

APRACA FinServAccess Programme

Intensification on the Application of Information and Communication Technology (ICT) Strategies and Tools in Rural Finance in Cambodia (Replication and Pilot Testing of ICT Strategies and Tools)



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Intensification on the Application of Information and Communication Technology (ICT) Strategies and Tools in Rural Finance in Cambodia (Replication and Pilot Testing of ICT Strategies and Tools)

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Preface

As development in the agriculture sector continues to influence the manner in which people respond to its effect and impacts, it is also evident that the activities attached to it changes through time. Not to mention, the changes have affected the improvement of certain sectors in order to enhance operation.

This is the case of the evolution and emergence of the information and communication technology (ICT) in development. Several sectors including agriculture, engineering, commerce and industry have fully utilized and maximized its application. In the finance sector, the use of ICT in terms of devices and gadgets have taken toll especially in the access and delivery of financial products and services. Through time, several financial institutions research on the utilization and application of these ICT based strategies and models to systematize and organize an effective and efficient financial operation.

This activity supported by the IFAD-APRACA FinServAccess Project on the replication and pilot testing of ICT based strategies, models and practices including the utilization of devices and gadgets particularly in Cambodia is a new intervention in its microfinance sub-sector. It is an activity that would assess the ICT capacity and preparedness of some microfinance institutions to determine ICT application is feasible and viable particularly in accessing finance by the people especially the poor people in the rural areas.

In addition, this activity will help the Cambodia financial sector to develop policies, plans and program to strengthen its capacity and be competitive towards regional and global financial markets. The acceptability, adaptability and applicability of ICT certainly would make the difference. As Cambodia works to be stronger and responsive to the challenges of development, agriculture, finance and information and communication technology sectors will be slowly be integrating and working together to led the country towards secured and stable socially upright and prolific economy.

The lessons learned from the different ICT based strategies and models are basis for the National Bank of Cambodia and its collaborative partners in shaping a more responsive and sustainable financial sector especially those that address the needs and requirements of the growing rural people and communities.

Acknowledgements

It is with deepest gratitude that this particular document was realized for publication because of the involvement and contribution of the different Cambodian microfinance institutions as well as its lead agency in the financial sector, National Bank of Cambodia where the information and communication technologies are placed forward for accessibility and applicability for development.

We would like to extend our heartfelt gratitude to the following in making this publication that shows the process of assessing, analyzing and application of ICT based strategies, models and practices are of use to rural people and communities. The experiences acquired by the participants in the replication and pilot testing from the start of the activity in May 2014 and up to the present is a journey understanding to be shared to everyone.

- The International Fund for Agricultural Development through the FinServAccess Project for providing the financial support to the Cambodia participants during the Phase 1 and Phase 2 activities of the Replication and Pilot Testing of ICT in Rural Finance;
- The MicroSave, India through the Managing Director, Mr. Manoj Sharma and Mr. Ravi Kant, Senior Analyst for serving as the technical expert and co-author and their whole team for giving an excellent technical support in the acquisition of knowledge and coordinating the whole activity;
- Dr. Marlowe U. Aquino, IFAD-APRACA FinServAccess Project Manager for orchestrating the activity with the Cambodian target institutions together with the identification of the technical experts on ICT and also working as co-author for this publication;
- Mr. Kim Vada, Assistant Governor and Director General of the Banking Supervision of the National Bank of Cambodia for providing the direction of the activity and approving the conduct for Cambodia microfinance sector;
- The different Cambodia APRACA members (NBC, Rural Development Bank, PRASAC MFI, Sathapana Limited and the Hattha Kaksekar Limited) for actively participating in the process and finding time to engage in reviewing and understanding the different ICT based strategies, models and practices;
- The different Cambodia MFI clientele/customers and communities during the Phase 1 activity, MicroSave partner institutions, Lucknow and Sitapur rural people for welcoming the Cambodian team in your communities to learn the process; and
- The important individuals interviewed and discussed with in order to come up with a relevant and applicable publication.

The use and application of ICT devices and gadgets in rural finance including value chain and microfinance is an added support that considers people's cultural bearing and resources for development. May this publication be useful and practical to improve work effectively and efficiently as possible through the use of information and communication technology.

Executive Summary

Information and communication technology (ICT) based financial innovations offer many benefits to smallholder farmers who generally lack access to finance. These include cheaper and easier services for small farmers to save, receive loans and make loan payments; easier for input suppliers to collect and manage payments from small holder farmers and for small holder farmers to aggregate their demand for inputs; easier and safer for traders to manage transactions and make deposits into deposit bank accounts; and producers and other key players in the value chain can move easily and cheaply receive domestic and international remittances. There are several ICT based banking and finance platforms which have enhanced value chain activities in village based economies usually by commercial banks and other financial institutions.

There were two (2) phases of the replication/pilot testing activity. The phases required massive scoping/ mapping including process documentation to ensure that lessons learned are captured and used to improve and enhance the best practice for implementers and beneficiaries/recipients. Phase 1 was conducted on 5 to 9 May 2014 in Cambodia to assess the ICT condition and preparedness to several MFIs and rural communities. Phase 2 is an exposure study visit for representatives of Cambodia MFIs on 6 to 10 October 2014 in India which was coordinated by MicroSave and its supported partners.

The activities provided a comprehensive description of the Cambodian financial condition through ICT and some practical and relevant ICT-based strategies and tools in rural finance. The results were analysed and presented as a way to confirm if such ICT based strategies and model could be of use to improve the operation of MFIs in relation to access to financial products and services especially in the rural areas. Also, experiences and lessons learned were noted as a basis for the replication and pilot testing of the Cambodian MFIs.

The innovations and strategies identified for replication include ICT Enabled Services to increase the access of financial Services and to achieve universal access are 1.) Leverage Services of Mobile Payment Service Provider like Wing Cambodia for loan repayment and 2.) Branchless Banking through Agents (Employee/Third Party) which offers a lower operational cost relative to other existing channel. The Branchless Banking through ICT enabled solution through agents (employee network/third party agents) using mPOS and POS as front end technology can be pilot tested and replicated.

Through the replication and pilot testing activities including the assessment of ICT preparedness and the exposure study visit to understand and learn the different ICT based strategies, models, practices including devices in Cambodia and India, much has to be done for a full blast of activity. The activities conducted have proven that Cambodia must continue to respond and be attuned to the changing condition of the national, regional and global financial sector. It is only by going through its initial step of setting a well-prepared microfinance sector dealing with agriculture and other small businesses that they can be considered competitive and could respond appropriately in this changing times. Nonetheless, it is a good opportunity to think about and learn from well-established and practicing countries whose ICT capacity and capability have evolved through time.

Acronyms

APRACA	Asia-Pacific Rural and Agricultural Credit Association
ATM	Automated Teller Machine
EDC	Electricite du Cambodge
ICT	Information and Communication Technology
ID	Identification
FGD	Focus Group Discussion(s)
HKL	Hattha Kaksekar Limited
MFIs	Microfinance Institutions
MPS	Mobile Payment Service
NBC	National Bank of Cambodia
mPOS	Mobile Point of Sale
PIN	Personal Identification Number
POS	Point of Sale
SBI	State Bank of India
WSP	Wing Service Providers

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CHAPTER 1

Introduction

1.1 Background

Information and communication technology (ICT) based financial innovations offer many benefits to smallholder farmers who generally lack access to finance. These include cheaper and easier services for small farmers to save, receive loans and make loan payments; easier for input suppliers to collect and manage payments from small holder farmers and for small holder farmers to aggregate their demand for inputs; easier and safer for traders to manage transactions and make deposits into deposit bank accounts; and producers and other key players in the value chain can move easily and cheaply receive domestic and international remittances. There are several ICT based banking and finance platforms which have enhanced value chain activities in village based economies usually by commercial banks and other financial institutions.

As one of the growing areas in rural finance development, ICT is viewed as an influencing factor in improving the access to finance for smallholder farmers/fishers at the same time in searching viable agricultural technologies to improve production and profit while sustaining farming and fishing operation based on existing and expanded resources from institutions. As the need continues to assist rural people and communities especially the poor, ICT is becoming more and more useful at certain extent of application.

In order to determine the extent of acceptance, adaptation and application of ICT strategies and tools in rural finance particularly on microfinance and value chain finance, these strategies and tools need to be tested by financial institutions whose support services are expanding in the rural areas. Through the initiative and requested intervention from the Cambodian APRACA member institutions, the IFAD-APRACA FinServAccess Project designed an activity for the replication and pilot testing of ICT from well-established and experienced countries like India.

In addition, a strong partner institution which provides extensive ICT solutions in banking was identified to provide the learning platform and utilize the experience of the MicroSave-India is the most fitting do the assessment to replicate and pilot test proven ICT based financial best practices in Cambodia. The replication activity is a combination of exploration and demonstration of the effective and efficient way of utilising ICT-based innovations. The best practices were evaluated, verified and replicated as part of a financial strategy of Cambodia Financial Institution(s) which are not yet in mainstream or ICT-based financial operation or wanting to improve financial access to their clientele. The replicated ICT-based financial best practice encouraged massive participation and empowerment of key players and stakeholders of Cambodia's crop production, livestock and poultry production, fishery production, processing and marketing and other related activities.

There were two (2) phases of the replication/pilot testing activity. The phases required massive scoping/mapping including process documentation to ensure that lessons learned are captured and used to improve and enhance the best practice for implementers and beneficiaries/recipients.

1.2 Objectives

1. To enhance financial access on bank and MFI services for rural people including acquisition of loan, repayment of loans, improve conventional money transfers;
2. To improve efficiency of operation by banks and MFIs in the delivery of financial services to clientele; and
3. To ensure quick and reliable financial transactions between bank/MFIs and rural people or clientele.

1.3 Methodology

The phases required massive scoping/mapping including process documentation to ensure that lessons learned are captured and used to improve the delivery of financial support services through better access and enhance the best practice for implementers and beneficiaries/recipients.

Phase 1 – Capacity Assessment, Profiling and Implementation

Phase 1 was conducted on 5 to 9 May 2014 with three active microfinance institutions (PRASAC MFI, Sathapana Limited and Hattha Kaksekar Limited) and the National Bank of Cambodia; all of which are active APRACA members. It includes the engagement of the technical expert to assess the capability of the financial institution including its resources in implementing the ICT-based financial best practice. At the same time, work on features of the ICT-based financial best practice to maximum acquisition of knowledge by the MFIs involved.

