

# UC Irvine

## White Papers

### Title

Best Practices in Mobile Microfinance

### Permalink

<https://escholarship.org/uc/item/2g18k3vk>

### Authors

Yousif, Fatima

Berthe, Elizabeth

Maiyo, Jacinta

[et al.](#)

### Publication Date

2013

### Copyright Information

This work is made available under the terms of a Creative Commons Attribution-NonCommercial-ShareAlike License, available at <https://creativecommons.org/licenses/by-nc-sa/4.0/>

Peer reviewed



**GRAMEEN FOUNDATION**

**INSTITUTE FOR MONEY, TECHNOLOGY & FINANCIAL INCLUSION**

# **BEST PRACTICES IN MOBILE MICROFINANCE**



**by Fatima  
Yousif with  
Elizabeth Berthe  
Jacinta Maiyo  
Olga Morawczynski**

**January 2013**

*This study was commissioned by Grameen Foundation, supported by the Institute for Money, Technology & Financial Inclusion, University of California, Irvine*

*Additional research by Gabriel Jones, Grameen Foundation*

## TABLE OF CONTENTS

<b>ONLINE SURVEY - LIST OF CHARTS</b>	<b>III</b>
<b>LIST OF FIGURES &amp; TABLES</b>	<b>IV</b>
<b>ACKNOWLEDGEMENTS</b>	<b>V</b>
<b>LIST OF ACRONYMS &amp; ABBREVIATIONS</b>	<b>VI</b>
<b>FOREWORD</b>	<b>VIII</b>
<b>EXECUTIVE SUMMARY</b>	<b>1</b>
<b>INTRODUCTION</b>	<b>5</b>
<b>MICROFINANCE FAST FACTS</b>	<b>5</b>
<b>MOBILE FINANCIAL SERVICES</b>	<b>11</b>
THE MOBILE FINANCIAL SERVICES ECOSYSTEM	12
HOW DO MOBILE FINANCIAL SERVICES WORK?	12
<b>IMPLEMENTING MOBILE FINANCIAL SERVICES</b>	<b>24</b>
1. CONDUCTING RESEARCH	25
2. CHOOSING THE RIGHT BUSINESS MODEL	30
3. CHOOSING YOUR IT/MIS	36
4. PRODUCT DEVELOPMENT	42
5. CHANGE LEADERSHIP PLAN	43
7. CONDUCTING A SUCCESSFUL PILOT	47
8. MARKETING AND COMMUNICATION	49
9. MANAGING YOUR AGENT NETWORK	50
9. WORKING WITH REGULATORS	52
<b>CONCLUSION &amp; RECOMMENDATIONS</b>	<b>55</b>
<b>ONLINE SURVEY RESULTS</b>	<b>59</b>

## ANNEXES

ANNEX I – LIST OF INTERVIEWEES	
ANNEX II – QUESTIONNAIRE	
ANNEX III – BIBLIOGRAPHY & REFERENCES	
ANNEX IV – EXAMPLES OF MARKETING MATERIALS	
ANNEX V – BIBLIOGRAPHY & REFERENCES	
ANNEX VI – SAMPLE PHONE MENUS	

## ONLINE SURVEY – LIST OF CHARTS

Q1. HOW MANY CLIENTS DO YOU HAVE? (N=25) .....	60
Q2. OF THOSE, WHAT PERCENTAGE IS USING MOBILE FINANCIAL SERVICES WITH YOUR INSTITUTION? (N=24)....	60
Q3. IF LESS THAN 100%, WHEN DO YOU EXPECT ALL CLIENTS TO UTILIZE THEIR MOBILE PHONE FOR REPAYMENT, SAVINGS CONTRIBUTIONS AND/OR DISBURSEMENTS? (N=25).....	61
Q4. HAS MOBILE MONEY ENABLED YOU TO INCREASE YOUR OUTREACH TO SERVE NEW CLIENTS? (N=25).....	61
Q5. IN YOUR COUNTRY, WHO RUNS THE MOBILE MONEY SYSTEM? (N=26).....	62
Q6. HOW MANY TELECOM OPERATORS SERVE YOUR OUTREACH AREA? (N=25) .....	62
Q7. OF THOSE, HOW MANY OF THOSE DO YOU WORK WITH? (N=26).....	63
Q8. DID YOU NEED TO NEGOTIATE TRANSACTION RATES WITH THE TELECOM OPERATOR TO OFFER MOBILE FINANCIAL SERVICES TO YOUR CLIENTS? (N=25).....	63
Q9. DO YOU OPERATE AS A MONEY TRANSFER, REMITTANCE OR PAYMENT AGENT? (N=25) .....	64
Q10. HOW MANY MONTHS HAVE YOU BEEN OPERATING MOBILE FINANCIAL SERVICES? (N=24) .....	64
Q11. HOW MANY MONTHS FROM CONCEPTION DID IT TAKE FOR ACTUAL ROLLOUT OF MOBILE FINANCIAL SERVICES? (N=23) .....	65
Q12. DID YOU NEED TO WORK WITH REGULATORS AS PART OF THE PROCESS? (N=25).....	65
Q13. PLEASE RANK THE PRODUCTS AND SERVICES IN ORDER OF ROLLOUT THAT YOU CURRENTLY OFFER. PLEASE ONLY RANK PRODUCTS AND SERVICES THAT YOU ROLLED OUT. (N= 23).....	66
Q13B. OTHER PRODUCTS .....	66
Q14. WHAT DETERMINED THE ORDER SELECTION OF ROLLOUT OF THE PRODUCTS AND SERVICES NOTED IN QUESTION ABOVE? (N= 21).....	67
Q15. PLEASE RANK IN ORDER OF POPULARITY WITH YOUR CLIENTS. (N=21).....	67
Q15B. OTHER PRODUCTS: ACCOUNT INQUIRIES .....	68
Q16. WHY DID YOU DECIDE TO IMPLEMENT MOBILE FINANCIAL SERVICES? (N=64, SEVERAL RESPONSES POSSIBLE) .....	68
Q16B. OTHER.....	68
Q17. WHAT RESEARCH DID YOU DO PRIOR TO IMPLEMENTING MOBILE FINANCIAL SOLUTIONS? (N=22).....	68
Q18. WHAT TYPE OF MANAGEMENT INFORMATION SYSTEM (MIS) OR CORE BANKING SYSTEM DO YOU HAVE? (N= 24).....	69
Q19. ARE YOU OPERATING MANUALLY OR DO YOU HAVE AN INTERFACE WITH THE MOBILE PAYMENT PLATFORM TO AUTOMATE TRANSACTIONS? (N=24).....	69
Q20. IF SO, WHO BUILT IT? (N=12).....	70
Q21. DID YOU OUTSOURCE THE INTEGRATION FOR THE OPERATIONALISING OF MOBILE FINANCIAL SERVICES WITHIN YOUR INSTITUTION? (N=21).....	70
Q22. WHAT NEW POSITIONS OR STAFF WERE HIRED IN ORDER TO MANAGE MOBILE FINANCIAL SOLUTIONS? (N=25).....	71
Q23 WHAT IN-HOUSE SKILL SETS ARE MOST IMPORTANT FOR IMPLEMENTING MOBILE FINANCIAL SOLUTIONS? (N=27, SEVERAL RESPONSES POSSIBLE).....	71
Q24. WHICH PROCESSES REQUIRED THE MOST CHANGES IN IMPLEMENTING MOBILE FINANCIAL SERVICES? RANK IN ORDER OF IMPORTANCE. (N=21) .....	72
Q24B. OTHER .....	72
Q25. DID YOU HAVE ANY ISSUES WITH GROUP ATTENDANCE FOR GROUPS THAT IMPLEMENTED MOBILE FINANCIAL SERVICES? (N=22).....	73
Q26. IF SO, HOW DID YOU RESOLVE? (N=6) .....	73
Q27. DO YOU USE SMS FOR REMINDERS FOR PAYMENTS AND LATE PAYMENTS? (N= 22) .....	73
Q28. WHAT HAS BEEN THE IMPACT ON OPERATIONAL COSTS AND PAR SINCE IMPLEMENTING MOBILE FINANCIAL SERVICES? (N=20) .....	74
Q29. WHERE DO CLIENTS USING THE MOBILE PHONE PAY FOR THEIR LOAN? (N=21) .....	74
Q30. WHAT WAS YOUR MOST EFFECTIVE TRAINING METHODOLOGY FOR YOUR CLIENTS? (N=20).....	75
Q31. WHAT WERE YOUR TOP 3 MOST VALUABLE LEARNINGS ABOUT THIS EXPERIENCE? (N=18) .....	76

Q32. WHAT RECOMMENDATIONS CAN YOU PROVIDE TO OTHER MICROFINANCE INSTITUTIONS WHO WANT TO IMPLEMENT MOBILE FINANCIAL SERVICES? (N=19) .....77

## LIST OF FIGURES & TABLES

CHART 1 - GROWTH OF MOBILE SUBSCRIPTIONS (2001 – 2011).....7  
FIGURE 1 – WORLD ECONOMIC PYRAMID .....11  
FIGURE 2 – GROUP LENDING AND MOBILE..... 22  
FIGURE 3 – STORED VALUE VERSUS MAPPED BANK ACCOUNTS.....23  
FIGURE 4 – DEVELOPMENT ACTION AREA VERSUS DEVELOPMENT STAGE.....24  
FIGURE 5 – MOBILE PAYMENT SYSTEM PROCESS FLOW ..... 40  
TABLE 1 – MOBILE PAYMENT SYSTEM PROCESS FLOW ..... 40

## ACKNOWLEDGEMENTS

This study would not have been possible without the financial support of the Institute for Money, Technology and Financial Inclusion (University of California, Irvine).

The author would also like to thank Grameen Foundation for its continued support throughout the research and drafting of this report. Special thanks to Ms. Elizabeth Berthe for her patience and guidance and to Ms. Jacinta Maiyo for her dedication in collecting and supervising the data from the online survey.

Finally, the author would like to extend her deepest gratitude to the microfinance institutions, experts, practitioners and professionals for their participation and willingness to share their time and expertise. Without their valuable contributions, this study could not have been completed.

A full list of interviewees and contributors is provided in Annex I.

## LIST OF ACRONYMS & ABBREVIATIONS

ARPU	Average Revenue per User
AML	Anti-Money Laundering
ATM	Automated Teller Machine
ATOSA	Afghanistan Telecommunications Operators' Social Association
BC	Business Correspondent
CBA	Cost/Benefit Analysis
CFT	Combating the Financing of Terrorism
CGAP	Consultative Group for Advancement of the Poor
CSO	Civil Society Organisation
EFT	Electronic Funds Transfer
FI	Financial Institution
GPRS	General Packet Radio Service
GSM	Global System for Mobile Communications
GSMA	GSM Association
IMTFI	Institute of Money, Technology & Financial Inclusion
ITU	International Telecommunications Union
IVR	Interactive Voice Response
KYC	Know Your Customer
MFI	Microfinance Institution
MFS	Mobile Financial Services
MNO	Mobile Network Operator
MSMEs	Micro, Small and Medium Enterprises
NBFI	Non-Banking Financial Institution
NFC	Near-Field Communication
POS	Point of Sale
RBI	Reserve Bank of India
SCC	Savings and Credit Cooperation
SHG	Self-Help Group
SMS	Short-Message System
Telco	Telecom Operator
UCI	University of California, Irvine
USSD	Unstructured Supplementary Service Data
WAP	Wireless Application Protocol

## DEFINITION OF MOBILE FINANCIAL SERVICES

The term “Mobile Financial Services” covers a wide range of transactions (from simple money transfers to providing loans and savings) that can be carried out using a mobile device.

Mobile financial services can be grouped into three kinds of services:<sup>1</sup>

1. **Mobile banking services.** Disbursement and repayment of loans, withdrawal and deposit of funds, transfer of funds from account to account, and information services (e.g., bank statements).
2. **Money transfers (domestic and international remittances).** Also referred to as person-to-person (P2P) transfers.
3. **Mobile payments.** Government to Person (G2P) and merchant payments (e.g., payment of civil servant payrolls, or payment of utility bills).

Money transfers and mobile payments jointly make up “Mobile Money,” and are included as part of “Mobile Financial Services.” “Mobile Microfinance” refers to mobile banking services implemented at a microfinance institution (MFI).

---

<sup>1</sup> Author’s definition based on various sources.



## FOREWORD

The main objective of this study is to review MFI experiences with mobile financial services to date, to understand the main challenges and opportunities faced during its implementation, and to provide guidelines for consideration. By sharing these experiences – which often were achieved through painful trial and error – the aim is to provide practical information and research-based guidelines on how MFIs can leverage existing best practices as we know them in this early stage, and increase their chances of successfully implementing mobile financial services.

Over the last 30 years, microfinance has proven to be an impressive tool for applying business practices to solutions of poverty, and has grown to a large scale<sup>2</sup> because of its sustainable business model. It is important to continue building on this success to develop innovative solutions that reach the 1 billion unbanked who have yet to benefit.<sup>3</sup> However, evidence of the limitations of the “high touch” model to rapidly innovate, lower costs or reach remote areas has been brought to light by the recent crises within the microfinance industry, and cannot be overlooked. Even today, MFIs face two important barriers to achieving scale: operational inefficiencies and high operational costs, both of which have contributed to keeping interest rates high.

With the appearance and development of mobile payments came the promise for many MFIs to address these barriers and offer branchless banking.<sup>4</sup> The success of Safaricom’s M-PESA – an SMS-based money-transfer system that enables individuals in Kenya to deposit, send and withdraw funds using their mobile phones – contributed to strengthening this belief. Today, there are 30 to 35 million mobile money users in the world, and every second person who sends money over a mobile phone is Kenyan.<sup>5</sup>

Spurred by rapid uptake in Kenya, MFIs and donors alike began – and continue – to examine the possibilities of using agent banking and point-of-sale (POS) devices to reduce the costs associated with microfinance. Among certain circles, mobile phones were seen not only as having the potential to develop more affordable and further-reaching microfinance business models, but also as providing an opportunity to deepen financial inclusion by reaching the unbanked. Finally, the mobile phone has been seen as a means of improving existing services by providing greater transparency, as well as more convenient access to services outside of banking hours or group meetings.

Yet today only a handful of countries have MFIs providing mobile financial services that include loans and/or savings. Of the 74 countries listed by the GSMA Mobile Money

---

<sup>2</sup> According to Microcreditsummit.org, “[O]ver the last 13 years, the number of very poor families with a microloan has grown more than 18-fold from 7.6 million in 1997 to 137.5 million in 2010. Assuming an average of five persons per family, these 137.5 million microloans affected more than 687 million family members, which is greater than the combined populations of the European Union and Russia.” [http://www.microcreditsummit.org/state\\_of\\_the\\_campaign\\_report/](http://www.microcreditsummit.org/state_of_the_campaign_report/)

<sup>3</sup> Mary Ellen Iskenderian, President and CEO of Women’s World Banking (WWB).

<sup>4</sup> CGAP defines branchless banking as the delivery of financial services outside conventional bank branches, using information and communications technologies and nonbank retail agents – for example, over card-based networks or with a mobile phone.

<sup>5</sup> “Mobile money: A game changer for financial inclusion,” W. Fengler, M. Joseph, P. Mugenyi (November 2011). <http://whatmatters.mckinseydigital.com>

deployment tracker as offering mobile money products, only 13 offer products that include loan repayments and/or savings.<sup>6</sup> The reality is that mobile network operators (MNOs) remain the leaders of the market, providing services that focus on person-to-person (P2P) remittances and merchant payments, such as utility bills, goods and air-time top-up.

---

<sup>6</sup> GSMA Mobile Money Tracker, [www.http://www.wirelessintelligence.com/mobile-money](http://www.wirelessintelligence.com/mobile-money) (February 2012), and author research.

## EXECUTIVE SUMMARY

The development of mobile and branchless banking has been steadily gaining momentum over the last 10 years, thanks to a highly innovative technological environment fostering the development of new mobile money platforms and applications.

The success of Safaricom's M-PESA in Kenya created high expectations regarding the benefits of mobile payments. As a result, many donors, experts and MFIs became convinced that using mobile financial services (MFS)<sup>7</sup> is more convenient and efficient, and less costly, than the traditional high-touch model for delivering microfinance services, especially when targeting the unbanked poor living in remote areas. Indeed, MFS was seen as the alternative to brick-and-mortar branches, enabling MFIs to improve existing services in the short term while increasing their outreach in the long term. By serving a greater number of unbanked poor, MFS was – and still is – seen as a powerful means of achieving greater financial inclusion.

But attempts to replicate M-PESA's success in other countries have thus far been met with what can only be qualified as mitigated success. In Tanzania, transfer costs have been too high to offset users' cost to travel to an agent. In Cambodia, the limited geographical outreach of agents and the shortages of liquidity (e-float) stymied MFS growth. In Senegal, the restrictive regulatory environment made it difficult to roll out and reach the scale of transactions needed to make the service viable. Research revealed that without an enabling market and regulatory environment, the cost/benefit equation for MFS was no longer as obvious as initially perceived.

Through direct interviews and an online survey, our research team gained an overview of MFI experiences with MFS in several geographical regions. This provided the basis for identifying best practices as well as the critical factors for successfully implementing MFS.

The key findings of the study are presented below.

### 1. The right market environment is essential

**Mobile network operators dominate the MFS market.** The online survey revealed that 58% of the respondents were operating in markets where MNOs had led the development of mobile payments, a figure confirmed by the direct interviews. This can be largely explained by MNOs' ability to leverage existing network infrastructure to quickly implement mobile money services and trust gained by consumers from electronic airtime top-up purchases.

**Current Markets are primarily urban and semi-urban.** Most MFS clients are located in urban and semi-urban areas. This is mostly due to the fact that these zones have better network coverage, a denser agent network and greater mobile penetration.

---

<sup>7</sup> Although the phrases mobile money and MFS are often used interchangeably, in this report a distinction is made between mobile money (which encompasses P2P and G2P transfers, bill and merchant payment and air-time top-up) and MFS (which encompasses the full range of financial services made via mobile, including loans, savings and micro-insurance).

**A vibrant mobile payments market is a necessary condition for the success of mobile financial services.** Kenya remains the country with the most MFIs implementing MFS, thanks to the success and expansive reach<sup>8</sup> of M-PESA and the number of clients demanding these services. The rapid development of first-generation products and services, such as money transfers, is a necessary step toward achieving the economies of scale required for successfully launching later-stage products and services (e.g., loans, savings or micro-insurance). **But, by itself, it is not a sufficient step.** Without adequate products or an expansive agent network to enable easy access to mobile payments, the uptake of mobile microfinance services will be low.

## 2. The process of adopting MFS is long and requires constant monitoring and adaptation

The study revealed that, overall, MFIs are taking a “wait-and-see” approach, particularly in markets where MFS is a new innovation. In Tanzania, South Africa and Sierra Leone, MFIs are waiting to learn from early adopters. Lack of information and access to best-standard tools to guide MFIs are key contributors to this attitude. Another is the simple lack of adequate resources, both in terms of financing and qualified personnel.

Few MFIs take the time to carry out an analysis of the overall business model or to conduct relevant pilot projects before implementing MFS. As a result, many MFIs launch a service without a full understanding of the market environment, and neglect the clients’ perspective, causing the model to require constant readjustments. This is partly due to lack of funding, but also is based on the misconception that adoption of MFS is a simple task. **The transition to MFS is time-consuming and requires a new way of thinking and proactively managing uncertainties.**

## 3. Innovation in products and services is limited

**The MFS market is dominated by money transfers, air-time top-up and bill payments.**

The online survey revealed that 60% of the MFIs interviewed also operate as money agents, providing remittance and money-transfer services. This is not surprising, considering that these products are relatively easy to roll out, bring in new potential clients and are more likely to quickly generate income. As a result, such MFIs typically develop products around remittance and bill-payment services, and make little effort to create innovative microbanking products.

## 4. There is a need to advance organizational structure, training and communication strategies

**Ensuring that MFIs successfully implement MFS requires a carefully thought-out change-leadership strategy, starting with the compelling business or social-mission case for adopting MFS.** Revising organizational structure and job content, creating internal process re-engineering incentives, assessing an MFI’s current ability to support these changes, and providing training for affected employees on the new processes and procedures must all be part of the change-leadership plan. Failure to carefully address these areas can hinder the uptake of mobile services. Our interviews revealed that MFIs often overlooked the importance of building internal support by regularly communicating

---

<sup>8</sup> 60% of the adult population in Kenya uses M-PESA.

project progress to the entire organization. Careful training of staff and clients alike must also occur.

## 5. There are challenges with IT/MIS integration

**IT/MIS integration is one of the greatest challenges faced by MFIs today.** MFIs often lack the funds, skill-sets or understanding needed to successfully upgrade their IT/MIS to integrate mobile financial services. To successfully implement MFS, MFIs need to integrate their core banking systems to the mobile money service provider's payment platform, which could be owned by a telecom operator, bank or third party. Often, MFIs hope to reduce or stagger costs by partially upgrading their system and conducting certain operations manually. This is a source of errors and ends up costing the MFI more in the long term. Additionally, many vendors' products are either not fully developed or not designed for microfinance institutions.

## 6. An expansive agent network is necessary

**A well-established agent network is a key success factor for implementing MFS and is one of the hardest elements to set up successfully.** In considering adoption of MFS, MFIs whose clients are not within reach of an existing agent network will need to carefully consider other options for making the service conveniently accessible to their clients. Although costly, the importance of an adequate agent network offering strategically located cash-in/cash-out points cannot be overlooked.

## 7. The regulatory environment influences everything

**The jury is still out on the best way in which MFS should be regulated in each market, and many supervisory bodies are cautious about writing regulations in stone at this stage.** Nonetheless, most countries tend to keep a close eye on the development of mobile financial services, especially with regard to protecting the clients. It is therefore a good practice for MFIs to maintain good relations with the supervising body responsible for regulating MFS in their country, and provide them with constant feedback on the development of MFS throughout the evolution of implementing mobile microfinance. Close collaboration between MFIs and regulators will ensure that the tricky balance between consumer protection and financial development is maintained.

## 8. Recommendations

**MFIs are still trying to fully understand all the implications of MFS.** Though more detailed recommendations are provided in the conclusion of this report, there are six elements in particular that every MFI should keep in mind before implementing MFS in a market where a reliable MFS system is in place and agents are easily accessible:

1. **Be prepared** – Before launching any services, MFIs should carry out all the necessary research, including a cost/benefit analysis, client-focused market research, and assessment of internal structure, processes and IT capacities, business model and market environment.

2. **Communicate** – It is just as important for MFIs to proactively communicate about strategy to their staff as it is to brand the new product and/or service. Without buy-in from the staff, especially loan officers, the chances of success are significantly reduced.
3. **Test and monitor services** – Because the MFS market is still relatively new, it is constantly changing, with new technologies and developments occurring every day. MFIs must regularly test and monitor their market environment and be prepared to make the changes necessary to re-adjust their strategy.
4. **Timing is key** – MFIs should take their time in developing their MFS strategy in line with the market environment. However, once the decision is made and the business case exists, they should act decisively, to not miss out on market opportunities as new, non-traditional entrants compete in the space. Acting too late or continuing to operate according to status quo will result in decreasing market share.
5. **Innovation is needed around products** – As more MFIs offer repayment and disbursement, and MFS becomes more commonplace, there is a need to be more creative around the usage of the mobile phone for new product innovation to remain competitive. This can come by bundling products, creating tools to increase savings, combining data sources for alternative credit scoring or partnering with other channels, to name a few options.
6. **Customer-centric approach** – Mobile phones offer a unique opportunity to provide a tailored touch for clients and improve customer service. Listening to customers offers keen insights on potential products or services. Once adoption of mobile financial services takes place, customers begin to have higher expectations of services.

## INTRODUCTION

### BACKGROUND

The concept of microsavings and microloans amongst the poor is not new. Savings groups in particular have existed in different countries under various names: “susus” in Ghana, “tontines” in West Africa, the “Sandoos” in North Sudan, the “chit funds” in India or the “pasanaku” in Bolivia.

More formalized institutions can be traced as far back as the 1800s in Europe, with the development of credit unions to help poor rural populations overcome difficulties in accessing funding from formal institutions, such as commercial banks.

Between the 1950s and 1970s, donors and governments focused primarily on developing programs aimed at rural populations by providing agricultural credit to small-scale and marginal farmers to raise their productivity and income. Highly subsidised and poorly implemented, these had a limited impact and rarely reached their intended target.

It was during the 1970s that microcredit pilot programs – such as those developed by ACCION International in Latin America, SEWA Bank in India or Mohammed Yunus in Bangladesh (later to become Grameen Bank) – came into being, setting the foundations for the microfinance activities we know today. These programs focused on women, using a group methodology with the primary objective of providing lending and savings products to empower micro-entrepreneurs and to create micro, small and medium enterprises (MSMEs).

Over the next two decades, microfinance would become more and more professional, with methodologies moving away from subsidised models toward systems where interest rates would be based on the true cost of providing small loans to those who had little or no access to formal sources of finance.

These initiatives provided proof that low-income populations (especially women) were credit-worthy and capable of high repayment rates, defying the accepted belief that you cannot lend money to the poor. In the book “*Portfolios of the Poor: How the World’s Poor Live on \$2 a Day*,”<sup>9</sup> the authors demonstrated that poor people are highly innovative in managing their limited resources, and are able to save, invest and even re-invest.

#### Microfinance Fast Facts

- AN ESTIMATED 2.7 BILLION PEOPLE AROUND THE WORLD HAVE NO ACCESS TO FORMAL FINANCIAL SERVICES (CGAP)
- AN ESTIMATED 154 MILLION MICROFINANCE CUSTOMERS (MICROCREDIT SUMMIT)
- TOTAL POTENTIAL CUSTOMERS: 1.5 BILLION (CGAP)
- TOTAL ESTIMATED MICROFINANCE LOANS OUTSTANDING: \$70 BILLION (MIX MARKET)
- TOTAL ESTIMATED SAVINGS DEPOSITS GLOBALLY: \$33 BILLION (MIX MARKET)

<sup>9</sup> D. Collins, J. Murdoch, S. Rutherford, O. Ruthven (UCT Press, 2009).

Today, microfinance is widely accepted as a poverty-reduction tool, representing \$70 billion in outstanding loans and a global outreach of 154 million clients.<sup>10</sup>

Nonetheless, modern microfinance is not without criticism, the greatest ones involving the high interest rates and costs associated with providing financial access to a segment of the population that is deemed too risky by most formal financial institutions. High operational costs relating to the high-touch, labor-intensive nature of the business model and the need to build brick-and-mortar branches in remote areas are reflected in interest rates higher than those offered to those with good credit in developed or developing countries.

It is therefore a primary objective for the microfinance community to examine ways in which operational and infrastructure costs can be reduced.

A model that seems to hold that promise is branchless banking – *“the delivery of financial services outside conventional bank branches using information and communications technologies and nonbank retail agents – for example, over card-based networks or with mobile phones.”*<sup>11</sup>

The potential for branchless banking to reduce operational costs by circumventing the need to build brick-and-mortar branches is a key element of interest for donors and MFIs. With advances made in mobile technology and the greater affordability of mobile phones, mobile money seems to hold great potential. This is especially true in the developing world, where an adult is more likely to own a mobile phone than a bank account. In addition, mobile subscriptions are increasing at a faster rate each year, both in developing and developed countries (see Chart 1 – *“Growth of Mobile Subscriptions 2001-2011”* below).

Kenya has already shown the difference that MFS can make. In 2006, before the advent of mobile money, only 20 percent of Kenyan adults had access to financial services (i.e., credit, savings and accounts with formal financial institutions). By the end of 2010, three years after the introduction of mobile money, that share had jumped to 75 percent.<sup>12</sup>

---

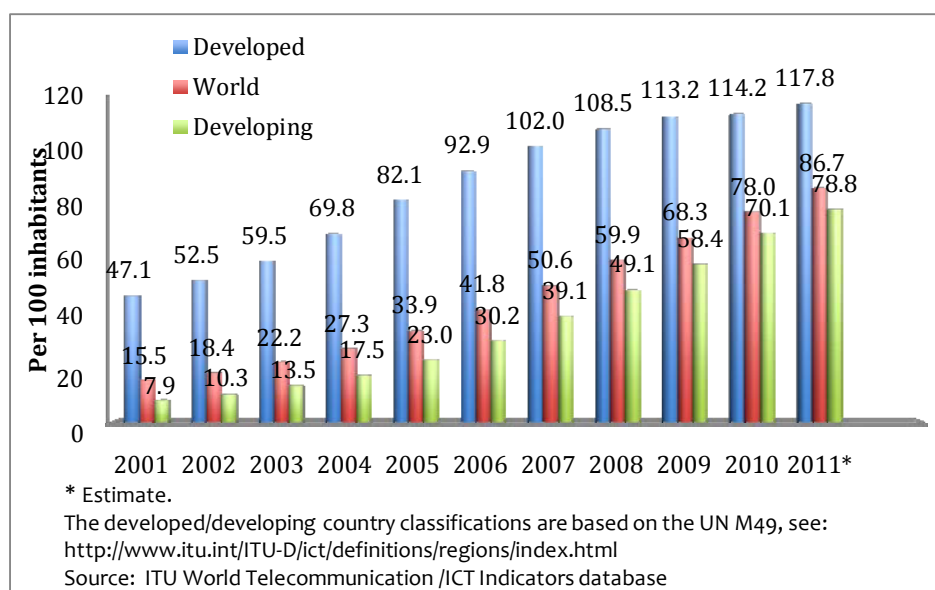
<sup>10</sup> CGAP.

<sup>11</sup> Definition by CGAP and the UK Department for International Development (DFID). This definition includes various distribution channels, such as automated teller machines (ATMs), points of sale (POS) and mobile technology.

<sup>12</sup> *“Mobile money: A game changer for financial inclusion,”* W. Fenger, M. Joseph, P. Mugenyi (November 2011). <http://whatmatters.mckinseydigital.com>.



**Chart 1 - Growth of mobile subscriptions (2001 – 2011)**



However, the first joint initiatives between MNOs and MFIs were not successful, for various reasons.

In Kenya, Vodacom/Safaricom’s M-PESA was initially designed as a pilot, conducted in partnership with the microfinance institution Faulu in 2003, to assess whether mobile phones could be used by microfinance institutions to better serve their clients.

In the Philippines, Negros Women for Tomorrow Foundation, Inc. (NWTF) partnered with Smart Telecommunications in 2008 to provide services to its clients.

In both cases, the pilot programs did not lead to a full rollout of joint services. Indeed, engaging in MFS entails several major organisational and operational changes, involving such areas as IT/MIS, marketing, communications or risk mitigation. This was especially the case for Faulu, which did not have an adequate IT/MIS and was still struggling to establish itself using traditional microfinance methods at that time. Like many other MFIs, the implementation of mobile technology was an investment Faulu was not ready, or even able, to

**Box 1 – Faulu Innovation**

*Faulu Kenya, a deposit-taking MFI that has a customer base of about 400,000, entered into a partnership with Airtel Kenya, which has more than 2 million customers, to provide small loans through mobile phones. The service, dubbed “Faulu Airtel Kopa Chapaa,” is targeted at customers in the lower end of the market, who seem to have been adversely affected by the increase in interest rates, which have gone up as high as 30 percent. Airtel customers who have been transacting money for the last six months can access the service. The applicants’ debt-repayment history is cross-checked with the Credit Reference Bureau, disqualifying those who are already black-listed. Customers can now borrow a minimum of 100 shillings (\$0.80) and a maximum of Sh10,000 (\$80), with a minimum repayment period of 10 days and maximum of 30 days. Interest rates range between 3 and 10 percent, depending on the amount borrowed. The partnership is planning to increase the amount to be borrowed from the current Sh10,000 to Sh75,000.*

make. Since that time, Faulu has made much progress (as noted in Box 1) and has delved deeper into mobile financial services, partnering once again with an MNO.

