PROMOTING FORMAL FINANCIAL SERVICES ACCESS THROUGH MOBILE BANKING: THE UGANDAN CASE

A Thesis in
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by
Ishita Ghosh

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The thesis of Ishita Ghosh was reviewed and approved* by the following:

John Carroll  
Edward M. Frymoyer Professor of Information Sciences and Technology  
Thesis Adviser

Mary Beth Rosson  
Professor of Information Sciences and Technology

Andrea Tapia  
Associate Professor of Information Sciences and Technology

David Hall  
Dean, Information Sciences & Technology

*Signatures are on file in the Graduate School.
ABSTRACT

Mobile Banking has been touted as revolutionary in the developing world with its capacity to extend financial services access to the unbanked. However, the scope of the financial services offered on the mobile backbone has been at best optimistic and under-developed, spanning typically micro-transfer, micropayment and remittance services. As the literature continues to exhort the benefits of long-term, reliable and easy access to formal financial services (especially savings and loan instruments) in combating poverty, the Mobile Banking landscape finds itself in a state of flux. Innovative ventures are being tested around the globe to develop Mobile Banking services to include savings accrual, loan approval and insurance facilities. Whether or not the Mobile Banking infrastructure is able to accommodate more inclusive financial services and products is certainly the question of the hour.

This thesis will present the findings from a three month pilot that was conducted in Uganda to test a Mobile Banking solution that targeted the dissemination of formal financial services, especially savings facilities, to unserved populations by re-appropriating an existing technological platform (mobile phones) and leveraging a non-traditional service provider (bank on wheels). To this end, a preliminary prototype was launched at eight different sites to test its viability. Through a host of qualitative and quantitative methods (semi-structured & informal interviews, demographic surveys, and participant observations), this inception design was constantly monitored and subsequently redesigned. In this manner, the design activity becomes the pivot of the study. Further, the pilot also tracked the uptake of the service and the characteristics of its users. This was especially important in determining the transformational potential of the design; that is, to measure the potential of the service to bring formal financial instruments to unbanked populations. The end goal of the pilot was to present a final transformational design to the project partners for consideration for a full-scale, commercial launch.
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Chapter 1

Introduction

1.1 Introduction to the Research Area

It is hardly news that the world has witnessed a mobile telephony explosion over the past decade. Until recently mobile phones were diffusing more rapidly in developed nations (UNDP, 2001); however this has seen a shift and mobile networks have since been rapidly expanding in low-income and middle-income countries. Affordable mobile handsets, low-value prepaid cards and greater coverage have introduced telephony into the lives of millions of first-time users, and it seems unlikely that this trend will abate anytime soon. Interestingly, there is evidence that suggests that a significant proportion of these mobile phone users in emerging economies around the world are also “unbanked”, or lack access to formal financial services. Indeed, it is speculated that there exist more people with mobile connections than with bank accounts across the developing world (Porteous, 2006).

Following in the footsteps of the mobile revolution, innovative ventures have been launched in emerging economies around the globe which seek to deliver financial services to unbanked populations. These services typically include long-distance remittances, micropayments, and micro-transfers in alternative currencies where airtime in a handset can replace or augment cash holdings (Donner, 2007). The mobile phone platform reduces the cost of delivery of the financial services, both from the provider end - by lowering the costs of building and maintaining a traditional bank branch network, and from the customer end - by lowering the costs of accessing these services. These advantages can accelerate the access to financial services on the back of the mobile infrastructure (Porteous, 2006). This form of banking is defined as Mobile Banking.

On the flip side, it is important to recognize the under-developed and optimistic scope of financial services that is currently being delivered on the mobile infrastructure. These services have been traditionally restricted to micropayments, remittance services and micro-transfers, and are yet to accommodate savings accrual, loan approval and insurance facilities. It is important to experiment in this domain as the potential for mobile devices to deliver financial services has been well-established. Innovative solutions need to be tested to truly
revolutionize the mobile-banking landscape. This thesis demonstrates the findings from a preliminary project that engages a formal financial service provider (FSP) and the local mobile infrastructure to link unserved populations to a variety of services that transcend micropayments and transfers.

1.2 Statement of Purpose

The Financial Literacy or the FinLit project aimed at linking unserved populations to formal financial services. To this end, the project team was working in conjunction with MTN, the leading telecom provider, as well as PostBank, one of the largest commercial banks in the country. The pilot engaged the PostBank mobile banking van that provided door-to-door banking services on a weekly basis, and leveraged the existing Mobile Money agent network to provide daily access to traditional M-banking services. The agents were further prepared to perform the interface function between the two distinct services, and thus complete the model.

This thesis presents the findings from the pilot that guided the design evolution of the FinLit model. The concluding design would be presented to MTN and PostBank for consideration for a commercial roll-out. The findings also demonstrate what demographics were appropriating and utilizing the service – a crucial indicator in evaluating our penetration into unserved populations. The most important contribution of the FinLit project however, is its accommodation of a broader financial services portfolio for dissemination into unserved regions. The FinLit model aims to link potential customer to formal bank accounts, and therefore introduce a larger customer base to savings accounts, interest rates, and loan opportunities. The model also aims at refurbishing the traditional concept of the Mobile Money wallet by extending its function as a micro-transfer device to a potential currency storage device. Such outcomes are decisive in guiding M-banking endeavors around the world.
1.3 Project Focus & Hypothesis

The FinLit project was primarily focused on making financial services more accessible by bringing the financial service provider to unserved regions and allowing individuals to choose from a variety of financial products and services.

More specifically, the following hypotheses were tested. Chapter 5 will outline the findings in greater detail:

1. Individuals will move their cash from MM wallet to formal account if provided with the adequate stimulus from the marketing team, consistent guidance from MM agents, and appropriate incentives from the financial service provider.

2. Individuals will sign up for a savings account if provided with adequate stimulus from the marketing team, consistent guidance from the MM agents, and appropriate incentives from the financial service provider.

3. The service will be appropriated by unbanked individuals account if provided with adequate stimulus from the marketing team, consistent guidance from the MM agents, and appropriate incentives from the financial service provider.

1.4 Common Definitions & Terms

Table 1.1: Definitions and Terms

<table>
<thead>
<tr>
<th>TERM</th>
<th>DEFINITION</th>
<th>ALTERNATIVE TERMS</th>
</tr>
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<tbody>
<tr>
<td>Mobile Banking</td>
<td>The delivery of banking services through mobile phones is known as mobile banking or m-banking. The terms mobile payments (m-payments) and mobile commerce (m-commerce) may be used, but these typically refer to the more popular use of mobile phones to make retail payments and person-to-person transfers only (Ivatury &amp; Pickens, 2006).</td>
<td>M-commerce, M-payments</td>
</tr>
<tr>
<td><strong>Formal Financial Services</strong></td>
<td>Financial services provided by formal providers that are subject to general laws as well as specific banking regulation and supervision is known as formal financial services (CGAP, 2011).</td>
<td><strong>Banking services</strong></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Unbanked</strong></td>
<td>Demographics that are typically excluded from the financial mainstream and that do not have deposit accounts of any type are known as unbanked (Caskey, 2000). Unserved is another term that is used interchangeably but it refers to a more holistic exclusion than just banking services: unserved populations may also be excluded from semi-formal or informal financial services.</td>
<td><strong>Unserved</strong></td>
</tr>
<tr>
<td><strong>Mobile Money</strong></td>
<td>Mobile money is money that can be stored electronically on a mobile device utilizing software that functions much like an electronic wallet (Varshney, 2002).</td>
<td><strong>Electronic money, Virtual money</strong></td>
</tr>
</tbody>
</table>

### 1.4 Project Snapshot

The author joined the FinLit team in August 2010, after the needs assessment had been predominantly completed. This study will exclude the data collection and analysis details from the needs assessment, but will instead provide a synthesis of the feedback provided during this phase. This thesis will concentrate on the preliminary design of the pilot, the initial user feedback to this design, and subsequent iterations through the project term. In doing so, this study will also be excluding the findings from the financial literacy interventions. The author believes the findings are beyond the scope of this study.

The FinLit team set out to test a solution that, if successful, would be turned over to MTN and PostBank for a commercial launch. To this end, the team had a limited budget and a three month timeframe. An inception design was conceptualized based on the preliminary findings of the needs assessment phase. Immediately after the inception design was launched at the pilot sites, the FinLit team began tracking the progress of the pilot. To this end, a host
of qualitative as well as quantitative methods were used to track the progress and uptake of the service. 52 semi-structured interviews and 92 demographic surveys were conducted, in addition to monitoring the pilot through tracking sheets, participant observations and informal interviews.

The methods were pivotal in developing the design of the pilot over the 3 month timeframe. Through the tracking of the service, the FinLit team was able to gauge customer reaction which guided the evolution of the inception design. Design typically develops under uncertain conditions, and it is important to create an awareness of any external or internal stimuli to better guide the design progress. The FinLit model went through two design innovations: first the inception model was re-designed based on preliminary findings, and second a new design was introduced based on the pilot progress findings. The methods also helped determine the demographic characteristics of the users who were signing up for the service. This was especially important in determining the transformational potential of the FinLit service, as will be discussed in greater detail in chapters 2 and 3.

1.5 Thesis Organization

Table 1.2: Thesis Organization

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>TITLE</th>
<th>CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHAPTER 1</td>
<td>Introduction</td>
<td>This chapter provides a broad introduction to the research area, before leading into the FinLit project synthesis. Through the statement of purpose, pilot focus &amp; hypotheses, and the project snapshot, the reader is able to get a preliminary insight into the project’s design, methodology and findings. The thesis layout is also described here.</td>
</tr>
<tr>
<td>CHAPTER 2</td>
<td>Background</td>
<td>This chapter delves in to the existing literature that looks</td>
</tr>
</tbody>
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This chapter looks at the FinLit project in greater detail. The inception design of the FinLit model is described. The pilot sites and target population are identified. The project partners and their dedicated platforms are described in detail.

**CHAPTER 4** Methods & Analysis

This chapter provides a description of the methods used to collect data and analysis tools used to study this data.