- Conducted assessment of the condition of Cambodia financial institution ICT based utilization and application for increased production and profit of key players and stakeholders
- Determined influencing (contributory and limiting) factors of ICT based financial best practice such as acceptability, utility, applicability and adaptability
- Determined effectiveness and efficiency of the ICT based financial best practice for improved financial management and knowledge management strategies

Profiling activity was done to determine its extent of acceptability, utility, applicability and adaptability. Based on the results, the identified the ICT-based financial best practice were tested and evaluated. Monitoring and evaluation activities were done to ensure feedback and appropriate actions.

A team of implementers were identified and created by the financial institution to work with local farmers/entrepreneurs to determine extent of involvement and participation. Process documentation was done by the team and the technical expert necessary for the next phase. Detailed activities were developed to be implemented for a period of six months (one production cycle) for effectiveness and efficiency.

Phase 2 – Exposure Study Visit and Evaluation

After six months of Phase 1, during the exposure visit to India (6 to 10 October 2014), the team gathered views, ideas and insights on ICT based financial best practices. The team also learnt the practice through visit to various ICT based models and exchanged lessons learned with the technical experts. The objective of the exposure visit was to give an exposure to the team on some of the ICT based financial based practices that included:

- ICT based financial technologies like POS, Mobile Wallet and Kiosk Banking practiced by financial institutions and mobile network operators; and
- Front end and bank end processes of ICT technologies

During the Phase 2 activity, three important approaches were used to include concept sharing; demonstration and debriefing sessions. These were conducted in a participatory manner in order to meet the objectives of the exposure study visit. The following are the different activities with the Cambodian MFI partners:

- Conducted classroom sessions to understand the key field processes, costing and viability of various ICT technologies such as POS, Mobile Wallet and Kiosk Banking
- Conducted field visits to the agent points of the following ICT-based financial models:
 - Mobile Wallet: Airtel Money Agent Outlet
 - POS: HDFC Bank Agent Outlet
 - Kiosk Banking: State Bank of India (SBI) Agent Outlet
- Conducted de-briefing sessions to address the queries of the team after field visit.

The details of the mix of approaches are described below:

- **Concept Sharing:** Various models of ICT based financial services i.e. POS, Kiosk and Mobile Wallet were presented and discussed in detail by technical experts. Experts also discussed experiences of the implementing organization and the end-users along with influencing (contributory and limiting) factors of ICT-based financial best practice such as acceptability, utility, applicability and adaptability
- **Demonstration:** During field visits to agent outlets, technical expert demonstrated key processes such as account opening, cash-in, cash-out, remittance, etc. of the ICT-based financial models mentioned above. Field visits helped the participants to understand the front-end processes of various ICT models. It also aided the participants decide the most relevant ICT model for their institutions.
- **Debriefing sessions:** Technical expert conducted the debrief sessions on each ICT-based financial model after the field visit to the agent outlet. She/he addressed the queries of the team members during the debrief session.

All pertinent experiences and discussion during the whole process were documented and described as part of this relevant document.

CHAPTER 2

Cambodia Financial Institutions' ICT Based Utilization and Application

2.1 Assessment of the ICT platform in Microfinance

The assessment of the Cambodia financial institution's ICT based utilization and application was conducted purposely through the Cambodia APRACA member institutions directly working on microfinance, namely PRASAC MFI, Sathapana Limited and Hattha Kaksekar Limited (HKL), a private service provider and the National Bank of Cambodia (NBC) particularly in the MFIs service areas in rural Cambodia.

The banking penetration is very low in Cambodia as evident from the fact that 85 percent* of Cambodians do not have a bank account. In-depth discussion with MFIs further revealed that rural people accessibility to financial services is very poor in the country. The rural people face challenges as they have to travel a long distance ranging from 15-20 Km to reach the nearest MFI branch office. Focus group discussion with rural clients also brought forward the following issues with regard to access to financial services:

- *Loan instalment:* The Operational area of the MFI branch ranges from 15-20 kilometers. So, the client has to travel up the distance to deposit the loan instalment at the MFI branch.
- *Savings:* Rural target segment wants to save a small amount on regular basis. But because of high transportation expenses they are not able to save.
- *Withdrawal:* Client has limited access to withdrawal as there is no ATM or branch in the rural areas.
- *Transfer and Payment Facilities:* For remittances client is dependent on informal channels and money transfer service provided at high cost.
- *Cultural Disconnect:* Client does not feel convenient in terms of instant service and support from bank staff in the commercial bank.

Presently, Cambodia MFIs are knowledgeable to the utilization and application of information and communication technology (ICT). They have utilized at least more than three strategies concerning ICT which aid in improving the delivery of their products and services to their respective clientele. All the three MFIs are using the core banking system. However, it was noted that MFI capability and competencies differentiates them from each other particularly the use and application of ICT tools and required resources.

The MFI clients have a range of livelihood from farming – crop production and animal raising, village transport service, tailoring, store and shop keeping, and trading particularly rice.

The existing and planned ICT enabled services of visited MFIs is not effective to achieve universal access to financial services (Table 1).

- ATM cannot be replicated in rural areas: a) Opening ATM in rural areas might not be a business viable option for financial institutions b) Existing ATMs of MFIs are in urban areas
- Planned ICT such as Internet Banking on Mobile Phone and POS at Branches will not be very effective for rural clientele: a) Internet Banking will have lower uptake in rural areas b) Installing POS Machine at branches will only decongest the branches and decrease the service time.

Table 1. Existing and Planned ICT enabled financial services of the MFIs

Existing ICT Enabled Financial Services			
Type of ICT	PRASAC	Sathapana Limited	Hattha Kaksekar Ltd.
ATM	60 ATM	zero	40 ATM
Planned ICT Enabled Financial Services			
Type of ICT	PRASAC	Sathapana Limited	Hattha Kaksekar Ltd.
ATM	Install ATM Deposit Machines within the coming months of 2014	To be set up at the end of May 2014 for 12 ATMs	Plan to have more ATMs within the year and onwards
Mobile/Internet Banking	Plan to launch internet banking on mobile towards the end of 2014	No plan	Already deployed mobile banking
Use of POS Machine	Have plans to install POS at branches	At brainstorming stage	Already purchased around 100 POS Machine, testing is on-going to install POS at branches

Source: Phase 1 Assessment Report, May 2014

The MFIs believe the use of ICT will improve, support and increase their reach especially in the rural areas where bank services are limited. However, it was also noted that only few rural people depend on ICT-based services even if these are already available within their reach. Limited access by the rural people and farmers still is a concern of these MFIs despite the efforts they instituted to address it. They hope that the integration of ICT will enable them to provide better services in the future.

During the field visits, through focus group discussions and key informant interviews, it was noted that the MFIs clients are receptive to information particularly on financial services. However, the use of ICT is not an encouraging concern because they believe that their money is best kept under their care; going to banks or MFI offices is very intimidating especially if the facility is big and in an orderly manner. The rural people wanted simple yet accommodating officers to provide necessary financial products and services within their reach. It was further noted that the MFIs ICT condition are not effective to achieve universal access to financial services (Table 2).

Furthermore, it was noted that the MFI clients were provided with ATM cards but were not used for simple reason that they do not need the ATM cards and for fear of utilizing the machine. At this point, there is a need to do information dissemination and promotion on the use of ATMs and the benefits of ICT upgrades from the MFIs visited including their clientele.

While doing the assessment and field visitation in the different MFI's branches, the team visited and observed the operation of one existing rural service provider. During the assessment, interaction and observations were done with one of the Wing Service Providers (WSP) in Cambodia. The WSP is a local company operating in Cambodia particularly in rural areas which utilizes ICT enable service to transact money transfer among individuals. It provides a reach to all people from paying and transferring certain amounts through Point of Sale/Service (POS) machine.



Mr. Ravi Kant MicroSave Senior Analyst and Technical Expert of the Replication Study (left, foreground) discussing with the Wing Agent during the Phase 1 activity

Table 2. Existing and planned ICT enabled services of MFIs which are not effective to achieve financial services

Existing ICT Enabled Condition	Planned ICT Enabled Condition
<p>ATM cannot be replicated in rural areas <i>Opening ATM in rural areas might not be a business viable option</i></p> <ul style="list-style-type: none"> • Lack of power: power shortage in rural areas will hinder the functioning of ATM • High Capital Expenditure: Business viability will be less as the number of people • Lack of connectivity: Connectivity could be a problem in rural areas • High Operational Expenditure: It is due to high level of maintenance requirement such as servicing, cash maintenance, and security of ATM, etc. <p><i>Existing ATMs of MFIs are in urban areas</i></p> <ul style="list-style-type: none"> • ATM of the visited MFIs revealed that these are mostly located near to the branches or/and in the urban area • Many rural customers have not opened savings account in the MFI though they have taken loan from it. 	<p><i>Planned ICT such as Internet Banking on Mobile Phone and POS at Branches will not be very effective for rural clientele Internet Banking will have lower uptake in rural areas</i></p> <ul style="list-style-type: none"> • Lack of Smart phone: It is assumed that target market of MFIs in rural areas will have low end mobile phone. And, this will not be able to download the mobile banking application. • Behavioural Barrier: For them who are not technical savvy will hardly use it. • Lack of Cash-in/Cash-out facility: It will not solve the need of rural people to deposit and withdraw cash from nearby location. <p><i>Installing POS Machine at branches will only help in the following:</i></p> <ul style="list-style-type: none"> • It will help to decongest the branch and reduce the service time • Since the branches are hardly located in rural areas, it will not increase the accessibility to financial services in remote and rural areas



The research team with the PRASAC MFI women clientele/customers during the focus group discussion of the Phase 1 Assessment activity in Phnom Penh, Cambodia.

Based on the notes gathered, the MFIs' clientele are aware of the emerging trend on the use of ICT. However, they strongly pointed out that they would simply await and deal with the MFI agents to transact their banking businesses. They believed that these is one way of having socialization with these officers especially in times of the scheduled transactions wherein most of the community members are there for a "pep talk" and community updates. The collection of loan payments are a way of ensuring that these are seen as direct transfer to the bank. In addition, they are guaranteed that they can see their transaction first hand because of the "trust" they give to the assigned bank officer in their area (PI and FGD conducted by Aquino and Kant, 2014).



Two concurrent focus group discussions with the Sathapana Limited rural clientele/ customers during the Phase 1 Assessment activity in Cambodia.