For other more-mature MFIs, such as NWTF, the issues were mainly related to negotiating with the MNOs to provide better-tailored services to serve the microfinance sector, and to being able to commit their own time and/or money. All MFIs must also overcome a general reluctance to change the way business is conducted.

In the case of Kenya, Safaricom continued to develop its mobile money services on its own, mainly focused on remittance, bill payment and airtime top-up services. The application went viral, supported by a regulatory, social and economic environment that was highly conducive to the development of mobile money services (for example, the Central Bank of Kenya gave Safaricom leeway to develop the service while keeping a close eye on how the service was developed).

In the case of the Philippines, the MFIs that had attempted to partner with the MNOs, including NWTF, soon came to the realisation that the MNOs were not willing to adapt their services to meet their needs. Transaction costs remained high, offsetting the potential cost benefits for clients. In NWTF's case, SMART, a Filipino MNO, had a limited number of agents at the time, and was not able to provide the service in the areas where NWTF's clients needed it most. NWTF also was faced with a reconciliation issue, because SMART reconciled accounts only at the end of the day, rather than in real-time. Faced with the unwillingness of SMART to create joint products, in 2011 NWTF took the initiative to create its own platform.

Another poignant example involves the partnership between WING Money and WorldVision Fund (WVF) Cambodia. WING Money was created in 2009 by ANZ Bank in Cambodia, with the hope of leveraging synergies between MFIs and banks to serve the poor. Drawn in by the promise of quick development and outreach to new clients, WVF Cambodia invested large sums of money to hire and train agents to promote the service and register new clients. But client adoption in Cambodia was below expectation. WING faced challenges of financial and language literacy, as well as a population that was still distrustful of the financial system after it had been destroyed by the Khmer Rouge<sup>13</sup> in the 1970s.

#### **Box 2 – The Role of Mobile Money in Development**

*Mobile money has had other applications in development. For example, NGOs and government organisations can use it to securely and swiftly send salaries to workers who are not located close to a financial institution.*

*In post-conflict countries such as Afghanistan, mobile money has helped combat corruption by allowing greater tracing of fund transfers. And when disaster struck Haiti, it served as a transitional financial-services channel pending the reconstruction of the country's infrastructure.*

*More recently in Kenya, M-PESA made it possible to collect \$5 million in just two weeks to help those threatened by famine in the north of the country, thanks to the "Kenyans for Kenya" initiative, surpassing all government efforts.*

*All these factors point to the potential of mobile money to support development efforts.*

<sup>13</sup> At the start of their reign (1975-1979), the Khmer Rouge abolished all forms of money, going as far as destroying the National Bank of Cambodia in April 1975. The NBC was not rebuilt until October 1979 and the

After more than a year of implementation, WING was far from reaching the projected numbers and it became clear that WVF would not be able to fully benefit from WING's services as initially perceived. The persons hired by WVF eventually became full WING agents under WING Money. WVF abandoned the mobile services and has begun to consider developing its own system. WING Money continued to actively seek strategic partnerships with MFIs, but it refocused its activities around remittance services.

Today, mobile money has enabled an increasing number of the unbanked to carry out basic financial transactions based on person-to-person transfers, but relatively few have adopted banking services via their mobile. One large Kenyan bank noted that M-PESA is causing disintermediation with its own clientele.

As the examples in Box 2 point out, mobile money does have the potential to support development efforts. However, the use by microfinance institutions is still limited. MFS is still in its infancy, with fewer than 100 institutions, primarily in East Africa, successfully converting clients to MFS. The research conducted for this report revealed that few MFIs to date have been able to leverage the full potential of MFS to deepen financial inclusion, capture new clients and significantly reduce operational costs to enable them to offer lower interest rates. But given the early stage of MFS adoption, this is to be expected. The only exception is in Kenya, where MFIs have benefited from the fact that mobile money has become quasi-ubiquitous throughout all income levels of the population. As such, MFIs in Kenya did not have to work as hard to gain clients' trust. Because the mobile money brand was well accepted, it was easier for them to focus on traditional banking products.

Another important lesson learned from Kenya is that for MFS to thrive, there has to be a sufficient volume of users and transactions upon which MFIs can build their own services. Studies<sup>14</sup> have shown that a good indicator is the number of agents (or cash-in/cash-out points) in relation to the number of bank branches; this ratio should be at least 10 to 1. As a further example of the easier path for Kenyan MFI adoption of MFS, Kenya has more than 50,000<sup>15</sup> agents for 1,045 bank branches.<sup>16</sup> Hence, to assess the kind of investment that will be needed to promote the service, as well as the best time to launch it, it is important to understand how mature the mobile money market is in a country.

It is clear from the study that there are only a handful of countries – such as Kenya, Tanzania, Uganda and Pakistan – out of the 64<sup>17</sup> countries currently rolling out mobile money that have a sufficient critical mass of mobile money clients (defined by when the number of mobile money subscribers is at least 10 percent of telecom subscribers) to allow easy adoption by MFI clients. Nonetheless, there are some valuable lessons to be learned from the early pioneers in this space.

---

national currency, the Riel, was not re-issued until March 1980, while the current banking law was not adopted until November 1999.

<sup>14</sup> "Scaling Mobile Money," I. Mas, & D. Radcliffe (Sept. 2010).

<sup>15</sup> Safaricom figure: [http://siteresources.worldbank.org/FINANCIALSECTOR/Resources/282044-](http://siteresources.worldbank.org/FINANCIALSECTOR/Resources/282044-1323805522895/2-Innovation-BettyMwangi.pdf)

[1323805522895/2-Innovation-BettyMwangi.pdf](http://www.orange.co.ke/Orange_money_home.html); Orange Money figure:

[http://www.orange.co.ke/Orange\\_money\\_home.html](http://www.orange.co.ke/Orange_money_home.html); Airtel figure:

<http://www.africa.airtel.com/wps/wcm/connect/africaairtel/Kenya/AirtelMoney/>.

<sup>16</sup> As of December 2011. <http://www.centralbank.go.ke/financialsystem/banks/Register.aspx>

<sup>17</sup> <http://www.wirelessintelligence.com/mobile-money/unbanked/>

## OBJECTIVES OF THE STUDY

The objective of this study is to review MFI experiences with mobile financial services, to understand the main challenges and opportunities faced during implementation.

Both qualitative and quantitative survey techniques (focus groups, direct interviews and online surveys) were used to achieve the following specific objectives:

- 1) Identify best practices for enabling new microfinance adopters to advance innovation faster
- 2) Understand the best approach and business model for bringing clients on board
- 3) Understand which products and services have been successful using the mobile channel to meet poor clients' needs
- 4) Provide research-based guidelines to inform mobile microfinance practice and policy
- 5) Identify factors critical to successful mobile microfinance adoption, and develop guidelines and recommendations for MFIs

## SCOPE OF THE STUDY

The study investigated factors that influence MFS adoption by microfinance clients, and the methodologies and best practices that MFIs have adopted to evolve their models, their approach and their products to better serve their clients using mobile technologies. More specifically, the study examines how MFIs approach the development of mobile financial services as a whole, with a special focus on providing financial services.

The research team endeavored to collect information from MFIs and mobile money service providers from all regions. However, due to the overarching objective of identifying best practices and relaying the lessons learned, most of the institutions interviewed were located in Africa and Asia, where MFS has a longer history.

Finally, it should be noted that although the study focuses on MFIs, there are also mobile operators offering money transfers that serve the poor, even if indirectly. By making it easier for persons living in the city to send money more easily and affordably, they contribute to increasing the income of households in rural areas. These various applications will be mentioned in this report, but solely with the objective of offering a comprehensive view of the use of mobile money. The focus of the report will be on how MFIs can integrate these different products and services in their business model to reach their ultimate mission objectives: to widen the base of financial inclusion and to empower the poor.

## MOBILE FINANCIAL SERVICES

### OVERVIEW

Few people today would refute the fact that mobile technology is one of the innovations of the 20th century that has had the most impact on our lives. Coupled with the advent of 3G technology, broadband Internet connections and fiber-optic cables, mobile devices have revolutionized the way by which we communicate, conduct business and share knowledge. In developed countries, owning a mobile phone is as common as owning a television set, and it is almost impossible to picture an office desk or restaurant table without at least one mobile phone lying on top of it.

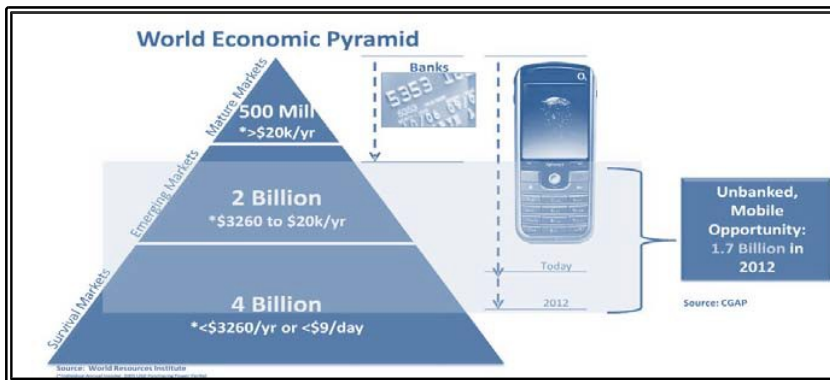
While mobile phones might not be as ubiquitous in developing countries, more and more households – and in some cases entire villages – own a phone or have access to a shared phone. In its report “*Measuring Financial Access Around the World*,” CGAP estimated that in 2010 2.7 billion (72%) of adults living in developing countries were unbanked, and that by 2012 1.7 billion of these people will have a mobile phone (see Figure 1 below).

#### Mobile phone fast facts<sup>18</sup>

- 5.9 billion mobile cellular subscriptions worldwide
- 87% global penetration (79% in the developing world)
- 10% of the world not covered by a signal (compared to 39% in 2003)

Fueled by the need for basic financial services in the developing world, Juniper Research expects active users of mobile money products to more than double, to more than 200 million, by 2013.<sup>19</sup>

Figure 1 – World Economic Pyramid



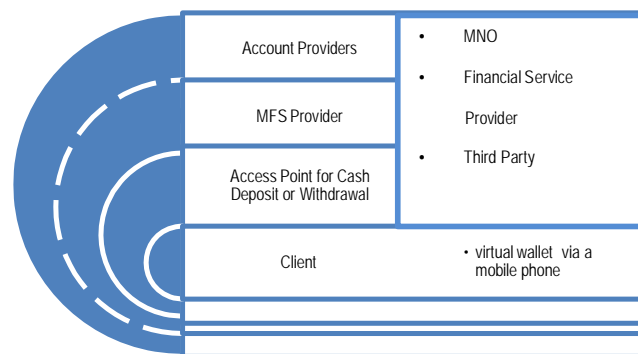
It is therefore evident that the market for mobile financial services has a high potential for growth. Before exposing the findings of the study, however, it is important to understand the mobile financial services ecosystem.

<sup>18</sup> ITU statistics database – 2011 estimates

<sup>19</sup> <http://www.3gamericas.org/index.cfm?fuseaction=page&pageid=1183>

## The Mobile Financial Services Ecosystem

Though the MFS ecosystem is continuing to evolve, it is composed essentially of six players.



- a) **The account provider** is the company that manages the client accounts. The account provider can be a financial institution (bank, MFI, etc.) or a non-bank MFS provider (e.g., Safaricom in Kenya or G-Cash in the Philippines). In the case of the latter, the client will have an account with the non-bank entity, but the funds will have to be deposited with a partner financial institution.
- b) **The MFS provider.** This is the entity that hosts the mobile money platform over which transactions are recorded. The MFS provider can be the same entity that manages the account.
- c) **The mobile network operator (MNO).** Mobile financial services cannot, of course, be delivered without the existence of a mobile telephone network that makes it possible to carry the data from one mobile device to another. The network also is how the interfaces of the different players communicate and how they exchange information on the transactions carried out.
- d) **The agent** is the entity that operates the cash service point where the customer does cash-in and cash-out transactions. The agent can also register new customers. An important characteristic of a mobile money service is the ease with which clients can convert their virtual money to physical cash. Hence, for the system to succeed, agents must have access to high volumes of cash (liquidity or e-float) that they can use to convert cash to e-money and back to cash.
- e) **Third-party operators.** These encompass all entities that provide services aimed at improving the delivery of mobile financial services. These include mobile money platforms (e.g., Taggitudo or Obopay), software companies and even NGOs that have developed products based on mobile money transactions. Finally, third-party operators also include agent network managers – companies that specialise in managing the agents of the service. With the rise in popularity of the market, the number of players and the role they play is expected to expand in the future.
- f) **The customer** is the end-user of the service.

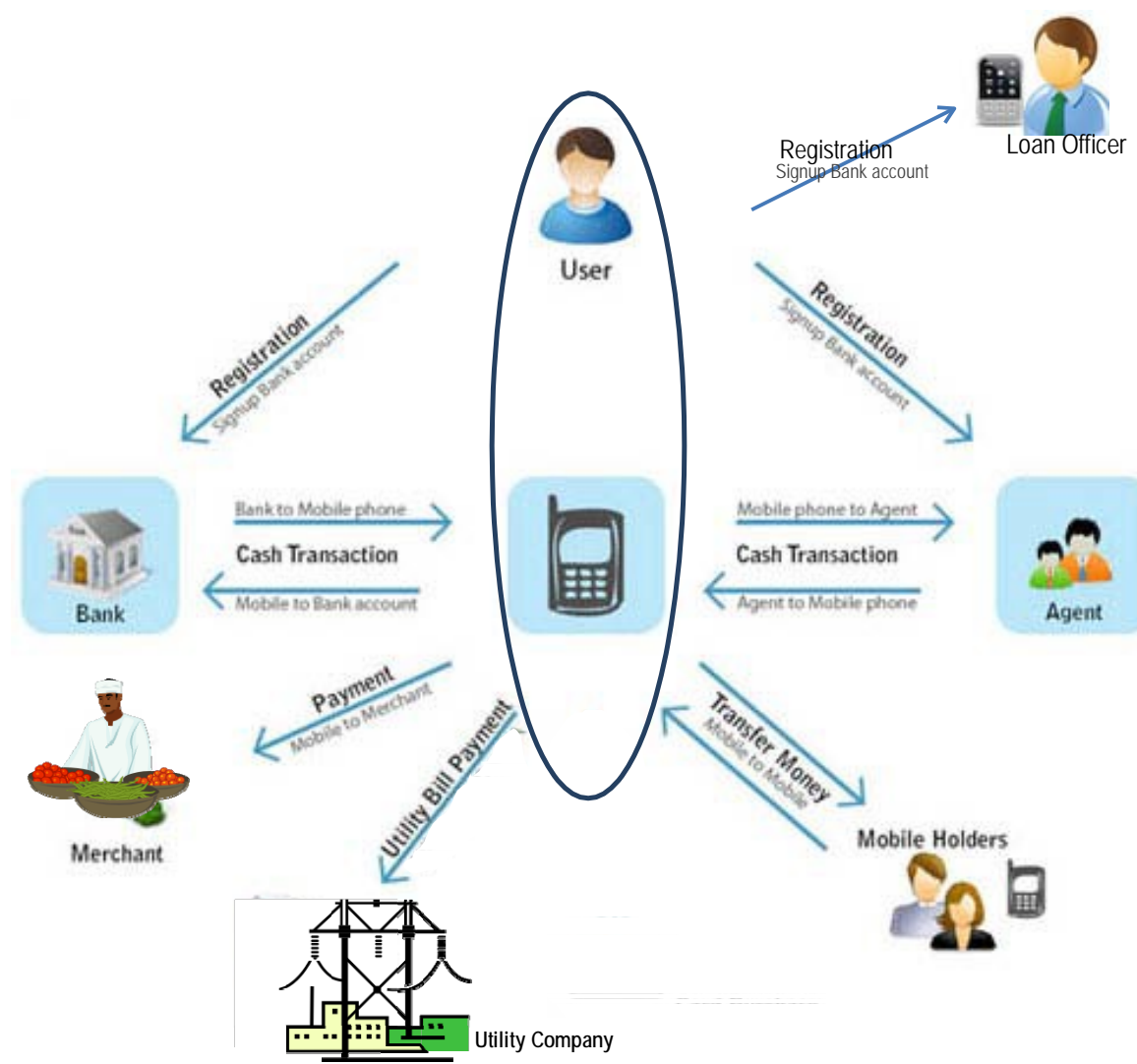
## How Do Mobile Financial Services Work?

Many mobile money users find the concept of mobile money hard to grasp, especially if the market environment is predominantly cash-based and characterized by low literacy rates. However, in countries where virtual airtime top-up exists, the transition is easier,

because the concept is simple to test and trust is gained quickly. Some MFIs have found it necessary to print small SMS receipts via Bluetooth printers<sup>20</sup> to reassure their clients that the money has been transacted safely – although as clients become more trusting of the service over time, they become more accepting of electronic receipts.

In reality, all transactions that are carried out “virtually” via mobile money have to be mirrored by the physical movement of cash within the financial system. Therefore, reconciliations are carried out between the cash-in/cash-out points (agents), the accounts of the users and the bank accounts in which the funds are pooled, either in real time or at least several times a day.

Below are the main steps for using mobile money:



Source: Modified from Kumari Bank Ltd.

<sup>20</sup> It should be noted that the receipts fade if they get wet or touched by sweaty hands, so most MFIs that we interviewed said they had abandoned the system and relied uniquely on the virtual message.

**Table 1 – Payment Process, Step by Step**

Step	Description
1. Create account with MNO, bank or third party	<ul style="list-style-type: none"> <li>- Registration is carried out either at branch, loan officer or agent level, depending on local regulations.</li> <li>- To <b>send</b> money, users must open an account with the mobile money service provider.</li> <li>- Clients receive account and a personal information number (PIN), which in some countries may be combined with a coding card for added security for carrying out transactions.</li> <li>- Clients who are registering must provide valid identification or, in some cases where national IDs do not exist, have a witness (such as a village chief) confirm identification.</li> </ul>
2. Transferring funds to the e-wallet	<ul style="list-style-type: none"> <li>- The client must convert physical cash to “virtual” cash (e-money) by depositing money into their electronic wallet, or e-wallet (cashing in). This digital form of a wallet enables secure storage of funds and financial information.</li> <li>- Depositing funds can be done at branch, ATM or agent level.</li> <li>- The e-money can be used immediately or stored for use at a later date.</li> <li>- <b>Depositing</b> funds in the e-wallet is, in most cases, free of charge. Clients might, however, pay a fee for <b>withdrawing</b> cash or <b>transferring</b> cash.</li> </ul>
3. Sending money from your mobile phone	<ul style="list-style-type: none"> <li>- Transactions are sent using SMS, USSD,<sup>21</sup> J2ME<sup>22</sup> or GRPS/WAP solutions.<sup>23</sup></li> <li>- In an example using SMS, the sender must have the phone number of the recipient and their account number (if they are also registered for the service) for a person-to-person transfer, or an account number for a payment.</li> <li>- The transaction is validated using the PIN code provided to open the account.</li> </ul>
4. Receiving money	<ul style="list-style-type: none"> <li>- Recipients receive an SMS informing them of the amount received and the phone and/or account number of the sender.</li> <li>- Recipients can either convert the e-money to cash at an authorized agent or keep it in their e-wallet to use later.</li> <li>- The recipient will often pay the agent a fee to convert the money to physical cash, depending on the business model.</li> </ul>

<sup>21</sup> Unstructured Supplementary Service Data (USSD) is a protocol used by GSM cellular telephones to communicate with the service provider computers. All phones can use USSD; a short-code access must be negotiated with the MNO. To access the USSD menu, the client calls a number that starts with the asterisk (“\*”) or gate (or hash, “#”) characters, and then a combination of numerals, asterisks and, finally, the gate or hash character. The handset recognizes such numbers and will use the USSD bearer instead of a voice call. This does not require a special phone or SIM.

<sup>22</sup> Java Platform Micro-Edition, or Java ME, is a Java platform designed for embedded systems (e.g., mobile devices). The client m-payment application can reside on the mobile phone of the customer. Java ME was formerly known as Java 2 Platform Micro-Edition (J2ME) and runs on GSM handsets, whereas the Binary Runtime Environment for Wireless (BREW) was used for CDMA handsets. J2ME is downloaded from the Internet and uploaded onto one’s handset.

<sup>23</sup> Wireless Application Protocol, or WAP, is a Web interface and requires an Internet-enabled handset.



Step	Description
5. Confirmation	<ul style="list-style-type: none"> <li>- Once the transaction is completed, the sender receives an SMS confirming the transaction, with the amount sent and the phone number and/or account number of the recipient. Some systems also provide the balance of funds in the account and a reference number.</li> <li>- The SMS is can be saved on the phone for reference and proof of payment, in lieu of a paper receipt.</li> </ul>

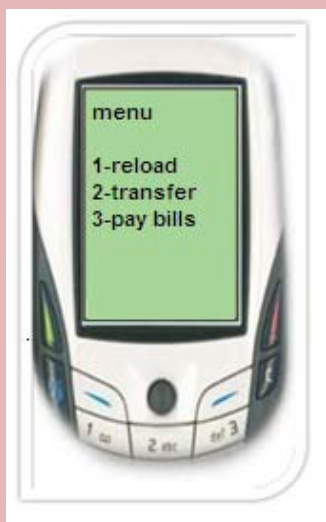
The steps above describe a simple mobile money transaction. Experience has shown that although it seems quite straightforward, there are some recurring issues that must be considered when designing the system for usage by an MFI.

- a) **Shared SIM cards and handsets.** In many communities, handsets and SIM cards are shared. When designing their system, MFIs must take into consideration the fact that there will be more than one user to a single phone number (in the case of a shared SIM card) and put in place procedures to identify the true recipient or sender(s) of funds or, as often is the case, the group of individuals sending payments via one mobile number.
  
- b) **Low literacy.** Low literacy is a recurring issue for MFIs. When using text-based applications, efforts must be made to offer multiple support mechanisms for training. This could range from client group members to younger family members or other trusted individuals. Additionally, it is important to keep in mind the length of the messages being sent or information required from the client, and keeping it simple to limit errors, as seen in the example below of the USSD menu.
  
- c) **Disclosing PINs.** When a client opens an account, s/he receives a personal identification number (PIN) that, depending on the system, is automatically generated or selected by the user. In the case of automation, the user should be trained to modify this PIN before they carry out the first transaction. Unfortunately, many are not trained or informed of the security risks involved in not keeping the code private and about the need to change their PIN code. More often, clients are illiterate and rely on friends, family members, loan officers or, sometimes, the agents to act as intermediaries and carry out the transactions for them. This can be a potential source of fraud, as the PIN is no longer a secret. Additionally, some systems transmit the PIN code via SMS, so if a client is not trained to delete the message, this opens additional opportunities for fraud.
  
- d) **Transaction Codes.** Transaction codes are pre-determined codes that are used to allow the mobile platform to communicate with the core banking system and help determine the type of transaction. Often it is up to the microfinance institution to determine what codes make the most sense. For transaction codes to be efficient, they must be simple and easy to remember for the client. The longer the sequence of inputs required to make a transaction, the higher the probability of errors. Examples of transaction codes include:
  - LR = Loan Repayment

- LD = Loan Disbursement
- BP = Bill Payment
- C BAL = Balance Enquiry

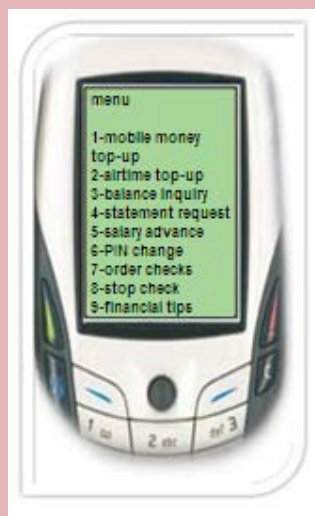
Clients will not want to send separate payments for each type of transaction, such as a savings payment or a loan repayment. To facilitate usage by the client and reduce the number of steps for each transaction, algorithms can be created to help create structures to allocate payments within the various accounts.

In the example on the next page, the client has been taught to enter a sequence of numbers to identify a payment as a loan repayment. Note that when requiring clients to input codes, errors will occur, so a system will need to be designed to interpret or separate out errors for correction. As with any new process, if measures are not put in place to ensure that the systems are operating as planned, trust in the system will decline rapidly and it will be challenging to convince staff and clients to utilize this new service channel.



**SIM-dependent and integrated solutions** – The best known example of such a solution is M-PESA from Safaricom, which is now pre-loaded on all new Safaricom SIM cards. Because it's integrated into the SIM card, the solution can operate on the most basic phone, and has end-to-end encryption. However, given the degree of technological integration necessary, this type of solution is extremely difficult for a non-MNO to offer and thus gives MNOs a huge advantage over other mobile payments providers. Consequently, it is a core feature of leading MNO business models.

**USSD solutions** – Equally successful are solutions that use unstructured supplementary service data (USSD) and simple menus to provide mobile payment solutions. Bank mobile payment providers in South Africa have seen the greatest success with USSD services. However, as the initial leg of the transaction is not encrypted or secure, most of these services have been confined to “closed-loop transactions,” where money is passed between accounts or users at a single bank, but not between banks. This is a huge constraint to achieving widespread use of mobile payments, because interactions will be confined to the bank’s own customers, and out-of-network payments need to be through cash. As all phones can use USSD, the solution can reach large target segments, and because the USSD service does not require integration with the SIM card, these services can be launched with minimal involvement of a MNO (although the MNO needs to agree to make the service available and this has been a problem in some markets). In USSD solutions, anybody can “play,” and banks have tended to be the winners.



**GPRS/Java solutions** – As noted above, downloading solutions to an “enhanced” phone is considerably easier, and an increasing number of people have higher-quality phones or soon will have them. It is likely that most people who are banked now have phones that can handle such downloads. This business model is perhaps the most contestable, because the downloadable application can be from a bank, MNO or any other third party. The drawback remains that the solution is no more secure than accessing the Internet, and to compensate the provider for the associated risk, transaction fees tend to be higher.

Source: “Mobile Payments – Ten Years on, What Has Changed?” R. Ketley (May 2010).  
<http://ezinearticles.com/?Mobile-Payments-Ten-Years-on,-What-Has-Changed?&id=4366008>

#### Box 4 – M-PESA: An Isolated Success Story

There is no refuting the fact that M-PESA is a phenomenon that numerous MNOs are trying to replicate. It was a driving force toward spurring interest in mobile money, and a successful example of how mobile money can be used by the unbanked as well as the potential it has for increasing financial transactions and deepening financial inclusion. Today, 75% of Kenya's adult population has an M-PESA account used to pay bills, send money, purchase goods and even save.

However, it is important to stress that Kenya's success story still remains an isolated case. No other countries, even those with similar socio-economic conditions, have experienced the same success.

In their article "Mobile Payments Go Viral: M-PESA in Kenya,"<sup>24</sup> Ignacio Mas and Dan Radcliffe of the Bill & Melinda Gates Foundation acknowledge the strategic vision of Vodacom/Safaricom while pointing out that the environment in which they launched M-PESA was also favorable to its success. This environment included strong latent demand for domestic remittances, poor quality of available financial services, a banking regulator that permitted Safaricom to experiment with different business models and distribution channels, and a mobile communications market characterized by Safaricom's dominant market position and low commissions on airtime sales.

The combination of these factors made M-PESA the equivalent of the Big Bang Theory for mobile payments and explains, to a certain extent, why no other country has experienced the same phenomenon.

But although M-PESA has turned into a gold mine for Safaricom, the adoption of the service by MFIs for their own operations has not been easy.

Throughout our interviews, MFIs raised a number of issues that came up with dealing with a player like Safaricom, which has a quasi-monopolistic hold on the market, including difficulties in negotiating tariffs, lack of flexibility in terms of developing scripts and interfaces with their own core systems, and customer service issues.

Kenyan application developers have been patiently waiting for Safaricom to release an M-PESA API<sup>25</sup> that would enable them build value-added services on the M-PESA platform. M-PESA has around 15 million<sup>26</sup> users, and all of its subscribers use the mobile money service, making it a truly popular service that ensures customer loyalty. However, in its current design, it not real-time but requires human intervention and manual activation.

<sup>24</sup> "Mobile Payments Go Viral: M-PESA in Kenya," I. Mas, D. Radcliffe (August 2010).

<sup>25</sup> An application programming interface (API) is a specification intended to be used as an interface by software components to communicate with each other.

<sup>26</sup> 14.65 million users as of March 1, 2012.

[http://www.safaricom.co.ke/mpesa\\_timeline/timeline.html](http://www.safaricom.co.ke/mpesa_timeline/timeline.html)

## MOBILE FINANCIAL SERVICES BUSINESS MODELS

There are four main types of business models that have appeared on the market today. However, new players are constantly appearing on the market, giving way to hybrid models or service companies that offer support to MFS providers and contribute to creating a more complex ecosystem and value chain.

**MNO-led.** This is the most prominent business model found today. In our survey, 58% of the respondents answered that, in their country, mobile financial services were provided by MNOs (compared to 27% that were bank-led, and 15% who did not know). The advantage of this model is that MNOs usually have an already-existing agent-distribution network. However, the network may be limited in its geographical outreach, posing a challenge for MFIs wishing to partner with an MNO. Also, the services offered focus more on person-to-person (P2P) transactions, and merchant and utility payments, although more and more are diversifying the range of products offered (e.g., salary payments).

Most MNOs do not have a banking license and therefore need to be linked to a licensed financial institution if they wish to provide savings. MNOs are required to deposit their funds with a licensed financial institution into a trust account. Because the funds deposited must at all times mirror the amount of funds circulating virtually in the e-wallet, reconciliations are done regularly, often several times a day. Anecdotal evidence from the research showed that mobile money users without a bank account considered that holding money in an e-wallet is banking. A study in Kenya showed that M-PESA users who own a bank account are much more likely to save on M-PESA than those who do not.<sup>27</sup> Readiness to embrace new payment systems is prevalent, and new systems can reduce or eliminate problems consumers face in existing payment settlement systems.<sup>28</sup>

The main disadvantage of this model is that MNOs are more focused on high-revenue market segments or partners. The MNOs in early stages of mobile money focus their attention on developing services and products that have large appeal to their existing customers, including anything from bill payment to remittances, which require few additional changes in their existing infrastructure or processes and procedures. There is little willingness to dedicate resources or offer much flexibility on solutions until there is greater uptake in the market, so MFIs often need to work with a one-size-fits-all solution rather than a more customized offering. The institution can link its core banking system to the MNO, if available; otherwise it is necessary to build an interface to link into the system. This again is a challenge for MFIs, which sometimes struggle to reach an agreement with MNOs to develop interfaces and services that are more in line with the needs of their microfinance clients. This was the case for NWTF, an MFI in the Philippines that decided to develop its own closed-loop system that functions only for its clients.

Another disadvantage of MNO-led models for MFIs is that such models are usually not agnostic to the mobile service (e.g., you need to have a SIM card from the MNO to send money). MFIs and other institutions wishing to use the services have to create interfaces

---

<sup>27</sup> “The Economics of M-PESA: An Update,” William Jack and Tavneet Suri (October 2010).

