120,000 would increase the cost of an employee hour from \$30 to \$60 and would increase the cost of all alternatives. It is also possible to add or remove studies, to test how each one affects estimates. Please feel free to contact me with any questions about using the spreadsheet or about this report in general. My contact information can be found on the final page.

Link to estimates spreadsheet:

<https://docs.google.com/spreadsheets/d/1dKc1dANSk4Mx7bA9oXzQ6A5zC3g-8EdoTlCDeZsIN6U/edit?usp=sharing>

THANK YOU!