**CHAPTER 5** Findings & Design Process

This chapter provides the findings that guide the design progress throughout the pilot, as well as characterize the demographic that signed up for the service.

**CHAPTER 6** Discussion

This chapter integrates the findings and their design implications on the FinLit model.
Chapter 2

Background

2.1 Why is Access to Formal Financial Services important?

In a paper published by the Financial Access Initiative in 2009, it was found that 2.5 billion adults, a little more than half of the world’s adult population, did not use formal financial services to save or borrow. Nearly, 90% of this population lived in Africa, Asia, Latin America and the Middle East. Indeed, a little more than 800 million of this population living in Africa, Asia and the Middle East alone, live on less than $5 per day (Chaia, Dalal, Goland, Gonzalez, Morduch & Schiff, 2009).

What is the impact of these numbers when we examine them independently? The fact that more than 2 billion people did not use formal financial services is a direct reference to the lack of consumption of these services. However, this cannot be considered a direct outcome of lack of access – a given population may have access to formal financial services but may simply choose not to avail of the same (voluntary exclusion). On the other hand, not having access to such services will inevitably preclude consumption (involuntary exclusion) (Claessens, 2006). The fact that 90% of this population comprises most of the developing world is an important point. While it is tempting to assume that socioeconomic and demographic factors almost exclusively foster financial inclusion (or exclusion), it has been found that the regulatory environment as well as the initiatives of independent financial service providers within a country can significantly impact the financial landscape (Chaia et all, 2009).

And what does it mean that 800 million people who do not use formal financial services, either voluntarily or involuntarily, live on $5 per day? It certainly reflects on the cost constraints of access to financial services. More often these costs are pecuniary – prohibitively expensive services predictably exclude large portions of society. These expenses can range from high minimum deposits, administrative fees and liabilities when accessing banking accounts, to the facility of collateral while accessing loans (Claessens, 2006). Frequently, rural areas bear the cost of lack of physical access to financial services. Indeed access to such services has traditionally necessitated access to physical branches which again restrict opportunities for unserved regions.
This in many ways is a critical problem as more and more contemporary rhetoric exhorts the benefits of continued, reliable and easy access to formal financial services in combating poverty. Access and subsequent consumption of such services can assist in insuring against income irregularities and shocks, expanding investment portfolios, accessing loans and credit services, and building credit history.

Indeed, an inclusive financial system will aim to address the needs of everyone, including the poor, and including unserved regions. Such a system will be able to identify and characterize the features of a diverse clientele. But a financial system that aims to serve the poor will also face some substantive challenges to be truly inclusive. Helms elaborates upon these challenges in her book. She identifies scale, depth and cost as pivotal to building inclusive financial systems. While scale ensures reaching out to larger populations, depth ensures that these populations contain the poorer and more remote sections. Finally, it is imperative that a sustainable and inclusive financial system will aim to lower the costs at the client as well as the FSP end (Helms, 2006).

Over the years, financial systems have started restructuring by moving out of traditional bank branches into retail stores and points-of-service (POS) terminals in unserved areas. Indeed, branchless banking is being touted as the promising solution to extend financial services to populations not served by physical bank branch networks. Branchless banking can penetrate hitherto unserved regions (depth), reach out to more people (scale), and reduce the cost of delivery at both the client as well as provider end (cost). In a shifting landscape, branchless banking has seen many innovative initiatives around the world, especially in the developing world.

2.2 More about Branchless Banking

The key elements in branchless banking have been well-documented: the technology platform that can authorize unique customer access and complete electronic transactions; the structural facilities to trade against electronically valued currency; the classification of non-bank third-party outlets that can handle cash-in and cash-outs; basic cash deposit and withdrawal services
provided by government-authorized deposit-taking institutions, and the accessibility to substitute for a physical bank branch at the customer end (Ivatury & Pickens, 2006). This last component is particularly significant as it serves to distinguish between “additive” and “transformational” models and their ability to extend financial services to the poor. While an additive model provides an additional medium to existing banked customers for conducting banking transactions, a transformational model can substitute for traditional bank branches to reach out to unbanked populations (Porteous, 2006).

The following figure provides a high-level view of the various projects that have been commercially launched or announced in different countries across the globe. As is apparent, Latin America has seen a prevalence of card based models, whereas African countries have seen a highly skewed incidence of mobile-phone based projects. For most African countries this reflects the rapid diffusion of mobile handsets in a landscape where the fixed telecommunications and banking infrastructure are inadequate to serve the needs of everyone (Mas, 2009).

Branchless banking becomes an inherently lucrative alternative for servicing unserved areas by minimizing the cost of deployment and the costs of handling low-value transactions. In developing countries around the world, this has been achieved by the technology platform. The POS devices on the backbone of telecommunication networks connect customers in a remote location to the authorized deposit-taking institution, thereby minimizing the heavy roll-out costs for establishing physical presence. However, if the platform is mobile-phone based then third-party agents must enter the model to successfully fulfill banking services. Utilizing third-party networks, that are typically retail outlet proprietors, serves in exploiting existing networks which again eliminates roll-outs costs. This relieves the operation costs of low-cost transactions, especially if critical volumes are achieved. Indeed, providing access to unbanked populations may increase the uptake and utilization of banking services, if and only if the exclusion had been previously involuntary. Furthermore, the mobile phone platform reduces the cost of delivery of the financial services at the customer end as well by lowering the costs of accessing these services. Bringing financial services to the neighborhood can eliminate the costs of commuting to outlying physical bank branches, saving the customer both time and money.
Figure 2.1: Global Branchless Banking Ventures

SENEGAL: Mobile operator VeFone and two transaction switching companies deliver mobile money.

GHANA: Tnt-N-Pay service, Zain piloting Mobile Money.

NIGERIA: MoneyboxAfrica introduced mobile money.

DR Congo: Early Celpay mobile service by operator Celtel.

SOUTH AFRICA: Several mobile banking projects launched, led by banks, mobile operators and an independent provider.

MEXICO: Public telegraph offices retail banking services for 4 banks. Many banks have mini branches in retail spaces. Branchless and mobile banking regulations are being issued.

COLOMBIA: Leading banks are rolling out POS-based agent networks. Government program to subsidize banks to set up agents in unserved municipalities.

PERU: 4 leading banks are rolling out POS-based agent networks.

BOLIVIA: Banks experimenting branchless banking; regulations already issued.

CHILE: BancoEstado has large network of POS-based agent network, associated with basic account and microfinance unit.

Brazil: Major banks have extensive POS-based agent networks, led by public banks. Postal bank set up as JV of public post offices and a private bank.

India: There are many pilots involving many technologies. Regulatory framework still unfolding, with uncertain outcome.

Sri Lanka: Dialog/NDB Bank launched mobile banking service.
This paper is particularly concerned with mobile banking or M-banking and how it can serve unbanked populations, especially in developing countries. Considerable literature exists that has investigated M-banking applications and innovation around the world. There exist case studies that appraise individual applications in a specific country, and therefore a specific regulatory environment. For instance, a heavy body of work exists about M-Pesa – a Safaricom initiative in Kenya (Hughes & Lonie, 2007; Mas & Morawczynski, 2009; Morawczynski, 2009; Morawczynski, 2008; Suri & William, 2009). Similarly, case studies have examined WIZZIT in South Africa (Ivatury & Pickens, 2006; Ghosh, 2010). Similarly, case studies have examined WIZZIT in South Africa (Ivatury & Pickens, 2006; Ghosh, 2010) and Globe Gcash in the Philippines (Ghosh, 2010). Other studies have examined mobile banking ecosystems that isolate each actor and each organization, and the intersecting partnerships, in the mobile banking community (Jenkins, 2008), or have focused on the enabling environment that fosters a sustainable trajectory of market development for innovative mobile banking applications (Porteous, 2006). There are few studies that have looked at the mobile banking user experience in the developing world. In one of the few, Medhi et al evaluate adoption and usage of mobile banking systems in five different developing countries, especially for low-literacy, low-income users (Medhi, Ratan & Toyama, 2009). Singh writes an interesting paper on how novice users may be unable to grasp the abstract concept of electronic or mobile money (Singh, 2007).

There has been considerable speculation about the true potential of mobile banking to reach out to unbanked populations. Porteous assesses the transformational potential of four different M-banking models in Africa in his comprehensive study, but notes that predicting the unencumbered evolution of a transformational approach is difficult in the face of uncertain policy and regulatory conditions (Porteous, 2006). In fact, in most countries regulation is an impediment to the emergence of mobile banking. Porteous also outlines the regulatory principles that can decisively transform an additive M-banking model to a transformational M-banking one. He urges regulators and policy makers to adopt a risk-based approach to encourage remote account openings and to exempt small volume value accounts; to appropriately regulate agents to take deposits or process withdrawals; and to suitably regulate electronic money provisions that can let non-banks enter the financial landscape. In another study, Porteous observes that only once M-banking extends financial access to unbanked populations at a sufficient scale, can it be
said to have truly “transformed” the retail financial sector (Morawczynski & Pickens, 2009). In his study, he looks at South Africa and notes that the transformational impact of mobile banking has been trivial as most users use it as an additive channel for banking.

The scale that Porteous talks about has been reached by Safaricom’s M-Pesa in Kenya. As of early 2011, M-Pesa had 13.5 million users and 22,000 M-Pesa agents according to Microfinance Africa (Thorat, 2006). Studies have looked at the user profiles of the poorer M-Pesa users in Kenya and observed that there were two main types of users: urban senders who were mostly male and rural recipients who were mostly female (Mugwe, 2011). Interestingly, the same study notes that while the urban senders were using M-Pesa as an additive channel for remittance they preferred it to alternative options because it was cheaper, safer, and easier to access. The study also observes that both banked and unbanked M-Pesa users were using it as a potential savings device. This brings up another critical aspect of a transformational system by identifying a gap in the market – that of a safe and affordable place to store money. Evidently, to transform the retail financial sector one must reach scale in extending access to unbanked populations. However, to truly reach scale this access cannot be restricted. A narrow range of financial products and services will only attract a certain segment of the population. Therefore, a truly transformational financial system has to be inclusive in two ways: one, by including the unserved populations; and two, by including a complete set of financial products and services. Indeed, it has been noted in the literature that to conduct maximum transactions per customer, branchless banking has to go beyond payments and storage services, but must also accommodate savings, credit disbursements and repayments, and remittances etc (Mas, 2009).