<sup>28</sup> [http://www.gosustainable.se/fou/cuppsats.nsf/all/2317be39b43b8abfc125712a00397464/\\$file/Microsoft%20Word%20-%20BTH%20Master%20Thesis.pdf](http://www.gosustainable.se/fou/cuppsats.nsf/all/2317be39b43b8abfc125712a00397464/$file/Microsoft%20Word%20-%20BTH%20Master%20Thesis.pdf)

for each MNO that offers mobile payment services, which ends up being quite costly. In most cases, MFIs opt to partner with the MNO having the largest market share, but there are examples of MFIs working on common platforms in Ecuador and Senegal, for example (see boxes 5 and 8). Due to the costs of creating the linkages, it might make sense for MFIs to explore collaboration with other MFIs to share expenses (which can be substantial – for example, one MFI in the Philippines was told by the MNO that it would cost \$65,000 to start the conversation, showing that there is a long way to go in the negotiation process).

#### **Box 5 – The Afghanistan Telecommunication Operators’ Social Association**

MFIs can learn from the initiative of the telecom operators in Afghanistan to create an association aimed at improving the quality of mobile money services provided, as well as collectively collaborate with regulators to ensure a healthy development of the market.

Afghan Telecom, Afghan Wireless Communications Company, Etisalat, MTN and Roshan signed an agreement in April 2011 to create the Afghanistan Telecommunications Operators’ Social Association (ATOSA).

ATOSA provides a forum to share experiences in implementing MFS with the intention of creating a healthy enabling environment. Its objectives include better security, consumer protection, fostering private-public partnerships and lobbying for better public policy.

**Bank/financial institution-led.** In this model, it is the bank or financial institution that takes the initiative to provide its clients with a mobile banking service, rather than the MNO. An example of a bank-led model is XacBank Mongolia.

In this case, the financial institution relies on the infrastructure of the MNO to transfer the data of the transactions, but uses its own branches or partners for the distribution network. Depending on the design of its system, it may also need to enter a partnership with the MNO to pre-load the SIM with a special application (a SIM toolkit) that would enable the user to access the menu directly from their phone or, for a short code, to offer USSD services.

Although justifiable in some environments, engaging in your own mobile payment network is a huge investment that should be considered only if no viable partnership opportunities are available in the long term. This was the lesson learned by Opportunity International Malawi.<sup>29</sup> The MFI had taken the initiative to create its own mobile money platform; however before it had reached full implementation, MNOs appeared on the market and offered lower-cost mobile money solutions.

One should also consider the limitations this puts on the client, comparing the tradeoffs spelled out in Table 2, below. Training clients to utilize a closed-loop system lowers the potential benefits of the overall ecosystem when, for example, clients could also access additional services, such as insurance.

<sup>29</sup> <http://www.opportunity.org/wp-content/uploads/2010/07/Expanding-Outreach-in-Malawi-OIBMs-Efforts-to-Launch-a-Mobile-Phone-Banking-Program.pdf>

Table 2 – Closed-Loop versus Open-Loop Systems

<b>Open Looped Systems</b>	<b>Closed Loop Systems</b>
<b>Pros</b> <ul style="list-style-type: none"><li>• Economies of scale</li><li>• Marketing covered</li><li>• Easier potential to bundle with other external products</li></ul>	<b>Pros</b> <ul style="list-style-type: none"><li>• Client trust limited to one system</li><li>• Greater control on development from design to security encryption</li></ul>
<b>Cons</b> <ul style="list-style-type: none"><li>• Less ability to easily customize</li></ul>	<b>Cons</b> <ul style="list-style-type: none"><li>• Lower potential ecosystem benefits for clients</li><li>• Clients with multiple wallets might shift to alternative solutions</li><li>• Costs to shift to open system</li></ul>

**Third party-led models.** In this business model, the institution providing the service is one that is created specifically for that purpose. Due to the increasing interest in the MFS market, several service companies have come into being recently. Although these companies target all MFS providers, including commercial banks and network operators, they can be a judicious choice for small MFIs that are struggling with the implementation and integration of their MFS.

Wizzit in South Africa, WING Money in Cambodia, Yellow Pepper in Latin America and G-Cash in the Philippines are prime examples of third-party models, in which the institution has an authorization or license from the central bank to offer financial services or partner with a financial services provider. Although the focus does remain on money transfers and merchant payments, these models also provide an existing platform for MFIs and other financial institutions to build their MFS on.

Mobile money service providers are geared toward microbanking platforms that directly manage the wide range of MFS for their partners: remittances, mobile top-up, bill payment, merchant purchases and even managing agent networks. Some mobile money service providers are also able to give access to cloud-based core banking systems that can be leveraged and used to the advantage of the MFI. Hence, they provide an interesting alternative for MFIs that choose to outsource their mobile payment services.

Another example from Kenya is MobiKash, a third-party mobile money provider leveraging USSD to give Kenyans on any mobile network real-time access to accounts at participating banks (including Post Bank, National Bank of Kenya and Trans National Bank), offers an agent network and a core banking system, as well as a middleware to flow transactions, thus reducing the need to heavily invest on the MFI side.

Table 3 – Evolving the MFI Approach Using MFS

<b>Traditional Approach</b>	<b>MFS Approach</b>
<ul style="list-style-type: none"> <li>▪ <b>Cash collected and counted at meeting often resulting in long waits</b></li> <li>▪ <b>Loan processed and payment made at following meeting</b></li> <li>▪ <b>Paper trail taking several days or weeks to reach head office</b></li> <li>▪ <b>Back office staff intensive</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>No cash handling, transactions completed outside of group meeting</b></li> <li>▪ <b>Loan approval with payment either immediate or within a few hours</b></li> <li>▪ <b>Real time reconciliation</b></li> <li>▪ <b>Automation of processes</b></li> </ul>

**The hybrid model.** This involves a joint venture between an MNO and a financial institution. The most successful example of such a model is Tameer Bank in Pakistan, which partnered with Telenor. Telenor owns 51% of Tameer Bank and together they offer the service EasyPaisa. As a newer model in the early stages, it is focused on developing market share primarily through traditional services such as payments or money transfers, so it has yet to reach the market serving typical MFI clients (savings and loans are generally not first products, because clients need to build trust in systems and feel comfortable leaving cash in their e-wallets before taking the next step toward savings and loans). For an MFI, this model should be considered much in the same way that a third-party model could be considered. One of the main advantages of this model is that it can make the most of both the financial services of the financial institution and the agent network of the MNO.

Another example of a hybrid model is Kenya’s Equity Bank M-Kesho, in partnership with Safaricom’s M-PESA. The service, designed to service the unbanked, allows users to transfer money from their M-PESA e-wallet to their Equity Bank savings account and to earn interest on their M-Kesho account. It also allows account users to receive loans based on how frequently they use M-PESA (which helps them establish a credit history), as well as micro-insurance products. The two partners faced many technical challenges; because the M-PESA system was not designed to integrate with banks, so some compromises had to be made in the design.

In the first three months after its launch, Equity Bank registered 455,000 new M-Kesho account users. One of the disadvantages of M-Kesho, however, is that clients have found it costly to transfer funds between the savings account and the mobile phone – they have to pay a fee (30 Kenyan shillings, or about 35 cents) to transfer funds from their M-Kesho account to their M-PESA account (it is free to transfer from M-PESA to M-Kesho), and another fee to withdraw the money from their M-PESA account (approximately 25 KES, or 29 cents for registered users and 30 KES for non registered users). This decreases the cost benefits of the interest-bearing account, especially when one considers that most of these deposits are short-term and destined for daily consumption. Although the intention was to serve unbanked savers, its main users are banked clients who do not



want to enter the banking hall and are willing to pay the transfer fees, thus missing the intended market segment.

Daily usage is an issue that Orange Money Kenya sought to address through its own mobile money service, Iko Pesa, launched at the end of 2010. Iko Pesa is a fully mapped bank account integrated into a mobile platform. Hence, all transfers are registered as account-to-account transactions, without passing through an e-wallet – meaning that the client is transacting using his or her own bank account and all bank features, and the system is linked to the core banking system and the bank’s security. The comparisons are noted in Table 4, below.

Orange Money Kenya uses Equity Bank’s own mobile banking platform, which it has rebranded for its use under the name Iko Pesa. The application is made available on the mobile phone through multiple channels, using a SIM Toolkit, USSD and J2ME. This mapped account also offers options not generally available through MNO channels, such as the ability to transfer funds to other Equity Bank accounts as well as other banks, higher transaction limits and the ability to send funds to any MNO network. Combining options from the MNO and the financial institution, this product provides the most options to date for financial services compared to the other channels. Additionally there is a Visa-branded debit card linked to the account.

Although no figures were available on the rate of uptake at the time of writing, Iko-Pesa has the potential to link Orange Money’s 125,000 subscribers to Equity Bank’s 4.5 million account holders (716,000 active borrowers). Launch of the mobile banking account offers Equity Bank an opportunity to turn 2.4 million Telkom Kenya subscribers into account holders, while Orange taps into Equity’s large customer base for new subscribers.<sup>30</sup>

**Table 4 – Stored Value versus Mapped Bank Accounts<sup>31</sup>**

	<b>Stored Value Account</b>	<b>Mapped Bank Account</b>
<b>Security</b>	<b>Limited</b>	<b>Bank-level AML and KYC</b>
<b>Float</b>	<b>Need for separate float account</b>	<b>Ease of transfer from any bank account</b>
<b>Deposit protection</b>	<b>Limited protection</b>	<b>Individual accounts protected</b>
<b>Financial intermediation</b>	<b>Funds collected not available for mass market</b>	<b>Funds collect are lent back to mass market</b>
<b>Transaction history</b>	<b>Not all transactions are captured within the banking system</b>	<b>Full record of transactions within the banking system</b>
<b>Access to other financial services</b>	<b>Limited to money transfer</b>	<b>Money transfer, credit (MasterCard) or debit card</b>

<sup>30</sup> Mobile Money Africa, “Customers Will No Longer Walk All the Way to the Bank as Services Go Hi-Tech in Kenya,” [www.mobilemoneyafrica.com](http://www.mobilemoneyafrica.com), David Mugwe and Okuttah Mark. October 13, 2011.

<sup>31</sup> Orange Company presentation.

## IMPLEMENTING MOBILE FINANCIAL SERVICES

### BEST PRACTICES AND LESSONS LEARNED

Every day, new MFIs are entering or contemplating entering the MFS market. For each one, the decision will be based on a number of factors, as noted in Table 5, including – but not limited to – market demand, consumer behavior, regulatory requirements, literacy levels, availability and complexity of financial services, and even the availability of mobile technology and infrastructure.

For many MFIs, the task can be daunting, as financial resources and human capacity often are limited. Therefore, rather than “reinvent the wheel,” MFIs should make the most of existing experiences and draw certain conclusions on the best approach to provide mobile financial services to their clients in an efficient and affordable manner.

**Table 5 – Balancing Priorities**

Drivers	Design/Pilot	Launch	Scaling Up	Product Diversification
Feasibility Study	Critical			Very Important
Agent Network		Critical	Critical	Critical
Product	Critical	Critical		Critical
Process Re-engineering	Critical	Very Important	Very Important	Very Important
Internal Commitment	Critical	Critical	Critical	Critical
Change Management	Critical	Critical	Critical	Critical
Partnerships	Very Important			Important
Regulations	Important		Important	Important
IT	Critical	Critical		Very Important

Below are some of the most valuable lessons learned from our research.

### 1. CONDUCTING RESEARCH

As mentioned above, the first step to implementing MFS would be to carry out extensive research, preferably in the form of a feasibility study. MFIs should bear in mind that, despite pressure from the market, it is necessary to take the proper amount of time to prepare the launch of the service.

In an article published by Triple Jump Advisory Services,<sup>32</sup> Carol Caruso stresses the importance of taking your time. Moreover, our online survey revealed that 9% of the respondents had not conducted any form of research before implementing MFS and that only 5% had carried out a cost/benefit analysis (CBA). The majority of the respondents (32%) had only carried out superficial surveys, such as literature review and focus groups, and had relied instead on existing studies. Also, during the interviews, when asked if a CBA had been carried out, a significant number had replied that they “did not need to” because the cost benefits were “obvious,” especially when comparing e-transactions to the traditional methods (collecting receipts, sending checks and documents by courier, etc.). Furthermore, our study showed that even when a cost analysis is carried out, this is mostly done focusing on the potential savings for the client, such as less time spent away from their business, no transportation costs and the lower risk of losing cash.

It is important to understand costs related to changes in an MFI’s core processes, as well as to map out those changes. In the pre-launch phase, the process re-engineering, technology and internal change management will take longer than estimated and MFIs should plan accordingly (see responses to questions 31 and 32 in the survey results).

It is understandable that the need to maintain a competitive edge could push MFIs to launch services before they have taken the necessary measures. However, in this case, implementation can be very rocky. Because it is extremely difficult to regain the trust of disgruntled clients, it is preferable to ensure that the service is tested and running smoothly with a diverse group of clients before rolling it out across the broader organization. It is sometimes too late and more costly to try to sort out kinks later.

The adverse effects do not only emanate from clients, but also internally from staff. If the application is seen as failing or creates additional work, then MFIs face the risk of losing

#### Box 6 - Creative Training Tools

Taking Cambodia as an example again, a significant number of phones do not support Khmer characters, making literacy an even greater challenge for MFI clients. A lesson that can be taken here is the importance of training, and the marketing materials associated around this. WING Money overcame this issue by creating small brochures with detailed explanations of how to use each screen, translating the English script into Khmer, rather than opting for IVR (interactive voice recognition). Also, because it was prohibitively expensive to offer m-banking services in Khmer-language characters, WING uses romanized Khmer for its transactions. Baseline research conducted in 2009 showed that 56 percent of all WING customers were previously unbanked, a figure that is as high as 81 percent in rural areas. (WING Social Report 2009)

<sup>32</sup> “Mobile banking for MFIs: why it pays to take your time,” C. Caruso, Managing Director, Triple Jump Advisory Services (Fall 2011).

staff's trust in the efficiency of the service, and this sentiment will eventually be conveyed to the clients.

#### **Box 7 – Why it pays to know your environment**

Understanding the market environment is the first step for successful implementation. Prior research will enable MFIs to gain a better understanding of the market opportunities and challenges they face, and assess if the benefits of mobile money outweigh the costs. The decision should be based on concrete facts and market trends, rather than because “everyone else is doing it.”

An aspect of the market environment often overlooked is consumer behavior. For example, in Cambodia, mobile phones are primarily used for voice, with texting being very minimal. So MFIs in that country needed to consider developing products based on voice.

In the same vein, it is important to understand limitations caused by the technology available. In Afghanistan, Roshan, the country's leading telecom operator, introduced M-Paisa, an m-banking service that includes an interactive voice response (IVR) system to address low levels of education and literacy. The IVR system offers instructions in Dari, Pashto and English, and clients can select which language they use.

The interviews also revealed that when research is rushed, internal costs to the organization – such as training, upgrading the IT/MIS and developing the agent network – are rarely factored in, making it impossible for MFIs to calculate the real costs of implementing MFS.

By conducting a feasibility study, MFIs can ensure that they have examined all aspects of the market and are fully aware not only of the costs and risks, but also of the opportunities and benefits to expect from MFS.

MFIs should examine the following areas. The list below is not exhaustive, but aims to raise awareness about some key issues.

#### **a) Consumer profiles**

- How can I segment my clients? (Phone-literate? Living in high-risk security areas?)
- What kind of products are clients looking for? How do they “invest” today? (Cows, food stock, etc.?)
- What kinds of products would be appropriate for potential clients?
- How many of my clients own a phone? If they do not own a phone, how many own a SIM card?
- What are the pain points of my clients regarding technology?
- What are the pain points of my clients regarding access to finance?
- How will literacy levels affect the adoption of my product?
- Do I have the capacity to develop products that respond to their needs?

- How is mobile money perceived?
- How much will I need to invest in training my clients on using mobile money?
- What is the geographical distribution of my clients compared to network coverage?
- How far away is the closest cash-in/cash-out point?
- How much does it cost a client to collect a loan, pay a loan or put away savings?
- What features are most important to a client for a product/service?
- What risks does the client see using this product/service?
- What does a successful product/service look like from the client's viewpoint?
- What fees are the clients willing to pay?

**b) Staff**

- What are the major concerns of staff in implementing MFS?
- What training tools do clients/staff need?
- Which job descriptions need to be modified and what new roles must be created?
- What key performance indicators need to be modified?
- What types of incentives will be necessary to facilitate adoption?
- Is staff already using MFS?
- What is phone ownership among staff and will the MFI need to purchase/subsidize/offer loans to upgrade handsets?
- What does a successful product/service look like from the staff's viewpoint?

**c) Regulatory Framework**

- Is a special license required to carry out e-transactions?
- Are there limits to the amounts that can be sent or stored on the e-wallet?
- What KYC (know your customer) measures need to be put in place?

**d) Processes**

- How do I serve my clients today and what changes need to take place to implement mobile payments?
- Which systems need to interconnect? How to prioritize?
- What audit systems need to be in place?
- If automating systems, how do approvals change?
- How will I train and market the new services?

### e) Competition

- What are my competitors doing and what can I learn from them?
- Is there a niche that is not covered by my competitors?
- Should I collaborate on a shared system?

### f) IT/MIS

- What is the state of my IT/MIS? Can it support mobile money or will I need to upgrade?
- Will the MNO cooperate in providing the information I need to develop an adequate interface?
- What are the costs for implementation and integration of my MIS with the MNO, bank or third-party platform?
- What special skill sets do I need in my IT department?
- What reports will I need to manage my business?

### g) Technology

- What phones are accessible to my client and at what cost?
- Will it be possible to create applications in the local language?
- Do I need to provide interactive voice response (IVR) service?

### h) Network

#### MNOs:

- How many operators are in the country?
- Is there a leader? If so, what is their market share?
- What percentage of voice subscribers are active mobile money users?
- What is the network coverage and does it overlap with my catchment area?
- How many agents are there and what is their geographical distribution?
- How reliable is the network signal?
- What are the tariffs and are they negotiable?
- What are the transaction fees for the clients?
- Do I need to invest in additional hardware or software?
- Who pays for the integration into the core banking software?
- What are the implications of exclusivity?
- Do I offer real-time transactions and reconciliations?
- Who owns the customer?
- What marketing assistance could one expect?

- What types of reports are available? Is customization possible and, if so, at what cost?

**Banks (in addition to questions under MNOs if bank-led model):**

- How many branches/agents does the bank have and what is their geographical distribution?
- What will be the cost of linking to the bank's branch network? ATMs? Other switches?
- Who will own the relationship with my clients? (i.e., can they approach them with their own competing products?)
- Do I need to invest in additional hardware or software?
- What are the implications of exclusivity?

**Third parties:**

- What is the fee structure/cost of services?
- Do I need to invest in additional hardware or software?
- Do they have an agent network and what is their geographical distribution? Will they have access to information on my clients?
- Are the services interoperable? Are there any exclusivities that could affect your operations?
- Do they have a track record in my country? Elsewhere?

**i) Agent network**

MFIs first need to establish whether there is an existing network that they can leverage, or whether they will be developing their own network from scratch.

**If there is an existing agent network:**

- How many agent points are there and what is their geographical distribution?
- What incentives are they currently receiving? Are they happy with the fee structure and incentives plan?
- Do the agents often encounter problems with managing their liquidity (e-float)?
- Do the agents have the capacity (and willingness) to register new clients?
- Do the retailers have an exclusivity contract with the MNO (i.e., are they allowed to act as agents for other mobile money services)?

**If there is no existing agent network, the following areas are important to look into:**

- Are there local businesses that can act as retailers for my service (e.g., convenience or mom-and-pop stores, postal offices, air-time resellers)?
- How much training will I need to invest in my agents?

- What kind of incentive will they need to become interested in becoming a retail agent and what quality control measures will I need to put in place?
- How easy is it for the agents to manage liquidity?
- Could my loan officers or group leaders act as agents and use existing infrastructure?

### **Best Practices**

- *Examine all aspects of the market: regulation, consumer behavior, competition, technology developments, socio-economic profiles of the client, network coverage.*
- *Take your time when conducting your research, but be decisive once the results are conclusive.*
- *MFIs should also consider the option of NOT implementing mobile financial services. If your organization or the market is not ready, it may be preferable to wait for new developments that would make it more viable.*

## **2. CHOOSING THE RIGHT BUSINESS MODEL**

Once the research is completed, the next important step will be to decide on the type of business model to implement. Questions will arise as to whether to create your own platform, to partner with one or several MNOs, partner with a bank or third party, or merge with a partner institution. The decision should be based on the results of the feasibility study.

The majority of MFIs implementing MFS today do so in partnership with an MNO or third party (e.g., Wizzit or Wing Money). This is largely due to the fact that, in many cases, the MNO has already started developing remittance services, clients trust its systems and the MFI wishes to take advantage of its existing network and visibility among the population.

Before engaging in a partnership with an MNO, the MFI must keep in mind the following:

- a) **Respective vision and mission statements.** The business objectives of potential partners and MFIs are inherently different and some would even say diverging. For example, MNOs are focused on expanding their ability to provide payment services using their existing infrastructure. This leads to a focus on urban and semi-urban areas where antennas are in place and the agent network is generally well-established.

MFIs, on the other hand, are hoping to use mobile financial services to increase outreach to areas where it would not otherwise be cost-effective to establish a brick-and-mortar branch. There is also a social objective that motivates MFIs (which also need to focus on operational and financial sustainability), which is not the case for MNOs or third parties. Therefore it is important to ensure that your



partnership would not entail a drift in mission.

- b) **Negotiating power.** Just because an MFI is small does not necessarily mean that it cannot negotiate tariffs with a potential partner. Negotiating skills are important. In fact, our survey showed that 44% of respondents had negotiated tariffs with MNOs. During a group interview with 14 MFIs in Kenya, we discovered that the two smallest MFIs had negotiated better tariffs than their larger counterparts in the same market. In the case where prices are not set, it is important to negotiate. Small MFIs should consider creating an alliance with other MFIs to increase bargaining and lobbying power.

#### Box 8 – Ecuador’s Red Financier Rural (RfR), a National MFI Network

In Ecuador, more than 1,300 small credit unions and cooperatives, and a few medium-sized MFIs, reach a client base of about 2 million people. The high costs for each institution to invest in its own technology platform helped justify collaboration to create an interoperable system.

RfR, begun in 2008, enables more than 100 MFIs, credit unions and cooperatives to operate on a shared technology platform. The platform enables interbank transactions and connections; external payment systems for such services as remittances; social payments; and ATM/card transactions. Though the project’s initial goal was 750,000 accounts on the hosted system in the first four years, it has surpassed that, reaching almost 1 million accounts.

Since 2009, Red also has been implementing a microinsurance project. The effort, which began by piggybacking on the shared MFI platform, focused on product design, claims processes analysis, and training of commercial agents delivering microinsurance products.

Sources: <http://www.cgap.org/p/site/c/template.rc/1.11.131163/1.26.5603/>

<http://www.rfr.org.ec/component/content/article/2-noticias/83-la-importancia-de-contar-con-informacion-crediciticia.html>

- c) **Consumer protection.** In the Philippines, clients of an MFI using a third-party system started receiving text messages from the MNO promoting competing products. As it turned out, in the fine print of the contract, the MFI had given the MNO the right to commercially exploit the information it had acquired about the MFI’s clients. As a result, clients felt harassed by the messages and lost trust in the ability of the MFI to protect the privacy of their information. The MFI learned that it is important to scrutinize the contract to understand what rights the MNO, bank or third party will have over client information and how they can use it, as well as the importance of choosing partners wisely and understanding their long-term strategy.

Many MFIs, however, do not take deposits and have no choice but to partner with a bank if they wish to offer savings products. If this is the case, the partnership should clearly protect the MFI’s sole right to its clients’ information. There are

country-specific cases, such as India, where MFIs are currently not permitted to hold the accounts of their clients; instead, these are owned by the banks. But whenever possible, MFIs need to retain ownership of their clients' accounts to stay in business.

- d) **Ensuring confidentiality of data.** Financial services are data-sensitive. As mentioned above, the information you keep on your clients can be valuable for many service companies. It is therefore important, in addition to carefully reviewing the contract, to ensure that there is a sufficient encryption level of the data that is being transmitted over the MNO network and through the systems of third-party operators. Access to the client and transaction information should not be granted to any entity outside of the MFI.
- e) **Interoperability.** Interoperability is the ability to offer products or services that are agnostic to the mobile phone network of your users. This is particularly important in countries that have a large number of networks, none of which have a leading share of the market. In this case, partnering exclusively with one MNO would make it difficult to achieve the economies of scale required to make the service sustainable. In countries where one MNO has the lion's share of the market (e.g., Safaricom in Kenya, with an estimated 70% market share), it is not essential to achieve full interoperability – but there are few countries globally with this type of environment.
- f) **Real-time reconciliation.** There are implications for operations based on a real-time approach versus offline updates. For example, there have been instances in which clients would use their phone to repay a loan at a meeting and then immediately go to an ATM to withdraw funds, although normally they should have been denied due to an insufficient balance. This was only rendered possible by the fact that reconciliations were only carried out at the end of the day. Therefore, it is important to ensure that the system has the capacity to update transaction data in real-time, and not only at the end of the day.<sup>33</sup>

It is also possible that there are no existing services being deployed, which may encourage the MFI to create its own platform. On the basis of the feedback received from MFIs and experts, there is general consensus that this should only be undertaken by an MFI if there is:

- a) An enabling regulatory framework
- b) A significantly high level of latent demand
- c) Very little prospect of an MNO or mobile money service provider appearing on the market before the MFI has fully rolled out its services

Ultimately, it is the prevailing market environment that will guide the MFI on the best business model.

---

<sup>33</sup> Note that this differs from the actual settlement of cash, which is often done several times a day or at the end of the day.

Below are some examples of pioneering models that show ways in which MFIs have adapted to the specific characteristics of their market environment.

**XacBank (Mongolia)** developed its own platform, called AMAR, with the help of Horus, because there were no MNOs interested in developing mobile money transactions for a country as geographically challenging and having a population as widely dispersed as Mongolia. XacBank also developed an agent network with an innovative franchise approach, as outlined in Box 9.

Clients can use a combination of mobile phones and more than 3,000 cash-handling agents (such as remote grocery stores and trusted individuals) to make a variety of transactions (depositing, withdrawing and transferring money). Initially, it was expected that remittances – where funds are sent from one person’s e-wallet to another – would be the most popular service, but after rolling the program out, direct account-to-account transfer became the most widely used service and the largest driver of revenue. The payment function for goods and services is also popular.

#### **Box 9 – XacBank’s Franchise Model**

Mongolia is one of the most challenging environments in terms of reaching remote microfinance clients. To reach its client base in the farther soums,<sup>34</sup> XacBank developed a franchise model through which it built the capacities of local savings and loans cooperatives, known locally as SCCs. XacBank trained the SCCs in such areas as governance, financial management and product development.

The role of the franchise SCC is to review and approve loan applications on its own, independently of XacBank branch staff. The SCC has an advantage in terms of having information on the behavior of potential clients and their capacity to absorb credit, as well as the ability to enforce loan repayment through informal mechanisms, such as peer pressure and a close follow-up.

XacBank initially introduced mobile banking as a transition strategy before the franchise model became sustainable. However, the MFS services turned out to be profitable and a sustainable business model of its own accord.

Although XacBank faced various difficulties in designing and rolling out the mobile money platform, the fact that to this date there are still no other mobile financial services is an indication that there is no fixed method to implement. Flexibility in the model in adapting to specifics of the market is essential for success.

**Tameer Bank (Pakistan)** follows another model that is not commonly seen. It made the decision to partner with Telenor Group to create mobile money services under the name of Easypaisa. Instead of acting as two separate entities, Telenor bought a 51% stake in Tameer Bank. Today, Easypaisa is not promoted as a mobile money tool for loan disbursements and repayments, but rather as a money-transfer service with its own corporate website and branding.

<sup>34</sup> Soums are second-level administrative units or districts in Mongolia.

Tameer Bank has not yet been able to fully roll out loan and savings products to the poorer populations, but it has admitted that this is not its priority at the moment. Rather, its objective is to increase revenues from Easypaisa by offering products and services that are high in demand, such as bill payments, merchant payments, money transfers, G2P transfers, etc. Once a sufficient client base has been achieved, it will have a greater chance of converting its microfinance clients to mobile money.

Moreover, the experience gained by Tameer Bank through Easypaisa now offers a new business opportunity for the bank – to act as a third party and provide a mobile money platform for MFIs.

**Musoni (Kenya)** is an example of an MFI that is 100% mobile. Because all clients pay via the mobile phone, Musoni initially began with a model that featured limited interaction with its clients (no group meetings), which made it difficult for the loan officers to manage their portfolios. As a result, Musoni changed its initial low-touch model to include regular monthly in-person group meetings, while all cash transactions continue to be carried out via mobile (outside of the group meeting). Interestingly, Musoni sees a majority of payments being sent outside of normal banking hours.

The fact that Musoni was launched as a cashless business model helped facilitate the adoption of MFS by its staff. Indeed, unlike other MFIs in Kenya, which sometimes faced resistance from loan officers to adopt mobile payments,<sup>35</sup> it did not have to “re-train” staff to comply with new procedures nor did it have to manage disagreement from loan officers who felt that mobile technology was hindering their performance.

Musoni also benefits from the technical expertise and resources of Musoni B.V., where all research and development takes place, especially regarding developing the MFI’s MIS and IT applications. By centralizing the research and development of the technological innovations at the holding level, Musoni staff – from the CEO to the loan officers – can dedicate more time to finding new clients and satisfying existing clients.

The 100% mobile model is not without its challenges, of course. The MFI’s performance is closely tied to the quality of the services provided by the MNO. Long-term network issues can directly affect operations when relying solely on one system, so a backup plan is required for outages, which occur more frequently in early stages of MFS as volumes grow. Also, Safaricom – with a market share of nearly 70%<sup>36</sup> – has the upper hand when negotiating tariffs.

**Somesh (India)** is also a business model worth mentioning, given that MFIs in India are not allowed to carry out e-transactions. However, they may act as a business correspondent of a bank. In this way, MFIs in India are using mobile technology to improve their outreach and expand services rendered to their clients.

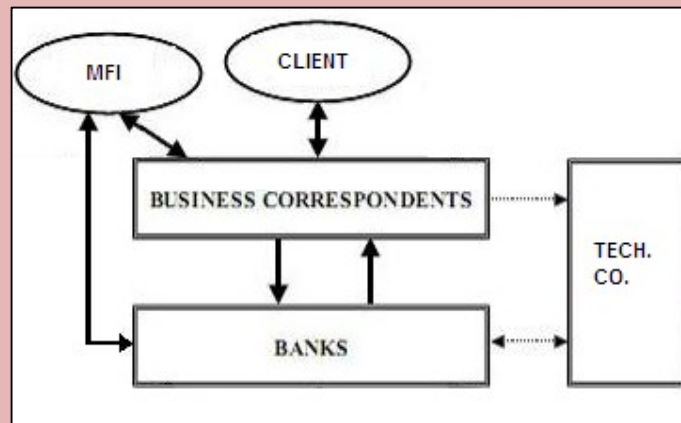
---

<sup>35</sup> Loans officer sometimes thought their jobs would be eliminated and replaced by technology, and thus did not want to convert clients to the mobile systems.

<sup>36</sup> Bloomberg, October 2011.

## Box 10 – India’s Business Correspondent Model

The Business Correspondent Model was introduced by the Reserve Bank of India (RBI) in January 2006 as part of an initiative to ensure greater financial inclusion and increase the outreach of the banking sector. This policy favors banks in lieu of MNOs and allows third parties to deliver financial services on behalf of the bank.