2.2 Proposed ICT Enabled Financial Services that can be replicated by MFIs in Cambodia

In the course of the activities, the following items were identified to as important ICT enabled financial services for proposed replication by the MFIs in Cambodia.

- **Solution 1:** Leverage Services of Mobile Payment Service Provider like Wing Cambodia for loan repayment



(Source: Photos taken during the Phase 1 Assessment Activity, May 2014)

- **Solution 2:** Branchless Banking through agents (employee network/third party agents) using mPOS or POS as front end technology can be pilot tested and replicated. However, other ICT based solutions like 'kiosk banking' and 'mobile wallet' is hard to be replicated by MFIs.



(Source: MicroSave Photo Album, May 2014)

It should be noted that these are proposed on the following premise:

- Two ICT enabled financial services solutions have been recommended above for MFIs in Cambodia. It is important to mention that the strategy of one MFI may vary from another MFI depending upon its capacity, resources and business plan;
- MFI will have to take permission from National Bank of Cambodia (NBC) to do branchless banking through agent network since NBC do not have specific guideline for MFIs in this regard; and
- The MFI/Bank needs to maintain adequate internal control. It should monitor the agents, identify suspicious patterns and check service quality at agent point time to time.

Solution 1 – Leverage Service of Mobile Payment Service Provider

Description: Leverage Services of Mobile Payment Service Provider like Wing Cambodia for loan repayment

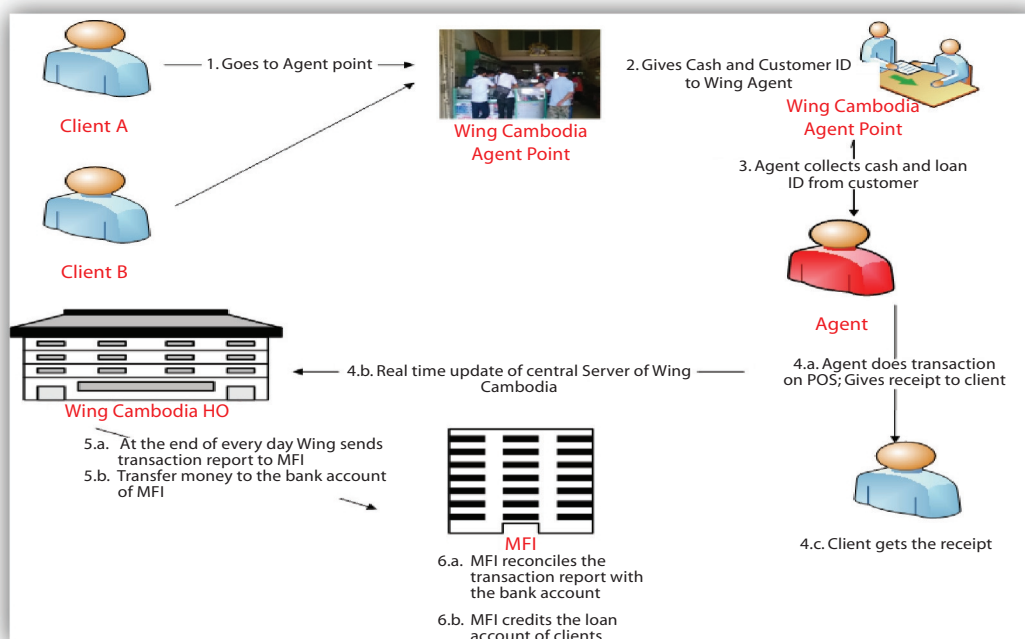
- MFI can get itself added as a biller in Wing Cambodia for Loan Repayment. For this, MFI will have to negotiate with senior management of Wing Cambodia. There are private companies in Cambodia who have already added themselves as a biller with Wing Cambodia such as Electricite du Cambodge (EDC) in Phnom Penh and Kandal, DIGI internet, Aeon (Samsung Authorised Distributor), First Finance etc.
- MFI will have to take a strategic decision on who will bear the cost of the transaction at the agent point for loan repayment – 'client' or 'MFI'
- MFI can negotiate for a reduced price with Wing Cambodia
- MFI will have to promote to customers about the loan repayment facility available at Wing Cambodia agent points

Operating Process (How this will function)

- Loan Customers has to submit the loan amount and loan ID at Cash Xpress outlet of Wing Cambodia.
- The agent processes the loan repayment transaction at the POS machine
- At the end of the transaction, agent hands over automatically generated physical receipt to the customer as proof of payment.
- Agent updates the transaction details in the logbook
- As soon as the transaction gets completed at the agent point, there is real time update of central server of Wing Cambodia
- At the end of every day Wing Cambodia sends transaction report to MFI and transfers money to the bank account of MFI
- MFI reconciles the transaction report with the bank account
- MFI credits the loan account of clients manually or automatically with the help of software

Loan Repayment through Mobile Payment Service Provider (Figure 1)

Figure 1. The loan repayment process through MPS provider (Kant & Aquino, May 2014)



Contributing Factors

- Wing Cambodia has strong agent network of 880 cash express outlets across the country
- Many of the customers we met during FGDs have heard about Wing Cambodia and some of them have been availing its services especially for money transfer
- Huge benefit for customers
 - Customer especially based in rural and remote areas will get rid of going to MFI branch to deposit loan repayment. Thus it saves opportunity cost and time of the customer
 - Customer saves money on transportation expenses
 - Transactions at Wing Cambodia agent points will be hassle free as customers will not have to stand in a long queue
- MFI will not have to bear any fixed cost on hard ware or/and software to provide this facility to customers. It does not involve any software/hardware installation or modification
- It will strengthen the customer service aspect of the MFI and strengthen its brand. Thus it will help to build the competitive advantage to the MFI

Limiting Factors

- This solution will not cater to clients who want to make deposits in their savings account of MFI
- MFIs might have the strategy to go for branchless banking through their own agent network.
- MFI may see it as loss of revenue as the loan customer is generally being charged in case she/he deposits the loan instalment amount at non home branch.

Solution 2 – Model of Branchless Banking using ICT Solutions

Currently 85 percent of Cambodians do not have a bank account. One key constraint is the high cost of building and maintaining branch networks to reach remote and rural areas. To increase the

accessibility of financial services to rural people, MFIs/Banks need to build networks of points at which people can conveniently cash in/cash out from their bank accounts (Source <http://raconteur.net/technology/mobile-phone-banking-boosts-emerging-economies>, 23 June 2013)

Description: Branchless Banking through Agent Network using ICT Solution

Branchless Banking through Agents (Employee/Third Party)

1. Through Employee – Employee will carry the frontend ICT enabled technology along with him/her to enable financial transaction in rural areas
2. Third Party Agents – Agents can be selected in different areas and equipped with front end ICT technology

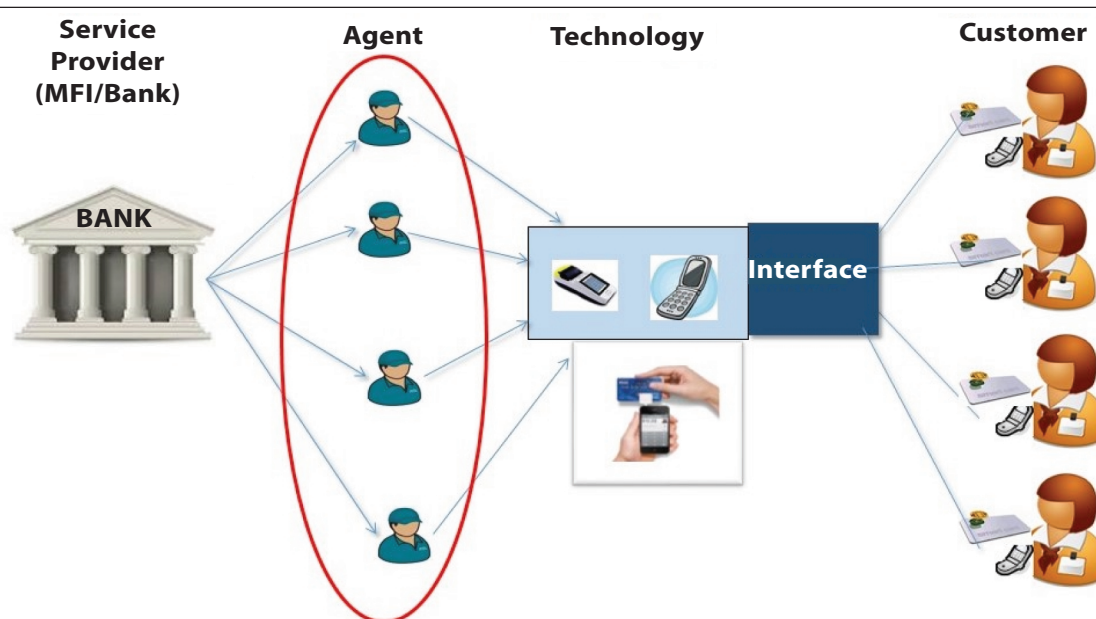
Branchless Banking can be used by MFI/Banks to achieve various strategies

It offers a lower operational cost relative to other existing channel. And, ICT device technology can enable banks and their customers to interact in a trusted way.

- Expanding Geographical Coverage
 - Rural people can transact in their own village who did not have access to financial services and depended on long bus trips to reach the closest branch.
- Targeting new market
 - Agent network can help bank/MFI to cater to new customer segments, for instance lower income people and farmers dependent on agrarian economy in rural areas.
- Decongesting Branches
 - Agents are placed in proximity to the bank's existing branch network to cater the existing bank customers.
 - For the bank, the agent is another channel to deliver financial services.

Figure 2 shows a schematic illustration of the model of a branchless banking using ICT solution for Cambodia based on the data collected during the activity.

Figure 2. Schematic illustration of Branchless Banking Model using ICT solutions (Kant and Aquino, May 2014)



The illustration was generated based on the discussion with the participating Cambodia MFIs and the technical expert's experiences and knowledge on the utilization of information and communication technology in rural finance. Accordingly, there are three important actors in the process; namely: the service provider which is usually the MFI or bank; agent which is an MFI or bank officer or sometimes an contract out individual who process the financial and banking transaction through ICT gadgets; and the customers who are the individuals who transact business with the bank using the ICT gadgets with an agent. The process is simple to administer and follow provided that continuous financial education or literacy program is provided to the MFI or bank clientele. Such program or educational strategies could be provided during community meetings or events that contribute to the enhancement of community activities and strengthen rural development programs.