The United Nation’s Millennium Development Goals have identified this complete set of financial services as access to payment and both domestic and international remittance facilities, savings instruments, short and long-term credit, and insurance services (Aportela, 1999). However, mobile banking services have been primarily designed and are marketed as a payment channel. The literature has noted that most mobile banking systems revolve around stored value, cash-in and cash-out, and micropayments and micro-transfers (Donner, 2007). Interestingly though, more and more research is observing the appropriation of the mobile money wallet as a potential storage or savings device; however mobile operators are wary of advertising their
product as such to avoid any risks with the banking regulators. This appropriation is interesting because, as mentioned previously, it exposes the latent demand in the market for a safe, affordable, and convenient place to for the storage of money for both banked as well as unbanked populations. While the former may appropriate their mobile money wallets to diversify their financial portfolios (Mugwe, 2011) or to switch to a more convenient and/or cheaper alternative; the unbanked populations may appropriate their mobile money wallets for the lack of other options.

2.3 Why Savings?

Although microcredit has radicalized financial systems for the poor for decades, more recent rhetoric has started recognizing the diverse financial needs of the poor, as well as their capability to save. Practitioners have identified the lack of unsuitable deposit facilities and institutional structures as the reason for the incommensurate savings capacities of poorer populations (Robinson, 1994; Ledgerwood & White, 2006); as opposed to the previously established conception that low income levels automatically result in low savings. Indeed, over the past decade microfinance institutions have been restructuring to include savings mobilization in their programs. This can prove valuable for MFIs as well as the potential clients. While the MFIs benefit from gaining alternative and inexpensive streams of capital, as well as acquiring access to a larger client pool, potential clients can hugely benefit from gaining access to savings instruments (Morduch, 1999). The literature has underscored the importance of savings in low-income populations, especially for those with erratic incomes (Rutherford, 2000). Savings can help one build up a cash reserve to insure against contingencies, uneven income streams and consumption volatility; they can help build up assets, and moderate the reliance on credit instruments (Morduch, 1999; Fiebig, Hanning & Wisniwski, 1999). In a similar vein, scholars have also warned against the indiscriminate provision of credit to the poor. In practice, not everyone is a microentrepreneur (Helms, 2006). Even if one was to acquire a loan for alternative purposes, theoretically, getting this loan immediately commits one to future payment streams, which becomes harder for low-income and/or variable-income populations to repay (Almazan & Mas, 2010), as opposed to accumulating cash over time to self-finance personal and/or business
ventures. In general, if MFIs provide a restricted set of products and services, they will attract only a narrow range of clients (Helms, 2006). There also exists speculation that exclusive access to only credit instruments excludes the poorest 10-15% of the population as they are typically averse to risk, and therefore credit products and services (Wright, 1997). Therefore, the reorganization of the microfinance industry to include savings options has been a turning point.

It has been noted that the main challenge low-income populations may face in trying to secure their savings is a safe place to do so and to receive a fair rate of return for locking their savings away (Muteesassira & Wright, 2001). Typically the unbanked tend to save in informal savings devices. These may range from saving under the mattress (Banerjee & Duflo, 2006) or in the garden, or investing in livestock. Of course, while informal savings devices have the advantage of always being within reach, they also have the disadvantage of always being within reach. This is an interesting dichotomy that has been vaguely discussed in the literature. While ease of access to one’s savings is critical, especially for lower-income populations, it has also been observed that having money out of one’s reach may remove any temptations to spend this money (Lincoln & Guba, 1985). Indeed, imposing a trivial barrier between yourself and your savings may be the best way to ensure that your savings remain intact. If this money is moved into a formal savings account that offers a fair interest rate, the lump sum may now be adjusted to inflation rates (Muteesassira & Wright, 2001) or increase in value over time.

As noted from the literature review, Mobile banking as a payment service has been commercially launched and tested in different countries with varying degrees of success. But its outreach as a potential linking device to formal banking services and products, and therefore savings instruments, is still in its inception stages. One example is the recent partnership between Safaricom and Equity Bank in Kenya that launched M-Kesho. M-Kesho links potential customers to formal bank accounts on the backbone of the M-Pesa platform and agent network (Breloff & Tarazi, 2010). Such a venture may demand a regulatory intervention that would seek to re-evaluate the agents’ deposit taking privileges.

Therefore, as MFIs have been restructuring to offer savings products and services as in addition to microcredit products, the FinLit project also conceptualized the mobile banking model to be
more than just a facility that sustains the “velocity of money” (Porteous, 2007). Such a restructuring of the mobile banking model could be particularly transformational for unserved populations whose only access to financial instruments and functions may be through local MFI s or mobile money agents.

2.4 Contribution

The literature review looks at the capability of M-banking to extend formal financial services to the unbanked. The literature also emphasizes how savings instruments can particularly help the poor even their consumption flows and erratic incomes, as well as prepare for big expenditures and contingencies. However, M-banking in its current state has been slotted as more of a micropayments and micro-transfers tool, completely excluding loan, savings, and insurance facilities. Recognizing the need to test such solutions on the mobile platform that could deliver a more integrated stack of financial services, including savings, was the primary motivation behind the FinLit project. While financial literacy was also an important aspect of the project, it is important to realize that more often financial literacy and financial access cannot be separated: providing the former without the latter is redundant.

Before the FinLit model is discussed in the next section, it is important to note that the model was designed with the express intention of piloting the service within a 3 month timeframe. This put the FinLit team under tremendous pressure, especially in trying to avoid the risk of running afoul with the banking regulators. Mobile Money had been approved of as a provisional wallet which enables the flow of money between a sender and receiver. However, as more and more studies have shown electronic value gets stored in these wallets for days, weeks, and sometimes even months. This was an interesting behavior that we sought to qualify: were people just storing in their Mobile Money wallets to be able to transfer money at a moment’s notice? Or were more and more people trying to get their savings from under their mattress and into their Mobile Money wallets? Indeed, in trying to promote a savings facility on the mobile backbone, it is important to recognize that savings practices may already exist in the appropriation of existing tools. These basic tenets will guide the project design and subsequent inquiry.
Chapter 3

Introduction to the Project

3.1 The FinLit Project

FinLit or the Financial Literacy project was envisioned by the Grameen Foundation in conjunction with MTN and PostBank in Uganda, with initial funding from the Western Union. While initially envisaged as a project that would exclusively sponsor financial literacy amongst poor Ugandans, the customer needs assessment quickly revealed that there was no access to formal financial services in the areas where the lack of financial literacy was felt the most. Therefore, the pilot was designed to address both concerns; the FinLit project was conceptualized to bring fundamental financial information to unserved populations in order to equip them with the capability to select from a range of financial products and services, and therefore to best manage their personal finances. The project composed this information to especially focus on savings instruments and best savings practices.

3.2 The FinLit Stakeholders

Table 3.1: FinLit Stakeholders

<table>
<thead>
<tr>
<th>ORGANIZATION</th>
<th>DESCRIPTION</th>
<th>PROJECT ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grameen Foundation</td>
<td>Grameen Foundation is an international organization with headquarters in Washington D.C. It aims to equip the world’s poor with access to financial services and information.</td>
<td>Design and execute the project in each of the 8 different sites to assess its sustainability and success.</td>
</tr>
<tr>
<td>MTN Uganda</td>
<td>MTN is the leading telecommunications provider in Uganda. Mobile Money is one of MTN’s product offerings with over a</td>
<td>Mobile Money served as the platform that linked individuals to financial services. The MM agent network was also critical in identifying pilot sites.</td>
</tr>
</tbody>
</table>
Mobile Money was launched in Uganda in March 2009 and is one of the product offerings of MTN. It is primarily a money transfer service, designed on the success of M-Pesa, although it can allow a host of financial services via the mobile phone – from airtime recharge to remittance transfers.

The MM service is enabled by a network of Mobile Money agents. These agents operate out of local retail outlets and may be small-time shop-owners or entrepreneurs. They facilitate the conversion of currency into its electronic value and vice versa. This is a fairly extensive process. For instance, a registered Mobile Money user will approach the MM agent and deposit cash with the agent. The equivalent mobile money (electronic value) will be transferred to the user’s account by the agent. The agent in this way is collecting hard cash that at some point has to be transferred to MTN. To this end, the agent has to undertake a trip to the nearest designated POS. This may be an ATM or a physical bank branch as assigned by MTN. It may be observed that by undertaking this trip the agent ensures that he can bring Mobile Money services closer to his local clientele. Once, the agent deposits the cash into MTN’s account his/her Mobile Money account will now reflect the equivalent MM value. The agent can now trade this electronic value for cash with his customers and the process will repeat. The customer at his/her end can now use the electronic value to transfer it someone else, or buy airtime etc.
Unfortunately, the process is seldom as efficient wherein there is a balance between hard cash and mobile money at the agent’s end at all times. Often, a customer may have to turn away disappointed because the agent may have run out of electronic value or hard cash or both. In such a scenario, he/she may visit another agent in town (if there are any) or wait until another customer shows up to transact which may temporarily provide some relief to the agent.

The money transfer process also needs some articulation. Once a customer has traded currency to buy mobile money, he now has stored electronic value on his MM account. He/she can transfer this to the desired recipient. Once the recipient receives the mobile money on their account, they can go to their local Mobile Money agent and have the mobile money converted to hard cash. This simple transaction has enabled domestic remittances in a way that has fostered over a million customers and 2000 MM agents in Uganda already.

One of the targets of the FinLit pilot was to determine the capacity of Mobile Money agents to act as financial extension workers and savings mobilizers; a revival from the traditional role of offering cash-in and cash-out services. The agents had several characteristics that made them suitable for this role. First, they were dealing with cash transaction on a daily basis and were therefore, reasonably comfortable with the basics of money management. Second, they were known to the community members and had already established trust relations. Finally, they could facilitate a communication stream with potential customers by disseminating information on finances and providing them with a place to follow-up on that information.