Non-governmental organizations (NGOs), self-help groups (SHGs), MFIs and civil-society organizations can become correspondents for the banks, to provide financial and banking services on their behalf.

For MFIs, most of which do not take deposits, this seems a good opportunity, as it offers a means for them to provide savings products via the banks. With each bank developing its own approach, partnerships must be closely analyzed to ensure that the banking partner is strategically aligned with the MFI, and that expectations are realistic. With the increasing presence of mobile technologies (ATMs, POS and mobile phones) it seems that the model can be implemented at relatively low cost.

That said, to date, the business-correspondent model has had mitigated success and there is general consensus that it will need to evolve.

Some of the challenges faced by MFIs include:

**Inactive accounts.** Most accounts are not used after being opened, as clients still find banks inaccessible.

**Low incentive from banks.** Banks are not willing to cover the costs of training and deploying the service, making it difficult to make it commercially viable.

**Mistrust of banks.** MFIs have found it hard to convince their clients to trust the banks with their money.

**Integrating technology.** Communication between the banks' and MFIs' systems is difficult. It's usually up to the MFI to upgrade its systems to communicate with the bank, which increases the costs of implementation.

**SMS receipts late.** As the systems start to exceed the capacity of the network operators, clients send in multiple payments due to the lack of response on the MNO network, eroding trust in the system.

Loan officers collect the cash at meetings and send the information by phone to the branch. Loan officers also can do the transaction in offline mode if they are in an area that does not have coverage, and reconcile once they are in an area that has network connectivity.

In this way, the MFI can use mobile technology to provide swifter and more efficient services without the need to offer a full MFS package.

### **Best Practices**

- *There are a variety of models available to MFIs, with new ones appearing every day. Therefore, it is important to carefully research the players in your environment to identify possible partnership possibilities.*
- *Developing your own mobile money platform is a very complex and resource-intensive option. Creating your own system should be a decision weighed against the probability of having new entrants in the market.*
- *Create partnerships with like-minded institutions whenever possible to increase your ability to influence market trends.*

### **3. CHOOSING YOUR IT/MIS**

An efficient and adequate MIS, fully integrated with the core banking system, is crucial to the successful implementation of MFS.

Through the study, we observed that some MFIs attempted to integrate their mobile money transactions gradually, beginning with a manual reconciliation. By doing so, MFIs hoped to reduce cost by staggering implementation steps, giving themselves more time to mobilize the necessary funds and resources for a fully integrated system from donors and/or stakeholders.

Unfortunately, the result was a high number of entry errors, slower transactions and reconciliation, and even higher costs associated with having to restart the transition process from traditional to mobile banking. The adverse affect on operations included an increase in PAR (albeit temporary, according to the interviews), a lack of buy-in by loan officers and low service satisfaction by clients. (The section on Change Management highlights lessons, as well as ways to mitigate risk.) Breaches in trust are much harder to overcome and often are the result of downtimes or lack of follow-through in processes. Box 11 highlights the challenges in the tradeoff of manual buildup versus automation.

Best practice dictates that IT/MIS be a strategic tool for MFIs, which are now realizing that IT and the innovation around it, such as MFS, can enable them to better collect, process and analyze data accurately.

Despite the fact that MFIs are aware of the immense potential added value of MFS, there are some that are very reluctant to fully invest in a system that would allow them to deploy it efficiently.

In Tanzania, for example, MFIs are playing “watch-and-wait.” At the time of our study,<sup>37</sup> only one MFI had fully deployed MFS and had fully integrated it with its core banking application, allowing it to gain a competitive edge over other MFIs in the country. The online survey also told us that 42% of the respondents were still integrating their mobile operations manually into their core banking system.

Those that had automated systems noted the importance of reports. As part of the process of re-engineering, MFIs need to consider what data they require from reports to extract and analyze data. The reports assist in decision-making and auditing, to name a few areas. In another example from Kenya, several MFIs realized that they needed clients to pay them 48 hours before meetings, so that loan officers could take reports with them to meetings that were accurate (clients had been paying up until the meeting time). Several MFIs used Internet-enabled handsets, allowing loan officers to view reports live and update client records while still in the field or to take pictures of signoffs or clients.

#### **Box 11 – Automation and Integration Are Key**

The example given below is from an MFI in Kenya, but could be applied to other relevant contexts.

A small MFI decided to take the leap and provide its clients with mobile financial services. Judging that its size and operations did not warrant a full overhaul of its IT/MIS, the MFI appointed a single employee to carry out the reconciliations between the mobile money platform and its core banking system manually.

Within weeks of launching operations, the employee was overwhelmed and had a **three-week** backlog in transactions. Considering that the MFI was registering new mobile clients at a rate of 300 per week, it was clear that alone – and manually – it would have been impossible to catch up on the number of transactions. In the end, the MFI did invest in an automated system, but in the meantime many customers had a bad experience with the service, jeopardizing the MFI’s operations and the success of its MFS.

There are a number of existing software and technology firms that have the expertise to design mobile money solutions. MFIs should research the options and consult them before developing the service. Also, as mentioned in previous sections, mobile money service companies with varying levels of experience are appearing every day, making it possible for MFIs to outsource part of their activities.

However, when choosing the technical partner, MFIs should bear in mind that many vendors have no understanding of MFI operations, while many IT/MIS projects either fail or take very long to implement. Always ask what prior experience the potential partner has with MFIs, and call for references. Choose a vendor with a sound knowledge of

---

<sup>37</sup> August 2011.

developing solutions for MFIs, even if it is at higher cost. Indeed, a less experienced service provider may be more affordable, but the lack of understanding of microfinance operations may result in a product that is impractical and not in line with the MFI's business model. As noted earlier, it is often costly to correct or start again.

### **MOBILE MONEY BRIDGING SOLUTION**

From this study it is evident that besides deploying a core banking application, MFIs need to integrate their MIS with MFS from front-end to back-end to gain the full potential of mobile money. The study showed that MFIs have chosen to upgrade gradually, beginning by manually entering transaction to core banking systems, then integrating their MIS with MFS as a phase two.

MFIs generally find phase one faster, cheaper and quicker to implement. Creating true integration and a seamless solution for MFIs is an expensive undertaking. In the example given in Box 11, this particular MFI eventually chose a consultant that provided them with a solution.

Due to the technical nature of the integration and the cost involved, MFIs are deciding to implement the automated system at a later stage and therefore, in the short term, face greater challenges regarding PAR, buy-in from loan officers and rejection by clients. MFIs should set aside a budget and implement a bridge that will ensure transactions from mobile money are automated and that the core banking application is updated on a real-time basis. MFIs that have such seamless systems in place have greatly benefited from MFS; the investment has been worth the cost.

It should also be noted that not all systems are real-time. Real-time systems help speed the work of identifying and responding to potential fraud. In the current MFI environment, transactions can be initiated on many different channels – online, branch, ATM, point of sale, mobile, etc. – with each channel communicating separately with the core banking application. These transactions are processed at the end of the day. Because these channels run independently, the core banking application becomes a point of synchronization at end-of-day and, therefore, becomes a potential risk to the MFI.

Deploying a mobile money bridge has the following benefits for the organization:

- Improved efficiency of processing mobile money payments to the core banking system with automated/real-time solutions.
- Improved accuracy of posting mobile money payments due to elimination of manual processes.
- Clear reconciliation points and support report, to ensure that the MFI has clear control over its mobile money account.
- Increased client confidence that comes from notification of when each payment has been credited to their loan account (for solutions that come with SMS notification – for most solutions, this is an optional component).



- Client flexibility to send money from any network, and mitigation of the risk of depending on one mobile network operator (when sourcing for a mobile money bridge, MFIs must choose a solution that works with different mobile operators).

The most secure and efficient way to implement a bridge solution is given below, based on a thorough review of how implementation was done by several MFIs. Please note that the example below, Figure 5 and Table 6 are based on interviews with vendors in Kenya. Results may vary from one country to the next, based on regulation and the level of expertise available on the market.

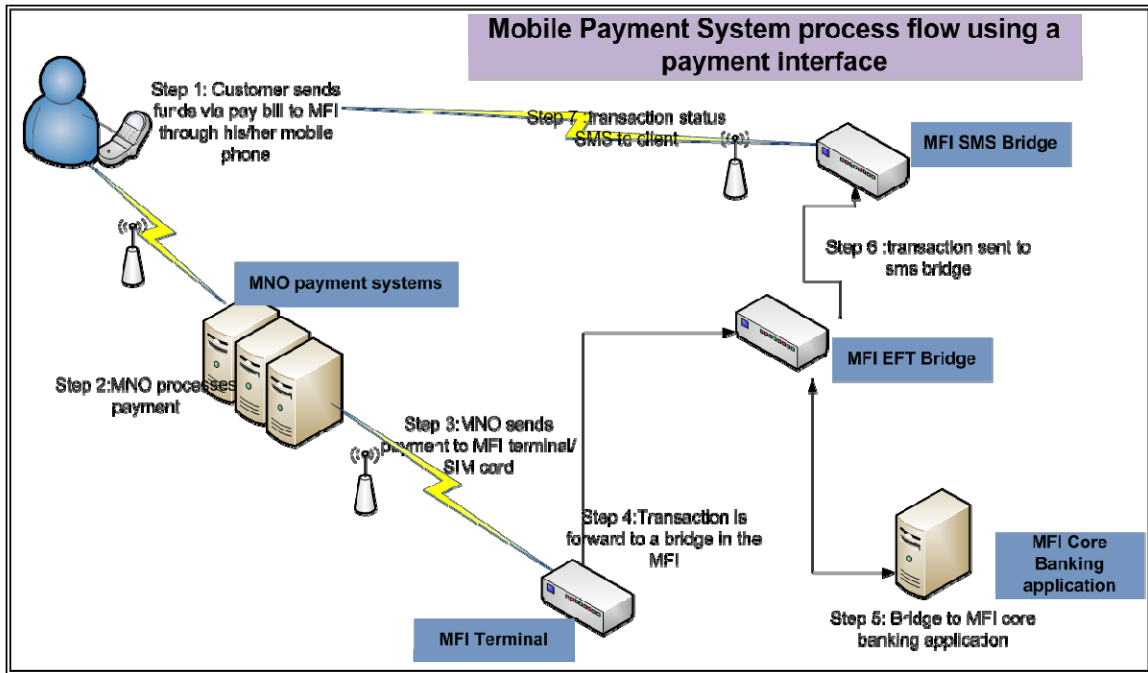
1. MFIs must sign contracts with an MNO or MNOs to access their services.
2. MFIs must obtain a business terminal SIM card from the MNO(s) and negotiate access to a test environment.
3. Vendors typically install the GSM modem and the software bridge.
4. MFIs must create functional specifications that detail exactly how the solution will need to be configured. This document must include the following elements:
  - Detailed specification of the transaction posting to be handled by the solution, with description of the various scenarios (e.g., exact loan repayment, underpayment, overpayment, payment not on the repayment date, etc.), taking into consideration all scenarios that could arise.
  - Specification of the reconciliation process.
  - Specification of the SMS alerts and associated rules.
  - Business process maps and workflow analyses covering pre- and post-implementation of bridge.
5. Installation and configuration of the mobile bridge interface.
6. Development of user guides for the specific configuration (this is a technical document for the IT senior staff).
7. Training of the IT staff (e.g., system administrators, IT support, help desk staff, etc.).
8. Implementation of a user acceptance test for the whole system. This is done on a test instance.
9. Repair/redesign of any issues identified during user acceptance testing.

10. Going live.

The research showed that successful implementation incorporates one MNO at a time in the project. After going live, MFIs can then rollout a system with other mobile operators – but, again, only one at a time.

From the study, it is difficult to state an appropriate timeframe for implementation, because this varies depending on an MFI’s hardware availability and decision-making process, including sign-off executions.

Figure 5 – Mobile Payment System Process Flow



Source: Software Group

Table 6 – Mobile Payment System Process Flow

No.	Steps	Description of activities
1	MFI customer sends funds via mobile phone.	Client processes payment as per the requirement of the MNO and MFI.
2	MNO processes payment.	MNO processes the payment as normal, sending confirmation test message to MFI client if the transaction has been successfully transferred to MFI mobile money account.
3	Transactions are forwarded to MFI business terminal.	The MFI uses a dedicated GPRS modem with a SIM card configured to act as the MFI business terminal. This modem receives all transactions forwarded by the MNO and passes these on to an EFT bridge for onward processing.

No.	Steps	Description of activities
4	Transactions are forwarded to an EFT bridge.	On receipt of any transaction, the business terminal converts and forwards this on to an EFT bridge, which registers the transaction and prepares it for forwarding to the core banking application.
5	EFT bridge processes the transactions in core banking application	The EFT bridge waits for transaction instructions to be received on the business terminal and, when such instruction comes, it processes it through the bridge. At the end of the process, it sends a message to the core banking application with parameters for the specific transaction. The core banking application is configured to post the transaction per the MFI's business requirements. After processing all of this, the EFT bridge stores the status of the transaction (in terms of posting status) in the core banking application. If for some reason the transaction could not be posted due to, for example, an incorrect account, ID or phone number, it will be recorded as an exception and will appear on a reconciliation report. This information can also be sent back to the client via the SMS bridge.
6	Transaction status forwarded to the SMS bridge.	Once processed, the EFT bridge forwards the transaction status to the SMS bridge, for onward communication to the client.
7	Transactions status communicated to the client.	The SMS bridge can be configured to either send an SMS for all transactions to the clients, or send only those that did not post successfully.

Source: Software Group

### **Best Practices**

- *Ensure the ability to extract information to meet needs; data should be real-time.*
- *To err is human. Therefore, avoid manual reconciliation at all costs.*
- *Manual reconciliation means that the security of your financial system is no longer air-tight, making it more at risk to fraudulent behavior.*
- *It is a fallacy to believe that a partially automated system is sufficient because you are a small MFI.*
- *Choose a vendor that has a proven track record implementing mobile solutions for MFIs.*
- *Incorporate a suspense account to easily resolve errors; develop training tools to resolve the issues.*

#### 4. PRODUCT DEVELOPMENT

With the exception of Kenya, few countries can report having a significant number of MFIs implementing loan products via mobile, and even fewer offer savings. One of the reasons is that many MFIs do not have a deposit-taking license; hence, their focus is on the disbursement of loans and repayment.

Another reason is that regulation makes it difficult to disburse loans in a cost-efficient manner. Upper limits on the mobile payment system may force the MFI to disburse the loan in several installments, which can increase costs for the client when they wish to cash out.

Taking the above into account, MFIs should try to segment their clients and to understand their specific needs. A simple replication of existing products to mobile platform is not the only solution. MFS provides a channel to deliver innovative products that often had been too costly to implement. Box 12 is a good reminder that players not traditionally seen as competition are coming into the market and, as regulators are looking to increase financial inclusion, non-traditional approaches and channels will soon compete.

##### Box 12 – Orange Money in Madagascar

Although officially e-wallets are not used for savings, studies have shown that the unbanked tend to store money in their e-wallet for relatively long periods of time. This is because it is deemed safer than keeping it “under the mattress” by the clients, and can be readily accessible for when they need to make a payment or a transfer.

Based on this client use, Orange Money Madagascar developed a product that enables clients to gain interest on the money stored on their e-wallet.

When the product was launched in 2011, annual interest rates varied from 4% to 6%, depending on the amount saved. Deposits of 1 to 100,000 Ariary (about \$0.00045 to \$45)<sup>38</sup> earned 4% annually, deposits of 100,000 to 5 million Ariary (about \$45 to \$2,265) earned 5% and deposits of more than 1 million Ariary (about \$2,265 and more) earned 6%.

The real attraction for the product is that clients are free to deposit and withdraw money at any time.

Regulators elsewhere have not authorized these kinds of services, due to the high risk involved. Time will tell if this is a product that will be authorized in the future. However, the case remains an interesting one, as it demonstrates that innovation in developing products that correspond to client needs can be a stepping-stone to clients having formalized bank accounts.

One prime example is the disbursement of small emergency loans. Made available to clients with a good credit history, the loan is of a small amount (usually less than \$50) and is to be reimbursed within 48 hours. The cost of traditional microfinance loans would

<sup>38</sup> Exchange rate published on [www.xe.com/ucc](http://www.xe.com/ucc) (January 2012).

have made it impossible to provide a loan under these conditions. But thanks to mobile phones, such loans can quickly be put in place and provided in an affordable manner, enabling clients to avoid moneylenders.

### **Best Practices**

- *Start small and keep it simple.*
- *Identify a niche that can become your signature product and perfect it before rolling out other services.*
- *Be on the lookout for new user cases that can lead to innovative products.*

## **5. CHANGE LEADERSHIP PLAN**

A recurring theme in the responses was the importance of securing staff support for MFS. Understanding how their individual roles would change, revising performance expectations and learning the new processes and procedures were all essential elements in guaranteeing the success of MFS implementation. Without the support of the staff, especially loan officers, there is a high probability that adoption by clients will be low. Change in general is often a challenge, but this area was called out consistently as one of the more challenging, more so for staff than by clients. However, this challenge can be overcome by a comprehensive change leadership plan.<sup>39</sup>

### **Set the vision**

A key first step is to clearly articulate the institution's vision for MFS and describe how this fits into the overall business strategy and social mission. Communicating this to all employees is important, because adopting MFS is a significant change in the way that an MFI provides services. Senior leaders should take every opportunity to reinforce these messages on a regular basis.

### **Engage frontline staff**

As the institution considers the process changes that will be required, it should consider including frontline employees in the discussions. They can help keep a focus on field-level realities, anticipate challenges and help ensure that changes can be implemented. These employees can also serve as MFS champions with their peers. Make sure that all field-level functions are represented. Engaging employees in this way also makes it far more likely they will support the changes required.

### **Provide comprehensive training on new processes**

It's especially important to MFS implementation success that affected employees receive detailed training on the new processes and procedures. Developing job aids, such as checklists and product-feature summaries, will help them explain the MFS to the clients and ensure operational consistency across the institution. Test the draft processes and

---

<sup>39</sup> See "Change Leadership: A Microsavings Case Study," Grameen Foundation (2011). [http://www.grameenfoundation.org/sites/default/files/GF\\_Change\\_Leadership\\_Case\\_Study.pdf](http://www.grameenfoundation.org/sites/default/files/GF_Change_Leadership_Case_Study.pdf)[http://www.grameenfoundation.org/sites/default/files/GF\\_Change\\_Leadership\\_Case\\_Study.pdf](http://www.grameenfoundation.org/sites/default/files/GF_Change_Leadership_Case_Study.pdf)

procedures by piloting them at a few different branches that represent a range of client types and market conditions.

Below are recommended steps to ensure training success, compiled from the various direct interviews.

**1. Begin by training the branch managers.** The branch managers should be included in the development of the change-leadership plan in a collaborative manner. This would involve explaining the long-term strategy and the reasons for implementing MFS.<sup>40</sup> Provide them with the results of your feasibility study and identify areas in which they can contribute directly.

Walk them through the expected changes to procedures and clearly point out the areas where you expect them to contribute. Also explain what new “know your customer” (KYC) procedures will be implemented and how that will affect their day-to-day operations. Present several scenarios if available.

Finally, give them a tentative timeline, to enable them to organize their own units.

**2. The branch managers should be given the responsibility of training the staff within their own branches** and liaise back to HQ about any feedback or setbacks foreseen. It is important to ensure that they understand the stakes and the expected outcomes. If the branch managers are acting as trainers, there needs to be a system of monitoring and supervision to ensure consistency.

As the frontline representative of your savings and loans operations, the loan officer will be your most valuable herald for promoting your services, so their understanding and support of MFS is crucial.

The study revealed that loan officers tended to have two main concerns regarding mobile money:

- 1. The first is the fear of losing their jobs.** Mobile money means that the client can potentially bypass the loan officer and send money directly through mobile money. This also makes the loan officer’s task of managing their portfolio much more difficult, which could affect their PAR. It is important to involve the loan officers in the re-engineering process so that they understand the strategic direction, and can ask questions to alleviate their fears, including questions about changes to roles and responsibilities, job-performance expectations and key performance indicators. Several MFIs said that they created small taskforces staffed by loan officers elected by their peers, which helped the loan officers feel included.
- 2. The second major concern involves the efficiency of the service.** Downtimes and technical troubleshooting could mean that the repayments are not registered, again affecting PAR. Frustration from clients on the quality of the service will mean that they lose trust in the institution, which could negatively affect

---

<sup>40</sup> As noted earlier, this sharing of information should be across the entire organization.

operations. This is why taking the time to map the processes and to pilot-test the system before rolling it out across the MFI is so critical.

Finally, on a lesser level, some loan officers felt that MFS was just another “fad” by management and not worth investing the time needed to develop it.

Communication, training and support are key to addressing these concerns. If loan officers are left in the dark, they may “sabotage” the rollout, either consciously or unconsciously, by their lack of enthusiasm for the MFS, by lack of knowledge of the process, products and features, or through negative or lack of advertising (i.e., refusing to promote the product to their clients).

**3. Develop and follow a change-leadership plan.** This does not have to be a very complex or detailed document, but should reassert the objectives, the expected results and setbacks, and the timeline. A person at the senior management level should be designated as the change leader, developing a communications plan, ensuring that the plan is followed, pooling all questions and queries, and helping to resolve any issues that arise.

Once the staff is duly informed and supportive, it is time to start informing clients about the changes.

## 6. CLIENT TRAINING

The online survey showed that, for most MFIs, the most effective way of training clients is through face-to-face training, either individually or during the group meetings.

A live demonstration is a good tool for explaining the new product, but it is not sufficient. The technological side may in fact be the simplest area for the client to understand; they may rely on family, friends or other group members to help with this. It is more important to show the advantages they could gain from MFS.

Some clients will have issues with the concept of e-money, especially if they are used to living in a cash-based society. For countries where virtual airtime top-ups exist instead of scratch cards, adoption is easier, because the concept of a virtual transaction has already been tested. There may be a feeling of distrust regarding the reliability of the service; therefore it is important to walk clients through the possible areas of troubleshooting.

Here are some concerns raised by the clients of the MFIs that we interviewed:

- What happens if there’s a network failure?
- I don’t have paper receipts anymore. How will I prove that I paid my loan?
- What happens if I lose my phone or it is stolen? Will my money disappear?
- What happens if I lose my PIN code?
- What happens if I send in the wrong amount?
- Why do I have to pay for deposits when it was previously free for a loan officer to collect it?

Clients have as much a right to understand your strategy and reasons for offering MFS as your staff and stakeholders. Make it clear to them that in the beginning there may be some bumps, and that you will rely on their feedback to smooth things out and provide the best kind of service possible.

Fliers explaining the service are also helpful, but should be a support rather than the main methodology for training your clients and bringing them on board. This is especially the case if low literacy is an issue for your clients. The fliers should use simple language that is easily understood by those who can read. It should also include images and visuals depicting the different steps (see Annex VI for examples).

In some instances, the MFIs include a short explanation with the relevant short codes in the client's passbook, which they usually have with them at all times. Additionally, USSD codes could be saved in the handset phonebook for common transactions.

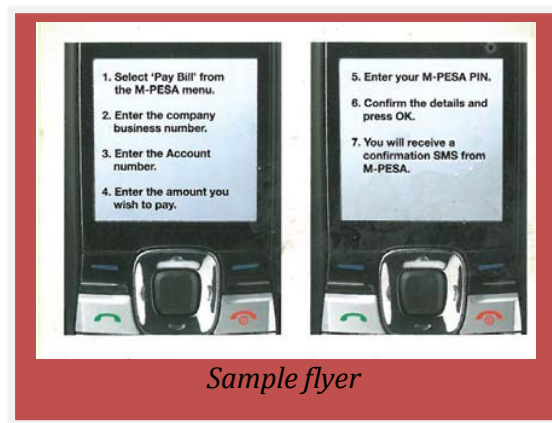
Finally, if the resources are available, set up a hotline that clients can use to request information any time, at least during the first months of implementation. This will not only reassure clients, but will also be a valuable source of information on how well or how badly your service is doing, while helping to identify areas that need to be addressed. Ensuring that clients know how to reach the provider's hotline (if using an MNO system, for example) also will help with general questions, such as how to change a PIN code.

**Group attendance issues.** One of the challenges experienced by MFIs implementing MFS involves maintaining group cohesion among their lending groups. In some instances, group meetings were affected by absenteeism after the MFS was rolled out, because some clients no longer saw the need to attend meetings once the cash had been sent.

Group meetings should not be conducted solely for cash collection and disbursement. It is important to make sure that there are other reasons to come to the group meeting, especially if the group has been in existence a long time and members start to become tired of the frequency of the meetings.

To address these issues, MFIs have taken several approaches.

- When implemented correctly, MFS gives the loan officer more time, due to faster reconciliation and reduced paperwork. This additional time at meetings can be directed toward activities focusing on capacity building, on training and on addressing client concerns.
- Certain MFIs have implemented self-help groups for small savings programs within the group.
- Some groups have implemented penalties for absent members.
- Money is also sent only to the





group treasurer, who is then responsible for sending the group payment to the loan officer. This maintains the traditional hierarchy and positions of responsibility, so there is less disruption to the group's solidarity.

- Some groups have found that gradually decreasing the frequency of meetings is effective.

**Training to mitigate fraud risks.** Less scrupulous clients might believe that MFS offers them an opportunity to default on their repayment. They may claim that they have paid when they have not. In other instances, less educated (or poorly trained) clients will send money directly to the loan officer's personal e-wallet (rather than to the MFI's billing account). Use of a shared phone might mean that there is no guarantee that the money sent to the registered account reached the intended user. Payments might be combined from multiple clients or on behalf of other clients, so processes need to be developed regarding clients' phone habits. MFIs must therefore include these issues in their training, and design checks and balances in their processes to mitigate the risk of fraud, whether from clients or their own loan officers.

### **Best Practices**

- *Resistance to change is human. In some instances, converting your own staff to MFS will prove more difficult than converting your clients. This can be overcome by a comprehensive change-leadership plan that includes frequent communication, engaging frontline employees in process redesign and ensuring that all affected staff are thoroughly trained on the new processes and procedures.*
- *Take time to train your clients and involve the group leaders in the training.*
- *If you are doing group lending, ensure that the group meetings serve a higher purpose than simply collecting cash. This will help sustain group cohesion.*
- *Provide a channel for receiving feedback from both your clients and staff, especially during the initial months of implementation.*
- *Provide theoretical and on-the-job training for your staff on new material and how to resolve issues.*
- *A picture is worth a thousand words. Use simple language and visuals to describe your service.*
- *Inform your clients on the possible risks of fraud, and set up mechanisms and design training to minimize the risks.*
- *Design systems to take into account the usage of shared phones.*

## **7. CONDUCTING A SUCCESSFUL PILOT**

An important element in implementing MFS involves designing a pilot. Through the careful selection of pilot groups, the MFI provides a semi-controlled environment for testing the new products. This in turn will enable the MFI to understand the issues and resolve them before it makes the service available on a large scale.

Some key elements for conducting a successful pilot include the following:

- **Develop a complete system.** A pilot should be seen as an accurate representation of the services that will be rolled out on a large scale. The system developed should therefore be complete, to be able to account for any potential problem areas that may arise when the service is fully rolled out.
- **Carefully select staff to be included in the pilot.** Make sure you have a cross-section of performance levels in your pilot, so you can monitor the challenges that average or even slightly underperforming employees encounter when implementing MFS.
- **Develop a list of key milestones to test hypotheses.** Develop a list of parameters to test around process re-engineering, auditing and job responsibilities, technology to improve efficiencies, client understanding and uptake, training and marketing, and adequacy of training, as measured by qualitative interviews with staff and quantitative assessment of targets achieved.
- **Vary your pilot groups.** The service you provide will be received differently depending on whether it is provided in urban, semi-urban areas or in rural areas. The pilots can be small, but should enable you to test how the product is perceived by your different client profiles. If you do not have the resources to conduct several pilots, the sample chosen should allow you to test a diversity of client profiles.
- **Give it sufficient time.** It will take some time for the feedback to get to your institution and for you to test the changes you have made. Ideally, a pilot should last at least three to six months.
- **Inform your clients.** Make it clear to your clients that you are testing a service, and that you welcome their comments on how it can be improved. This will prepare them for possible setbacks and will make them feel as part of the process. Good practice is to increasingly involve the group leaders throughout the pilot.

By conducting a pilot, it is possible to answer questions about issues that were not identified in the market study. For example:

- Is the application user-friendly? Is it readily understood and mastered by clients?
- Is literacy an issue?
- Is the agent network in an acceptable distance to promote usage?
- What are the potential sources of errors when carrying out a transaction?
- Are sufficient KYC measures put in place?
- How well is liquidity managed by the agent?
- Is the price policy adequate?
- Is the training satisfactory?
- How prevalent is shared phone usage?

Based on the results of the pilot, it is possible to fine-tune the service to ensure that there will be minimal issues across the system once it is fully rolled out.

### **Best Practices**

- *Design the pilot so that it is as accurate a representation of the full-scale rollout as possible.*
- *Plan enough time to implement the pilot, to receive feedback on it and to implement/test any changes.*
- *Inform staff as well as clients of your activities, to prepare them for possible setbacks and opportunities for improvement.*
- *Involve group leaders and keep staff at all levels informed.*

## **8. MARKETING AND COMMUNICATION**

MFIs often underestimate the importance of marketing and communication in developing their products and services. One of the reasons is that it is harder to translate the return on investment in marketing into tangible results. Indeed, it is hard to identify just how much the success of your new product is attributable to your marketing and communication campaign, and how much is due to investment in developing the product itself. As a result, marketing and communication departments are often considered a luxury and have limited budgets.

However, when it comes to mobile-money marketing and communication (specifically branding and piloting), a new product could make the difference between its success and its failure.

As mentioned in the previous section, communication must begin within your own institution. This implies involving *all* staff members in the development process, not only staff in the departments that will be directly affected by the rollout of mobile services. Share proposed client communication pieces with field staff first, to gather their opinions on clarity, simplicity, etc.

It is also important to “communicate up.” Your Board of Directors and other stakeholders will appreciate being regularly informed, and have the right to fully understand what is happening and how it will affect operations. Having the full support of your Board and staff will ensure that you will in turn be supported when there are setbacks. Examples of communication materials developed by a selection of MFIs are provided in Annex IV.

Regarding external communication, differentiating your product through a well-targeted advertising and branding campaign can help speed adoption by your clients.

In addition to the usual communication tools (fliers, posters, newspapers, radio and television advertisements), word of mouth is an effective way of promoting your MFS, even more than with other products. One reason for this is that microfinance clients often live in remote areas and may not be exposed to general public advertisements.

Another is that literacy levels are a challenge, meaning written communication might have a limited effect. Finally, microfinance clients are usually more responsive to communication campaigns that are based on human interaction.

### **Best Practices**

- *Communication must be carried out both internally and externally.*
- *Adapt your communication campaign to your clients by using media they are familiar with and can identify with.*
- *Involve staff and group leaders to promote the services.*

## **9. MANAGING YOUR AGENT NETWORK**

Based on the interviews we conducted, there is an overall consensus that a well-established agent footprint is pivotal to the success of MFS. In cases where there is no existing agent network, it remains one of the greater pain points for MFIs developing MFS.

Imagine an MFI that has only one branch situated in a remote village and has developed the perfect product for its clients. Without a widespread branch network, the MFI will not be able to reach the wider population and will be limited to its immediate geographic area.

The same applies to mobile financial services. It is not sufficient to create a product and consider only affordability and appropriateness. It is also necessary to make that product conveniently accessible. Without a dense agent network, mobile financial services will not achieve their purpose – i.e., facilitating access of your clients to your institution’s products and services.