As per the discussion with senior management team of the MFIs, the following enabling and limiting factors were observed with regard to the mode of using branchless banking. Most of the members argued in favour of third party agent network.

Since the senior management team of MFIs showed inclination for third party agent network, the discussion here onwards has been focussed on various frontend ICT solution using third party agent network. However, the discussion is equally relevant in case any MFI is interested in branchless banking through employee network.

Table 3 shows the advantages and disadvantages of the branchless banking based on the perspective of employee network and third part agent.

Table 3. The advantages and disadvantages of the branchless banking

Criteria	Employee Network	Third Party Agent
Disadvantage	The employee runs the risk of carrying cash along with him/her. There is also a risk to the life of the employee.	The agent also runs the risk of carrying cash and life. But the risk gets mitigated to a large extent as agent is quiet familiar with the village and belong to the same village. Moreover, agents have the support of the community.
	Employee may be reluctant to carry the technology enabled machine along with him to the rural and remote areas. For example, employee may feel uncomfortable carrying POS machine along with him.	The model is not completely in the control of the company as Agent can break the contract at any point of time if the business does not look lucrative. However, with the help of Agent Selection Framework and selecting the right agent, the risk can be mitigated to a good extent.
Advantages	The model is in complete control of the company since it is not dependent on third party	Agents can do the transaction at their base stations and need not carry the machine. Agents will include general store, mobile phone store, petrol pumps, airtime sellers etc.
		Risk of handling cash is transferred to the third party (transit/cash insurance).
		Brand visibility becomes stronger.
		Agent point can serve as information centre for potential clients without incurring any cost.



In view of the different information and communication technology (ICT) solutions in rural financing, the following aspects are presented to determine the strengths in doing a replication and pilot testing for branchless banking. These were identified, discussed and analysed based on the resources and competencies of the MFIs willing to engage in the initial activity.

Under Cambodia MFI condition, the mobile point of sale (mPOS) device and the point of sale (POS) device can be replicated anytime. On the other hand, the mobile wallet and kiosk banking are hard to replicate this time. The description and functionality of the four ICT based branchless banking strategies and devices are presented in Table 4a and Table 4b.

Table 4a. ICT based strategy for Branchless Banking – Can be Replicated by MFIs

Type of ICT based Strategy	ICT Machine	Ease of Operation for Clients	What clients have to do at Agent Point for Transaction
Mobile Point of Sale (mPOS) Device		Easy	Client is required to present smart/ATM card and punch PIN at agent point
Point of Sale (POS) Device		Easy	Client is required to present smart/ATM card and PIN/Thumb impression at agent point

Table 4b. ICT based strategy for Branchless Banking – Hard to Replicate by MFIs

Type of ICT based Strategy	ICT Machine	Ease of Operation for Clients	What clients have to do at Agent Point for Transaction
Mobile Wallet		Uptake requires financial literacy training to clients (Difficult)	Part of the transaction needs to be done by client on his mobile
Kiosk Banking		Very Easy	Client is required to present MFI/Bank ID card and thumb impression at agent point

CHAPTER 3

Operationalization of the ICT Solutions in Cambodia

The increasingly important role of ICTs in agriculture can help change the face of the sector by utilizing innovative gadgets to cutting edge interventions. In fact, it should form part of the larger thrust to attract more young people to the sector. This is also true in the case of financial support services which utilize ICT based devices towards improving the delivery and access to financial services especially in the rural areas where people are hard to reach.

The application of ICT based strategies and innovations including devices in rural and agricultural finance is enhancing the provision and delivery of services. Based on this, the following devices are described in relation to its accessibility, applicability and adaptability in Cambodia microfinance conditions especially in the agriculture sector.

3.1 Assessment of the 'Point of Sale Device' based Financial Practice

Introduction of the POS Model

POS or point of sale device is the ability for a customer transaction to be carried by a portable device. It will enable rural clients to access financial services such as loan repayment, deposit, money transfer at their doorsteps (Source: Mas, Ignacio (n.d.) "Banking through Networks of Retail Agents."

Process of Deposit by Customer

- Agent should maintain an account with MFI/Bank. If a customer wishes to make a deposit at a store, swiping a MFI-issued card puts the customer in direct communication with the MFI/Bank.
- MFI/Bank automatically withdraws the equivalent amount from the agent's bank account to fund the deposit and issues a paper receipt to the customer through the POS device.
- The agent keeps the cash in compensation for the amount taken out of its bank account.
- The agent will not be able to do the deposit transaction on POS in case the amount in his bank account reaches the minimum level

Process of Withdrawal by Customer

Just opposite happens in case of withdrawal, the agent provides the cash to the customer, but is compensated by an equivalent increase in its bank account.

Security Features in POS

Security feature needs to be embedded to do branchless banking using POS or any other frontend technology. Other ICT based solutions such as mPOS, mobile wallet and kiosk banking should also be embedded with almost similar security features (Source: Mas, Ignacio (n.d.) "Banking through Networks of Retail Agents."



*A common POS Device used by agents in rural areas
(Photo by MicroSave Album, May 2014)*

- Automatic Receipt should be given to the customer
- All transactions must be initiated by the customer and should be automatically recorded electronically by the bank through the POS terminal
- Agent transaction limit should match with the balance amount in the bank account. MFI/Bank automatically withdraws the equivalent amount from the agent's bank account to fund the deposit of customer.
- Agent POS machine does not function once transaction limit given to him/her gets utilized. When the agent deposits the money to the branch POS machine starts functioning.
- Online, there should be a direct communication link (via standard phone line or wireless or satellite connectivity) between the POS and the bank.
- Customer identification is easy
 - Customer can carry smart card with him/her to do the transaction
 - Customer needs to give his PIN/thumb impression depending on MFI decided methodology
- Customer Literacy: The bank needs to ensure its customers understand these two fundamental points. – a) They should not share ATM/Smart Card and Secret Pin b) They must Check the receipt before leaving the counter
- Bank/MFI will have to go for an appropriate technology and testing. Of course, they need to take permission of Central Bank of Cambodia.

Contributing Factors for POS Model

Contributing Factors for Financial Institution

- Fixed Cost to Company: There is less up-front investment on the backend technology in compare to Mobile Wallet and Kiosk Banking.
- Operating Cost to Company: Monthly maintenance fee is charged by the software vendor and it depends on the number of agent points/number of devices used
- Connectivity: The device can work in remote places provided 2G/3G connectivity is functional.
- Risk: Cash collection risks is transferred to the agent
- A number of financial services can be provided at the agent point such as deposits, withdrawals, money transfer, account opening etc.

Contributing Factors for Agent

- Operating Cost to Agent: Agent bears operational expenses on maintenance cost, stationary and connectivity but it is less compared to Kiosk Banking

Contributing Factors for Client

- Ease to Operate: For clients, it is very easy to operate as one has to give his/her bank card or/and put finger at biometric device at the agent point to carry out the transaction.
- SMS to Client: As soon as the agent completes the transaction, the data hits the back end server which in turn sends an instant SMS to the client's mobile informing him/her about the transaction and gives transaction details.
- Physical Receipt to Client: As soon as the transaction gets completed on POS, automatic receipt gets generated from it and the same can be given to the client.

Limiting Factors for POS Model

Limiting Factors for Financial Institution

- Since the capital expenditure in case of POS machine is higher than that of mPOS, the breakeven will take more time than mPOS.
- POS machine may face connectivity problem at remote places.

Limiting Factors for Agent

- Since the cost of POS machine is higher than mPOS, the agent might be reluctant to invest the amount

Limiting Factors for Client

- MFI should invest on financial literacy of client. For example, MFI should educate clients that they must collect a receipt from the agent after the transaction.

Experience Sharing on the Costing of POS in India

Expenses for Financial Institution

- A POS device usually costs between USD 333-416 in India. However, it depends upon
 - Order size
 - Whether imported or assembled
 - Security standards
 - Enhancements capabilities such as blue tooth printer etc.
- Fixed Cost to Company: There is less up-front investment on the backend technology in compare to Mobile Wallet and Kiosk Banking
- Operating Cost to Company: Monthly maintenance fee is charged by the software vendor and it depends on the number of agent points/number of devices used

Expenses for Agent and Customer

- Many of the costs associated with front-end technology are usually borne by the agent. They either pay directly for the POS or they are asked to pay a “security deposit” which is almost the same as cost of the asset (say USD 416 for POS device).
- In a POS based model, the cost of cards (USD 1) is usually borne by the bank. Some banks, usually the private banks such as Axis and ICICI bank in India charge the customers for card during enrolment
- Operations Expenditure is borne by agent. Few line items such as internet charges are reimbursed by Bank/MFI.

Table 5. Shows the expenditure occurred at agent point

Capital Expenditure at Agent Point (in USD)		Operations Expenditure per Month (USD) at Agent Point
Type of ICT	POS	Internet Connection and Maintenance/Stationary Cost
POS	USD 333-416	

(Source: Sadana Mukesh, 2013. Transaction Economics for Technology Enabled Branchless Banking)

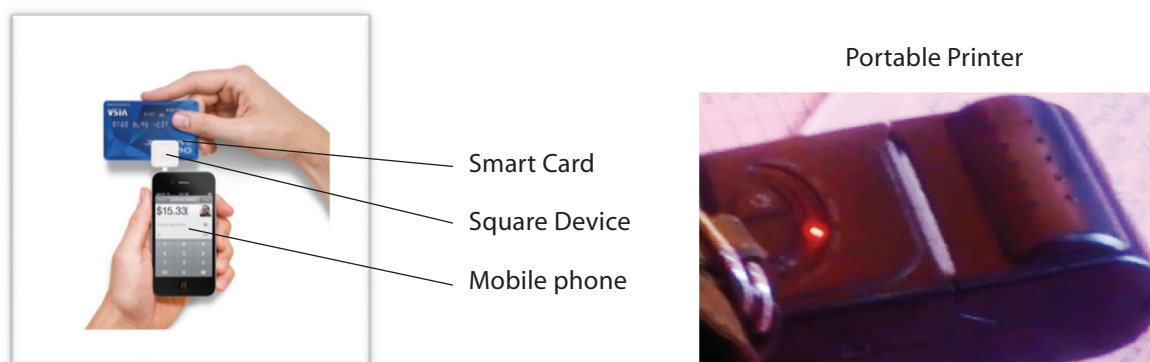
Note: The front end technology cost mentioned is based on Indian market and it can differ in Cambodian market depending upon vendor availability and competition.