Therefore, in this revived role MM agents would be responsible for the following:

- Explaining Mobile Money. This would involve the concept of getting money out of informal devices and into Mobile Money as a potential storage device.

- Linking individuals to FSP. This would involve elucidating the options provided by the partner institution (PostBank) and referring customers to savings and transactions accounts.

To this end, a commission structure was designed to encourage agents to undertake such interventions, which would undoubtedly involve a heavy investment of time and resources. Agents were incentivized for their pilot activities in several ways. First, they were provided a
commission of 2000 UGX for every referral made to PostBank. Second, they were also meant to gain from the increased activity on the account. Since, Mobile Money was promoted as an interim savings device, it encouraged customers to accumulate in the wallet and then move money to a formal account. This was meant to bring more users onto the system and to encourage existing ones to use MM in different ways, thereby increasing the transactions they made on the system. This would lead to an increase in their revenues as agents receive a commission per transaction.

Table 3.2: Agent Commission Structure

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>AMOUNT (UGX)</th>
<th>COMMISSION (UGX)</th>
</tr>
</thead>
<tbody>
<tr>
<td>REGISTER NEW USER</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1500</td>
<td></td>
</tr>
<tr>
<td>DEPOSIT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5000 – 30,000</td>
<td>260</td>
<td></td>
</tr>
<tr>
<td>30,000 – 60,000</td>
<td>260</td>
<td></td>
</tr>
<tr>
<td>60,001 – 125,000</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>125,001 – 250,000</td>
<td>480</td>
<td></td>
</tr>
<tr>
<td>250,000 – 500,000</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>500,001 – 1,000,000</td>
<td>2330</td>
<td></td>
</tr>
<tr>
<td>WITHDRAWALS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5000 – 30,000</td>
<td>420</td>
<td></td>
</tr>
<tr>
<td>30,000 – 60,000</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>60,001 – 125,000</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>125,000 – 250,000</td>
<td>1200</td>
<td></td>
</tr>
<tr>
<td>250,001 – 500,000</td>
<td>2400</td>
<td></td>
</tr>
<tr>
<td>500,001 – 1,000,000</td>
<td>4300</td>
<td></td>
</tr>
</tbody>
</table>
3.4 More about PostBank and the Mobile Banking Van

PostBank, a national bank in Uganda, was especially suited for the FinLit project as it had recently started a mobile bank on wheels which serviced each specified site on a weekly basis. Therefore, the pilot model aimed at combining the weekly access that the PostBank van provided with the constant access that the local MTN Mobile Money agents provided to bring to the unbanked communities formal financial services and information.

The PostBank mobile banking van was a bullet-proof van that had two armed security guards on duty at all times. Within the van, there was a safe that only three dedicated PostBank staff had access to. This safe housed the money that customers who were transacting with the van handed over to the PostBank staff in return for a receipt. Therefore, the money was secure. In any case, in the unlikely event of a theft, PostBank was liable for the lost money of the customers (as dictated by the Government of Uganda). The van’s route was established only after it was verified for its potential to reach out to a larger (and therefore, possible unbanked) customer base and the financial sustainability in servicing these regions.

PostBank offered two types of bank accounts: Savings and Transaction. Each of the accounts was designed for different purposes which determined the prices incurred for the transactions conducted. The savings account was designed to encourage people to keep money in their accounts. It thus put a high charge on withdrawals but offered a higher interest rate. The transaction account, in contrast, was designed for those individuals who wanted to push money in and out of the account and thus charged a lower per transaction fee but also offered a lower interest rate. As part of the marketing strategies, the potential customers were explained these intricacies to better guide their decision to choose an account.

<table>
<thead>
<tr>
<th>ACCOUNT TYPE</th>
<th>INTEREST RATE</th>
<th>TRANSACTION RESTRICTIONS</th>
<th>MONTHLY CHARGES</th>
</tr>
</thead>
</table>

Table 3.3: Account Types
### SAVINGS

<table>
<thead>
<tr>
<th>Description</th>
<th>Fee Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>8% over balances of 100,000 Ugandan shillings</td>
<td>2 free withdrawals annually. Every subsequent withdrawal is charged 5000 Ugandan shillings. Deposits are free.</td>
</tr>
</tbody>
</table>

### TRANSACTION

<table>
<thead>
<tr>
<th>Description</th>
<th>Fee Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>5% over balances of 500,000 Ugandan shillings</td>
<td>Every transaction is charged a nominal fee of 600 Ugandan shillings. For higher amounts, it is 0.2% of the transacted amount. 2000 Ugandan shillings is charged as a monthly maintenance fee.</td>
</tr>
</tbody>
</table>

### 3.5 The FinLit model

The FinLit project was designed to link potential customers to a formal bank account with PostBank on the backbone of MTN’s Mobile Money network. However, the initial design of the model could not sustain itself exclusively on the Mobile Money network and had to rely heavily on PostBank’s mobile banking van. The project had to tread with caution to avoid running into trouble with Uganda’s banking regulators. Since, the Mobile Money agents were unable to formally open bank accounts or take deposits (they were only approved to transact in mobile money), the weekly presence of the PostBank van was critical to completing the link between potential customers and their formal bank accounts.

The FinLit model was designed to target unbanked populations, and focus specifically on providing these populations with savings instruments. As noted from the literature review, savings can equip populations with the appropriate tools to tide over deficient cash flows. Linking populations specifically to a PostBank Savings account also had the additional benefit of a high savings rate, that of 8% per annum over amounts of 100,000 Ugandan Shillings. Therefore, the FinLit project’s aim was to provide transformational banking channels to the unserved – those who were exclusively relying on informal savings devices. However, the project would doubtless also serve those populations looking to diversify their financial portfolios, as the findings will later reveal. This would bring up decisive points of consideration: does this diversification expose a market need, or is it sound savings behavior? These points
would help us qualify if the link that the project is aiming to provide becomes an additive or a transformational channel.

The FinLit model was designed to enable the forward flow of money from informal savings devices (such as from under the mattress)/semi-formal savings devices (such as village savings groups)/formal savings devices (such as formal bank accounts), into Mobile Money, and then finally into a formal PostBank account.

3.6 Target Population

The pilot was especially intent on targeting a specific demographic to render the FinLit model truly transformational. The criteria were:

- Should reside in rural communities where there is network coverage.
- Should have erratic incomes and recurrent periods of cash deficits.
• Should have limited engagement with, and access to, formal financial services and have relied mainly on informal mechanisms (home savings, savings groups) in the past.
• Should have access to a Mobile Money agent.
• Should own, or have access to, a mobile phone
• Should be able to read SMS messages.

The dislocation from formal financial services for this particular demographic, yet the proximity to MM agents, made them an appropriate target for the pilot. However, there may very well have existed a dissonance between the ideal target population and the actual users. Delineating such characteristics would only enable the FinLit team to better understand the market dynamics.

3.7 Pilot Sites

8 sites were chosen for the pilot. These were chosen because they met some, or all, of the following criteria:

• Located in rural, or peri-urban areas.
• Provided access to the target population.
• Had low penetration of formal and semi-formal financial services.
• Had a Mobile Money agent within the locality.
• Situated along, or close to, the PostBank mobile banking route.

Table 3.4: FinLit Sites

<table>
<thead>
<tr>
<th>SITE</th>
<th>DESCRIPTION</th>
<th>ACCESS TO FINANCIAL SERVICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIMA</td>
<td>Hima is located in Kasese district, Western Uganda. It has a population of 20,720 people and it is mainly inhabited by migrant cement factory workers and smallholder farmers.</td>
<td>The village has 2 SACCOs and a Stanbic ATM point; and the nearest bank branches are 20 km away in Kasese town. There is only one mobile money outlet in this village. This outlet has been open for a year and it</td>
</tr>
<tr>
<td>Location</td>
<td>Description</td>
<td>Transactions</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td><strong>KIBIITO</strong></td>
<td>Kibiito is located in Kabarole district, Western Uganda. The village has a population of 18,000 people; and the main livelihood activity is small hold farming and animal rearing. The main crops grown include: bananas, maize, mangos and avocados.</td>
<td>does about 100 transactions a day.</td>
</tr>
<tr>
<td><strong>KIJURA</strong></td>
<td>Kijura is located in Kabarole district. The village has a population of 8,860 people and is mainly inhabited by migrant tea plantation workers. The main livelihood activity is tea farming where many people are employed in the tea plantations as casual labourers.</td>
<td>The village does 20 to 60 transactions a day.</td>
</tr>
<tr>
<td><strong>KATOOKE</strong></td>
<td>Katooke is located in Kyenjojo district, Western Uganda. It has a population of 12,000 people. The village is occupied by smallholder farmers who grow banana and maize. It also a trading place for agricultural produce such as maize grown in the nearby village.</td>
<td>The village does 30 – 50 transactions a day.</td>
</tr>
<tr>
<td><strong>MUHORORO</strong></td>
<td>Muhororo is located in Kibale district, Western Uganda. It has a population of 14,500 people. It is a trading centre for the nearby village. The livelihoods in this town include: boda boda (motorcycle taxi), metal crafting and maize milling.</td>
<td>The town does 30 – 60 transactions a day.</td>
</tr>
<tr>
<td><strong>KAGADI</strong></td>
<td>Kagadi is a capital of Kibale district, Western Uganda. It has a population of 16000 people. Being a district capital, Kagadi is also a big trading centre with a number of activities such as retail shops, boda-boda, metal crafts, and carpentry.</td>
<td>It has 7 seven SACCOs and a Stanbic ATM point. The nearest bank is 30 Km away. The area has 4 mobile money outlets which have opened in the last two years. The Outlet taking part in the FINLIT pilot does 50 transactions a day.</td>
</tr>
<tr>
<td><strong>KYARUSOZI</strong></td>
<td>Kyarusozi is a tea growing area located in Kyenjojo district, Western Uganda. Most people in this village work as casual labourers in the tea estates. The village does about 100 transactions a day.</td>
<td>There are 3 SACCOs in this village and the nearest bank is 40 km away. There is one mobile money outlet.</td>
</tr>
<tr>
<td>KYELEGWA</td>
<td>Kyegewa is the capital of Kyegewa district, Western Uganda. It has a population of 25000 people. Kyegewa has a number of activities including retail shops, trade in agriculture produce, carpentry, metal crafts and boda- boda.</td>
<td>It has 1 SACCO and the nearest bank is 50 Km away. There is only one mobile money outlet which has been open for a year. It does about 100 transactions a day.</td>
</tr>
</tbody>
</table>
Chapter 4

Methods & Analysis

The FinLit pilot was conducted over a three month timeframe with an emphasis on prototyping the inception design of the FinLit model, conducting a host of mixed-methods, re-evaluating and then subsequently re-designing the model. In this manner, the design of the FinLit model becomes the pivot of the project to eventually produce a model that could be considered for commercial launch by the MTN and PostBank partnership.