M-PESA, often commended on the quality of its agent network, increased the number of Safaricom agents from 2,000 to 9,000 in the course of one year in parallel with client growth. It also diversified the type of retailers that could act as agents. Initially, Safaricom only used their air-time sellers, but as M-PESA’s popularity grew, post offices, banks, grocery stores and ATMs (Pesa Points) were allowed to become agents.

The starting point is to identify which type of retailers can act as reliable agents. Some countries, such as Thailand, have an existing chain of stores that can readily serve as retail agents. Or, small mom-and-pop shops can serve this purpose, as seen in Latin America. However, that is not true for all countries.

Box 13 provides an example of a roving agent model from Colombia. In this case, the MFI will have to do further research to select its agents. During the research, we met several MFI clients who also acted as agents, meeting the criterion outlined below for agent selection and facilitating adoption and trust by other MFI clients.

### Box 13 – Puntos de Atención Móviles (PAMs)

PAMs are a variation on the agent model. Operated by BanColombia in Colombia, they are integral part of the strategy that the bank uses to reach clients in rural areas, enabling stationary agents to focus on cash transactions while the PAMs travel from village to village recruiting new clients (agents generally do not have the time to sell banking products). PAMs can open deposit accounts, facilitate opening other products and generally sell the full range of BanColombia products to potential clients.

An important characteristic of PAMs is that they do not process transactions. As such, the bank retains control over its clients, since the actual cash-in/cash-out is carried out at the branch or at a cash merchant.

Selection criteria should include the following elements:

- a) **Location.** The agent should be close to your target clients, to make it convenient for them. If there is not an agent nearby, then there is no tangible advantage to using mobile money.
- b) **Reputation.** It is preferable to work with agents who have a good reputation within the community you intend to serve and, if there is not a common language for the community, who are multi-lingual.
- c) **Traffic.** An agent with high traffic is more likely to have more cash at hand, making e-float management easier.
- d) **Commitment.** Just like your loan officers, agents represent your institution. Some agents will also be given the responsibility to register new users. Therefore, the agent must be willing (and able) to promote your products.
- e) **An existing business.** Cash is costly to transport and an agent business brings in new clients, so using an existing agent is complementary to the business and helps assure sufficient cash flows.

**Managing liquidity.** Interviews with various institutions showed that one of the greatest frustrations for a client involves going to an agent to collect a loan and being turned away because the agent does not have enough cash.

It is, therefore, important for the agents to be retailers who are able to manage their e-float (i.e., the ability to convert e-money to cash and vice-versa).

There are two ways in which liquidity can be managed.

- a) **By the agent.** The selected agent chooses to buy e-float directly from a bank or financial institution.
- b) **By an agent manager.** The agent manager is a third party whose role is to monitor a group of agents and ensure that they have enough liquidity to answer to normal daily needs.

**Incentivizing the agent.** As mentioned above, the agent has to keep a large sum of cash at hand to satisfy demand. If his or her business generates enough cash on its own, then this is not an issue. But if keeping large sums of money is a new element for the agent, brought on by their role as an agent, then certain incentives must be put in place to compensate the risk they take on in keeping that cash. This is even more true if the agent manages the e-float him or herself.

The MFI has to keep in mind that the agent is another type of client. S/he has to be incentivized to ensure loyalty and ensure that they promote the product to new clients. The main incentive will be the commissions that the agent makes from registering new users and carrying out transactions. Another incentive is increased traffic, which improves business.

This means that the MFI has to think of a price structure that will encourage the retailer. A good reference is the retailer's inventory. In Haiti, retailers accept becoming retailers if the increased business generates at least as much cash as their least-selling object. If the income generated by becoming an agent is less than that generated by their slowest-moving inventory, they will not be motivated to promote the service.

**Training.** In the same way that it is necessary to train clients and staff, agents should be trained on how to manage e-float and on the range of products that they will be expected to promote. Training should also cover the risk-mitigation procedures involved with opening new accounts.

It is best practice to have a training unit for customer service dedicated to agents. **Quality**

**Control.** Agents should be subjected to quality-control and performance targets. The performance of each agent should be monitored over time. If targets are not reached, then the agents should be eliminated from the program.

### **Best Practices**

- *Agents should be treated as a separate segment of clients. Strategies have to be developed to incentivize agents and ensure their loyalty.*
- *Agents should be kept informed about your products.*
- *Location is strategic for the agent.*
- *Agents should be trained on liquidity management.*
- *Agent performance should be monitored and, if needed, poor performers should be eliminated from the program.*

## **10. WORKING WITH REGULATORS**

Dealing with regulators and regulations are important factors for implementing MFS. Regulators balance between two objectives: needing to protect banks and increasing financial inclusion. In an area that involves new players (often from non-financial entities)

offering lower-cost solutions, cooperating with regulators becomes even more important, even if it means “sharing the table.”

In our online survey, 52% of the respondents claimed that they had to work with regulators when implementing their services, while 47% claimed that they did not. However, mobile financial services are still uncharted territories for many regulators (ordinarily the central bank).

The position taken by the regulator can directly affect the outcome of the success of MFS. For example, in the West African Monetary and Economic Union, the central bank of the West African states (known locally as the BCEAO) has authorized non-bank financial institutions (including cooperatives, SACCOs and MFIs) to provide MFS, as long as the total value of their portfolio does not exceed 5 million FCFA (\$9,726 USD).<sup>41</sup> The applications are automatically approved within three months, provided they meet all standards. If the BCEAO requires additional information, the process is extended an additional three months until all issues are resolved. Entities need to plan ahead and request applications far enough in advance to ensure that approvals arrive before the approaching the time limits. One cooperative in particular found itself obliged to scale down operations because it quickly had reached this limit before it had obtained mobile money licenses, which took almost a year. This had negative effects on how the service was perceived by the client, and in the long run will invariably lead to higher costs.

In Haiti, the maximum balance of an e-wallet cannot exceed 10,000 Gourds (\$250) at any given time. This poses a challenge if a person tries to send money to another user who already has a high balance on his or her e-wallet. The result is a high number of failed transactions, leading to low use and little trust in the system.

In Tanzania, upper limits are also too low; hence, transactions for loan disbursement via mobile by MFIs are not cost-effective. Coupled with high mobile rates, most clients – even those who are not directly next to an urban zone – prefer to travel to the branch.

Nonetheless, regulators play an important role in defining and enforcing KYC (know your customer), AML (anti-money laundering) and CFT (combating the finance of terrorism) guidelines. The knowledge that there are regulations also can help build trust among the users of MFS. Lessons learned from microfinance show that without regulation, it is easy to fall into bad practices and create an environment of mistrust between the service providers, financial institutions and clients.

At the same time, an approach that is too restrictive can hinder the market and make it difficult to provide services and products that are affordable and efficient.

Examples from Kenya, Pakistan and the Philippines have shown that MNOs and financial institutions (especially MFIs) can benefit from maintaining good relations and communicating with regulators. Indeed, MFS is still in its infancy and the rules are still evolving.

---

<sup>41</sup> Source: [www.xe.com/UCC](http://www.xe.com/UCC) (January 2012).

It is possible, by working together, to encourage the creation of a regulatory framework that is conducive to the development of MFS that will work well for MFIs while protecting the rights of consumers.

### **Best Practices**

- *Identify partners within the regulatory body.*
- *Be on the lookout for developments in national regulations regarding e-money or changes to current regulations.*
- *Actively participate in debates that concern the mobile money market.*
- *Create alliances with like-minded institutions to increase influence on developing sound policies for mobile banking.*



## CONCLUSION & RECOMMENDATIONS

There are numerous signs indicating that mobile financial services play an important role in improving the services rendered by MFIs and in contributing to deeper financial inclusion, including:

- A rapid and steady growth in the number of MNOs providing money-transfer services
- Growth in the number of service companies offering mobile money support platforms
- An increasing number of users, especially among NGOs and governments, for salary payments to field workers or conditional cash transfers
- A variety of social applications, such as health, education and vocational training

All these factors contribute to an environment for developing mobile financial services that can be leveraged by MFIs and enable greater efficiency, cost benefits and speed in delivering microfinance products. Mobile money is here to stay – and grow.

Even if our results found fewer than 50 MFIs that had implemented MFS for more than 12 months, and despite the challenges identified through this study, the benefits of mobile finance for those that have taken the steps to implement it do indeed outweigh the overall risks. This is especially true in the case where those deciding to implement MFS properly assessed the opportunities, costs and challenges associated with it.

As the study has shown, implementing mobile financial services involves a reorganization of an institution's internal processes and procedures. In some cases, there is a need to completely overhaul an organization's IT/MIS structure. Human capital management practices – such as training, performance planning and assessment, and selection – may need to be revised to better support the addition of MFS. And a well-designed communication and branding strategy is required, covering both internal and external stakeholders.

The recommendations given below are based on the findings of the research and are intended to help MFIs in their decision-making process. This is not meant to be an exhaustive set of guidelines, mainly because the market is growing and evolving on a daily basis. New technologies and regulations are coming into play that will need to be considered when implementing MFS.

More important, the environment in which each institution operates is unique to that country. Pointing out the obstacles to be avoided for each country would be a herculean task beyond the scope of this study. Nonetheless, there are identifiable “do's” and “don'ts” applicable to any context.

### #1 – Do Not Copy and Paste

As a general rule, business models are not easily transferable, because no two markets are identical.

There is no more compelling case of this than the success of Safaricom's M-PESA in Kenya. Without wanting to take away from the boost that M-PESA's success gave to the development of mobile banking in the last four years, it has also contributed to the misconception that if you build a system, everyone will adopt it.

As neighboring countries such as Uganda, Rwanda and Tanzania learned, adoption rates can be slow and need to be developed for the local context. What rapidly became a phenomenon in Kenya is still a painstakingly slow process in most countries.

- √ *The availability of MFS does not automatically create demand for these services.*
- √ *Each MFS package of services has to be tailored to the country, and be in line with the market demand and the profiles of the clients targeted in each country.*

### #2 – Invest in Research

Before implementing, it is important to have an in-depth understanding of your market.

This entails conducting research not only on the demand side, but also on the market environment and the internal situation of your own institution.

Research areas that should not be overlooked include:

- Literary review and benchmarking
- A peer review of your competitors and like-minded institutions
- Client behavior
- Regulatory environment
- Maturity of the MFS ecosystem
- Internal capacities

- √ *To avoid having to scale down operations after launch, it is important to conduct an extensive feasibility study, to understand the limitations of the service and products that you plan to offer.*

### #3 – Seek Partnerships for Developing MFS

Although it is possible for an MFI to develop mobile money services from scratch, given the state of the MFS market today, it is preferable to seek partnership with an MNO, a bank or third party.

- √ *To avoid mission drift, MFIs must choose their partners with care and seek partners that are willing to help them improve the quality of their services in the short term and increase their outreach in the long term.*

#### **#4 – Establish a Change Leadership Plan**

The impact of mobile financial services on internal organization is significant. Therefore, it is important to ensure that the new applications are fully understood not only by your clients, but by your staff as well. New skill-sets may need to be acquired and developed.

- √ *Involve all staff members in the development process, not only those who directly operate the new services.*
- √ *Invest in training and raise awareness among staff and clients.*
- √ *Provide theoretical and on-the-job training for your staff on new material and how to resolve issues.*
- √ *Use simple pictorial fliers/brochures that outline the steps involved in making a mobile transaction.*
- √ *Use language that your customers understand.*

#### **#5 – Develop an Integrated System**

An integrated MFS is crucial to the success of your implementation. Manual reconciliation should be avoided at all costs.

- √ *Understand the technological implications of implementing MFS.*
- √ *Link the MFS interface with your core banking system.*
- √ *Train IT staff in customer support, to minimize reaction and turn-around times in case of troubleshooting.*

#### **#6 – Test and Monitor Your Product**

It is rare that a new product will work perfectly from the beginning, even when market research has been carried out thoroughly. Pilots are a good way to minimize troubleshooting and setbacks while enabling you to make adjustments.

- √ *Start small and focus on specific areas of your business before launching out.*
- √ *Carry out the necessary pilots.*
- √ *Keep it simple and accessible to your clients.*
- √ *Manage your expectations; uptake by staff and clients is likely to be slower than you expect.*

## #7 – Communicate, Communicate, Communicate

Both internal and external communication campaigns have to be developed and rolled out for a mobile service rollout to succeed.

- √ *Ensure that your branding and marketing strategy is appealing to your clients.*
- √ *Differentiate your product marketing from competitors'.*
- √ *Communicate to ALL staff, even if they are not directly involved in MFS.*
- √ *Use internal communication systems, such as intranets, monthly newsletters, etc.*
- √ *Create a channel for receiving staff and client suggestions and feedback throughout the development and rollout phase (especially during the initial months of the rollout).*

## #8 – Develop or Leverage an Extensive Agent Footprint

Without a channel and well-designed distribution network, MFS will only have a limited reach.

If developing your own network of agents, put a lot of thought into developing the fee structure and incentive plans. This will ensure loyalty and motivate them to promote your products. If managed well, agents can become valuable promoters of your institution.

If you are relying on an existing agent network (e.g., the MNO's), then performance should be carefully monitored to ensure that your clients are satisfied with the service.

In both cases, agents should be trained on your products and services, to ensure better customer service.

*Agents are central to the success of MFS deployment!*

- √ *Agents are the bridge between your MFI and your clients, and help make your products accessible.*
- √ *Agents should be treated well and properly incentivized so that they promote your business.*

## #9 – Collaborate with regulators

In addition to analyzing the regulatory environment, it is important to build relationships with regulators and provide them with insights about the market. Remember – mobile financial payments are still relatively new for most players, supervisory authorities included.

- √ *Small does not mean powerless. By creating alliances and associations, even small MFIs can become a strong lobbying force for MFS.*

## ONLINE SURVEY RESULTS

### OVERVIEW

The results presented here are the findings of an online survey conducted from August to December 2011 using the web-based Survey Console tool.<sup>42</sup>

A semi-structured questionnaire (provided in Annex II) was developed by Grameen Foundation and approved by the Institute of Money, Technology & Financial Inclusion (IMTFI) at the University of California, Irvine, and sent to 172 pre-selected MFIs. The selection of the MFIs was based on a desk and literary review that identified institutions with a high probability of having implemented mobile microfinance for more than a year.

The survey was viewed and/or started a total of 115 times, out of which 26 valid questionnaires were retained after screening. Several hypotheses can be advanced to explain the low completion rate, such as connectivity issues or language barriers (although hardcopy versions of the Spanish- and French-language questionnaires were available upon request, the online survey was available only in English). However, following the analysis of the results, the author strongly believes that the main reason is the fact there are only a limited number of MFIs that have implemented MFS for more than a year. As the questionnaire was designed to collect data from MFIs that had more than a year's experience in rolling out mobile financial services, it is safe to assume that many respondents did not fall within that target.

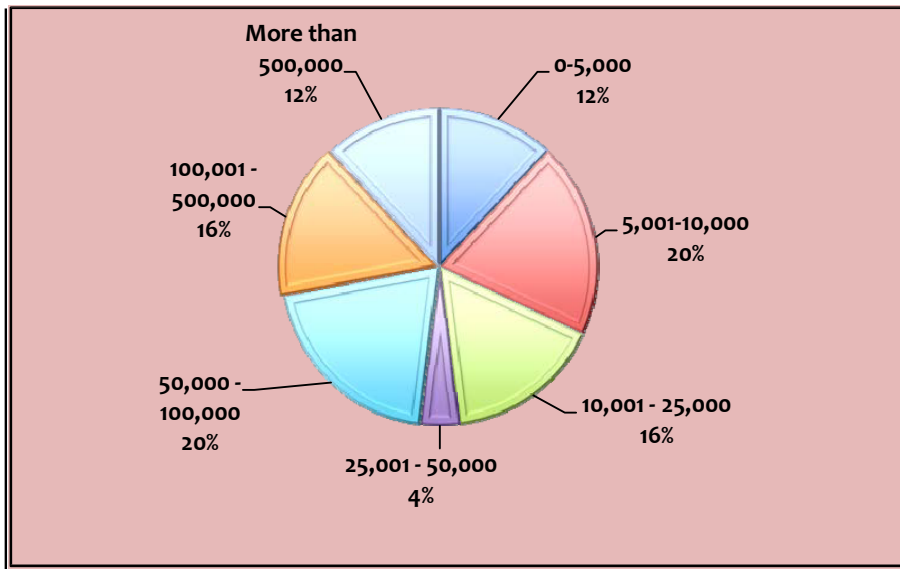
The author acknowledges that due to the small size of the sample, the results have to be interpreted with caution and cannot be presented as irrefutable conclusions on mobile money trends. However, when analyzed in conjunction with the information gathered through the literary review and the direct interviews, they do provide more depth and complement the qualitative findings of the study.

---

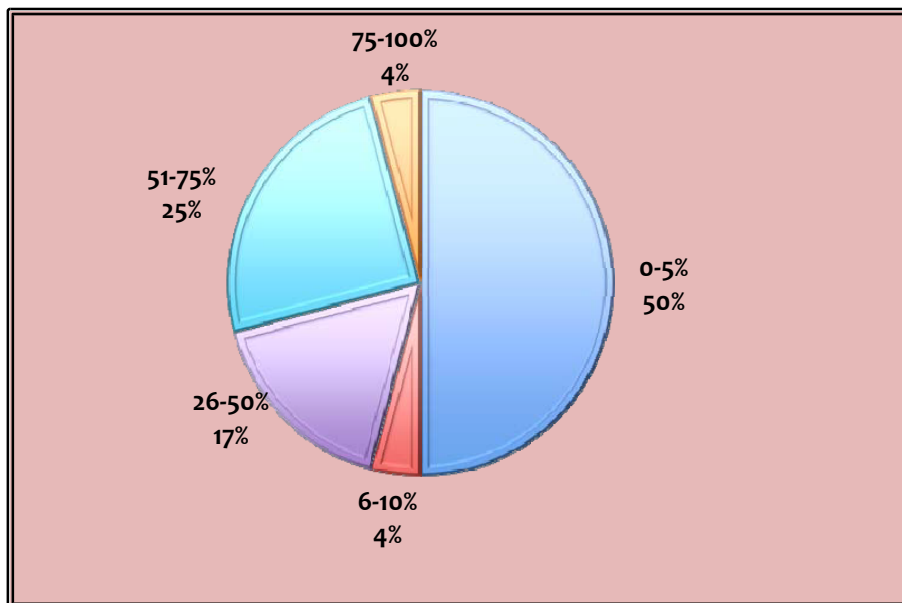
<sup>42</sup> <http://www.surveyconsole.com/>

## CHARTS & TABLES

Q1. How many clients do you have? (n=25)<sup>43</sup>

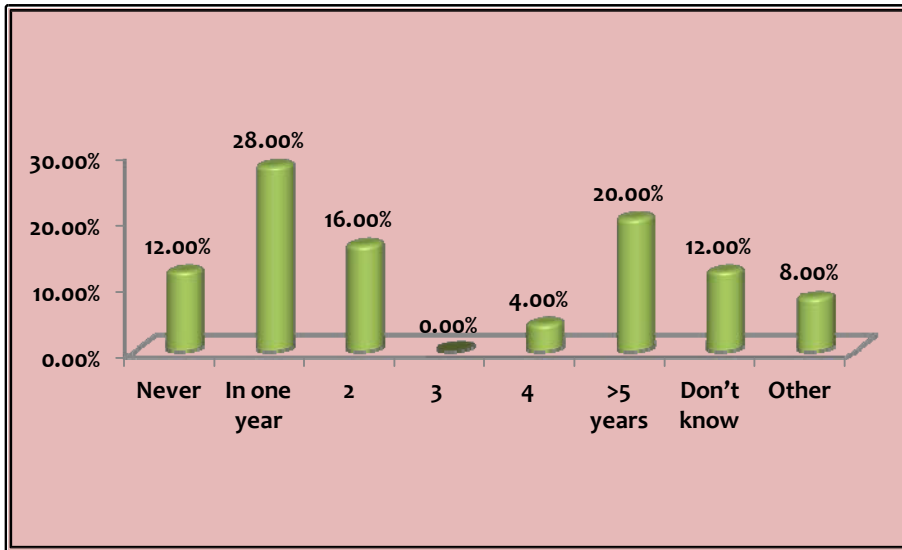


Q2. Of those, what percentage is using mobile financial services with your institution? (n=24)

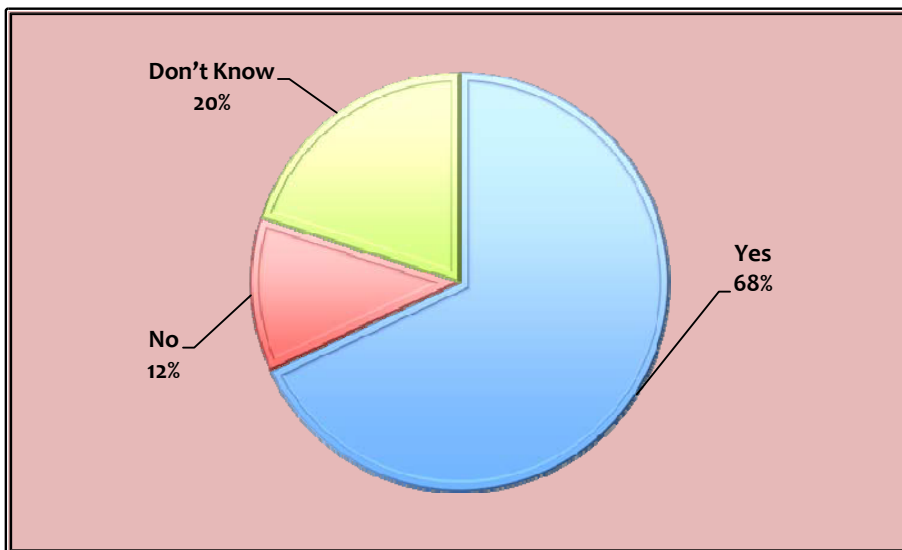


<sup>43</sup> n= number of responses

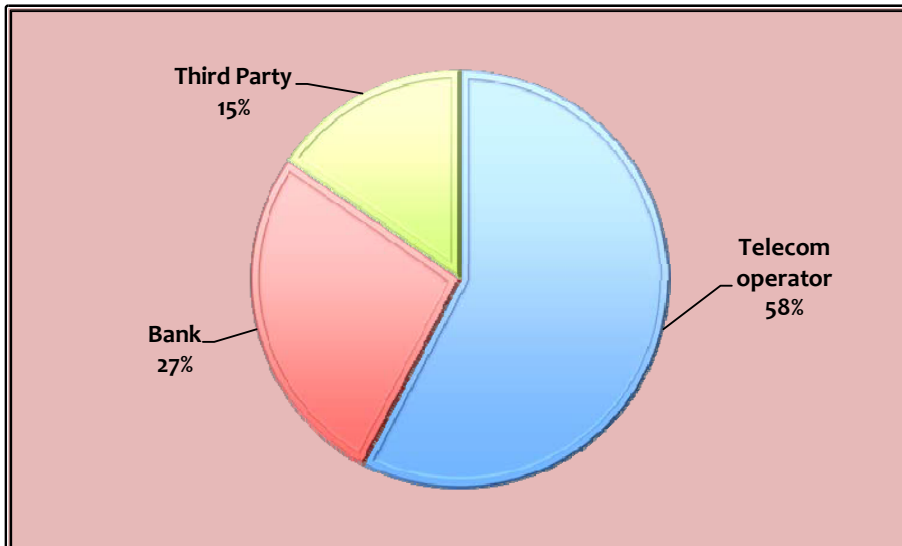
Q3. If less than 100%, when do you expect all clients to utilize their mobile phone for repayment, savings contributions and/or disbursements? (n=25)



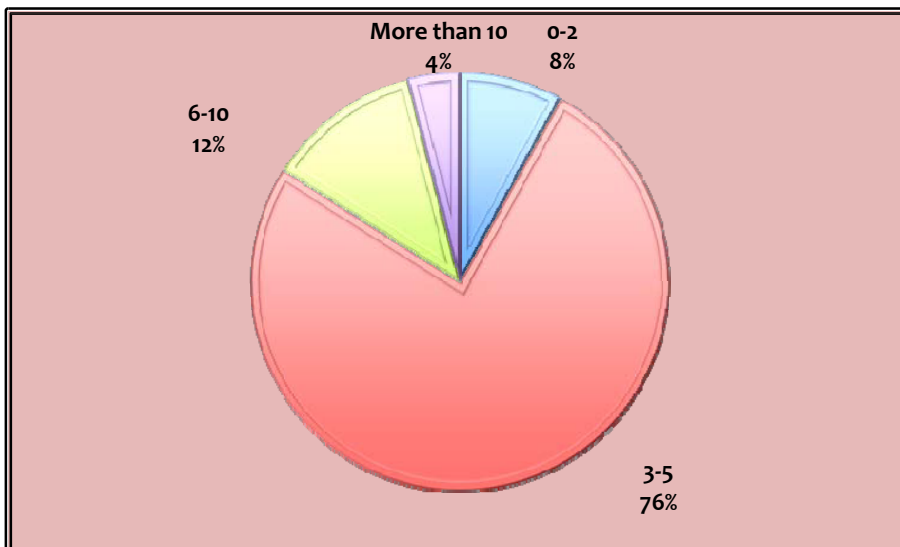
Q4. Has mobile money enabled you to increase your outreach to serve new clients? (n=25)



Q5. In your country, who runs the mobile money system? (n=26)

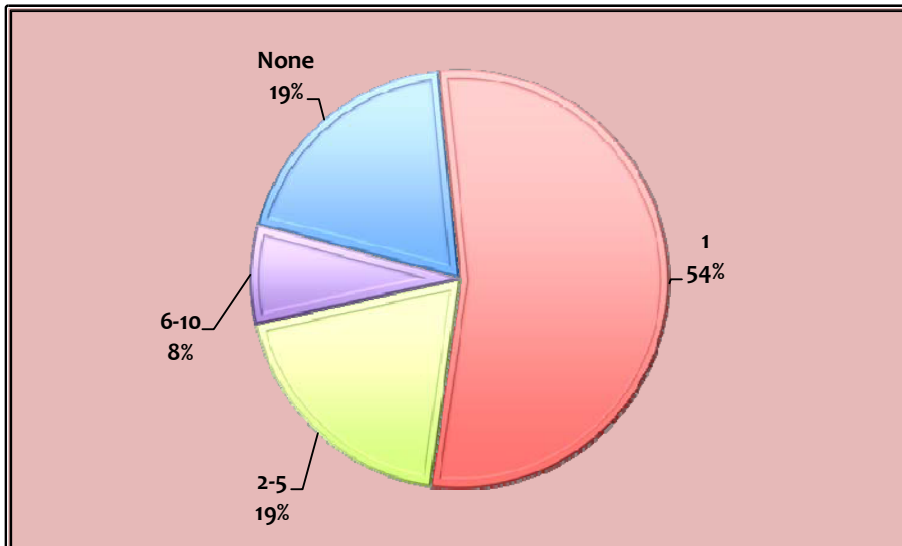


Q6. How many telecom operators serve your outreach area? (n=25)

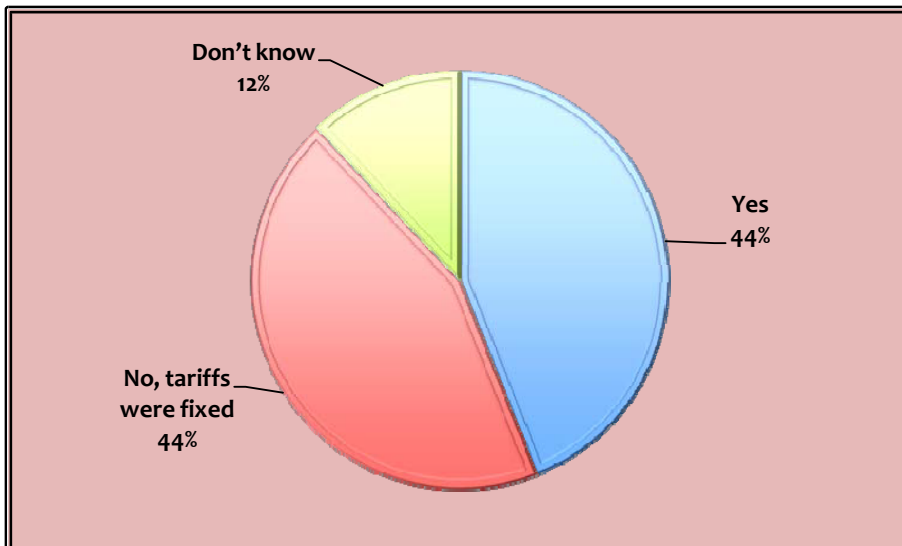




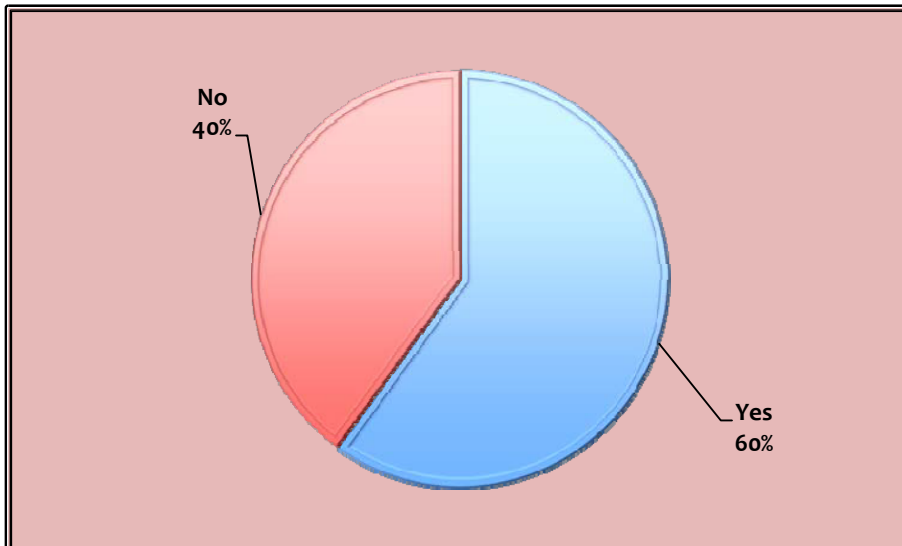
Q7. Of those, how many of those do you work with? (n=26)



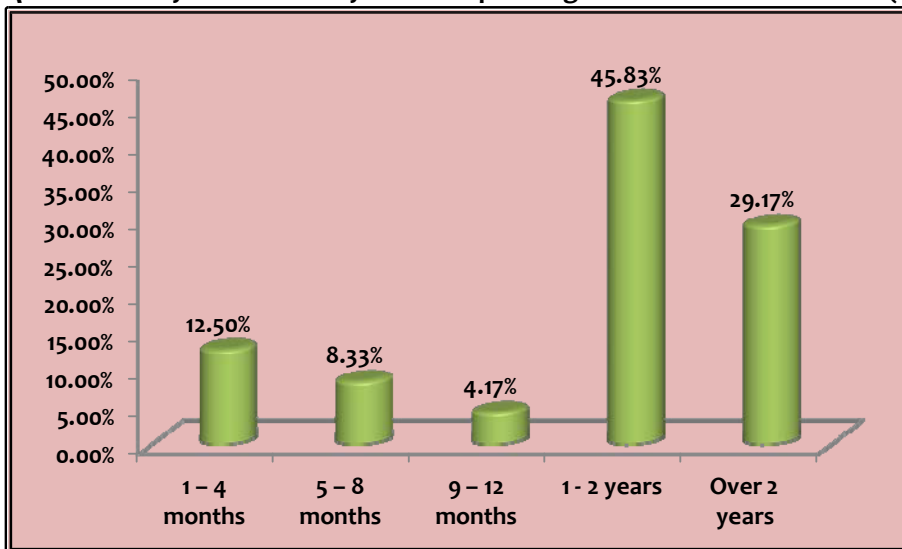
Q8. Did you need to negotiate transaction rates with the telecom operator to offer mobile financial services to your clients? (n=25)