3.2 Assessment of 'Mobile Point of Sale (mPOS) Device' based Financial Practice

Introduction of mPOS Model

mPOS or mobile point of sale is the ability for a customer transaction to be carried by a portable mobile device.

Figure 3. Diagram of a mPOS set-up



Why mPOS

Using a mobile or a similar device as an alternate POS requires less up-front investment and they are far more affordable to repair or replace than traditional POS systems.

How does it work?

There are different types of mPOS devices available. But popular devices are card readers which could be attached to the audio jack or USB port of a mobile device, and its related app acts as an interface.

The mobile device could be a tablet, mobile and even an iPod Touch. The basic functioning involves swiping the customer's card, taking an electronic signature and even generating a receipt with a portable printer as shown in Figure 3.

Contributing Factors for mPOS

Contributing Factors for Financial Institution

- Fixed Cost to Company: There is less investment on the back-end technology of mPOS with regard to mobile wallet technology.
- Operating Cost to Company: Monthly maintenance fee is charged by the software vendor and it depends on the number of agent points/number of devices used
- Connectivity: The device can work in remote places provided 2G/3G connectivity is functional.
- Risk: Cash collection risks is transferred to the agent
- A number of financial services can be provided at the agent point such as deposits, withdrawals, money transfer, account opening etc.

Contributing Factors for Agent

- Fixed Cost to Agent: Agent has to bear the cost of the mobile phone, square device (Ezetap) and Bluetooth printer. The capital expenditure is less compared to POS and Kiosk Banking. The square device can be fitted into any basic mobile phone.

- Operating Cost to Agent: Agent hardly bears any cost on operations. She/he just needs to charge his device.

Contributing Factors for Client

- Ease to Operate: For clients, it is very easy to operate as one has to give his/her smart card to the agent to carry out the transaction.
- SMS to Client: As soon as the agent completes the transaction, the data hits the back end server which in turn sends an instant SMS to the client's mobile informing him/her about the transaction and gives transaction details.
- Physical receipt to Client: A blue tooth printer can be connected with back end server of the organization. As soon as the transaction gets completed on the mobile at the agent point, automatic receipt gets generated at the printer and the same can be given to the client.

Limiting Factors for mPOS Model

Limiting Factors for Financial Institution

- The mPOS model does not work on all the mobile phones. However, it works on basic mobile phones such as low end Nokia Mobile Phones.

Limiting Factors for Agent

- Since the capital expenditure and operations expenditure is very less, agent hardly faces any challenges.

Limiting Factors for Client

- Client may take time to adopt since they might not feel it secure.

Experience sharing on the Costing of mPOS in India

Expenses for Financial Institution

- A mPOS device should normally cost around USD 100. However, its cost will depend upon the following:
 - Type of Mobile Phone
 - Type of square device (Ezetap)
 - Bluetooth printer
 - Security standards
- Fixed Cost to Financial Institution: There is less up-front investment on the backend technology in compare to Mobile Wallet
- Operating Cost to Financial Institution: Monthly maintenance fee is charged by the software vendor and it depends on the number of agent points/number of devices used

Expenses for Agent and Customer

- *Capital expenditure at the agent point will be very less compare to POS and Kiosk Banking.* The card readers which could be attached to the audio jack or USB port of a mobile device. Costs associated with front-end technology are usually borne by the agent. They either pay directly for the mPOS or they are asked to pay a "security deposit" which is almost the same as cost of the asset (say USD 25 for square device).
- In a mPOS based model, the cost of cards (USD 1) is usually borne by the MFI. Some financial institutions

- *Operations Expenditure is borne by agent and will be very less compare to POS and Kiosk Banking. Few line items such as expenses on connectivity can be borne by Bank/MFI. Apart from that he will have to bear very small expenses on maintenance and stationary.*

Table 6. Shows the expenditure occurred at agent point for mPOS

Capital Expenditure at Agent Point (in USD)		Operations Expenditure per Month (USD) at Agent Point
Type of ICT	mPOS (Mobile phone + Ezetap) + Bluetooth	Internet Connection and Maintenance/Stationary Cost
mPOS	USD 100	3

(Source: Sadana Mukesh, 2013. Transaction Economics for Technology Enabled Branchless Banking)

Note: The front end technology cost mentioned is based on Indian market and it can differ in Cambodian market depending upon vendor availability and competition.

3.3 Assessment of Mobile Wallet based Financial Practice

Introduction of Mobile Wallet

Mobile wallet is an electronic wallet service that enables you to send and receive money anywhere in the country using your phone. The wallet stores eMoney.



*The concept of mobile wallet
(Photos' source: MicroSave, May 2014)*



Cash-In/Cash-Out point in Tanzania (2011)

How does it work?

Agent Networks are extensively used to reach the end user. Existing Technologies such as USSD, SIM Toolkit or Smartphone Apps are used to perform transactions and debit/credit balances

Most Common Mobile Money Networks

- Cash-in/Cash-out – Depositing money into a mobile money account is called a cash-in. A cash-out is withdrawing money. Both of these are agent assisted.
- P2P – Person to person money transfer
- Bill Payment – Payment of utility bill using your mobile money account
- Airtime Top-Up – Topping up airtime through a mobile money account
- Merchant Payment – Payment for goods/services at a store using a mobile money account

Contributing Factors for Mobile Wallet

Contributing Factors for Financial Institution

- Low banking penetration: It suggests substantial unmet demand for access to formal financial services. At the same time, it is difficult for banks in Cambodia (as elsewhere in the developing world) to profitably serve low-income customers using traditional brick-and-mortar branches.
- High Mobile phone penetration: By mid-2013, there were over 18 million mobile subscribers (penetration 118 percent) in Cambodia (Source: <http://www.budde.com.au/Research/Cambodia-Telecoms-Mobile-Internet-and-Forecasts.html?r=51>)

Contributing Factors for Agent

- Fixed Cost to Agent: Agents are required to purchase a mobile handset which costs around USD 30 to 50 to conduct the BC business
- Operating Cost to Agent: Agent hardly bears any cost apart from internet connection cost.

Contributing Factors for Client

- Client can do a number of financial transactions on his mobile such as person to person money transfer, bill payment, airtime recharge, balance check etc. without visiting the agent point

Limiting Factors for Mobile Wallet

Limiting Factors for Financial Institution

- Huge investment on setting up the Back-end infrastructure: There is very high upfront investment on the back-end technology of mobile wallet than that of other ICT technology. For example, setting up Digital Financial Services Server alone costs more than USD 100,000.
- Collaboration with telecom companies: It requires collaboration with all the telecom companies to make the mobile money model effective. Partnering with a single provider would severely restrict the potential customer base.
- For MFI, It will be like entering into a different ball game which will require it to establish an agent network and maintaining it.

Limiting Factors for Agent

- Since the capital expenditure and operations expenditure is very less, agent hardly faces any challenges.

Limiting Factors for Client

- Lower functional Literacy rate*: Though the 2008 National Population Census puts the adult literacy rate at 77.6 percent (15 years old and over) but the functional literacy rate (a person who can read, write and calculate for his/her own or their community's development) is concerning (Functional literacy was 37.1 percent when it was last measured in 1999).
- *People lack understanding of English*: As per the FGD discussions with MFI clients, it came to our note that many rural people can read Khmer but can not read English. Hence, they can not read SMS on their mobile phones as it comes in English. And, since part of the transaction has to be done by customer on his/her mobile, they may find it difficult to complete the financial transaction. Overall mobile financial literacy is low among people especially in rural areas.
- Behavioral Barriers: There are certain behavioral barriers that prevent adoption of mobile banking. People would be reluctant to change their current methods of transferring money and there is lack of trust in the new system. For example, Initially, WING intended to provide

loan disbursements through Visionfund but this was not possible at the outset since Visionfund borrowers were reluctant to change their habits. Instead, WING set up its Xpresspoints at Visionfund outlets for customers to deposit or withdraw and transfer cash.

Mobile Wallet based financial practice will be hard to replicate for MFIs primarily because of huge investment on setting up the back end technology and rural client unease to operate a mobile to complete the financial transaction.

Experience Sharing on the Costing of Mobile Wallet in India

Expenses for Financial Institution

- Fixed Cost to Financial Institution: There is a huge investment on setting up the back-end technology infrastructure of mobile wallet than that of other ICT technology. For example, setting up Digital Financial Services Server alone costs more than USD 100,000.
- Other back-end technology infrastructure such as firewall, mobile switch and other software applications will further increase the investment cost.

Expenses for Agent and Customer

- A mobile phone device used by third party agent can cost between USD 20 to 100 depending upon
 - the technology used by the service provider: USSD, SMS or Java based programme
 - Whether a specific model is prescribed by the service provider (usually increases the cost) or not, agents usually prefer the most basic device
- Capital expenditure (capex) at the agent point will be very less compare to mPOS, POS and Kiosk Banking. Given that most mobile phone based models do not require purchase of new/ expensive handsets and that most entrepreneurs already have one, the incremental capex for mobile based model is nil.
- Operations Expenditure is borne by agent. Of the three models, mobile based deployments have the least operational expenditure while POS and computer based models are expensive.

Table 7. Shows the expenditure occurred at agent point for Mobile Wallet

Capital Expenditure at Agent Point (in USD)		Operations Expenditure per Month (USD) at Agent Point
Type of ICT	Mobile	Internet Connection and Maintenance/Stationary Cost
Mobile	USD 50-100	2-3

(Source: Sadana Mukesh, 2013. Transaction Economics for Technology Enabled Branchless Banking)

Note: The front end technology cost mentioned is based on Indian market and it can differ in Cambodian market depending upon vendor availability and competition.

3.4 Assessment of Computer based (Kiosk Banking) Financial Practices

Introduction to Kiosk Banking

A kiosk is usually manned by one or two individuals. It requires minimum space of size 150-200 sq feet with a counter for setting it up. The agent uses computer with internet connectivity which is connected with the central server of the organization. The photo below shows a simple Kiosk Banking in India.