4.1 Methods

The high-level research goal of the project was to disseminate a service (formal financial services) to hitherto unserved populations by re-appropriating an existing technological platform (mobile phones) and leveraging a non-traditional service provider (PostBank mobile van). To this end, the FinLit team launched a preliminary prototype at eight different sites to test its viability. Thereafter, the team engaged in field research to track the progress of the pilot. Field research enables one to observe or participate in social behavior and therefore, to understand it (Babbie, 2007). Field methods typically rely on “first-hand knowing” in a natural setting as the primary data collection approach (Wilson, 1985).

During the three month pilot we conducted a host of qualitative and quantitative methods: 52 semi-structured interviews and 92 demographic surveys. Further, the pilot was constantly monitored through tracking sheets, participant observations and informal interviews.

4.1.1 Semi-structured interviews

Interviews have been deemed as particularly suitable for “understanding the social actor’s experience, knowledge and worldviews” (Lindlof & Taylor, 2002) and could be “a source of discovery to both the interviewee as well as to the interviewer” (Numagami, 1998). Semi-structured interviews are designed to have well-prepared questions that are sufficiently open to empower the interviewer to better understand the context at hand (Wengraf, 2001).
52 semi-structured interviews were held across all 8 sites.

**Table 4.1: Semi-structured Interviews**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>NUMBER OF INFORMANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAGADI</td>
<td>2</td>
</tr>
<tr>
<td>KIBIITO</td>
<td>8</td>
</tr>
<tr>
<td>KIJURA</td>
<td>16</td>
</tr>
<tr>
<td>KYARUSOZI</td>
<td>4</td>
</tr>
<tr>
<td>KATOKE</td>
<td>8</td>
</tr>
<tr>
<td>HIMAA</td>
<td>6</td>
</tr>
<tr>
<td>MUHORRO</td>
<td>3</td>
</tr>
<tr>
<td>KYEGEGWA</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>52</td>
</tr>
</tbody>
</table>

The interviews were conducted over a period of two weeks. During this time the people who came to either transact with the PostBank van or sign up for new accounts were approached and requested to participate in the interviews. With the help of my interpreter, we explained the purpose of the interview: to try and ascertain the extent of information about PostBank’s products available to these communities, as well as the nature of Mobile Money usage within these communities. Thereafter, we sought the verbal consent of the potential recruits to participate in the interviews. If verbal assent was granted, the participants were taken to a nearby restaurant. The interviews lasted from anywhere between 10 to 15 minutes and light refreshments were served.

My interpreter and I were responsible for conducting the interviews. We had an interview guide with our prepared questions: 3 questions were open-ended and 2 were closed-ended. During the interviewing process detailed notes were taken which were then subsequently transcribed to aid further analysis.
4.1.2 Demographic Surveys

Demographic surveys are a popular way to understand and evaluate the target market for a specific solution. Since the high-level goal of the FinLit project was to link unserved populations to formal financial services, it was vital to monitor the demographic that was signing up for PostBank accounts. It was also important to understand if these customers were already using Mobile Money, and if so, whether they were appropriating the service for saving purposes.

92 demographic surveys were conducted across all 8 sites.

Table 4.2: Demographic Surveys

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>NUMBER OF INFORMANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAGADI</td>
<td>4</td>
</tr>
<tr>
<td>KIBIITO</td>
<td>7</td>
</tr>
<tr>
<td>KIJURA</td>
<td>31</td>
</tr>
<tr>
<td>KYARUSOZI</td>
<td>19</td>
</tr>
<tr>
<td>KATOKE</td>
<td>7</td>
</tr>
<tr>
<td>HIMA</td>
<td>8</td>
</tr>
<tr>
<td>MUHORRO</td>
<td>7</td>
</tr>
<tr>
<td>KYELEGWA</td>
<td>9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>92</td>
</tr>
</tbody>
</table>

The surveys were conducted over a week. All new customers who signed up at a given site were approached with surveys. With the help of my interpreter, we explained the purpose of the interviews to potential recruits: to better understand the local communities that were signing up for PostBank accounts through the FinLit service. At this stage, we sought the verbal consent of the potential recruits. If verbal assent was granted, the
participant was led to the PostBank van where the process of filling the paper survey out could be completed.

My interpreter and I were responsible for filling out the surveys. The participant was asked each question in order one-by-one, and the responses were filled in by us. The survey had 18 closed-ended questions.

4.1.3 Informal Interviews & Participant Observations

Participant observation may not be an isolated method by itself, but may comprise of three different methods: participant observation, enumeration and informant interviewing (Zelditch, 1962). A researcher may typically use only the first method or in conjunction with one or both other methods to better understand a social setting (Bouchard, 1976). The FinLit team conducted participant observations as well as informal interviews during the 3 month pilot: they were especially relevant to this study to better understand the FinLit design evolution over the course of the pilot.

Informal interviews are typically casual conversations with participants without any reliance on a structured interview guide. Participant observations may help in corroborating descriptions against fact, to notice any discrepancies, and to improve cognizance of any systematic distortions made by the person under study, especially when informal interviews are being used as a source to understand events and not the actor’s behavior in particular (Becker & Blanche, 1957).

16 informal interviews were conducted with customers and potential customers across all 8 sites. The interviews were conducted over a period of two weeks when the FinLit team was marketing the service. During this time, potential customers who either approached us to inquire about the product, or existing customers who were using the service were engaged in conversations which helped us understand their reactions to the FinLit model. Quick notes were jotted down, and the complete picture was reconstructed from memory immediately after the interviews.
4.1.4 Monitoring

During the monitoring of the progress of the pilot, the FinLit team maintained tracking sheets that logged some basic details of every new PostBank customer. These details included a) account type b) date opened and c) gender. These details were either retrieved from the new customer directly, or retrieved from PostBank’s records at a later time. At no point was any identifying information of these customers collected. The FinLit team was especially interested in understanding what type of accounts new customers were opening up, given the fact that the pilot was focusing on promoting Savings accounts.

4.2 Data Analysis

4.2.1 Qualitative Data Analysis

All data from the open-ended questions in our structured interviews and informal interviews were subject to inductive coding. The coding process followed a preliminary evaluation of the body of textual responses to condense the content into initial codes. Initial coding is key to uncovering and articulating concepts. Often, a piece of textual information can be assigned two different codes. After this process, the initial codes were re-evaluated to eliminate the lesser constructive codes or to combine multiple initial codes to gradually develop larger themes. This culminated the process of focused coding.

Examples of the coding process are illustrated below:

<table>
<thead>
<tr>
<th>Question: “Why did you sign-up for a Savings/Transaction account?”</th>
<th>Initial Coding</th>
<th>Focused Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>I opened a Savings account because I want to grow my money. If I kept it at home it would just sit there. It is better I keep it in a bank account, get 8% interest.</td>
<td>Grow Money</td>
<td>Accumulate Money</td>
</tr>
<tr>
<td>I opened a Transaction account because I own a shop.</td>
<td>Earning interest</td>
<td>}</td>
</tr>
</tbody>
</table>
I need to be able to withdraw money whenever I need it for work. The PostBank officer told me that a Transaction account is ideal for me if I want to be able to access my money at any time since it is cheaper.

<table>
<thead>
<tr>
<th>Constant Access</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheaper transaction costs</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.4: Coding Process Example II

**Question:** “What do you use your Mobile Money account for?”

<table>
<thead>
<tr>
<th>Response</th>
<th>Initial Coding</th>
<th>Focused Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>I save money in Mobile Money. Whenever I have some extra cash I go to the agent and deposit it into my Mobile Money account to keep it safe. I keep it there for a few weeks and withdraw it when I need it again.</td>
<td>Saving</td>
<td>Short-term savings</td>
</tr>
<tr>
<td></td>
<td>Short-term</td>
<td></td>
</tr>
<tr>
<td>I use it to receive Mobile Money from my husband in the city. But usually I don’t withdraw it all at once. I only withdraw what I need, maybe once every few days.</td>
<td>Mobile Money transaction</td>
<td>Transaction savings</td>
</tr>
<tr>
<td></td>
<td>Withdraw requisite amount, short-term</td>
<td></td>
</tr>
<tr>
<td>Whenever I have money I deposit it into my Mobile Money account. I am saving for my son’s school fees. When I have the complete amount I will withdraw it.</td>
<td>Target</td>
<td>Targeted savings</td>
</tr>
<tr>
<td></td>
<td>Saving</td>
<td></td>
</tr>
</tbody>
</table>
4.2.2 Quantitative Data Analysis

The survey data was treated with descriptive statistics to articulate the main features of the data collected. The key purpose of the surveys was to understand the demographics of the customers who were signing up for the PostBank accounts. Descriptive statistics is generally considered as a popular analysis tool for summarizing data numerically (Sandelowski, 2000). The demographic surveys were used for this purpose – to quickly summarize the population characteristics for those who were signing up for the service.

The semi-structured interviews were subject to mixed-method analysis. Once the interview transcripts were coded, the codes were subject to a quick count as well. This helped the FinLit team recognize the more frequently occurring codes, thereby lending a numerical perspective to the textual data. An example of this process is provided below:

Table 4.5: Savings Account

<table>
<thead>
<tr>
<th>REASONS FOR OPENING A SAVINGS ACCOUNT</th>
<th>ACCUMULATE MONEY</th>
<th>SAFETY</th>
<th>MONEY OUT OF REACH</th>
<th>NO MONTHLY CHARGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

4.2.3 Design Process

The FinLit team was responsible for testing a solution jointly conceived with MTN and PostBank, and to assess its sustainability and potential success. Promising results would stimulate a commercial and joint roll-out by MTN and PostBank at which stage, FinLit would exit the pilot.