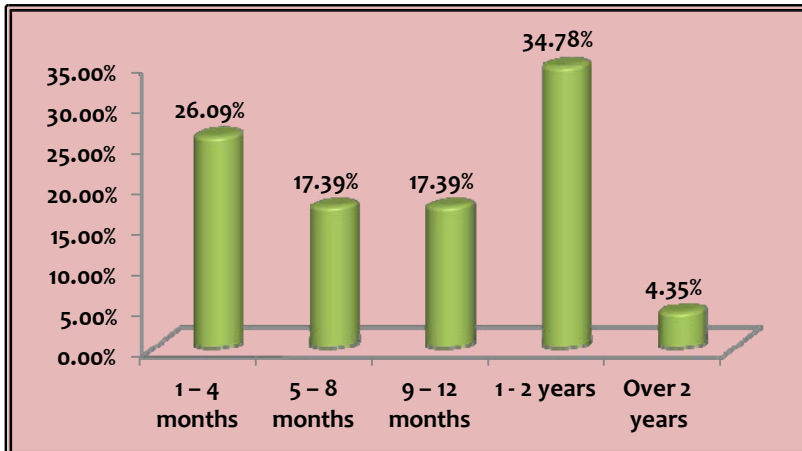
Q9. Do you operate as a money transfer, remittance or payment agent? (n=25)



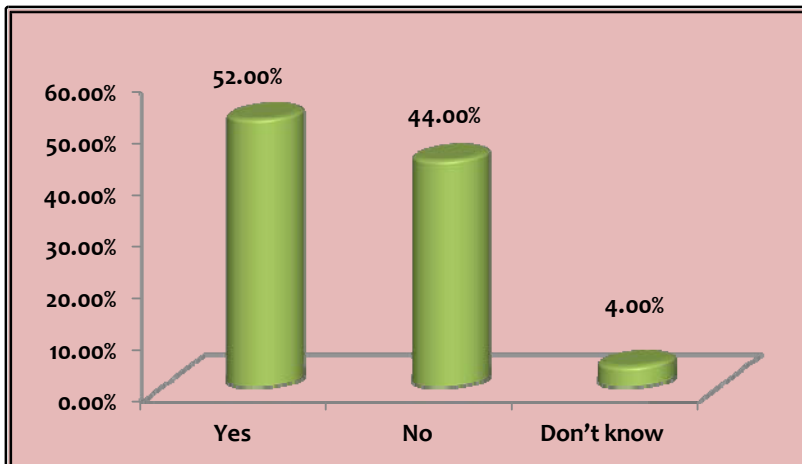
Q10. How many months have you been operating mobile financial services? (n=24)



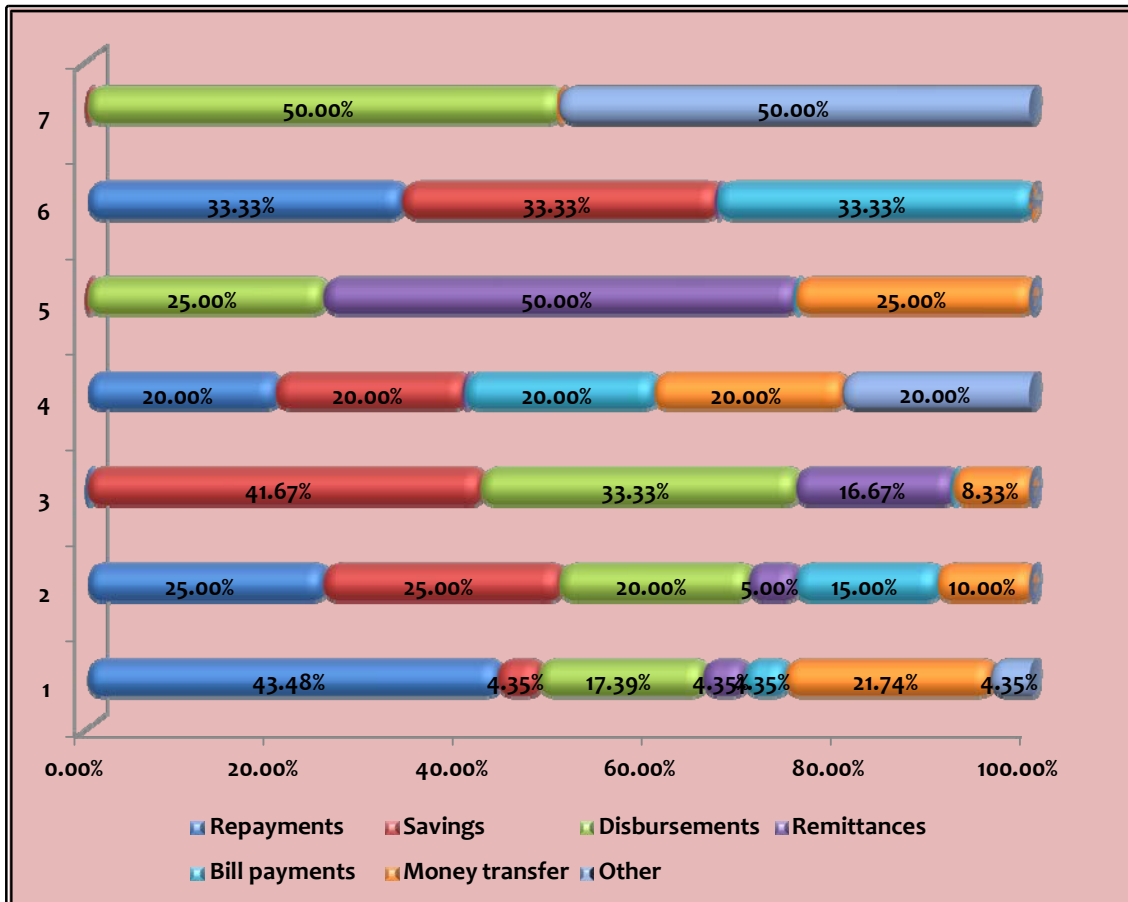
Q11. How many months from conception did it take for actual rollout of mobile financial services? (n=23)



Q12. Did you need to work with regulators as part of the process? (n=25)



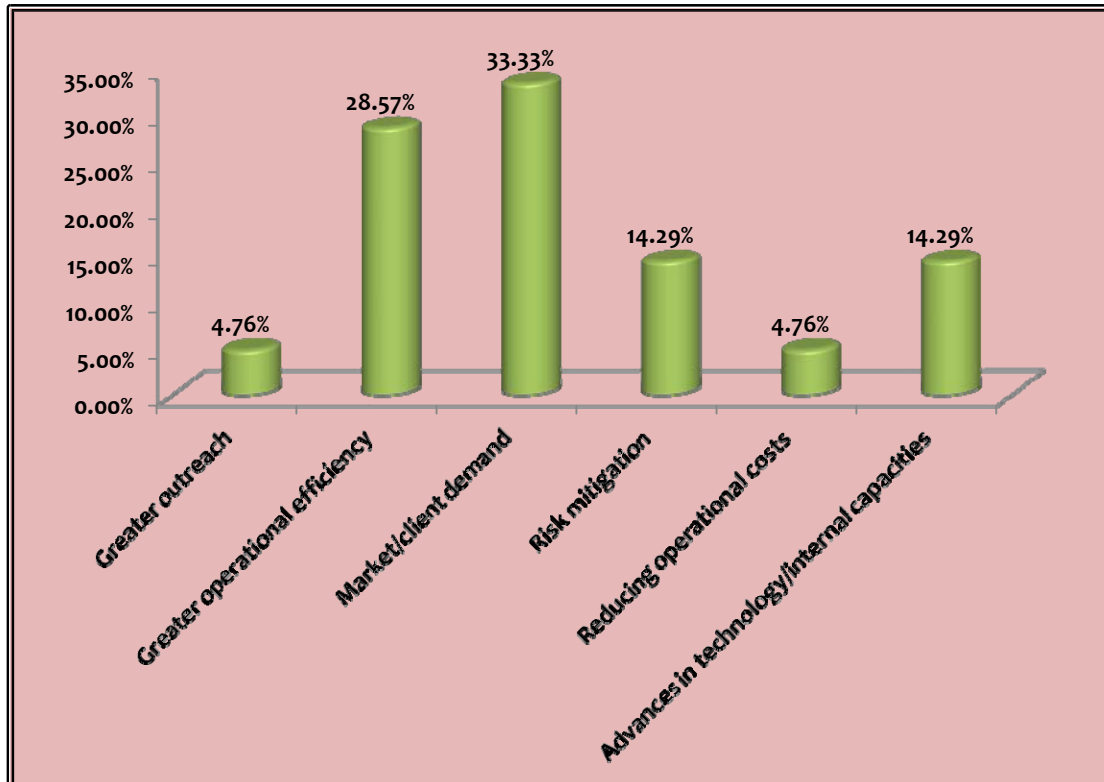
Q13. Please rank the products and services in order of rollout that you currently offer. Please only rank products and services that you rolled out. (n= 23)



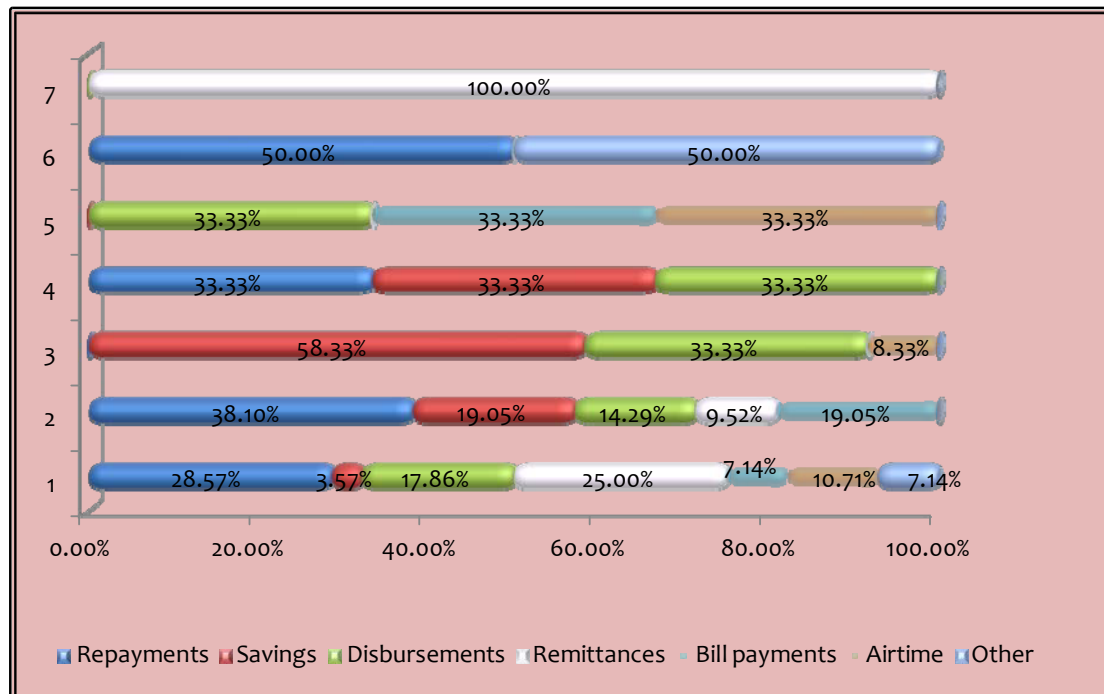
Q13b. Other products

- Account inquiries such as balance or transaction history
- Mobile phone top-up
- Donations

Q14. What determined the order selection of rollout of the products and services noted in question above? (n= 21)

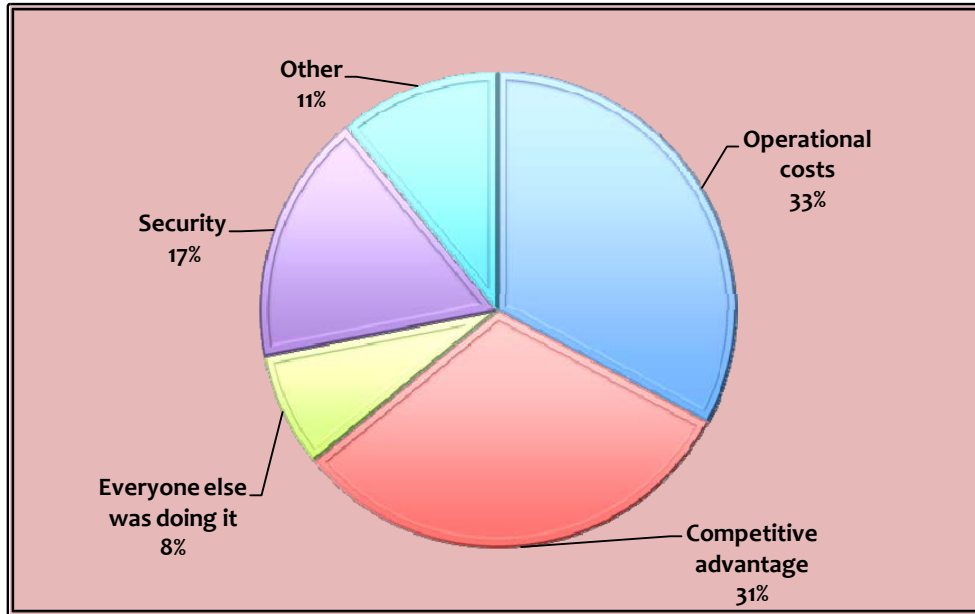


Q15. Please rank in order of popularity with your clients. (n=21)



**Q15b. Other products: Account inquiries**

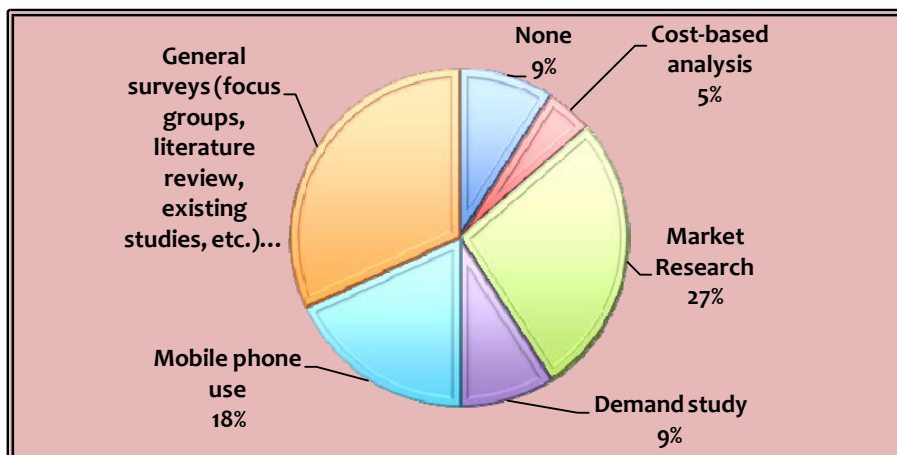
**Q16. Why did you decide to implement mobile financial services? (n=64, several responses possible)**



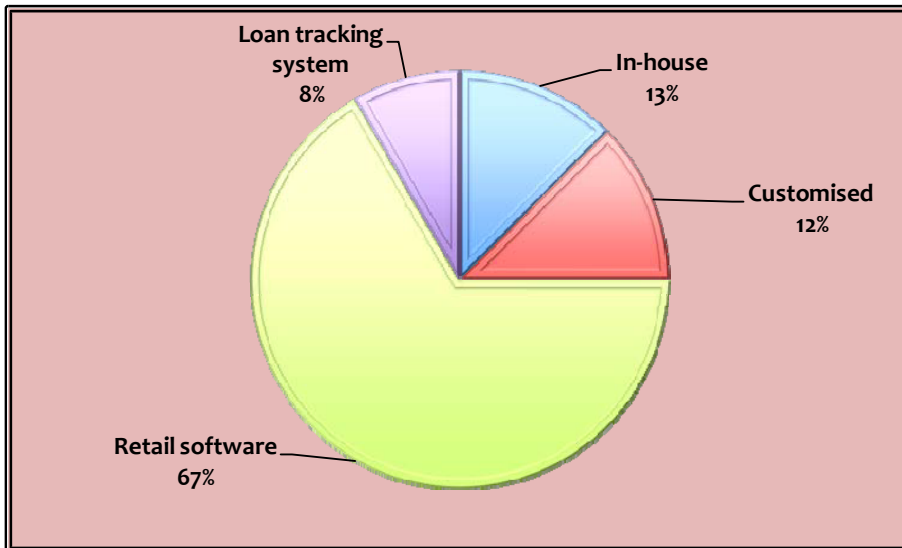
**Q16b. Other**

- Efficiency
- Confidence
- Client demand
- Client convenience
- To accommodate our organization's operating structure
- To reduce risks of internal fraud
- To increase outreach

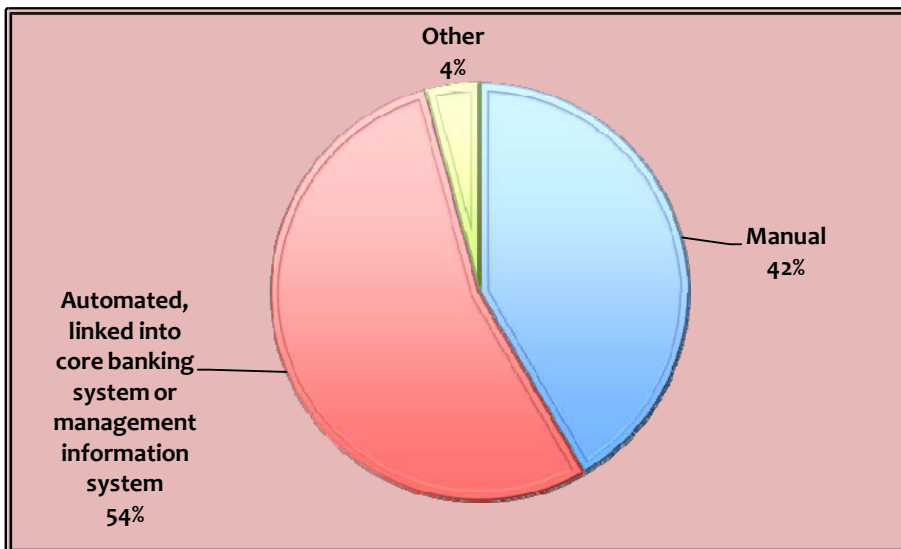
**Q17. What research did you do prior to implementing mobile financial solutions? (n=22)**



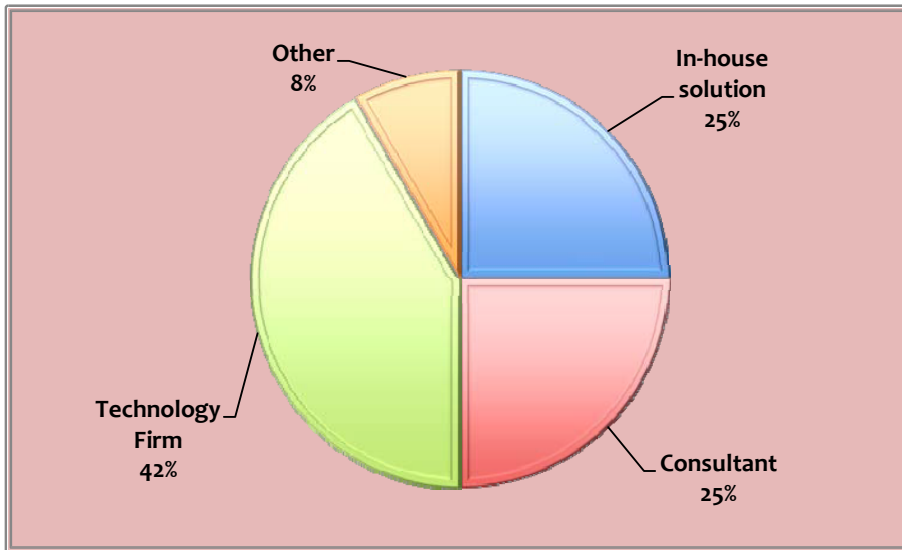
Q18. What type of management information system (MIS) or core banking system do you have? (n= 24)



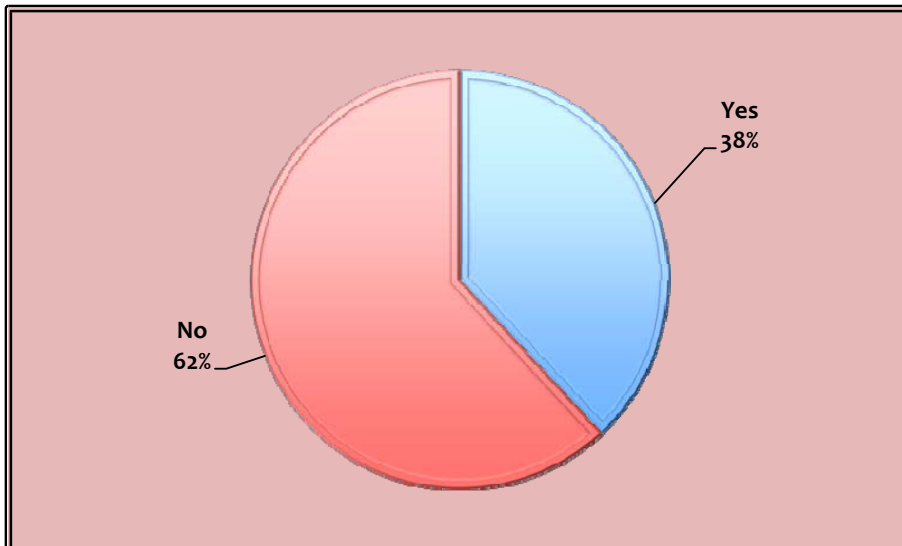
Q19. Are you operating manually or do you have an interface with the mobile payment platform to automate transactions? (n=24)



Q20. If so, who built it? (n=12)

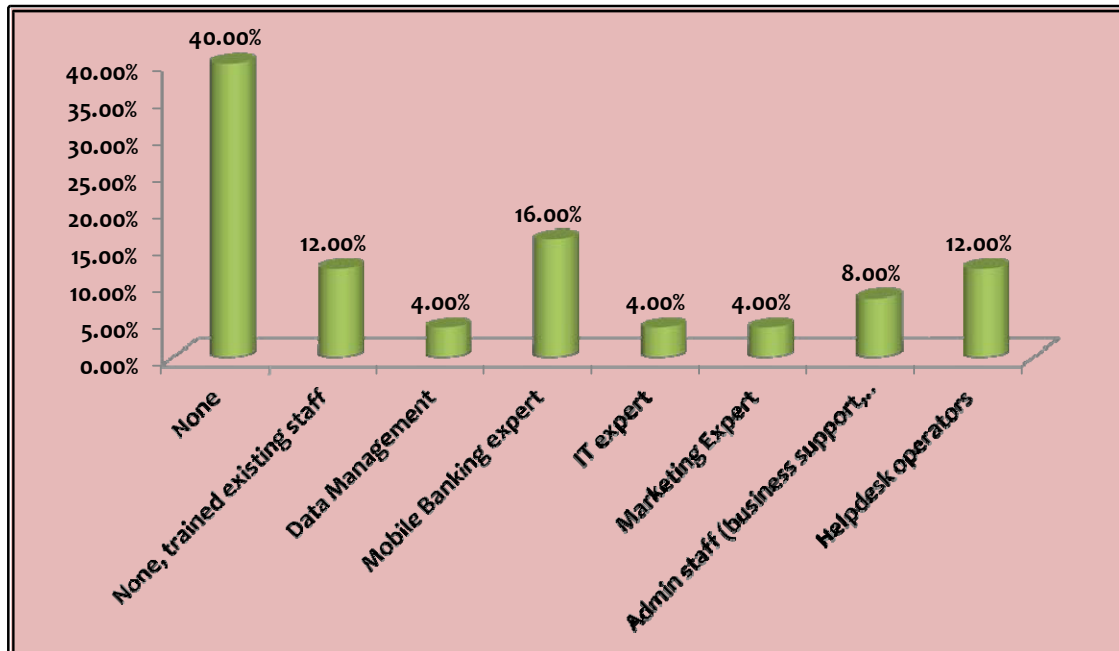


Q21. Did you outsource the integration for the operationalising of mobile financial services within your institution? (n=21)

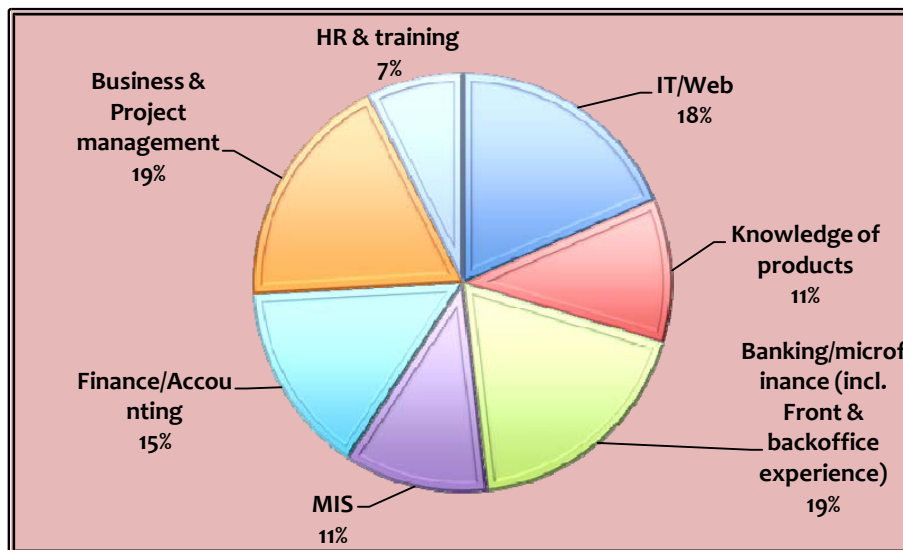




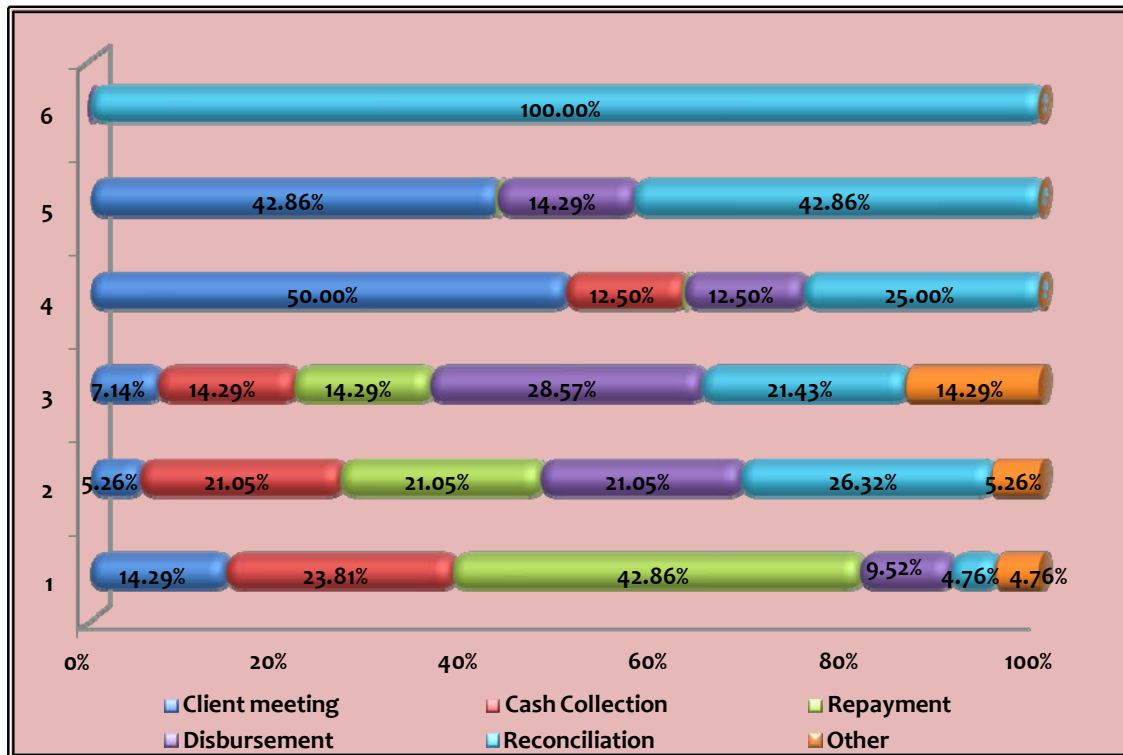
Q22. What new positions or staff were hired in order to manage mobile financial solutions?  
(n=25)



Q23. What in-house skill sets are most important for implementing mobile financial solutions?  
(n=27, several responses possible)



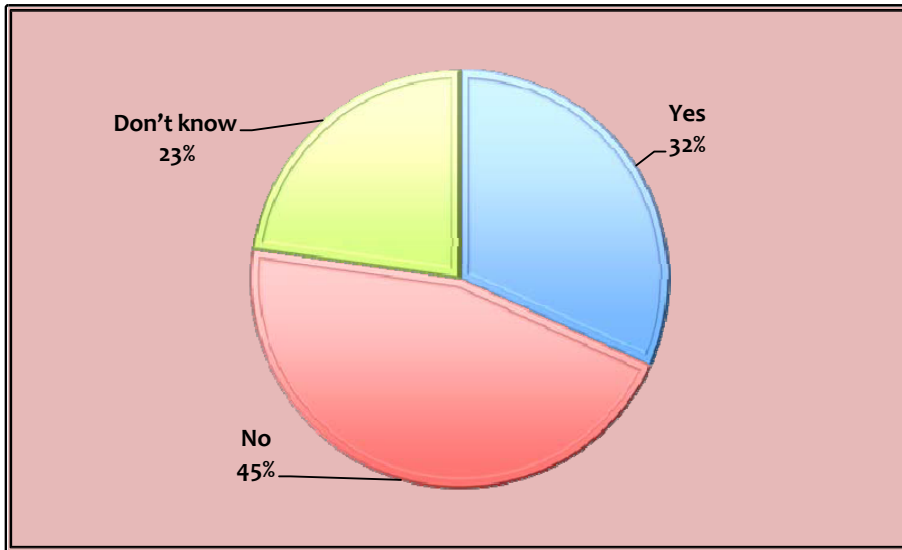
Q24. Which processes required the most changes in implementing mobile financial services?  
Rank in order of importance. (n=21)



Q24b. Other

- Client registration and training in mobile banking.
- Client and staff perception on the use on technology
- Raising awareness amongst staff
- No major changes needed to implement mobile technology, however overall tracking becomes more efficient.
- Management requirements
- Financial accounting, regulatory reporting and risk management
- Computer systems need to be geared to operate at high transaction speed, staff training and skills development, creation of new positions, setting of new processes and procedures.