System configuration includes the following in Kiosk Banking

- PC with good data storage capacity
- A web cam
- A standard printer/scanner/Finger print device
- Generator/Invertor (In case power supply is poor)

Services provided at Kiosk Banking include

Initially, MFI Kiosk Banking can provide the following services to customers:

- Deposit of Cash
- Withdrawal of Cash
- Money transfer to another MFI account holder in other locations
- Account Opening

Contributing Factors for Kiosk Banking

Contributing Factors for Financial Institution

- Fixed Cost to Company: The investment on setting up the back end infrastructure will be lower than that of mPOS, POS and Mobile Wallet.
- Operating Cost to Company: Monthly maintenance fee is charged by the software vendor and it depends on the number of agent points/number of devices used
- Connectivity: The device requires internet connection with decent speed and good connectivity
- Risk: Cash collection risks is transferred to the agent
- A number of financial services can be provided at the agent point such as deposits, withdrawals, money transfer, account opening etc.

Contributing Factors for Agent

- Social Status of Agents: Agent social status in the society improves as he/she gets associated with the bank/MFI.

Contributing Factors for Client

- Ease to Operate: For clients, it is very easy to operate as one has to give his/her bank card or/and put finger at biometric device at the agent point to carry out the transaction.
- Physical Receipt to Client: As soon as the transaction gets completed on POS, automatic receipt gets generated from it and the same can be given to the client.
- Trust: Client's trust factor is high in comparison to many other branchless banking delivery points such as general store, petrol pump, mobile store, mobile agents, etc.

Limiting Factors for Company

- Kiosk model also costs more in terms of capital expenditure. Since the model requires over investment, therefore the business case has not been very attractive for the agents (especially in rural areas)
- Kiosk should have adequate space to attend to 5-6 customers at a time
- System configuration requires PC with good storage capacity, a web cam, a standard printer/scanner/finger print device and generator/invertor (In case power supply is poor).

Limiting Factors for Agent

- In case of any software related problem (change in internet plan, computer equipment, etc.) agent has to wait for a member of the sales team to re-install the software
- Most of the rural agents are not well versed with computer and internet. They will need repeat trainings and handholding to conduct transactions smoothly
- Kiosk model costs more in terms of operations expenditure
 - Running a computer for online transactions it requires continuous power supply and internet connection.
 - Internet connection with decent speed and good connectivity also cost around Rs.500-1,000 per month.
 - Running a power generator or installing a UPS/battery and its maintenance is very costly.
 - Printing ink and paper will also add to the cost
 - Maintenance and repair (may or may not be covered under Annual Maintenance Cost)

Kiosk Banking based financial practice will be hard to replicate for MFIs primarily because of high investment on setting up the front end technology at the agent point. In addition the high operational expenses at the agent point and agent's difficulty to operate computer are big limiting factors.

Experience Sharing on the Costing of Kiosk Banking In India

Expenses for Company

- A computer with power backup and printer can cost USD 1,000.
- Fixed Cost to Company: The investment on setting up the back-end infrastructure will be lower than that of mPOS, POS and Mobile Wallet.

Expenses for Agent and Customer

- For a computer based model, following operational expenses are usually incurred at agent point:
 - electricity
 - power back up (UPS or generator), because mostly it is used in online deployments, and therefore interruption cannot be allowed
 - internet
 - printing ink and paper
 - maintenance and repair (may or may not be covered under AMC)
- Kiosk model costs more in terms of opex because running a computer for online transactions requires continuous power supply and internet connection.
- Since electricity could be a problem in rural areas. Running a power generator or installing a UPS/battery and its maintenance will prove more costly. Internet connection with decent speed and good connectivity will also add to cost.
- Of all the four models, computer based models is more expensive.

Table 8. Shows the expenditure occurred at agent point for Kiosk Banking

Capital Expenditure at Agent Point (in USD)		Operations Expenditure per Month (USD) at Agent Point
Type of ICT	Computer + Power backup + Printer	Internet Connection and Maintenance/Stationary Cost
Mobile	USD 1,000	20

(Source: Sadana Mukesh, 2013. Transaction Economics for Technology Enabled Branchless Banking)

Note: The front end technology cost mentioned is based on Indian market and it can differ in Cambodian market depending upon vendor availability and competition.

Response application of ICT Solution for MFIs

After the intensive discussions with the officers and management of the National Bank of Cambodia with regards to the replication and pilot testing on ICT based solutions for the microfinance institutional operations, the following are the responses. The responses were analyzed and presented as a way to confirm if such ICT based strategies and model could be of use to improve the operation of MFIs in relation to access to financial products and services especially in the rural areas.

Overall, the MFIs should request NBC to allow interoperability between ATMs to improve client's accessibility to financial services.

Directions and Actions to Be Taken

As the process of replication and pilot testing unfolds to improve the access of financial services in Cambodia, the active involvement of the commissioned technical expert from MicroSave together with the MFI moved to the next level of activities. Undergoing the process enabled the team to work together as they continuously address the needs of the clientele through an action research and documentation of ICT based initiatives on microfinance in agriculture.

The following are the evolving activities up to now as they key players and stakeholders participate in the process of testing the best ICT based innovation for the rural people to access finance and the MFIs to deliver the required financial services.

Proposed ICT Financial Solutions to achieve universal access to financial services	Central Bank Response
<ul style="list-style-type: none"> Solution 1: Leverage Services of Mobile Payment Service Provider like Wing Cambodia for loan repayment 	<ul style="list-style-type: none"> MFI will have to take permission from the regulator to get itself added as a biller in Wing Cambodia.
<ul style="list-style-type: none"> Solution 2: Branchless Banking through agents (employee network/third party agents) using mPOS or POS as front end technology can be pilot tested and replicated 	<ul style="list-style-type: none"> Currently there is no regulation with regard to MFI doing branchless banking through third party agent network. National Bank of Cambodia (NBC) can allow MFI to do a pilot testing in case it seeks permission from NBC. MFI will share the pilot test plan with NBC On completion of the pilot test MFI will share the results of the pilot with NCB. If the pilot test is successful and NCB is confident with the security features of the model, it can allow MFI to roll out the model.

What has been done till now

- Creation of E-Forum: An e-group comprising of MFI representatives, central bank, technical expert has been created to discuss ideas, insights and perspective on the ICT based strategy.
- Discussion with Senior Management: The participants of the Phase 1 meeting discussed the issues, concerns and their future plan related to ICT strategy with their respective management
- Sharing of Report (Phase 1): The findings and result of the Phase 1 report to be shared to all concerned before 15th June 2014

Way Forward/Next Level Initiatives (Before Exposure Visit)

- Identification and Evaluation of ICT Strategy by each MFI: After circulation of the Phase 1 report, the MFIs will share its comments and concerns with regard to ICT-based strategy to achieve universal access to financial services

- Finalise the ICT based strategy: By end of July 15, MFIs have to finalize the ICT-based strategy and prepare business plan of the model they want to implement. MFIs will be assisted by the FinServAccess Technical Expert, Mr. Ravi Kant of *MicroSave* India
- MFIs to draft Process Mapping: MFIs will have to first identify the processes involved to deliver the financial services using identified ICT technology. After identifying processes MFI product manager/expert will have to document the activities of all the processes in a step by step manner.
- *Exposure visit to India – 1st week of October 2014*: Conduct Phase 2 activity particularly the Exposure Study Visit to include the validation, evaluation, analysis and knowledge exchange on Cambodia experience vis-à-vis India experience to be conducted on 6 to 10 October 2014 through *MicroSave* India

Way Forward/Next Level Initiatives (After Exposure Visit)

- Preparation of Operations Manual: MFI needs to have operations manual to conduct the pilot testing and make roll out of the business model. Operations Manual will contain all the policies, procedures and processes to guide the staffs to implement the model on field. The lessons learned during the project will be helpful to design the manual.
- Pilot Test Planning: Before going for pilot test, it is very critical for MFI to do a pilot test planning. It will include
 - Composing the Pilot Test Team
 - Developing the Testing Protocol
 - Defining the Objectives
 - Preparing all Systems
 - Modeling the Financial Projections
 - Documenting the Product Definitions and Procedures
- Pilot testing: It will involve
 - Training the relevant Staff
 - Developing Customer Marketing Materials
 - Commencing the Product Test
 - Evaluating the Test
- Full blast implementation/Rollout of ICT-based strategies including monitoring and evaluation between and among participating MFIs

Through the replication and pilot testing activities including the assessment of ICT preparedness and the exposure study visit to understand and learn the different ICT based strategies, models, practices including devices in Cambodia and India, much has to be done for a full blast of activity. The activities conducted have proven that Cambodia must continue to respond and be attuned to the changing condition of the national, regional and global financial sector. It is only by going through its initial step of setting a well-prepared microfinance sector dealing with agriculture and other small businesses that they can be considered competitive and could respond appropriately in this changing times. Nonetheless, it is a good opportunity to think about and learn from well-established and practicing countries whose ICT capacity and capability have evolved through time.

Understanding the process flow of ICT based Financial Solutions

During the final activity of the Phase 2 activities, the following sessions were conducted to encourage the Cambodia MFI representatives to validate, evaluate and have first-hand appreciation of ICT based financial solutions in India. The activity was coordinated by *MicroSave* located in Lucknow, India on 6 to 10 October 2014. Table 10 shows the summary of key observations and learnings of the Cambodia MFI representatives/team in relation to the ICT based models/solutions (Agent Outlets).

Table 9. Key observations and learnings on the different ICT based Models (Agent Outlets)

Location	ICT Based Models (Agent Outlets)	Key Observations and Learnings
Lucknow, India	Airtel Money Agent Outlet	<ul style="list-style-type: none"> • Agent interaction – To understand agent and customers' experience with Airtel Money • Airtel Money account opening – Front end process • Liquidity and Cash Management Process • Transactions like deposit, withdrawal, money transfer, mobile recharge using mobile phone
Sitapus, India	HDFC Agent Outlet	<ul style="list-style-type: none"> • Agent interaction – To understand agent and customers' experience with HDFC's POS based financial model • HDFC account opening – Front end processes at agent outlet • Liquidity and Cash Management Process • Transactions like deposit, withdrawal, balance enquiry through POS
Lucknow, India	SBI Kiosk Agent Outlet	<ul style="list-style-type: none"> • Agent interaction – To understand agent and customers' experience with SBI's Kiosk based banking model • Front end processes at agent outlet • Liquidity and Cash Management Process • Transactions like deposit, withdrawal, money transfer through POS

Mobile Money based Financial Services

The session covered brief overview of Mobile Money models. The presentation also covers the model adopted by Airtel (MNO) in partnership with Axis Bank. The session involved detailed discussions on product, processes, stakeholders involved, viability of model, and benefits along with challenges.

The session also presented a case of Sonata Microfinance which pilot tested loan repayment using Mobile Money model. After the classroom session, the team visited Airtel Money's Agent outlet for practical demonstration.