The needs assessment conducted in the months preceding the pilot uncovered some fundamental issues in the financial landscape of Uganda. The preliminary report concluded that there was no access to formal financial services in the places where
financial literacy was needed the most. Therefore, the pilot decided to focus on access and the inception design of the FinLit model served this high-level goal. Over the course of the pilot, the FinLit team tracked the progress of the pilot to ascertain customer reaction. These findings guided the evolution of the FinLit model over time.

With a timeline of three months, the design evolution of the FinLit model was subject to temporal pressure. It was necessary to expedite the design activity for a quicker turnaround, but at the same time it was imperative to document this process. The design process tracks the design choices, the rationale for these choices, and a detailed explanation of how the design will be implemented (Chandrasekaran & Iwasaki, 1993). The design process for the FinLit model especially was subject to redesign iterations. In redesigning only the components, subsystems, or parameters that need to be modified are restricted; thus the design of the model does not have to start from scratch again (Chandrasekaran & Iwasaki, 1993).

The FinLit design process begins by identifying the high-level motivation, which comprises of the goal of the design, the assumptions made during the design activity, as well as the constraints the design may be subjected to. After this preliminary classification, each design feature is individually appraised: by identifying the trade-off and then providing a justification analysis. This initial process then results in a design artifact that may be subject to redesign contingent upon the pilot findings.
Chapter 5

Findings & Design Process

5.1 Interview Findings

5.1.1 Finding I

Most customers did not follow the fixed savings process.

The inception design of the FinLit project was structured and rigid. It enabled the fixed savings process: from informal savings devices to Mobile Money wallet to PostBank account. The marketing efforts especially emphasized this process to all potential customers. However, the FinLit team discovered very early on in the pilot that customers were appropriating the service in one of the three ways: a) they were moving their money from informal savings devices to their MM wallet to their PostBank account; b) they were terminating the process in their MM wallet and saving their money there; and c) they were directly saving in their PostBank accounts.

After this initial observation, informal interviews were conducted with 16 potential customers. It was seen that most of the informants were unable to isolate the application of their Mobile Money wallets as an interim savings tool (confusing) in the FinLit process. Some vignettes from the informal interviews were:

“How can’t I directly save in PostBank? Why do I have to save in Mobile Money? I am happy with the weekly service of the van.”

“I don’t want to save in PostBank. I am happy saving only in Mobile Money. I can ask my friends if they want to open a PostBank account.”
Informants also observed that the cost of transacting with the interim tool was too high (expensive) to justify saving in their Mobile Money wallets and then moving these amounts to their PostBank accounts. Some vignettes from the informal interviews were:

“It is too expensive to keep withdrawing from Mobile Money to deposit in PostBank.”

“But I can just keep the money in my house and accumulate it for a week. Then I can go and deposit it into my PostBank account. It is cheaper than paying to withdraw from Mobile Money.”

5.1.2 Finding II

Some customers were using their Mobile Money wallets to save

52 informants were asked how they used Mobile Money in the semi-structured interviews: 17 (32.7%) said they were using Mobile Money to save their money, 14 (26.9%) said they were not using Mobile Money to save, and 21 (40.4%) informants said that they were not registered for the Mobile Money service. The break-up was as follows:

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>SAVE IN MOBILE MONEY</th>
<th>DO NOT SAVE IN MOBILE MONEY</th>
<th>NOT REGISTERED FOR MOBILE MONEY SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAGADI</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>KIBIITO</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>KIJURA</td>
<td>1</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>KYARUSOZI</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>KATOKE</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>HIMÁ</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>MUHORRO</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>KYEGEGWA</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>17</td>
<td>14</td>
<td>21</td>
</tr>
</tbody>
</table>
The semi-structured interviews also revealed how saving in Mobile Money found different interpretations amidst different customers. These interpretations typically entailed a different series of behaviours. The following savings scenarios were cultivated to reflect these behaviours:

**Scenario 1: MM as a transactions account for short term savings**

8 (47%) informants used MM as a short-term savings mechanism. They would deposit cash into their wallet when they had some on hand, and withdraw the cash if and when the need arose. The cash usually stayed on the account from a few weeks to 2 months. This seemed to be the most popular way of saving in Mobile Money.

**Scenario 2: Saving before sending, or after receiving, MM**

6 (35%) informants tied their savings behavior to transactions that occurred on MM. For example, recipients of MM would keep a balance on their account for a period of a few days to three months. They would make smaller value withdrawals when they needed the cash until the balance was depleted. In this case, the recipients saved by *not withdrawing* the entire amount after the transfer was made. Senders would also make smaller value deposit before making a transfer. They would accumulate this cash over a period of a few days to 3 months before sending the accumulated amount. In this case, the user would save by depositing cash until they met their transfer target.

**Scenario 3: Targeted Savings**

55 (18%) of customers would save with a goal mind—from land to cattle and school fees. In some cases, they had cultivated a savings schedule and decided upon the day of the week/month that they would make the deposit and the amount that would be deposited each time. In others, they would put money into MM when they had it on hand. When customers met their goal, they would withdraw the bulk amount from their wallet for the purchase.
5.1.3 Finding III

More customers opened Transaction accounts than Savings accounts.

While the high-level goal of the FinLit project was to link unserved populations to formal financial services, the FinLit team was especially concentrating on promoting a culture of savings and getting money out-of-reach from informal savings devices. For this reason, PostBank’s savings accounts were more aggressively promoted.

Despite this, the FinLit project observed that throughout the pilot period more Transaction accounts were being opened than Savings accounts. Indeed, at the culmination of the pilot it was seen through our monitoring records that significantly more (76.5%) Transaction accounts were opened than Savings accounts.

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>TRANSACTION ACCOUNT</th>
<th>SAVINGS ACCOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kibiito</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>Hima</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td>Kyegegwa</td>
<td>25</td>
<td>8</td>
</tr>
<tr>
<td>Katooke</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Muhororo</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td>Kagadi</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Kijura</td>
<td>80</td>
<td>25</td>
</tr>
<tr>
<td>Kyarusoz</td>
<td>34</td>
<td>11</td>
</tr>
<tr>
<td>TOTAL</td>
<td>222</td>
<td>68</td>
</tr>
</tbody>
</table>
Such a finding reveals the market predilection for Transaction accounts, at least within the sites we piloted in. This is interesting, given that a Transaction account incurs higher charges: there is a monthly maintenance fee of 2000 UGX and every transaction (deposit or withdrawal) is charged a nominal fee of 600 UGX. Interest rates were also lower than those offered for a Savings account – 5% offered over account balances of 500,000 UGX. However, what was most surprising about this finding was the fact that Transaction account holders could only access their accounts on a weekly basis through the FinLit service, which completely belies the constant access that Transaction account owners traditionally benefit from.

During the structured interviews, respondents were asked to justify what type of account they had signed up for. Of the 52 informants, 19 held Savings accounts and 30 held Transaction accounts. 3 participants were unable to name what account they owned.

Table 5.3: Savings Account

<table>
<thead>
<tr>
<th></th>
<th>ACCUMULATE MONEY</th>
<th>SAFETY</th>
<th>MONEY OUT OF REACH</th>
<th>NO MONTHLY CHARGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAVINGS ACCOUNT</td>
<td>11</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

58% of the informants stated that they opened up a Savings account to accumulate money. They were particularly interested in the high interest rate that this type of account offered – 8% over balances of 100,000 Ugandan shillings. 21% of the customers stated that keeping their money safe in bank accounts was a motivator to open a Savings account. 16% of the customers responded that they wanted their money out of their reach so that they would not be tempted to spend it unnecessarily.

Table 5.4: Transaction Account

<table>
<thead>
<tr>
<th></th>
<th>BUSINESS</th>
<th>LOANS</th>
<th>OUT OF REACH</th>
<th>SAFETY</th>
<th>SALARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSACTION</td>
<td>14</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>
47% of the informants stated that they opened up a Transaction account for business purposes. These informants were typically traders or small business owners who wanted to make frequent transactions without incurring the prohibitive 5000 UGX fee after the first two withdrawals on a Savings account. 30% of the informants also observed that they signed up for a Transaction account to access loans. This finding makes clear that some customers choose to interact with formal financial services to access a variety of services over time. 17% of the informants chose a Transaction account to have their salaries directly deposited into their accounts.

5.2 Design Process

5.2.1 Inception Design

The inception design of the FinLit model was guided by the strict forward flow of money from an actor’s existing devices into his/her Mobile Money accounts and finally into his/her PostBank accounts. The design was inflexible in the sense that it did not account for money to be moved directly to the PostBank account, or for the flow to end in the Mobile Money wallet. This was prompted by two deciding factors: the agent’s stake in the system and enabling consistent access to the service at the customer end.

The Mobile Money agent’s stake in the system is critical as he/she provides the daily link between the customer and the FinLit service. In preparation for the PostBank staff to accommodate all their traffic (existing as well as FinLit customers) in the few hours they spend at each site, the Mobile Money agents had to invest time in organizing customers. As per the incentive structure, the agents were directly compensated for every new customer they helped sign up. However, after this one-time event, the only justification for the agent’s investment in the project would be a significant increase in Mobile Money
transactions, and thus his/her commissions. And this increase in transactions could only be effected if the Mobile Money wallet was being used as an interim storage device.