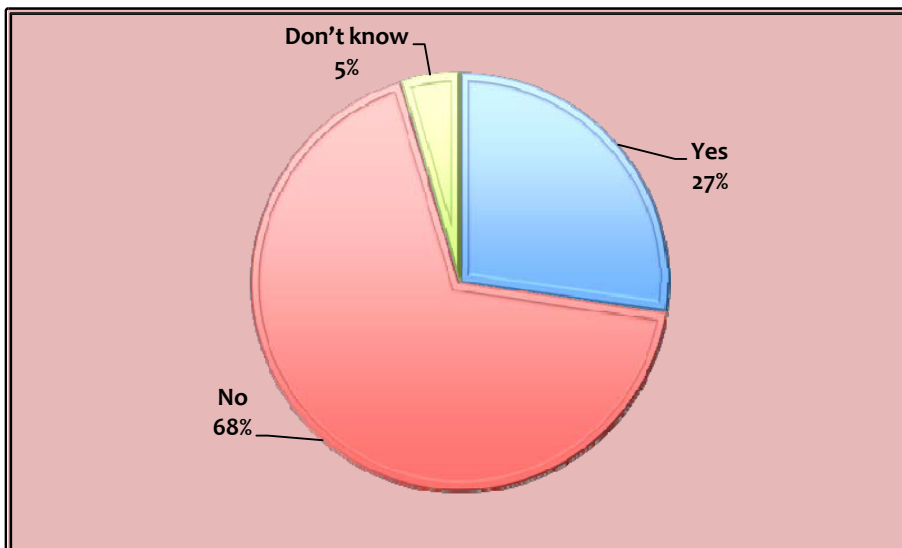
**Q25. Did you have any issues with group attendance for groups that implemented mobile financial services? (n=22)**



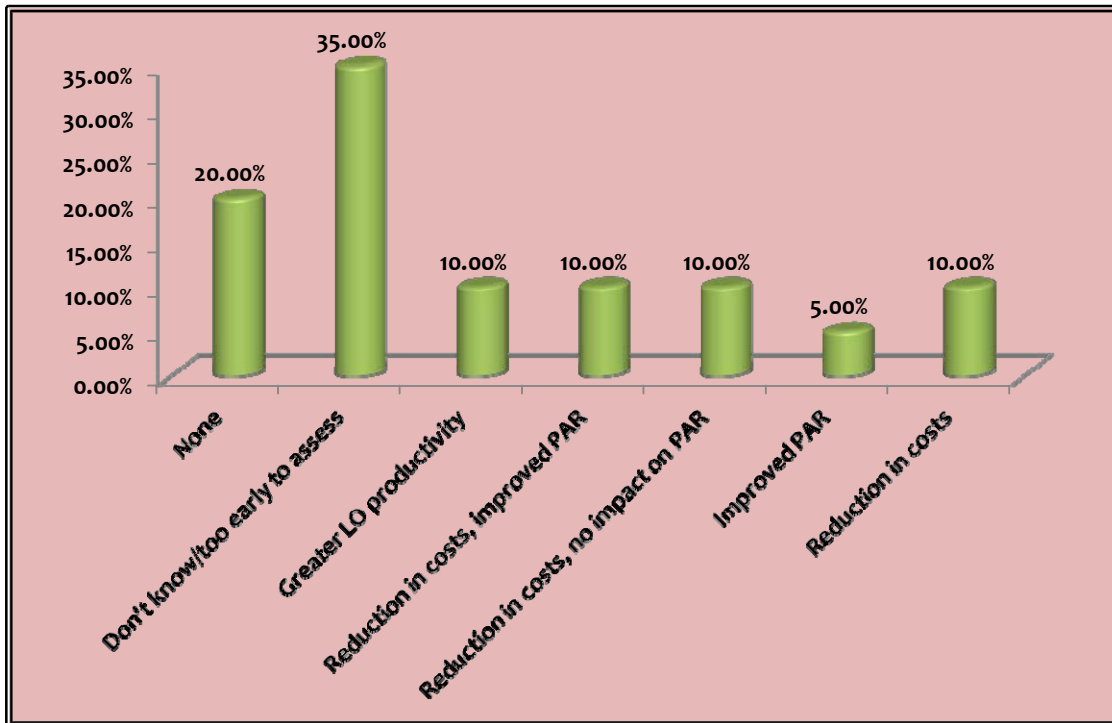
**Q26. If so, how did you resolve? (n=6)**

- Create more engaging centre meetings that address real client needs.
- Encouraged other group activities that help promote group dynamics.
- Listened to suggestions from groups and sought advice and support from the partner-bank.

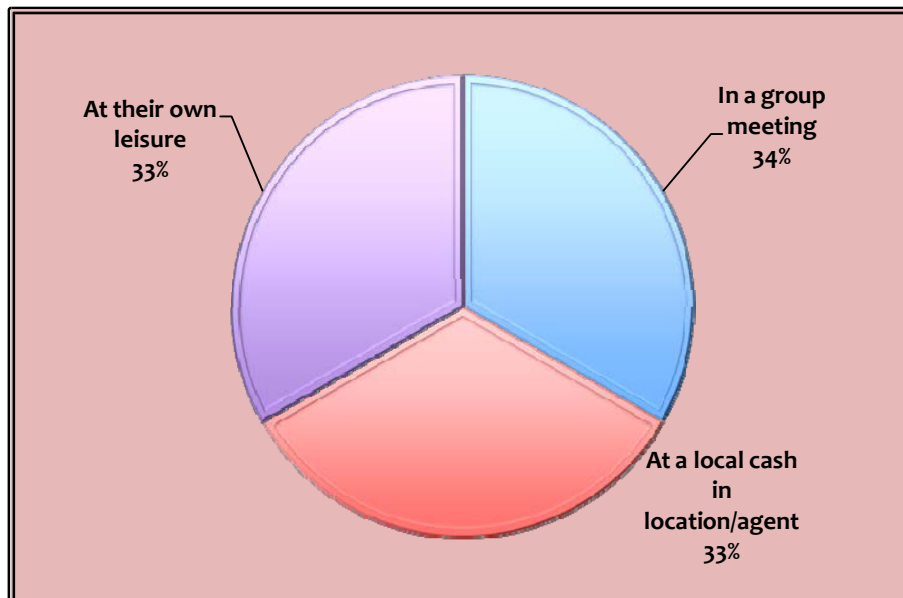
**Q27. Do you use SMS for reminders for payments and late payments? (n= 22)**



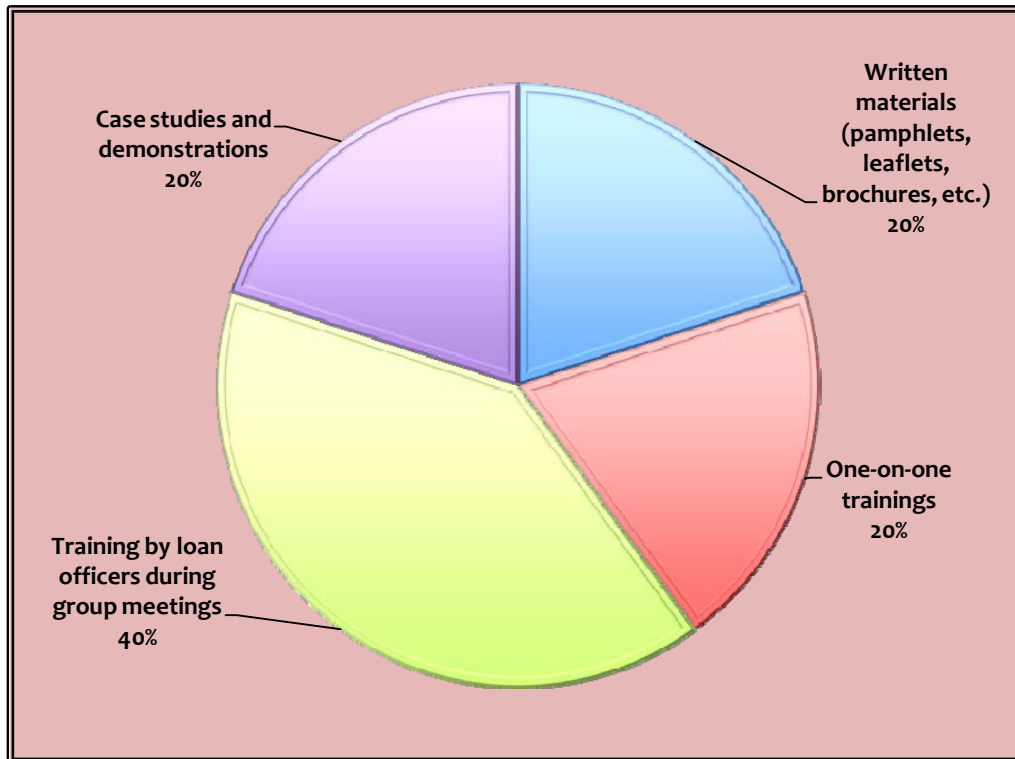
Q28. What has been the impact on operational costs and PAR since implementing mobile financial services? (n=20)



Q29. Where do clients using the mobile phone pay for their loan? (n=21)



Q30. What was your most effective training methodology for your clients? (n=20)



Q31 and Q32, reported below, were open-ended questions aimed at gaining a better understanding of the lessons learned and the type of advice that MFIs would give to other institutions that were thinking about implementing MFS. The responses have been transcribed as collected online, with only minor grammatical edits.

**Q31. What were your top 3 most valuable learnings about this experience? (n=18)**

Nbr	Response
1	<ul style="list-style-type: none"> <li>• [MFS is] time and cost effective for the client and organization.</li> <li>• [MFS helps in] preventing frauds by staff who are involved with cash collection.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Use technology clients are familiar with</li> <li>• Maximize the advantage it brings to the staff, especially loan officers</li> <li>• Credit policies should also be reviewed to align with it (MFS)</li> </ul>
3	<ul style="list-style-type: none"> <li>• Mobile is not less expensive for our clients or the institution</li> <li>• Staff was more resistant than clients.</li> <li>• More mobile = more problems</li> </ul>
4	<ul style="list-style-type: none"> <li>• Using technology to improve on efficiencies and moving with the market trend</li> </ul>
5	<ul style="list-style-type: none"> <li>• Through mobile forwarding data and managing data could be easy.</li> <li>• Manipulation [is] difficult.</li> <li>• Saving of time, paper and money.</li> </ul>
6	<ul style="list-style-type: none"> <li>• Integration with the core-banking system can be a real challenge.</li> <li>• Testing with the clients provides more buy-in from them.</li> <li>• Service delivery is greatly improved and clients satisfied.</li> </ul>
7	<ul style="list-style-type: none"> <li>• Telecom infrastructure is still in very early stages of evolution in India and coverage at remote locations is a big question.</li> <li>• Training needs to be followed with constant monitoring.</li> <li>• Interface needs to be easy enough for field officers to be convinced to use the same.</li> </ul>
8	<ul style="list-style-type: none"> <li>• Staff must be well informed and happy with [the] service.</li> <li>• Clients will adopt the service, but slowly at first.</li> <li>• Full system integration is important.</li> </ul>
9	<ul style="list-style-type: none"> <li>• Well-trained staff [will] train their clients well.</li> <li>• Ensure MIS back office is on top of things.</li> <li>• Have an efficient MIS.</li> </ul>
10	<ul style="list-style-type: none"> <li>• Customer growth.</li> <li>• Good income.</li> <li>• Deposit balances growth.</li> </ul>
11	<ul style="list-style-type: none"> <li>• Piloting before full implementation is critical.</li> </ul>
12	<ul style="list-style-type: none"> <li>• Our clients are positive about technology and willing to use it.</li> </ul>
13	<ul style="list-style-type: none"> <li>• Agent management and liquidity is the key for MFS</li> </ul>
14	<ul style="list-style-type: none"> <li>• Message reach home - members remember easily through the methodology used</li> </ul>
15	<ul style="list-style-type: none"> <li>• Improved turn-around-time leads to client stickiness.</li> <li>• Practical training to the staff and hand holding in the field most effective to assimilate learning.</li> </ul>

Nbr	Response
	<ul style="list-style-type: none"> <li>Quick deployment can lead to poor learning and system failure.</li> </ul>
16	<ul style="list-style-type: none"> <li>Understanding the client's philosophy</li> </ul>
17	<ul style="list-style-type: none"> <li>Difficulties in obtaining license from the regulators.</li> </ul>
18	<ul style="list-style-type: none"> <li>Mobile phone banking will be effective if the ecosystem is in place mobile money is available anywhere.</li> </ul>

**Q32. What recommendations can you provide to other Microfinance Institutions that want to implement mobile financial services? (n=19)**

Nbr	Response
1	<ul style="list-style-type: none"> <li>Use mobile banking for both loan and deposit activities.</li> <li>Integrate it with their MIS by deploying interface between the two systems.</li> </ul>
2	<ul style="list-style-type: none"> <li>Make sure you understand your needs and that of your clients and then plan your direction</li> <li>Make sure to be flexible in terms of technology, policies and business model.</li> </ul>
3	<ul style="list-style-type: none"> <li>Don't spend money on the integration. Get it for free or get a grant</li> </ul>
4	<ul style="list-style-type: none"> <li>Move with the market trend or be left out.</li> </ul>
5	<ul style="list-style-type: none"> <li>Go through the technology</li> </ul>
6	<ul style="list-style-type: none"> <li>Automate payments and processes</li> </ul>
7	<ul style="list-style-type: none"> <li>It is fast and efficient and the way to go to give timely service.</li> </ul>
8	<ul style="list-style-type: none"> <li>Rollout in a phased manner while studying impacts &amp; analyzing results.</li> <li>Make provision for zero network locations.</li> <li>Constantly monitor the first six months.</li> <li>Ensure that the backend provides for easy error resolution.</li> </ul>
9	<ul style="list-style-type: none"> <li>Implement service fully with current systems; adapt it to current operations</li> </ul>
10	<ul style="list-style-type: none"> <li>Do not copy and paste.</li> </ul>
11	<ul style="list-style-type: none"> <li>Developing the mobile financial services for unbanked customer (lower segments) seems suitable for Microfinance Institutions' customers.</li> </ul>
12	<ul style="list-style-type: none"> <li>It is a tool that can enhance customer service, efficient service delivery and costs management.</li> </ul>
13	<ul style="list-style-type: none"> <li>To make it easy and cheap to use.</li> </ul>
14	<ul style="list-style-type: none"> <li>In house integration to m-banking platform, to ensure effective reconciliation</li> <li>Customer training</li> <li>Agent training and commission structure</li> </ul>
15	<ul style="list-style-type: none"> <li>Make it simple and user-friendly.</li> <li>Pilot before roll-out.</li> </ul>
16	<ul style="list-style-type: none"> <li>Start slow learn and scale.</li> </ul>
17	<ul style="list-style-type: none"> <li>Do enough research</li> <li>Enough testing before implementing the solution.</li> <li>Create interface between the mobile banking solution and company's information systems</li> </ul>

**Nbr Response**

- |    |   |
|----|---|
| 18 | <ul style="list-style-type: none"> <li>Secure license before rolling out.</li> </ul>  |
| 19 | <ul style="list-style-type: none"> <li>It will be effective if mobile money [is] available anywhere and anytime to borrower/client</li> </ul> |

**ANNEX I – LIST OF INTERVIEWEES**

MICROFINANCE INSTITUTIONS		
Name and Position of Interviewee	Name of Institution	Country
Mr. Sopheap LOEUNG, SVP & Head of Product Development	ACLEDA Bank	Cambodia
Mr. Tay MEANG, VP & Deputy Head of Information Technology Division	ACLEDA Bank	Cambodia
Ms. Chanta YORN, Asst. Senior Vice President, Human Resources Division	ACLEDA Bank	Cambodia
Ms. Mariane MENG, VP & Deputy Head of Finance Division	ACLEDA Bank	Cambodia
Mr. Bunthoun DORK, VP & Manager	ACLEDA Bank	Cambodia
Mr. Thay LY, SVP & Head of Operations Division	ACLEDA Bank	Cambodia
Mrs. Sophea SOK, SVP & Head of Marketing Division	ACLEDA Bank	Cambodia
Ms. Sophy PUM, Deputy Head of Research	AMK CO.,LTD	Cambodia
Mr. Roattana CHEA, Mobile Banking Manager	AMK CO., LTD	Cambodia
Mr. Gabriel KIVUTI, Chairman, SMEP BOD	SMEP Deposit Taking Microfinance, LTD.	Kenya
Mrs. Fiora WEKESSA, Senior Branch Manager, Nairobi Central Branch	SMEP Deposit Taking Microfinance, LTD.	Kenya
Mr. Joseph Sukure SUKUMERR, Head of ICT	SMEP Deposit Taking Microfinance, LTD.	Kenya
Mr. Symon Kamore MWANGI, Head of Finance	SMEP Deposit Taking Microfinance, LTD.	Kenya
Mr. Anthony M. MWAMBURI, Marketing Manager	SMEP Deposit Taking Microfinance, LTD.	Kenya
Ms. Hellen KAHENYA, Corporate Communications and Marketing Manager	KADET, LTD	Kenya



Ms. Alice MUMBI, Branch Manager, Gikomba	Musoni	Kenya
Mr. Peter MUGENDI, Chief Executive Officer	Kadet	Kenya
Ms Anne KIMARI, Head of Finance	Faulu	Kenya
Mr. Richard NGUMEH, Asst. ICT Manager – Alternative Business Channels	Faulu	Kenya
Mr. Joram GACHOKA, Group Finance Manager	MicroAfrica	Kenya
Ms. Edith NYAGA, Group MIS Officer	MicroAfrica	Kenya
Ms. Mary KITHOKA, Group HR Manager	MicroAfrica	Kenya
Mr. Charles NJOROGE, Director of Operations	MicroAfrica	Kenya
Mr. James MUGAMBI, Executive Director	MicroAfrica	Kenya
Mr. Joseph KEVERENGE, Finance & Administration Director	MicroAfrica	Kenya
Mr. George MAINA, Chief Executive Officer	Musoni	Kenya
Mr. James ASIBA, Head of Commercial Services	Faulu	Kenya
Mr. Norbert BENKER, Acting Chief Operations Officer Musoni Kenya	MUSONI	Kenya/The Netherlands
Mr. Nick MEAKIN, Operations Consultant	Opportunity International	Kenya
Mr. Somesh SAWHNEY, Business Analyst	Sahayata Microfinance Pvt. Ltd.	India
Mr. Mansur MEHDI, Director	MISFA	Afghanistan
Mr. Souleymane SARR, Head of Research & Development	ACEP	Senegal
Mr. Cyrus KOMU, Operations & Finance Manager	Keef	Kenya
Ms. Nelly PAUNE, Programs Manager	Bee	South Africa
Ms. Anna MATETE, Credit Manager	Tujjenge	Tanzania
Mr. Victor RWECHUNGURA, Operations Manger	Tujjenge	Tanzania
Mr. Sothy CHREA, IT Manager	World Vision Fund	Cambodia
Mr. Santosh DANIEL, Country Project Manager	Grameen Foundation	India

Mr. Raymond SERIOS, Special Projects Manager	NWTF	Philippines
<b>EXPERTS</b>		
Mr. Amaar IKHLAS, Technology Specialist	AGORA Microfinance Partners	Cambodia
Ms. Loretta MICHAELS	Independent Consultant, Mobile Money	USA
Mr. Anderson RINGU	Independent Software Engineer	Kenya
Mr. Daryl SKOOG, Senior Vice President, Technology	Opportunity International	USA
Mr. Daniel NAVARRO	Independent Consultant, Mobile Money	Colombia
Ms. Carol CARUSO, Director Advisory Services	Triple Jump Advisory Services	France
Mr. Thierno SECK, Director Mobile Financial Services	PlanetFinance	Senegal
Ms. Gera VOORRIPS, Partner and Consultant, Microfinance, Remittances & Mobile Payments	PHB Development International	The Netherlands
Ms. Marcela SABINO, Consultant Product Development	Digicel	Haiti
Mr. Joey MENDOZA, Mobile Money & Branchless Banking Result IV Leader	USAID FAIDA	Afghanistan
<b>MOBILE NETWORK OPERATORS &amp; SERVICE PROVIDERS</b>		
Mr. Zahir KHOJA, Executive Director Mobile Money	MPaisa, Roshan	Afghanistan
Ms. Lee-Anne PITCAITHLY, Acting CEO at WING Cambodia	Wing Money	Cambodia
Mr. Nicholas CORLIN, Strategic Partner Manager at WING	Wing Money	Cambodia
Mr. Chris LEMM, Technical Consultant	Wizzit	South Africa
Geraldine O'Keefe, Chief Operating Officer	Software Group	Kenya

## ANNEX II – ONLINE QUESTIONNAIRE QUESTIONS

1. How many active clients do you have?

2. Of those, what percent are using mobile financial services with your institution?

3. If less than 100%, when do you expect all clients to utilize their mobile phone for repayment, savings contributions and/or disbursements?

1. Never
2. In one year
3. 2 years
4. 3 years
5. 4 years
6. >5 years
7. Don't know
8. Other

4. Has mobile money enabled you to increase your outreach to serve new clients?

1. Yes
2. No
3. Don't Know

5. In your country, who runs the mobile money system?

1. Telecom operator
2. Bank
3. Third Party

6. How many telecom operators serve your outreach area?

7. Of those, how many of those do you work with?

8. Did you need to negotiate transaction rates with the telecom operator to offer mobile financial services to your clients?

1. Yes
2. No, tariffs were fixed
3. Don't know

9. Do you operate as a money transfer, remittance or payment agent?

1. Yes
2. No
3. Don't know

10. How many months have you been operating mobile financial services? Select one:

1. 1 – 4 months
2. 5 – 8 months
3. 9 – 12 months
4. 1 - 2 years
5. Over 2 years

11. How many months from conception did it take for actual rollout of mobile financial services? Select one:

1. 1 – 4 months
2. 5 – 8 months
3. 9 – 12 months
4. 1 - 2 years
5. Over 2 years

12. Did you need to work with regulators as part of the process?

1. Yes
2. No
3. Don't know

13. Please rank the products and services in order of rollout that you currently offer. (Please only rank products and services that you rolled out.)

- Repayments \_\_\_\_\_
- Savings \_\_\_\_\_
- Disbursements \_\_\_\_\_
- Remittances \_\_\_\_\_
- Bill payments \_\_\_\_\_
- Money transfer \_\_\_\_\_

- Other (please list below, in order, any others apart from the above ) \_\_\_\_\_

13a. Other (please list below, in order, any others products and services that you rolled out, apart from the list above)

14. What determined the order selection of rollout of the products and services noted in question above?

15. Please rank in order of popularity with your clients. Please only rank services that you offer today.

- Repayments \_\_\_\_\_
- Savings \_\_\_\_\_
- Disbursements \_\_\_\_\_
- Remittances \_\_\_\_\_
- Bill payments \_\_\_\_\_
- Airtime \_\_\_\_\_
- Other (please list below, in order, any others apart from the above) \_\_\_\_\_

15a. Other (please list below services that are popular with clients, in order, any others apart from the above list)

16. Why did you decide to implement mobile financial services? (please select as many that apply)

1. Operational costs
2. Competitive advantage
3. Everyone else was doing it
4. Security
5. Other

17. What research did you do prior to implementing Mobile Financial Solutions?

18. What type of management information system (MIS) or core banking system do you have?

19. Are you operating manually or do you have an interface with the mobile payment platform to automate transactions? (select one)

1. Manual
2. Automated, linked into core banking system or management information system
3. Other

20. If so, who built it?

1. In-house solution
2. Consultant
3. Technology Firm
4. Telecom operator developed
5. Other financial institution created
6. Other

21. Did you outsource the integration for the operationalizing of mobile financial services within your institution?

1. Yes
2. No
3. Don't know

22. What new positions or staff were hired in order to manage Mobile Financial Solutions?

23. What in-house skill-sets are most important for implementing Mobile Financial Solutions?

24. Which processes required the most changes in implementing mobile financial services? Rank in order of importance.

- Client meeting \_\_\_\_\_
- Cash Collection \_\_\_\_\_
- Repayment \_\_\_\_\_
- Disbursement \_\_\_\_\_
- Reconciliation \_\_\_\_\_
- Others (Please list below in order) \_\_\_\_\_

24a. Other (processes which required the most changes in implementing mobile financial services, any other apart from list above)

25. Did you have any issues with group attendance for groups that implemented mobile financial services?

1. Yes
2. No
3. Don't know

26. If so, how did you resolve?

27. Do you use SMS for reminders for payments and late payments?

1. Yes
2. No
3. Don't know

28. What has been the impact on operational costs and PAR since implementing mobile financial services?

29. Where do clients using the mobile phone pay for their loan?

1. In a group meeting
2. At a local cash in location/agent
3. Through an ATM
4. At their own leisure
5. Other

30. What was your most effective training methodology for your clients?

31. What were your top 3 most valuable learnings about this experience?

32. What recommendations can you provide to other Microfinance Institutions that want to implement mobile financial services?

33. May we contact you for additional questions?

1. Yes
2. No

If yes please provide us with your contact information below. Please note your name and institution will be kept confidential.

- First Name:
- Last Name:
- Address 1:
- Address 2:
- City:
- Zip Code:
- Country:
- Phone:
- Email Address:



## ANNEX III -INTERPRETATION OF RESEARCH QUESTIONS

Question	Interpretation
<b>Regulatory Framework</b>	
Is a special license required to carry out e-transactions?	Applying for and obtaining a special license can take a very long time. It is important to know if it is required because it may affect your ability to launch the service and hold up operations.
Are there limits to the amounts that can be sent or stored on the e-wallet?	Limits to e-wallets can imply that certain loan amounts will need to be staggered, which increases transaction costs. Also, being aware of how much money is available in the wallet means that precautionary measures can be taken to reduce errors generated due to sending funds that are above the e-wallets limit, hence managing client expectations.
What KYC (Know Your Customer) measures will need to be put in place?	In the majority of cases, a photo ID is the minimum requirement, but these are not easily available in certain countries. MFIs may have to adapt their risk mitigation and KYC policies to accommodate mobile money.
<b>Competition</b>	
What are my competitors doing and what can I learn from them?	It is not necessary to reinvent the wheel each time. Knowing what has or has not worked for competitors can save both time and money.
Is there a niche that is not covered by my competitors?	This is particularly important in countries where mobile money is starting to become widespread. MFIs need to be creative in the array of products that they provide, and may want to consider launching solutions that are solely mobile-based, instead of simply replicating existing products and services.
Should I collaborate on a shared system?	Sharing with other like-minded MFIs will provide greater bargaining power and will help reduce costs of setting up. However, MFIs should ensure that they retain full ownership of their clients.

Consumer profiles	
How many of my clients own a phone (or at least a SIM card)	Costs of phones are going down every day, yet it is still an investment for many MFI clients. Hence, there are a high number that share phones. Shared phones imply setting up particular sets of failsafes to ensure that funds are sent to the intended recipient.
What are the pain points of my clients regarding technology?	Understanding how familiar clients are with technology will provide information on the nature of the training required and in developing the interface and systems.
What are the pain points of my clients regarding access to finance?	This information will help when developing products and services.
How will literacy levels affect the adoption of my product?	Mobile money relies heavily on text-based applications. The levels of literacy will help determine the business model. For example, if literacy rates are too low, then the service can be operated through agents rather than made directly available to the client's phone.
Do I have the capacity to develop products that respond to their needs?	Though providing mobile money may answer some of the needs of MFI clients, you have to improve accessibility and provide appropriate products.
How is mobile money perceived?	The degree of trust by potential clients of the service is a crucial contributing factor to the speed of uptake. If mistrust is high, then MFIs have to be ready to spend time and money in awareness-raising campaigns aimed at making mobile money more attractive to and secure for the clients.
How much will I need to invest in training my clients on using mobile money?	As mentioned throughout the report, training is an important component for ensuring successful deployment. MFIs must be willing and able to invest time and money to train both staff and clients.
What is the geographical distribution of my clients compared to the network coverage?	Knowing where mobile networks operate (and plan to operate) is important for developing the rollout strategy and determining expected adoption levels.
How far away is the closed cash-in/cash-out point?	One of the objectives of mobile money is to bring financial services closer to the clients. However, if the agents are not sufficiently widespread, then there is little added value for the customer, who still needs to travel far distances to be able to take out a loan or repay it.

<b>IT/MIS</b>	
What is the state of my IT/MIS? Can it support mobile money or will I need to upgrade?	An automated and integrated system is necessary for deploying mobile money efficiently. MFIs have to review their IT/MIS and assess if any upgrades are needed, and the cost of doing so.
Will the MNO be cooperative in providing the information I need to develop an adequate interface?	Being able to create a bridge between the mobile money platform and the core banking system is important. Having access to the information needed to develop the appropriate scripts and interfaces will enable the MFI to save money and time in developing the bridge.
What are the costs for implementation and integration of my MIS with the MNO, bank or third party platform?	This information is important for determining your client fee structure.
What special skill sets do I need in my IT department?	Knowing your internal capacities will help you plan for training and the transfer to providing mobile money services. It is important to know beforehand if any additional training is needed or whether it will be necessary to hire new staff.
<b>Technology</b>	
What phones are accessible to my client and at what cost?	Most MFI clients will have low-end phones, most likely bought second-hand or from a counterfeit market. As such, they cannot handle complex applications. Knowing the limitations of the types of phones available will provide valuable insight as you develop your mobile money service.
Will it be possible to create applications in the local language?	Many local scripts have not been standardized and therefore are not properly supported by mobile phones, especially the ones aimed at the low-end of the market. Not being able to send texts in the local language can be an issue if literacy levels are low.
<b>Network – MNOs</b>	
How many operators are in the country?	The number of operators will have two effects on the market. First, a large number of players often means lower prices and easier terms for negotiating tariffs. However, it also usually means there is less incentive for the MNO to invest in mobile money, as it does not expect to achieve the necessary volume to make it viable. Competing networks also sometimes “block” each other (delay in messages, block of SMS texts, etc.), which can affect the quality of your service.

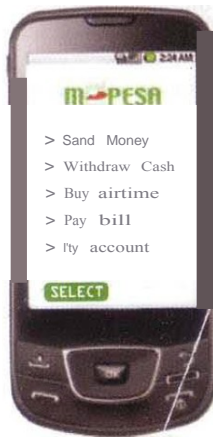
Is there a leader? If so, what is their market share?	As mentioned above, if there is a market leader, there is more incentive to develop mobile money services and to engage in partnerships with businesses. However, a leading player means that the MFI is in a weaker bargaining position.
What is the network coverage and does it overlap with my catchment area?	The network is vital for reaching the clients for mobile money. It is important to know where it exists and whether it is in line with the MFI's target regions.
How reliable is the network signal?	At the beginnings of mobile money, one of the greatest complaints was network failure and downtime. Clients became frustrated because it seemed that the service was not working and they had to repeat the steps several times. Other times messages would be delayed. To not irritate the client, be aware of these issues.
What are the tariffs and are they negotiable?	Given the volume of texts that will be sent, it is necessary to negotiate tariffs to reduce operational costs.
<b>Network – Banks</b>	
How many branches/agents does the bank have and what is their geographical distribution?	If you are going to use the branches of the bank to reach your clients, then they must have an advantage over your own network, either by complementing it or extending it.
What will be the cost of linking to the banks' branch network?	This will allow you to determine the cost structure of the service and to know how it can be absorbed by the MFI. If the cost is too high, it may offset the gains expected from launching the MFS.
Will I be obliged to give them my clients (i.e. can they approach them with their own competing products?)	MFIs must make it a point to retain ownership of their clients. When partnering with a bank, there is always the risk that they will try to "steal" your clients. It is important to negotiate these terms in the contract.
<b>Network – Third Parties</b>	
What is the fee structure/cost of services?	This will allow you to determine the cost structure of the service and to know how it can be absorbed by the MFI. If the cost is too high, it may offset the gains expected from launching the MFS.
Will they have access to information on my clients?	Third parties may use the information they collect on your clients to sell to other entities. Read the fine print carefully and ensure that data is encrypted and not visible to the third party.