POS Based Model

The presentation explains the POS based model adopted by HDFC Bank. The classroom session also involved detailed discussions on features of POS Machine, financial transactions done through POS, account opening process, liquidity management, and viability of the model. After the classroom session, the team visited HDFC Bank agent outlet for practical demonstration.

Kiosk Banking Model

The session covered brief overview of what is Kiosk Banking and the requirements for setting up Kiosk. The presentation explained the Kiosk based banking model adopted by State Bank of India. The session involved detailed discussions on agent selection, transaction processes, liquidity management, viability of model, benefits of model and challenges of model. After the classroom session, the team visited SBI Kiosk agent outlet for practical demonstration.

Lessons Learned

- With the use of ICT based strategies and models including devices and practices, it addresses the challenges that financial institutions face when serving low-income customers in particular, including illiteracy, information asymmetry, inadequate infrastructure, security, and most importantly the high cost relative to transaction size.
- Financial policies related to the use of information and communication technology(ies) must be developed and implemented in such a way that all concerned will be advised and well-informed especially in the delivery of services to the poor.
- It requires a comprehensive and holistic understanding of the rural landscape in order that services using ICT will be beneficial and appropriate to the needs of the local people especially those requiring constant financial or business transactions.
- It is still a far reach aspect in Cambodia to have localized fully installed ICT based financial services. Given the condition in the most areas, in particular the rural areas, much is still to be done in order that this will be an accepted and adapted scheme to do any forms/kinds of transaction.
- Once installed and running, the ICT based solutions for the rural sector will surely overcome the identified barriers to achieve financial sustainability and scale in serving the under-banked populations especially in the rural areas.
- There are several practices and ICT based financial strategies available with proven benefits to the clientele and the financial institutions concerned. However, it must be noted that only if the resources including the local people and communities are prepared and have change their financial behaviour and attitude, the use of ICT will be full realized to improve their living condition.
- Change is one of the hardest issue confronted by the MFIs in the rural areas. Although, this is slowly being addressed, the locals including their clients still believe that visibility and a presence of financial institutions and agents (bank officer) is the proven guarantee of the people when transacting any businesses involving money.

CHAPTER 4

Summary, Conclusion and Recommendation

4.1 Summary

Undergoing this kind of activity is very tedious yet relevant considering that limited amount of time to make conclusive and effective implementation of activities. Much have been learned in the process by the different participants including their respective institutions whose main role and responsibility is to improve the present condition of its clientele through effective and efficient means of access to financial products and services.

The engagement of these MFIs in the process of assessing its ICT preparedness towards a secured and sustainable operation of microfinance in agriculture through the use of information and communication technology(ies) including strategies, models, devices and practices is a welcome treat which boosts the level of confidence of these institutions. Needless to say, there is an opportunity for change which enables the MFIs to grow and improve their operation and system by employing state-of-art technologies and dynamic processes. These are necessary for increased production and profit in both levels.

The conduct of this activity, must be continuous as part of the MFIs journey to learn new trends, ideas and insights in rural financing. Given the vast experiences of partner institutions, they must be always tapped for the exchange of experiences and sharing of lesson learned. The technical expertise shown by MicroSave surely helped the Cambodian MFIs to understand clearly their present condition which is vital in the decision of improving their financial system. The development of policies and installing the necessary ICT infrastructure and tools must be in placed to determine the progress and success of operation.

Furthermore, the different ICT based strategies and tools are common to all and are available. However, its acceptability, application and adaptability are determined by the people installing and clientele utilizing them. As such, documentation and further research must be done to analyze and evaluate further its effect to the overall operation in improving the utilization of ICT vis-à-vis in rural finance and agricultural development. Four type of front end ICT technologies can be used by MFIs in Cambodia. However, mPOS and POS can be pilot tested and replicated (Table 10a, 10b and 10c).

Table 10a. Comparative Study of ICT technology applicable for Cambodia MFIs and Banks

	POS	mPOS	Mobile Wallet	Kiosk Banking
With Regards to MFI and Bank				
Fixed Cost (Back-end infrastructure)	Medium Investment	Medium Investment	Very High	Less
Operating Cost (Recurring expenditure)	Medium	Medium	High	Medium
Connectivity	Device work in remote places provided 2G/3G connectivity present	Device work in remote places provided 2G/3G connectivity present	Mobile Wallet will work provided telecom network is present	Device may not work in rural places as it require internet connectivity
Cash Collection Risk	Transferred to Agent	Transferred to Agent	Transferred to Agent	Transferred to Agent

Table 10b. Comparative Study of ICT technology applicable for Cambodia MFIs

	POS	mPOS	Mobile Wallet	Kiosk Banking
With Regards to Agent				
Fixed Cost (Front end infrastructure)	Medium Investment	Low investment	Very Low Investment	Very High Investment
Operating Cost (Recurring expenditure)	High	Low	Very Low	Very High (Most Expensive)
Agent's Ease to Handle	Medium	Easy	Easy	Difficult

Table 10c. Comparative Study of ICT technology applicable for Cambodia MFIs

	POS	mPOS	Mobile Wallet	Kiosk Banking
With Regards to Client				
Ease to Operate	Easy	Easy	Difficult	Easy
SMS to Client	Possible	Possible	Must receive	Possible
Physical Receipt to Client	Possible	Possible	Must receive	Possible

4.2 Conclusion

The banking penetration is very low in Cambodia as evident from the fact that 85 percent* of Cambodians do not have a bank account. In-depth discussion with MFIs further revealed that rural people accessibility to financial services is very poor in the country. The rural people face challenges as they have to travel a long distance ranging from 15-20 Km to reach the nearest MFI branch office. Focus group discussion with rural clients also brought forward the following issues with regard to access to financial services:

- Loan instalment: The Operational area of the MFI branch ranges from 15-20 kilometers. So, client has to travel up to 15-20 Km to deposit loan instalment at the MFI branch.
- Savings: Rural target segment wants to save a small amount on regular basis. But because of high transportation expenses they are not able to save.

- Withdrawal: Client has limited access to withdrawal as there is no ATM or branch in the rural areas
- Transfer and Payment Facilities: For remittances client is dependent on informal channels and money transfer service provided at high cost
- Cultural Disconnect: Client does not feel convenient in terms of instant service and support from bank staff in the commercial bank.

Existing and Planned ICT Enabled Services of visited MFIs is not effective to achieve universal access to financial services

- ATM cannot be replicated in rural areas: a) Opening ATM in rural areas might not be a business viable option for financial institutions b) Existing ATMs of MFIs are in urban areas
- Planned ICT such as Internet Banking on Mobile Phone and POS at Branches will not be very effective for rural clientele: a) Internet Banking will have lower uptake in rural areas b) Installing POS Machine at branches will only decongest the branches and decrease the service time.

4.3 Recommendation

ICT Enabled Services that can be replicated to increase the access of financial Services to achieve universal access

- Leverage Services of Mobile Payment Service Provider like Wing Cambodia for loan repayment
- Branchless Banking through Agents (Employee/Third Party) – It offers a lower operational cost relative to other existing channel.
- Branchless Banking through ICT enabled solution through agents (employee network/third party agents) using mPOS and POS as front end technology can be pilot tested and replicated.
- However, other ICT based solutions like ‘kiosk banking’ and ‘mobile wallet’ seems hard to be replicated by MFIs.

Annexes

Annex 1a

The Cambodian and MicroSave Teams during the Exposure Study Visit at the MicroSave Office visit



OFFICIAL LIST OF THE PARTICIPANTS

Replication and Pilot Testing of ICT
(Phase 2 – Exposure Study Visit on 6 to 9 October 2014
at MicroSave, Lucknow, India)

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PRASAC Microfinance Institution

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Analyst and Resource Speaker

MR. PRIYANK MISHRA

Analyst and Resource Speaker

Annex 1b

OFFICIAL LIST OF THE PARTICIPANTS

Replication and Pilot Testing of ICT
(Phase 1 – Assessment of Cambodia Financial Sector)
5-9 May 2014
Phnom Penh, Cambodia

Name	Position	Institution
MENG SAKPHOUCETH	IFAD Country Presence Officer	IFAD-Ministry of Agriculture and Forestry
NEAM BORAK	Credit officer	Rural Development Bank
RO NARAN	Information Technology Officer	Rural Development Bank
TOUN VOUTH	MISD Head	Sathapana Limited
NEAV SOKUN	Credit Manager	Sathapana Limited
LIM AUN	Chief Operating Officer	Sathapana Limited
BUN MONY	President and CEO	Sathapana Limited
SOUNG SOPHALRITHY	Deputy Credit Manager	Sathapana Limited
POU CHHIANGHONG	Division Chief	National Bank of Cambodia
LUN SAM OL	Deputy Director	National Bank of Cambodia
CHOU SOPHALLA	Deputy Section Chief	National Bank of Cambodia
SOM KOSSOM	Division Chief	National Bank of Cambodia
SOK SOPHAKTRA	Deputy Division Chief	National Bank of Cambodia
CHHAY VANNDY	Bank Officer	National Bank of Cambodia
DAVID KHEM	Marketing Head	PRASAC Microfinance Institution
LAING KHAN	Credit Product Development Unit Manager	PRASAC Microfinance Institution
SEU SOTHEA	Deputy Core Banking Head	PRASAC Microfinance Institution
LY SOPHEAKTRA	IT Manager	PRASAC Microfinance Institution
HEANG YOLENG	Policy and Procedure Unit Manager	PRASAC Microfinance Institution
LY SIVEN	Credit Director	Hattha Kaksekar Limited
TOUCH LINA	Chief Operating Officer	Hattha Kaksekar Limited
ROS NARETH	Help Desk Unit	Hattha Kaksekar Limited

Annex 2a

Phase 1 REPLICATION AND PILOT TESTING SCHEDULE (Assessment of Cambodia Finance Sector)

- Operational Meeting held on 5 May 2014 at the PRASAC MFI Executive Conference Room



The Operational Meeting with the Cambodia MFIs for the Replication and Pilot Testing of ICT Solutions to improve microfinance access by rural people and communities



Meeting with the National Bank of Cambodia officer on 5 May 2014 at the Central Bank Headquarters, Phnom Penh, Cambodia. The meeting focused on the importance of the ICT replication and pilot testing activity including NBC's views on improving the acceptability, adaptability and applicability of ICT in microfinance and financial policy development.