**Figure 5.1: Inception Design Activity**

<table>
<thead>
<tr>
<th>HIGH-LEVEL MOTIVATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
</tr>
<tr>
<td>To provide formal financial service access to unserved populations</td>
</tr>
<tr>
<td>ASSUMPTIONS</td>
</tr>
<tr>
<td>• Banking regulators will not permit Mobile Money agents to take deposits.</td>
</tr>
<tr>
<td>• Mobile Money cannot be marketed as a savings device.</td>
</tr>
<tr>
<td>CONSTRAINTS</td>
</tr>
<tr>
<td>• Timeframe of 3 months</td>
</tr>
<tr>
<td>• Funding</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DESIGN FEATURE</th>
<th>TRADE-OFF</th>
<th>JUSTIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward flow of money</td>
<td>Access versus Inflexibility</td>
<td>+ Engage Mobile Money services to enable constant access to the service. + Engage PostBank mobile van services to complete the link to formal financial services. - Process of forward flow of money is inflexible. - People may not understand the process flow.</td>
</tr>
<tr>
<td>Agent role restructuring</td>
<td>Improve Business versus Time Investment</td>
<td>+ Incentivize agent role and improve commissions. + Give more power to the agents. - Agents need to invest time to learn the service.</td>
</tr>
</tbody>
</table>
PostBank & MTN partnership

Penetration versus Branding

clash

- Agents need to invest time to properly market service to potential customer.
- Agents may need additional resources to handle the surplus cash inflow.

+ MTN agents will help PostBank to reach out to more potential customers.
+ PostBank services will help MTN agents reach out to more customers and improve commissions.
+ Each brand may strengthen the other.
- Telecom sector branding may clash with banking sector branding.
- Partnership may confuse potential customers.

Figure 5.2: FinLit Model
The model can be better explained through a scenario. In this scenario we make the assumption that the actor Moses is exclusively saving under his mattress at home. While the model will most definitely reach out to other other savers/non-savers as well, this scenario will help articulate the processes in the model.

**Figure 5.3: Inception Design Scenario**

### STAGE I: MONEY UNDER THE MATTRESS

- Moses is keeping his money under the mattress.
- He is worried his money may get stolen from under the mattress, or that his relatives will come asking for money and he will be unable to refuse!
- Moses has heard on the radio that Mobile Money can be used for saving!

### STAGE II: STORING IN MOBILE MONEY

- Moses goes to his local Mobile Money agent. The agent gives him some valuable financial information. Moses can now store his money in a safe place – his Mobile Money wallet!
- The agent also tells Moses about how he can link to a PostBank account, even though they don’t have a branch in the town. Moses is interested in hearing more.
- The agent hands him a pamphlet that provides information about all of PostBank’s products and services. The agent also tells Moses about the weekly mobile van that stops right outside the agent’s shop.
The agent also hands him the form for opening up a PostBank account.

STAGE III: SAVING IN POSTBANK

- The following week Moses goes to the PostBank van standing right outside the agent’s shop and hands the officer his completed form. After a few minutes, Moses has a bank account!

- Moses then walks into the agent shop and makes his first savings deposit of 10,000 Ush into his Mobile Money wallet!

- Moses continues to go to the Mobile Money agent every week and make his savings deposit of 10,000 Ush. It is safer than keeping his money at home!

- One week, the agent tells Moses that he has accumulated 100,000 Ush. He can now earn interest if he moves his money to PostBank!

- Next week, Moses withdraws his money from his Mobile Money wallet. He walks over to the PostBank van and deposits his money into his new bank account. He is now earning interest on it.

5.2.2 Re-design

After the inception FinLit model was launched, the FinLit team began to track the progress of the pilot. As is evident from Finding I, most of the customers were unable to cognize the fixed savings process. These preliminary results prompted a re-design of the FinLit model. It soon became apparent to the team that the rigid process flow in the inception design may be keeping potential customers away from the service.
Figure 5.4: Redesign Activity

<table>
<thead>
<tr>
<th>GOAL</th>
<th>ASSUMPTIONS</th>
<th>CONSTRAINTS</th>
</tr>
</thead>
</table>
| To provide formal financial service access to unserved populations | - Banking regulators will not permit Mobile Money agents to take deposits.  
- Mobile Money cannot be marketed as a savings device. | - Timeframe of 3 months  
- Funding |

---

<table>
<thead>
<tr>
<th>DESIGN FEATURE</th>
<th>TRADE-OFF</th>
<th>JUSTIFICATION</th>
</tr>
</thead>
</table>
| Directly saving in Mobile Money | Flexible versus Incomplete Access | + Engage Mobile Money services to enable constant access to the service.  
+ Option of terminating savings in Mobile Money is flexible  
+ Improve agent business.  
- Agents may not promote PostBank services without any direct incentives.  
- Customers will be excluded from PostBank’s services. |
| Directly saving in PostBank account | Flexible versus Inconstant Access | + Engage PostBank services to enable complete access to the service.  
+ Option of saving directly in PostBank is flexible.  
- Agents may not promote PostBank services without any direct incentives.  
- Customers will be excluded from Mobil Money’s services. |
|------------------------------------|----------------------------------|------------------------------------------------------------------|
| Forward flow of money              | Constant Access versus Inflexible | + Engage Mobile Money services to enable constant access to the service.  
+ Engage PostBank mobile van services to complete the link to formal financial services.  
- Process of forward flow of money is inflexible. |

Figure 5.5: FinLit Model Redesign
The re-design of the FinLit model granted complete autonomy to the customer to decide how they wanted to use the FinLit service. It is important to note that this design modification impacted the way the service was marketed to potential customers, thereby possibly accommodating more potential customers.

Therefore, now the customer could appropriate the FinLit service in one of the three ways:

**Scenario I:** The customer uses the model as it was designed at its inception. Moses will move his money from under his mattress, into his Mobile Money wallet, and finally into his PostBank account. This was described in the inception design.

**Scenario II:** The customer uses the model to terminate his savings flow in his/her Mobile Money wallet. Moses will move his money from under his mattress, into his Mobile Money wallet. The following scenario will better explain the process.

Figure 5.6: Saving Scenarios I

<table>
<thead>
<tr>
<th>STAGE I: MONEY UNDER THE MATTRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Moses is keeping his money under the mattress.</td>
</tr>
<tr>
<td>• He is worried his money may get stolen from under the mattress, or that his relatives will come asking for money and he will be unable to refuse!</td>
</tr>
<tr>
<td>• Moses has heard on the radio that Mobile Money can be used for storing money!</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STAGE II: STORING IN MOBILE MONEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Moses goes to his local Mobile Money agent. The agent gives him some valuable financial information. Moses can now store his money in a safe place – his Mobile</td>
</tr>
</tbody>
</table>
Money wallet!

- Moses hands over cash to the Mobile Money agent and buys some Mobile Money. Now whenever, he needs the money he can come to the agent and withdraw his money.

- The agent also tells him about the PostBank mobile banking van. Moses listens patiently, but he needs to keep his money in a place where he can withdraw it anytime he pleases and not just on a particular day of the week. He tells his agent that he is happy with the Mobile Money service.

**Scenario III:** The customer uses the model to directly transact with the PostBank van. Moses will move his money from under the mattress to deposit it into his PostBank account whenever the mobile van makes a stop at his village.

**Figure 5.7: Saving Scenario II**

### STAGE I: MONEY UNDER THE MATTRESS

- Moses is keeping his money under the mattress.

- He is worried his money may get stolen from under the mattress, or that his relatives will come asking for money and he will be unable to refuse!

- Moses has heard on the radio that his local Mobile Money agent can help sign him up for a PostBank account. Moses decides to learn more!

### STAGE II: STORING IN MOBILE MONEY

- Moses goes to his local Mobile Money agent. The agent gives him some valuable financial information. Moses can now sign up for a PostBank account but he does not have to travel to the bank, the bank will come to him!
• The agent tells him that the PostBank van will make a weekly stop in front of his shop. Moses can directly transact with the van. The agent also hands Moses a pamphlet explaining PostBank’s various products and services, as well as a sign-up form.

• Next Wednesday, Moses is waiting outside the Mobile Money agent’s shop with his completed form and his savings. Moses has decided to open a savings account where he can keep his money and earn interest on it!

5.2.3 Electronic Link

As the FinLit team was monitoring the progress of the pilot, it discovered that Transaction accounts were more popular, primarily because businessmen and traders were looking to conduct frequent transactions (as is evident from Finding III). Therefore, in a bid to provide a more consistent access to PostBank accounts than what the weekly van was providing, the electronic link was introduced.

To avoid running afoul with the banking regulators, the FinLit team conceptualized a transparent and controlled model. At the pilot stage, the electronic link was only capacitated to enable the customer to send money to his/her PostBank account; the customer would be unable to withdraw money from his/her account. The link was conceptualized with MTN and PostBank specialists.

Figure 5.8: Electronic Link Design Activity

<table>
<thead>
<tr>
<th>GOAL</th>
<th>ASSUMPTIONS</th>
<th>CONSTRAINTS</th>
</tr>
</thead>
</table>
| To provide constant access to formal financial services. | • The link will be a sub-function of the Mobile Money platform. | • Banking regulations.  
• Lack of dedicated resources.  
• Withdrawals from PostBank accounts |
<table>
<thead>
<tr>
<th>DESIGN FEATURE</th>
<th>TRADE-OFF</th>
<th>JUSTIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PostBank Dedicated Resource</td>
<td>Activate MM link versus</td>
<td>+ Dedicated resource ensures that transfers are completed in a timely and accurate manner.</td>
</tr>
<tr>
<td></td>
<td>Expensive</td>
<td>- Dedicated resource is time and cost intensive.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Human error may create irreparable problems.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Communication failure may create problems.</td>
</tr>
<tr>
<td>Mobile Money Transfer</td>
<td>Constant access versus</td>
<td>+ Engage Mobile Money services to enable constant access to the service.</td>
</tr>
<tr>
<td></td>
<td>Lack of Exclusivity</td>
<td>+ Improve MMM agent business.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Middleman’s human error may create irreparable problems.</td>
</tr>
</tbody>
</table>
Restricted marketing was conducted for the electronic link to existing FinLit customers. Customers were informed that they could now transfer money to their PostBank accounts directly using Mobile Money (they therefore, had to be registered MM users). At this stage, the electronic link users were unable to withdraw money from their accounts over the MM platform due to regulatory concerns.

The following scenario describes the processes in the electronic link in detail:

**Figure 5.10: Saving Scenarios III**

**STAGE I: PURCHASING MOBILE MONEY**

- Moses is a registered Mobile Money user. He also recently signed up for a PostBank account.
- He goes to his local Mobile Money agent and buys some Mobile Money.
The Mobile Money agent hands Moses a pamphlet with the mobile number of the dedicated representative from PostBank.