Are the services interoperable?	An advantage of third parties is that they are normally agnostic to the MNO; however, it is important to verify what partnerships they have established with MNOs in the country to understand which networks will be available to you.
Do they have a track record in my country?	Communication with companies that are overseas or with little experience in your country can be challenging and, most times, expensive. To ensure that no elements are lost in translation, verify the credentials of the third party and their ability to deliver services to MFIs in your particular market segment.
<b>Agent network – Existing agent network</b>	
How many agent points are there and what is their geographical distribution?	If you are to use the branches of the bank to reach your clients, then they must have an advantage over your own network, either by complementing it or extending it.
What incentives are they currently receiving? Are they happy with the fee structure and incentives plan?	Agents should become an integral part of your marketing campaign. As such, they will need to be trained appropriately so that they can inform your clients on how to use your service properly.
Do the agents often encounter problems with managing their liquidity (e-float)?	Mobile money agents need to have a high volume of cash available. If not, clients will be turned away and that will have a negative impact on your service. Retain agents that can generate or have access to liquidity easily.
Do the agents have the capacity (and willingness) to register new clients?	To save time and money, it is best practice to select some agents (those with a good track record) to register new clients. However, this takes time, so agents have to be incentivized to do it properly.
Do the agents have an exclusivity contract with the MNO (i.e., are they allowed to act as agents for other mobile money services?)	To protect their investment, MNOs usually sign exclusive contracts with their agents. If the MNO is your partner, then this is not an issue. However, if you are developing your own network, it would mean having to identify a second agent in the area, which may lead to saturation.
<b>Agent network – No existing network</b>	
Are there local businesses that can act as retailers for my service (e.g., 7-11 or mom & pop stores, postal offices, air-time sellers)?	An existing chain of retailers is usually the optimal choice as they are accustomed to handling a lot of cash, but they are not available in all countries. Conducting research on alternatives will help you choose an agent network model that is available nationwide and close to most of your clients.

<p>How much training will I need to invest in my agents?</p>	<p>Agents should become an integral part of your marketing campaign. As such, they need to be trained appropriately so they can inform your clients on how to use your service properly.</p>
<p>What kind of incentive will they need to become interested in becoming a retail agent and what quality control measures will I need to put in place?</p>	<p>Agents need to be kept motivated so they will promote your product and carry out the necessary checks if they are registering new clients. An adequate incentive plan will make it easier to monitor and manage agents, because they have a financial motivation to do well.</p>
<p>How easy is it for the agents to manage liquidity?</p>	<p>Mobile money agents need to have a high volume of cash available. If not, they will be forced to turn clients away, which will have a negative impact on your image and service. Retain agents who can generate or have access to cash easily.</p>

# KADET MPESA PROCEDURE

Sending Money to KADET using M-PESA Pay bill 200555



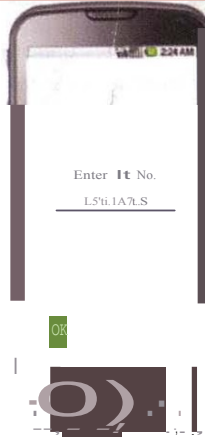
**STEP 1**

Select bill from your M-Pesa menu.



**STEP 2**

Enter KADET business No. 200555.



**STEP 3**

Enter national ID Number with L for loan repayment or S for savings before the ID number e.g. L54678765 or SS4678768



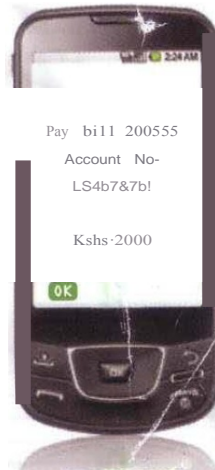
**STEP 4**

Enter amount (Between Ksh 50- 70,000)



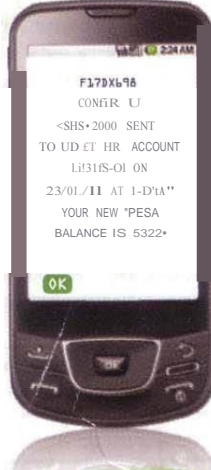
**iiii\*t**

Enter your M-Pesa pin



**STEP 6**

Confirm details are correct



**STEP 7**

Press OK and wait for confirmation



KADET I.T.D.

ff.....PESH

SEE FREQUENTLY ASKED QUESTIONS OVERLEAF

## FREQUENTLY ASKED QUESTIONS

### WHO CAN USE THIS SERVICE?

This service is available to M-PESA registered customers through the PAY BILL functionality on the M-PESA menu. You can register for M-PESA at authorized M-PESA agent outlet countrywide for FREE.

**I am registered for M-PESA but I do not have the pay bill functionality on my M-PESA menu.**

If you are registered for M-PESA but do not have the 'pay bill' option on your menu, select 'my account' in your M-PESA menu, select 'update menu' and enter your M-PESA PIN. A new menu will be sent to your phone at no cost.

**What is the KADET business number for M-PESA?**

The KADET business number is 200555

**What would happen if I send my money to the old business numbers?**

The old Business numbers for each branch will still be operational and will be phased out in 3 months.

**How should I key in my account number while paying for my LOAN OR SAVINGS bill via M-PESA?**

Enter national ID Number with L for loan repayment or S for savings before the ID number e.g. L54678765 for loan or S54678765 for saving

**Will I be able to make repayments for other products/services?**

Yes. Type Letter R for Registration, Letter B for Passbook, Letter P for Penalty, Letter Q for Quick access fee, before your National ID Number e.g. Q51,678765

**What should I do if I make an error when entering my account number?**

You will receive an SMS in your phone alerting you that your payment was not successful. Kindly contact your credit officer immediately for the correction to be made. (Contact your KADET Branch Office or the KADET M-PESA Helpdesk on 0722-200402 or 0723-7136990 contact)

**Will my SAVINGS and LOANS account be updated once I make my payment via M-PESA?** Yes, you will also receive your loan balance and savings balance statement immediately in your phone from KADET

**Can a Member of my Group send money on my behalf?**

Yes, so long as you give them your National ID number

**How much will it cost me to Send Money to KADET?**

KADET has greatly subsidized the normal cost of Sending money via MPESA. The table below shows how much the transaction will cost based on the amount being sent. When sending your repayment remember to include Ksh. 2 to enable you receive your statement on your mobile phone.

Charge Band	Min	Max	Cw:lower	SMS Cost
MFI Tariff 1	50.00	99.00	10.00	2
	100.00	999.00	20.00	2
	1,000.00	2,499.00	20.00	2
	2,500.00	4,999.00	20.00	2
	5,000.00	9,999.00	20.00	2
	10,000.00	19,999.00	20.00	2
	20,000.00	34,999.00	20.00	2
	35,000.00	49,999.00	50.00	2
	50,000.00	70,000.00	60.00	2



KADETLTD.





**INTRODUCING**

# **MIMINA** *Credit*

**This is an easy  
way to recharge  
your mobile and  
modem ANYWHERE**

**from as low as  
200Tshs**

**ZANTEL**

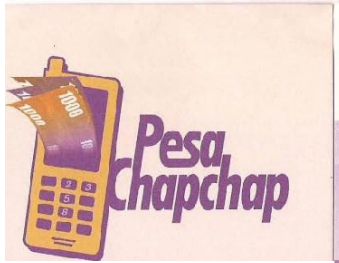


Visit any Zantel dealer or shop near you for more information **part of et1salat**

\*TERMS & CONDITIONS APPLY

**AIRTime VENDORS SIGN UP FOR mImiNR**  
SU, .Deller: Visit our ZanteDealer Support or ZantelCustomer Care.  
SUBcluler: Visit our ZantelDealer Support. ZantelSuper Dealer Shop or ZantelShop.  
Retailer: Visit ZanteShop, ZantelDealer or ZantelFreelancer

For Internet TopUp:  
login at [mimina.zantel.com](http://mimina.zantel.com)  
For mobile Phone TopUp  
Dla1\*1515# for registered vendors only



PESA CHAPCHAP  
 F(CU: ed ao Oifergeny'o...ed<le:z thenPoloC apCMp  
 thesoluton "o"/Cu

ag\_billy  
 Fodv 9011p do th vith o deen ropoym:lt his-o-y or  
 xevious O-Jn(s) oii newd te'lhwhoh:te rurillIQ looA Securl]  
 =nd (ISF) l'vcounts.

Minil'm 1 do)  
 Maxin,un- l>d:ly  
 Mint 1wm-Ksh300  
 Maxim,m-ksh C0C-0  
 Mond-ly - Friday90C o u--9>0 p.m  
 S-hndit)-000 .m-4 00 P..m

Easy Application Process  
 rcdSMS to 3285 in th, Jom ot  
 wkd,enlomer ID, nofohifillD cash ad, tonet amount.

Exall J : All'ew lk'oo whcms cu tMe -ly) is J645Z and  
 Norem-1 ty z, 108.56762 is oppitrig for Kss 5,32C ec h  
 od-o'lee  
 SM5tc 32D5 r, -ll leVuko, 1978452, 10\*56001, 5320.

Yoodv, nat... JIb6 cl ssc cl toy01 r HoDroaccont ondyov  
 can with:clat through oer kofifi branch J,KmJwifidi or Feso  
 PointAT.MI, Al puo, hp ord an>=00kifurologem.

Contact your Fauu officer or our customer service for more  
 information.

94 000 2177203 / 2177303 / 4186700  
 Fax: 186704, 287487  
 Email: info@fauu.co.ke, info@fauu.com  
 Website: www.fauu.co.ke



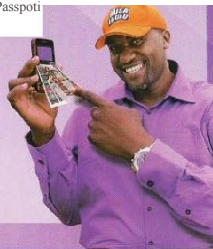
## Je unajua ku usu hu uma yetu mpya ya Fauu Popote?

Huduma ilii itanisaidia kiviipi 1  
**Uk fungu<Akaunti, utandikihwa pa po hapo.**  
 Ple utaweza kupokea hi Jidlna za i>enki kurum a  
 . mu ya riku ru na hdjidlbi n'atada> wa> billu  
 unaotumia.

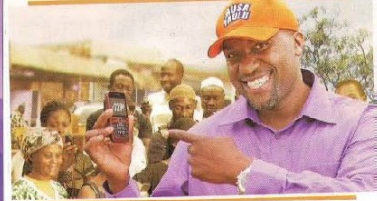
Manufaa yak&n i nini?  
**Inakufaa kwa sa babu bei yake ni ya chini**  
 Ul-kt rthwd n: mcjdifd M.lu popot" ulipe>  
 Itakuwezesha ku>koa wak.ati k.wa'ababu Akaunti  
 itafu ngulwiwa p3po ha po.  
 Itakuwezesha kupata huduma kama AkCa  
**Mkopo na Milwattha wakatiwoK>te**  
 Itakuwezesha kutuma pesa kwa rrtandao  
 wowote kutum.simu yako.  
 Utawez, kuwasitiana nai kwa swala lolote.  
 w2ka i wowote

- Nitil hita.Jl nini?  
 • Kitambulisho au Passpoti  
 • Kshs.200

Kwa maelezo zaidi  
 tembeleso fi.s lu u  
 au pig01 nambDri  
 yasin.J  
 0715 472 095



ADVIC  
 faulu stat' ekg <=> in find rll Frncial so llls b suit ME-eds.  
 Oufllite llllate to CO' act un'x a-Mx 3nd wa. Yll l'vty-d- to find a  
 product tusol 700.



- FAULU PIPDII**  
 ADLr us:ore you can 700! IGWJ'l'ical  
 oM'levey'ou': re tTWWh lle b VKI'19 cha l'nds
1. Ou'iral'ld'inetwot<
  2. Mobil Barking
  3. M.PSSA, Z'J, OrngE- IAoneard. Y i:'ashseMoes
  4. Oa Ja Cml at 1 ?Gsa Polntanc Keruwr: h AIMS COOllll'wgd

**OUR BANKING BRANCHES**  
 Nairobi OTC - Kawangara - Kayole - Kiribari - Kiserian - Thika - Nyahururu - Eldoret - Mt's Bridge  
 Nyeri - Nanyuki - Nakuru - Malindi - Bungoma - Kisumu - Wajir - Kericho - Mau -  
 Meru Thika - Wajir - Mombasa - Vuringa - VakeDinc (Mara) - Ngong Road, Nairobi

**MARKETING OFFICES**  
 Central Nairobi - Githurai - Kamau - Othmanji - Gilomb - Pwani - Tala - Many - Murang'i  
 Karatina - Kericho - Kabata - Nyeri - Isidi - Embu - Kericho - Ukiya - Changamwe - Voi - Loko  
 Malindi - Mpeketoni - Limbani - Taita - Omani - Rongai - Kilima Lenana - Machakos - Kiunga - Ki  
 Eruri - Voi - Eldama Ravine - Kabaret - Ngao - Nandi - Nandi - Dolo, Longo - Malindi - Kitamba  
 Ruarua - Kisumu - Kismayu - Baka - Kapisi - Iten - Molo - Kericho - Uasin - Borot - Banko  
 Liguji - West Nairobi (Ngong Road)

**CONTACT US**  
 Telephona: +254 20 2388088 Mobile: +254 720 446 830, 733 170 451  
 Email: customerservice@fauukenya.com Website: www.fauukenya.com

តើធ្វើយ៉ាងណាដើម្បីបញ្ជូនទឹកប្រាក់ទូរស័ព្ទតាមរយៈវីងបាន ?

ជំហានទី១: សូមស្វែងរកការបញ្ជូនទឹកប្រាក់ទូរស័ព្ទប្រព័ន្ធណាក៏បាន តាមរយៈ វីង ពីអ្នកលក់។ ការបញ្ជូននេះអាច តាមរយៈ វីង ទិញភាគ ឬ ម៉ាស៊ីនលក់សន្លឹកកាតរបស់វីង ។

ជំហានទី២: ប្រសិនបើអ្នកមានគណនី វីង លោកអ្នកអាចបញ្ជូនតាមរយៈ វីង ទិញភាគដោយខ្លួនឯង ឬមិត្តភក្តិដែលមានគណនី វីង ។



បញ្ជូនតាម សន្លឹកកាត វីង



បញ្ជូនតាម វីង ទិញភាគ

លក្ខខណ្ឌ:

ruuruJtnmmru9nLmlitJNQ mnrn:1hsmmn yruinmn  
 INQ i'nrits1b nt9 21\_n1J tlr 31 j 2011 \W:mn-1 ru  
 sntmn mnrn:mn\mruasnuumrumJrn ។  
 tt&irUri1b USffiSH U)\USIUijffij ribri iths:mjr ។  
 HnBtIs!f!ntflsru ny:msJ stn!(tmn nhn!flfits: ។  
 ;fH!J:U)1mSl.fj:li)S!J វិទ្យុ វិទ្យុ វិទ្យុ វិទ្យុ វិទ្យុ វិទ្យុ  
 amum sts1tfiatijs ts1i9 12 ann 2012 tlntttfll 3 nrujru  
 ms ។ nhf'iHliijjny:ush1mgmHnnsbms yusmsanmamru  
 fiSfi Sbmti f'ithHMIU6។  
 ijficty:Uj1{!Uth\flU lcljl:lr3!JINQ yru nmnl:JNQiwruny: ។  
 UiHviiSnJHifUIN QbmJiri\LUfi!fiOHilnqoimoilnuth S ។



W 023 999 989



# Juhudi Kilimo

Investing in Farmers



## Asset Financing for Smallholder Farmers

Select "Pay Bill"	Chagua "Lipa huduma"
Business no. Nambari ya biashara	<b>513900</b>
When asked to "Enter Account no.," type in the National ID number for the customer whose loan or deposit you wish to make the payment for	Ukultuza "Weka nambari ya akaunti" Weka nambari ya kitambulio ya mteja anayelipa mkopo ama anayeweka akiba.

## ANNEX V- BIBLIOGRAPHY & REFERENCES

- “An Emerging Platform: From Money Transfer System to Mobile Money Ecosystem,”* Legal Studies Research Paper Series N° 2011-14 (Jake Kendall, Philip Machoka, Clara Veniard and Bill Maurer)
- “Assessing the Potential for Mobile Payments in Africa: Approaches and Evidence from Uganda,”* Development Informatics Working Paper Series Paper N° 41 (Richard Duncombe, 2009)
- “Banking on Mobiles: Why, How, for Whom?,”* CGAP Focus Note, N° 48 (Ignacio Mas and Kabir Kumar, June 2008)
- “Best Practice for Mobile Financial Services Enrolment Business Model Analysis,”* Mobey Forum (Jordi Guaus, Liisa Kanniainen, Pasi Koistinen, Pekka Laaksonen, Kevin Murphy, Amro Juha Remes, Valimo Oy Norrie Taylor, Olli Welin, 2008)
- “Beyond Payments: Next Generation Mobile Banking for the Masses - Microfinance and Mobile Banking, Strategic and Operational Learnings from Pilots in Emerging Markets”* (Greg Rung and Arnaud Ventura, 2011)
- “Branchless Banking 2010: Who’s Served? At What Price? What’s Next?”* CGAP Focus Note N°66 (Claudia McKay and Mark Pickens, September 2010)
- “Branchless Banking Diagnostic Template,”* CGAP Technology Program
- “Building, Incentivising and Managing a Network of Mobile Money Agents: A Handbook for Mobile Network Operators,”* GSMA MMU (Neil Davidson and Paul Leishman)
- “Case Study on Philippines - Electronic Banking: Delivering Microfinance Services to the Poor in the Philippines”* (Eduardo C. Jimenez and Pia Bernadette Roman)
- “Cell Phones Bring Financial Services to the Unbanked”* (Lee Babcock)
- “Development of mobile payments: Issues and prospects for the future”* (PHB Development & Kurt Salmon 2011)
- “Enhancing Micro Finance for Africa’s Development,”* Issues Paper N°7 (Forum on Financing for Development: Mobilizing Resources for Economic Transformation in Africa, May 2011)
- “Examine the Customers' Attitude to Mobile Banking Based on Extended Theory of Planned Behavior (A Case Study in EN Bank),”* International Bulletin of Business Administration ISSN: 1451-243X Issue 10 (Abdoul Reza Beigina, Ali Soleimani Besheli, Morteza Ahmadi, Mahmoud Esfandiari Soluklu, 2011)
- “Facilitating Cross-Border Mobile Banking in Southern Africa,”* Trade Policy Notes Africa (Samuel Maimbo, Nicholas Strychacz, and Tania Saranga, May, 2010)
- “Financial Access 2010: The State of Financial Inclusion Through the Crisis”* (CGAP and The World Bank Group, 2010)
- “Financial Access for Investing in the Development of Afghanistan (FAIDA),”* USAID Fact Sheet (June 2011)
- “FS Series #11: Innovations in Financial Services Delivery – Branchless Banking: Primer, Diagnostic Checklist, and Model Scopes of Work”* (David Porteous, June 2010)

*"FS Series #9: Enabling Mobile Money Interventions – Primer, Diagnostic Checklist, and Model Scopes of Work"* (David Porteous, April 2010)

*"Global Microscope on the Microfinance Business Environment 2011"* (Economist Intelligence Unit, 2011)

*"Half the World is Unbanked,"* Financial Access Initiative Framing Note (Alberto Chaia, Aparna Dalal, Tony Goland, Maria Jose Gonzalez, Jonathan Morduch and Robert Schiff)

*"Information and Communication Technology and Microfinance: Options for Mongolia,"* ADB Institute Discussion Paper No. 42 (Gaamaa Hishigsuren, Feb. 2006)

*"Information Technology and Microfinance Institutions: Challenges and Lessons Learned,"* Journal of Electronic Commerce in Organisations 8 (2), 1-11 (Kishen Parthasarathy Iyengar, Najam Ahmad Quadri, Vikas Kumar Singh, April-June 2011)

*"M-PESA: Mobile Money for the 'Unbanked': Turning Cellphones into 24-Hour Tellers in Kenya"* (Nick Hughes and Susie Lonie, 2007)

*"Measuring Financial Access around the World,"* Policy Research Working Paper N° 5253 (Jake Kendall Nataliya, Mylenko Alejandro Ponce, March 2010)

*"Microfinance and Mobile Banking: The Story So Far,"* CGAP Focus Note No. 62 (Kabir Kumar, Claudia McKay, and Sarah Rotman, July 2010)

*"Mobile Africa Report 2011: Regional Hubs of Excellence and Innovation"* (Dr. Madanmohan Rao, March 2011)

*"Mobile Banking and Financial Inclusion: , The Regulatory Lessons,"* Policy Research Working Paper N°5664 (Michael Klein Colin Mayer, May 2011)

*"Mobile Banking for Equitable International Development: Improving Access to Capital Markets for the Unbanked,"* A Capital Markets White Paper (Justin Bean, Jake Blackshear and SeMe Sung, May, 2011)

*"Mobile banking for MFIs: why it pays to take your time"* (Carol Caruso, 2011)

*"Mobile banking, Cambodia and the financial crisis,"* CGAP (Jim Rosenberg, April 2009)

*"Mobile Money 101,"* CGAP (Mark Pickens November 2010)

*"Mobile Money in Latin America: A case study of Tigo Paraguay"* (Camilo Tellez and M. Yasmina McCarty, GSMA MMU)

*"Mobile Money Summit 2009: Accelerating the Development of Mobile Money Ecosystems"* (Jonathan Dolan, 2009)

*"Mobile Money: Cell phone Banking in Developing Countries,"* Policy Matters Journal (Britni Mus and Kathleen Ludewig, John Erickson, 2010)

*"Mobile Money: Will Mobile Networks Operators (MNOs), Banks, MFIs and Payment Vendors Compete or Collaborate?,"* Grameen Foundation

*"Mobile Payments go Viral: M-PESA in Kenya"* (Ignacio Mas and Dan Radcliffe, August 2010)

*“More Filipinos turning to mobile banking,” Malaya Business Insight (Jimmy C. Calapati)*

*“Poor People Using Mobile Financial Services: Observations on Customer Usage and Impact from M-PESA” (Olga Morawczynski and Mark Pickens, August 2009)*

*“Portfolios of the Poor: How the World’s Poor Live on \$2 a Day” (Daryl Collins, Jonathan Murdoch, Stuart Rutherford, Orlanda Ruthven, 2009)*

*“Riding the M-PESA Rails: Advantages & Disadvantages,” MicroSave Briefing Note # 94, (Mukesh Sadana, George Mugweru, Joyce Murithi, David Cracknell, Graham A.N. Wright, May 2011)*

*“Savings as Forward Payments: Innovations on Mobile Money Platforms” (Ignacio Mas and Colin Mayer, September 2011)*

*“Scaling Mobile Money”( Ignacio Mas & Dan Radcliffe, September 2010)*

*“Serving the Unbanked ... By Serving the Bank: Lessons from Safaricom, SMART, Globe and Zain”(Paul Leishman: September 2009)*

*“Shaping Our Financial Future: Socio-Economic Impact of Mobile Financial Services” (Telenor Group and The Boston Consulting Group, 2011)*

*“Snapshot: Mobile Money helps Safaricom Strengthen Lead in Kenya” (Wireless Intelligence, January 2010)*

*“Spotlight : Bringing financial services to the unbanked with mobile money services” (Alcatel-Lucent Technologies, 2011)*

*“State of the Microcredit Summit Campaign Report 2012” (Jan P. Maes and Larry R. Reed, 2012)*

*“The Business Case for Branchless Banking - What’s Missing?” MicroSave Briefing Note # 97 (Ann-Byrd Platt, July 2011)*

*“The Early Experience with Branchless Banking,” CGAP Focus Note N° 46 (Gautam Ivatury and Ignacio Mas , April 2008)*

*“The Economics of M-PESA” (William Jack and Tavneet Suri, August 2010)*

*“The Enabling Environment for Mobile Banking in Africa” (David Porteous, May 2006)*

*“The Mobile Financial Services Development Report 2011” (World Economic Forum, 2011)*

*“The Role of Mobile Operators in Expanding Access to Finance,” CGAP Brief (Ignacio Mas and Jim Rosenberg, May 2009)*

*“The World in 2010,” International Telecommunications Union (2010)*

*“Window on the Unbanked: Mobile Money in the Philippines,” CGAP Brief (Mark Pickens, December 2009)*

*GSMA Mobile Money for the Unbanked Annual Report 2011*

*International Telecommunications Union ICT World Telecommunication/ICT Indicators Database 2011*

ANNEX VI -SAMPLE PHONE MENUS

Smart Money (Philippines)



G\*tG SMART th!It  
11nd IK1 \$MART  
Money



Select Transfer  
and press OK.



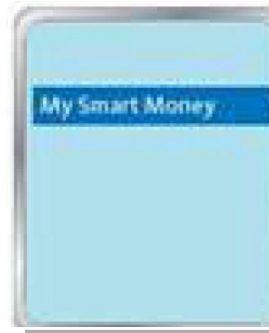
Se t:t Others  
.1nd!pregOK.



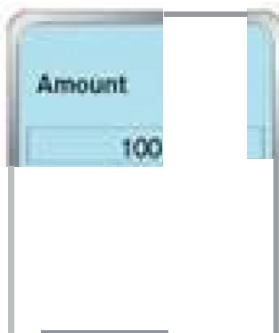
Entfi" yofll  
!Jenitlc rY's  
SMAIR'1 h!  
rtumberpres lOK.



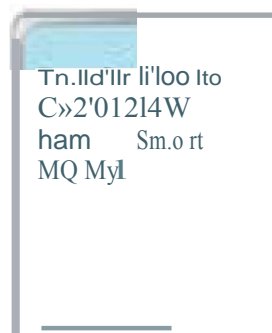
You will n: «t  
llpAJmptl  
OK.



:Sefed 'NM!r tt of  
flm!sl' Pf@S OK.



E'rttti".llftO&rlllyou  
wm. Jde tDH:ftd,  
,.-O .



CGI!frm yow'  
tgnslJJDnby  
Pf!H nsOK.



Ent rr yot r PI •



**STEP 3 - Fill out the enrollment form**



**STEP 4 - Activate your enrollment request through any BPI ATM**



From the ATM main screen, select "Special services..."

From Special Services, select "Activate Enrollments"

from Activate Enrollments, select "Express Online"

**STEP 5 -** After 24 hours from activating your enrollment, you can already access your account in BPI Express Online.



Use the telephone to do your banking transactions through



**Activate your BPEXpress Phone Enrollment Now!**

To enjoy the convenience of banking through BPI Express Phone, activate your account within 60 days from receipt of your ATM card!

**1. Activation Procedure within 60 days**

for newly opened accounts or newly changed account numbers, within 60 days from card receipt:

1. Call 89-100
2. Dial 1 for Express Teller
3. Key-in 11 digit access number

• Your 11-digit access number can be found on the face of your ATM card



Last 10 digits of your card number plus the first digit located on the bottom right of your ATM card right across your name

**4. Key-in the default Telephone 10 Number (TIN)**

- The temporary PIN reflected on the card carrier/welcome letter shall also serve as your default Telephone 10 Number (TIN)

**5. Nominate your preferred 4-digit Telephone ID Number (TIN)**

You can start using BPEXpress Phone as soon as you nominate your new 4-digit Telephone 10 Number.

**II. Activation Procedure Beyond 60 days**

For those unable to activate their enrollment within 60 days after the card was issued, you can still nominate your own Telephone 10 Number (TIN):

Call 89-100  
Dial 0 for Other Products and Services  
Dial 6 for Telephone ID Number (TIN) Nomination  
Key-in your 11-digit access number  
Nominate your preferred 4-digit Telephone 10 Number (TIN)  
Activate your nominated Telephone 10 Number (TIN) through any BPI ATM

From the ATM:  
Choose Special Services --> Activate Enrollment --> Phone TIN

You can start using BPEXpress Phone after two banking days from ATM activation.

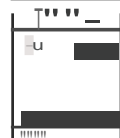
Use your Mobile Phone to do your banking transaction through



**SMART - How to Enroll**

1. Text ENROLL <acwunt /> <JA>. Send to 3274. You
2. Activate your enrollment through any BPI ATM.
3. Your initial MPIN will be sent to your mobile phone after

through SMS.

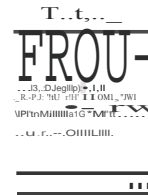


screen select

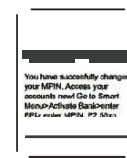
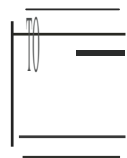
"Special Services".

- from Special Services, Enrollments".

select CONNECT - SMS ENROLLMENT".



**SMART- Change Initial MPIN**



1. After changing your MPIN, you can now activate your SMART Mobile Banking Menu

## M-PESA transactions made easier for you

For trouble-free M-PESA transactions, we encourage customers to remember the following information at all time

### @ Your M-PESA PIN

This is used to protect the value in your M-PESA account. You will need your PIN for all M-PESA transactions, therefore it is important that you choose a PIN which is easy for you to remember, but difficult for others to guess. You can change your M-PESA PIN for KShs 20, at any time by choosing "Change PIN" under "My Account" on your M-PESA menu.

### D1 Your Identification Card

You will be asked to present your original identification document when registering or transacting with M-PESA. Accepted forms of identification include: Kenyan National ID, passport, Military ID, Diplomatic ID or Alien ID. Photocopies and expired identification documents will not be enough to enable you to register or transact with M-PESA.

### Y1 Double check the phone number you are sending money to

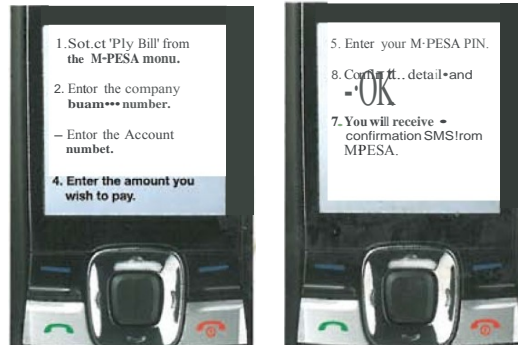
At the end of the transaction, you will be asked to confirm the transaction details. Ensure that the mobile phone number you have entered is correct. We recommend that you write it down for reference purposes.

### ✓ Your M-PESA Secret Word

You will need your secret word, which was sent to you by M-PESA upon registration, to identify yourself when calling customer care or when you visit a Safaricom Retail Center. You can change your secret word, for free, at any time, to a word that is easier to remember by choosing "Secret Word" under "My Account" on your M-PESA menu.

M-PESA Customer Service: call line 234 FREE from your Safaricom line

# How to Pay Your Bill via M-PESA



Pay Bill service is available to M-PESA registered customers

If you are already registered for M-PESA but do not have the 'Pay Bill' option on your M-PESA menu, select 'My Account' in your M-PESA menu, select 'Update Menu' and the new menu will be sent to your phone at no cost

Confirm if the company you intend to pay accepts payments via M-PESA before transacting. They will give you their 'business number' and advice on the appropriate 'account number' that you will enter into your M-PESA menu while making the payment

Existing M-PESA limits apply when paying bills including maximum transaction amount per day of KShs. 70,000 and the maximum amount transferable per transaction of KShs. 35,000

Transaction fees of between KShs 0 - 30 applicable per transaction depending on the organization you are paying to. For details on the exact amount chargeable contact the organization you wish to pay a bill to

Safaricom Customer Care: Call 234 FREE from your Safaricom line