- NBC Briefing-Meeting and Field visits (6 to 8 May 2014) – PRASAC, Sathapana and Hattha Kaksekar Limited including branch offices and their clients in Kandal Province



*Mr. Ly Sopheakhtra, IT Manager of PRASAC presenting the ICT program (left photo)
Mr. Ravi Kant (center, second photo) together with the PRASAC ICT and Marketing Team during
the meeting on 6 May 2014 at the PRASAC MFI Main Office.*



*Mr. Lina Touch, Chief Operating Officer of HKL presenting the ICT Plans and Programs (left photo)
on 7 May 2014 at the HKL Main Office.
The HKL IT team with Mr. Ravi Kant during the meeting/assessment activity (right photo).*



*Mr. Bun Mony, CEO (center, right photo) together with Mr. Lim Aun, COO and Mr. Neav Sokun
(head of Credit of Sathapana Limited) during the assessment of ICT in Cambodia.
The Sathapana Limited officers together with Mr. Ravi Kant (center) and Dr. Marlowe U. Aquino
(second from right, left photo)*



Conduct of focus group discussions to the Sathapana Limited clientele in Kandal Province, Cambodia



Farm visit and key informant interview of one of the clientele of HKL in Kandal Province, Cambodia



Exit Meeting held on 9 May 2014 held at the PRASAC MFI Executive Conference Room.

Annex 2b

Phase 2 REPLICATION AND PILOT TESTING SCHEDULE (Exposure Study Visit)

Schedule for Exposure Visit of Delegation from Cambodia			
October 06-08, 2014			
Time	Planned Activity	Expected Outcome	Presenter
Day 1: October 06, 2014			
Day 1 Topic: Mobile Money Model			
09:00–09:30	Introduction meeting to discuss following:		Ravi Kant, <i>MicroSave</i>
	• Mission agenda – drawing the objectives		
	• Setting expectations	• Feedback on the agenda	
	• Schedule for the visit and update on logistics	• Clarity on the days ahead – technical and logistics	
09:30–11:00	Presentation on Airtel’s Mobile Money Model	Understanding of following:	Ritesh Dhawan, <i>MicroSave</i>
	• Overview of Mobile Money concept	• Different types of Mobile Wallet- Closed, Semi Closed and Open	
	• Products and services offered through mobile money	• Key Developments in Mobile Money Model	
	• Processes (Account opening, Deposit, Withdrawal, money transfer etc.)	• Practical application of Mobile Money	
	• Key Stakeholders involved and their roles	• Benefits and challenges for multiple stakeholders	
	• Key Challenges	• Challenges in rolling out such service	
11:00–11:30	Tea-break		
11:30–13:30	Case: Sonata Microfinance and Mobile Money	Understanding of following:	Nishant Kumar and Akhilesh Singh, <i>MicroSave</i>
	• Overview of the model	• Core value proposition of model for MFI	
	• Stakeholders involved and their roles	• Value proposition for each stakeholder	
	• Process of loan repayment through mobile money	• Benefits of loan repayment through mobile money	
	• Key challenges	• Key challenges faced by Airtel and Sonata for rolling out the service	
	• Recommendations		
13:30-14:30	Lunch Break		
14:30–16:00	Field Visit to Airtel Money Agent	Demonstration of key processes of Airtel Money – Account opening, Deposit, Withdrawal, money transfer and Liquidity Management	Ritesh Dhawan, <i>MicroSave</i>
	• Interaction with Airtel Money agent	To understand following: 1. Liquidity Management requirements for agent 2. Footfall per day at outlet 3. Commission paid to agent for transactions and account opening	

		<ul style="list-style-type: none"> 4. Viability of Airtel Money business 5. Customer experience with Airtel Mobile Money 6. Services of Airtel Money popular with customers 7. Challenges faced by agent and customers with Airtel Money 	
16:00–16:30	Tea-break		
16:30–18:00	<ul style="list-style-type: none"> Day end de-briefing and Question and Answer 	<ul style="list-style-type: none"> Critical analysis of key learning Resolve the queries of delegation related to processes and systems of Mobile Money 	Ritesh Dhawan, <i>MicroSave</i>
Day 2: October 07, 2012			
Day 2 Topic: POS based Model			
09:00–11:00	Presentation on POS based Model	Understanding of following:	
	<ul style="list-style-type: none"> Overview of POS Based model Key Stakeholders involved and their roles Products and services offered through POS model 	<ul style="list-style-type: none"> POS based technology Benefits and challenges for multiple stakeholders Key Developments in POS based Model 	Nishant Kumar and Ila Tripathi, <i>MicroSave</i>
11:00–11:30	Tea-break		
11:30–12:30	<ul style="list-style-type: none"> Processes (Account opening, Deposit, Withdrawal, money transfer, documents to be maintained by agent etc.) POS Model: Risk and Related Semantics BC Agent's Economics 	<ul style="list-style-type: none"> Practical application of POS based model Operational Expenses Profitability and viability 	Nishant Kumar and Ila Tripathi, <i>MicroSave</i>
12:30–13:30	Lunch Break		
13:30–14:30	Travel to Sitapur District – HDFC's BC agent		
14:30–16:00	Field Visit to HDFC's BC agent Interaction with HDFC's BC agent	<ul style="list-style-type: none"> Demonstration of POS based model – Deposit, Withdrawal and Liquidity Management To understand following: <ol style="list-style-type: none"> Liquidity Management requirements for agent Footfall per day at outlet Commission paid to agent for transactions Operational expenses Viability of HDFC BC Model Customer experience with HDFC BC Model Services offered at Agent Outlet Challenges faced by agent and customers with HDFC BC Model 	Nishant Kumar, <i>MicroSave</i>
16:00–16:30	Tea-break		
16:30–18:00	<ul style="list-style-type: none"> Day end de-briefing and Question and Answer 	<ul style="list-style-type: none"> Critical analysis of key learning Resolve the queries of the team related to POS based model 	Nishant Kumar, <i>MicroSave</i>

Day 3: October 08, 2014			
Day 3 Topic: Kiosk based Model			
09:00–11:00	Presentation on Kiosk based Model	Understanding of following:	Priyank Mishra, <i>MicroSave</i>
	<ul style="list-style-type: none">• Overview of Kiosk Banking	<ul style="list-style-type: none">• Kiosk based technology• Requirements for setting up kiosk	
	<ul style="list-style-type: none">• Key Stakeholders involved and their roles	<ul style="list-style-type: none">• Benefits and challenges for multiple stakeholders	
	<ul style="list-style-type: none">• Products and services offered through Kiosk Banking	<ul style="list-style-type: none">• Key Developments in Kiosk based Model	
11:00–11:30	Tea-break		
11:30–13:00	<ul style="list-style-type: none">• Processes (Account opening, Deposit, Withdrawal, money transfer, documents to be maintained by agent etc.)	<ul style="list-style-type: none">• Practical application of POS based model	Priyank Mishra, <i>MicroSave</i>
	<ul style="list-style-type: none">• Kiosk Banking Economics	<ul style="list-style-type: none">• Operational Expenses• Profitability and viability	
13:00–14:00	Lunch Break		
14:00–16:00	Field Visit to SBI Kiosk Banking Agent	<ul style="list-style-type: none">• Demonstration of key processes of Kiosk Banking – Account opening, Deposit, Withdrawal, money transfer and Liquidity Management	Priyank Mishra, <i>MicroSave</i>
	<ul style="list-style-type: none">• Interaction with SBI Kiosk Banking agent	To understand following: <ol style="list-style-type: none">1. Liquidity Management requirements for agent2. Footfall per day at outlet3. Commission paid to agent for transactions and account opening4. Viability of Kiosk Banking business5. Customer experience with Kiosk Banking6. Services of Kiosk Banking popular with customers7. Challenges faced by agent and customers with Kiosk Banking	
16:00–16:30	Tea-break		
16:30–18:00	<ul style="list-style-type: none">• Day end de-briefing and Question and Answer	<ul style="list-style-type: none">• Critical analysis of key learning• Resolve the queries of team related to Kiosk Banking model	Priyank Mishra, <i>MicroSave</i>

Annex 3

Cambodia MFIs (PRASAC MFI, Sathapana Limited and Hattha Kaksekar Limited) Plans and Program and Challenges (2014 to 2016)

1. ICT Plans and Programs of Cambodia MFIs

PRASAC MFI, Sathapana Limited and Hattha Kaksekar Limited have their own ICT Plans and Programs. These plans considered and incorporated the policies and regulations set by the National Bank of Cambodia which oversees the implementation and operations of MFIs.

The following are the plans and programs:

Sathapana Limited

- Institutionalize the utilization of Flexcube as the institution's core banking system; practice inter-branch transaction for loan payment, deposit and withdrawal
- Plan to launch 12 ATMs in May 2014 and expect to increase another 20 machines in 2015

PRASAC MFI

- ICT is viewed as an important component to be client-responsive including competitive; ICT-based activities are in the pipeline for implementation such as bill payment and mobile top-up, internet and mobile banking, messaging gateway, use of credit card, cash deposits through ATMs and use of point of sale/service (POS) for greater reach

Hattha Kaksekar Limited (HKL)

- ICT is very encouraging aspect to improve operation. The HKL is looking for avenues to include ICT-based financial platforms in their banking system. Plans are developed but needs further deliberation to include internet mobile banking, loan payments and repayments, increase reach by supporting SMEs and incorporating ICT strategies and tools in transactions

2. Challenges of MFIs in relation to ICT

Sathapana Limited

- The knowledge and skills of staff to do the implementation, monitoring and evaluation of ICT-based financial platform; there is a need to understand the overall framework of ICT platform for effective and efficient management
- The set-up of ICT to support the operation of the MFIs required additional resources on technical, human and financial aspects
- The need to encourage and convince customer/clientele behaviour must be properly addressed

PRASAC MFI

- Target clientele are mostly found in rural areas making it difficult for skilled resources to reach
- There is poor infrastructure and inability of the poor rural people to offer collateral
- No credit history available of most rural people and target clientele
- Low value and high volume transactions
- High transaction costs
- Prevalence of risks especially on risk fraud and for tracing of identity' risk of default and low income group

Hattha Kaksekar Limited (HKL)

- Risk in cash transfer
- Capability of MFI officers to manage the operating using ICT
- Need for enhanced and financial education/literacy for rural people and communities
- Setting up of ICT infrastructure to address the increasing demand and changing requirements for effective and efficient system



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