Moses sends the amount he wants to deposit into his PostBank account to the dedicated representative’s mobile number using Mobile Money. He also enters his initials and account number in the message accompanying the transfer.

The dedicated representative at PostBank receives a message saying he has received Mobile Money.

The representative verifies the initials and the phone number against the account number. If this checks out, the representative walks over to the Mobile Money agent at the PostBank branch and withdraws the send cash.

The representative deposits this money into the customer’s PostBank account. Once the deposit is complete, he sends a message to the customer confirming the transfer.

5.3 Demographic Findings

5.3.1 Finding I

Most customers were monthly wage earners.

92 customers who opened PostBank accounts were surveyed across all 8 sites. One of the questions asked respondents how frequently they received their income(s). Respondents were allowed to select more than one option in cases where more than one income was earned. 51 (53.68%) respondents had their income come in on a monthly basis. 44 (46.31%) respondents indicated that they were daily wage earners.
Table 5.5: Finding I

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>DAILY WAGE EARNERS</th>
<th>PERCENTAGE</th>
<th>MONTHLY WAGE EARNERS</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUHORRO</td>
<td>5</td>
<td>71.43%</td>
<td>2</td>
<td>28.57%</td>
</tr>
<tr>
<td>HIMA</td>
<td>4</td>
<td>50%</td>
<td>3</td>
<td>37.5%</td>
</tr>
<tr>
<td>KAGADI</td>
<td>1</td>
<td>25%</td>
<td>3</td>
<td>75%</td>
</tr>
<tr>
<td>KIBITO</td>
<td>4</td>
<td>50%</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td>KYELEGWA</td>
<td>7</td>
<td>63.63%</td>
<td>3</td>
<td>27.27%</td>
</tr>
<tr>
<td>KIJURA</td>
<td>11</td>
<td>33.33%</td>
<td>21</td>
<td>63.63%</td>
</tr>
<tr>
<td>KATooke</td>
<td>5</td>
<td>62.5%</td>
<td>3</td>
<td>37.5%</td>
</tr>
<tr>
<td>KYARUSOZI</td>
<td>7</td>
<td>35%</td>
<td>12</td>
<td>60%</td>
</tr>
</tbody>
</table>

The surveyed customers were also asked if their incomes were variable, fixed or a combination of both. Respondents were able to select more than one option in cases where more than one income was earned. 55 (60.43%) respondents indicated that they were earning a variable income. 19 (20.87%) respondents said that they were earning a combination of fixed and variable incomes. 17(18.68%) respondents across all sites were earning a fixed income.

5.3.2 Finding II

Most customers were in the higher income range.

Of the 92 customers surveyed, 90 respondents self-reported their cumulative income inflows for each month. The breakup is as follows:

- 27 (30%) were earning between 200,000-400,000 UGX
- 18 (20%) were earning between 120,000-200,000 UGX
• 13 (14%) were earning between 400,000-1 million UGX
• 12 (13%) customers were earning between 0-30,000 UGX
• 7 (7%) were earning between 90,001-120,000 UGX
• 7 (8%) were earning between 60,001-90,000 UGX
• 5 (6%) were earning 1 million+ UGX
• 1 (1%) was earning between 30,001-60,000 UGX

It was seen that the higher income range customers were typically businessmen, traders or employed in services. The lower income range customers were typically small shop-owners or farmers.

Table 5.6: Finding II

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>0-30,000 UGX</th>
<th>30,001-60,000 UGX</th>
<th>60,001-90,000 UGX</th>
<th>90,001-120,000 UGX</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUHORRO</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>HIMA</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>KAGADI</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>KIBITO</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>KYELEGWA</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>KIJURA</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>KATOKOKE</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>KYARUSOZI</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>12</td>
<td>1</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>120,001-200,000 UGX</th>
<th>200,001-400,000 UGX</th>
<th>400,001-1 million UGX</th>
<th>1 million UGX+</th>
</tr>
</thead>
</table>

53
5.3.3 Finding III

Most customers were unbanked.

55 (59.78%) out of the 92 new customers possessed no bank account prior to the FinLit pilot, whilst the remainder (37 or 40.21%) had an account already.

Table 5.7: Finding III

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>BANKED</th>
<th>UNBANKED</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUHORRO</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>HIMA</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>KAGADI</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>KIBIITO</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>KYELEGWA</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>KIJURA</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td>KATOKE</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>KYARUSOZI</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL</td>
<td>37</td>
<td>55</td>
</tr>
</tbody>
</table>
The sample also showed a reliance on informal savings devices. Half of the sample kept money at home (29 or 32%) or in assets (17 or 19%).

**Table 5.8: Finding IV**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>SAVING AT HOME</th>
<th>SAVING IN ASSETS</th>
<th>SAVING IN OTHER ALTERNATIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUHORRO</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>HIMA</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>KAGADI</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>KIBIITO</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>KYEGEGWA</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>KIJURA</td>
<td>7</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>KATOOKE</td>
<td>6</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>KYARUSOZI</td>
<td>1</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td><strong>29</strong></td>
<td><strong>17</strong></td>
<td><strong>5</strong></td>
</tr>
</tbody>
</table>
Chapter 6

Discussion

The FinLit project began with the broad goal of providing formal financial access to unserved regions. To this end, the FinLit team developed the inception design that leveraged the existing Mobile Money agent network to provide a constant resource towards linking to formal financial services, and took PostBank to unserved regions on a weekly basis in the form of a mobile banking van. Almost immediately, the FinLit team began tracking the customer reactions to the inception design to determine if a redesign would be required. As it turns out, a redesign and the introduction of a new design was to be completed.

The preliminary findings were confounding, in that the potential effect that they might have had on the redesign could impact the very fundamentals of the inception design, thereby exacting the need to start from scratch a brand new design. This directly conflicted with the established roles of the partners (MTN and PostBank) and their stake in the project. Therefore when it was discovered through the informal interviews that customers were unable to subscribe to the rigid structure of the inception design, the easy answer was hardly to grant complete autonomy to the customer as this directly mitigated the agent’s motivation in remaining a constant resource. More specifically, once a customer signed up for a PostBank account and chose to transact directly with the bank by completely circumventing the Mobile Money wallet, the agent’s incentive for investing in the customer beyond the initial signing-up process immediately disappeared. Further, the agent would lose out on a potential Mobile Money customer, and therefore transaction commissions. In restructuring the traditional role of the M-banking agents, it was important to take into account the incentive structure, as that would essentially guide the agents’ response to this revived responsibility.

However, it was a concern to the FinLit team that the rigid structure of the inception design was keeping potential customers away as they were unable to cognize this model. Therefore, the decision was taken to grant this autonomy to the customers, and equip them with the resources to appropriate the model as they deemed fit. This also tied in to the finding that demonstrates that
customers were using their Mobile Money wallets to save their money in. This finding is particularly important as it lends a comprehensive perspective to the concept of savings: savings is not restricted to the function of accumulating money with a target in mind, but may also refer to letting moving money remain static. More specifically, storing money in Mobile Money without withdrawing or transferring it immediately may also build up on savings. Further, using the Mobile Money wallet as a transaction account, where customers intended to transact frequently with their wallets, demonstrated that there indeed existed a latent demand in the market for a safe, reliable and accessible place to store money, and that Mobile Money could provide this. Therefore, it seemed perfectly reasonable to terminate one’s savings in Mobile Money, without having to sign-up for a PostBank account depending on one’s needs and rate of access. Promoting Mobile Money as more than a micro-transfer service may actually include a larger customer base; customers that were hitherto unaware of the service, or who were unable to cognize the service as a safe and reliable place to store money. In a similar vein, circumventing the Mobile Money service to directly transact with the PostBank van could work perfectly for fulfilling a need that required no more than weekly access. Therefore, granting autonomy to the customer to decide how he/she wanted to construct their savings behavior was a major characteristic in the redesign of the inception design of the FinLit model. This redesign was presented to MTN and PostBank for consideration of a commercial launch.

Figure 6.1: FinLit Model
Surprisingly, despite the aggressive promotion of the Savings accounts, more customers opened Transaction accounts. This was an interesting finding as the weekly service of the PostBank mobile van seemed more suited to a Savings account. A customer who utilized the services of the PostBank van was evidently at a disadvantage compared to a customer who had access to a physical bank branch or ATM, given that both paid the same maintenance fee. At this stage therefore, the electronic link was conceptualized. While the link was handicapped in that it could not allow a customer to withdraw from his/her account and into the Mobile Money wallet, it did offer the luxury of depositing money directly into the PostBank account on any day, and not just on the day that the PostBank van was servicing the particular site. While the findings from the time period after the link was introduced have been omitted from this study, it does include the process of designing the link. This in itself was an important intervention in the pilot, given the unpredicted findings and the impact it had on the design process: instead of redesigning the inception design model, a novel concept was introduced into the project. It is important to note that the link was a sub-system of the Mobile Money platform, and that if the link were to be commercially rolled-out it would have to be dedicated and transparent. It would also have an automated authentication capability, something which a human resource was conducting during the pilot and may have been fraught with inherent risks.

**Figure 6.2: Electronic Link**

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**ELECTRONIC LINK**

**Customer**
(Buys Mobile Money)

**Mobile Money Platform**
(Money is transferred over the MM link)

**PostBank Dedicated Resource**
(Mobile Money is transferred to PostBank representative's phone)

**PostBank Account**
(Mobile Money is transferred to PostBank account)
Finally, the demographic surveys conducted were pivotal in summarizing the population characteristics of the users who signed up for PostBank accounts. These findings could help appraise the transformational potential of the FinLit model. Interestingly, most of the customers who signed up for PostBank accounts were unbanked. However, most customers were also in the higher-income range and were earning monthly, stable incomes as opposed to diurnal, erratic incomes. While it is important to recognize the comparative element, FinLit was still reaching out to a relatively more comfortable section of society. It may be worthwhile to qualify the reasons behind this event (high service charges for instance) to determine if FinLit can reach out to the unbanked as well as the poorer sections of society.
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