

WORKING PAPER NO: 474

Financial Inclusion in India: Select Issues

Charan Singh

*RBI Chair Professor
Economics & Social Science
Indian Institute of Management Bangalore
Bannerghatta Road, Bangalore – 5600 76
Ph: 080-26993818
charansingh@iimb.ernet.in*

Akanksha Mittal

*PGP Student, IIMB
Akanksha.mittal13@iimb.ernet.in*

Akshay Goenka

*PGP Student, IIMB
akshay.goenka13@iimb.ernet.in*

Cirigani Rahul Pramod Goud

*PGP Student, IIMB
rahul.pramod13@iimb.ernet.in*

Karthik Ram

*PGP Student, IIMB
karthik.ram13@iimb.ernet.in*

Rathi Vaibhav Suresh

*PGP Student, IIMB
vaibhav.rathi13@iimb.ernet.in*

Ravi Chandrakar

*PGP Student, IIMB
ravi.chandrakar13@iimb.ernet.in*

Ritesh Garg

*PGP Student, IIMB
ritesh.garg13@iimb.ernet.in*

Ujjaval Kumar

*PGP Student, IIMB
ujjaval.kumar13@iimb.ernet.in*

Year of Publication –November 2014

Financial Inclusion in India: Select Issues¹

Abstract

As the majority of the rural population is still not included in the inclusive growth, the concept of financial inclusion becomes a challenge for the Indian economy. Since 2005, many concerted measures are initiated by the Reserve Bank of India and Government of India in favor of financial inclusion but the impact of these did not yield satisfactory results. The paper aims to focus on utilizing the existing resources such as Mobile phones, Banking Technologies, India Post Office, Fair Price Shops and Business Correspondents (BCs) thereby making it more efficient and user friendly for the interest of the rural population as well as the formal sector.

Keywords: Financial inclusion, Business correspondents, Indian economy,

¹ The paper is based on field research and extensive consultation with former members of the Reserve Bank of India – Dr. D. Subbarao, Dr. K. C. Chakrabarty and Usha Thorat. The authors extend their sincere gratitude to G. P. Ray, K. Virupaksha, Umesh Rao, Suresh Rao, Bhanu Gode, Manish Raina, Amit Seth, Fayaaz Hussain, Vasanth Nayak, CV Rao, C.S. Ballal, S.S. Bhat, S. Anantha and Shardul Lavekar for their support and inputs during the duration of the project. The field visits were undertaken in the villages of Tumkur district and different places/post offices in Bangalore. The paper benefitted from research assistance by Shara Bhattacharjee.

Introduction

With the progress of the Indian economy, especially when the focus is on the achievement of sustainable development, there must be an attempt to include maximum number of participation from all the sections of the society. But the lack of awareness and financial literacy among the rural population of the country is hindering the growth of the economy as majority of the population does not have access to formal credit. This is a serious issue for the economic progress of the country. In order to overcome such barriers, the banking sector emerged with some technological innovations such as automated teller machines (ATM), credit and debit cards, internet banking, etc. Though introduction of such banking technologies brought a change in the urban society, a majority of the rural population is still unaware of these changes and is excluded from formal banking.

Financial inclusion enables improved and better sustainable economic and social development of the country. It helps in the empowerment of the underprivileged, poor and women of the society with the mission of making them self-sufficient and well informed to take better financial decisions. Financial inclusion takes into account the participation of vulnerable groups such as weaker sections of the society and low income groups, based on the extent of their access to financial services such as savings and payment account, credit insurance, pensions etc. Also the objective of financial inclusion exercise is easy availability of financial services which allows maximum investment in business opportunities, education, save for retirement, insurance against risks, etc. by the rural individuals and firms.

The penetration of financial services in the rural areas of India is still very low. The factors responsible for this condition can be looked at from both supply side and demand side and the major reason for low penetration of financial services is, probably, lack of supply. The reasons for low demand for financial services could be low income level, lack of financial literacy, other bank accounts in the family, etc. On the other hand, the supply side factors include no bank branch in the vicinity, lack of suitable products meeting the needs of the poor people, complex processes and language barriers.

Since 2005, the Reserve Bank of India (RBI) and the Government of India (GOI) have been making efforts to increase financial inclusion. Measures such as SHG-bank linkage program, use of business facilitators and correspondents, easing of Know Your Customer (KYC) norms, electronic benefit transfer, separate plan for urban financial inclusion, use of mobile technology, bank branches and ATMs, opening and encouraging 'no-frill-accounts' and emphasis on financial literacy have played a significant role for

increasing the use of formal sources for availing loan/ credit. Measures initiated by the government include, opening customer service centers, credit counselling centers, Kisan Credit Card, Mahatma Gandhi National Rural Employment Guarantee Scheme and Aadhar Scheme. These renewed efforts are more focused than the earlier measures which were more general in nature having a much wider scope. Though the measures were initiated earlier, their impact on the rural population needs to be analysed and reframed in order to understand the present scenario in the rural areas.

This paper is arranged in six sections. The definition of financial inclusion is presented in Section II. A detailed analysis of the dimensions of financial inclusion is discussed in Section III. Section IV presents a brief review of literature. An analysis of the performance of Banking correspondents and role of India Post Office, Fair Price Shops, Banking Technology and Mobile Banking in financial inclusion are discussed in Section V. Section VI presents conclusions and recommendations.

Section II: Definition of Financial Inclusion

According to the Planning Commission (2009), *Financial inclusion refers to universal access to a wide range of financial services at a reasonable cost. These include not only banking products but also other financial services such as insurance and equity products.* The household access to financial services includes access to contingency planning, credit and wealth creation. Access to contingency planning would help for future savings such as retirement savings, buffer savings and insurable contingencies and access to credit includes emergency loans, housing loans and consumption loans. On the other hand, access to wealth creation includes savings and investment based on household's level of financial literacy and risk perception.

GOI (2008) defines Financial inclusion as *the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost.* The meaning of financial inclusion is delivery of financial services to the low income groups especially the excluded sections of the population with the provision of equal opportunities. The main target is the access of financial services for better standard of living and income.

According to Chakraborty (2011), *Financial inclusion is the process of ensuring access to appropriate financial products and services needed by all sections of society including vulnerable groups such as weaker sections and low income groups at an affordable cost in a fair and transparent manner by mainstream institutional players.* This issue started gaining importance recently in the news media.

However, as is the case with several issues in India, financial inclusion has remained a pipe dream with a majority of Indians continuing to lack access to banking services.

Section III: Dimensions of Financial Inclusion

The level of financial inclusion in India can be measured based on three tangible and critical dimensions. These dimensions can be broadly discussed under the following heads:

I. Branch Penetration

Penetration of a bank branch is measured as number of bank branches per one lakh population. This refers to the penetration of commercial bank branches and ATMs for the provision of maximum formal financial services to the rural population.

II. Credit Penetration

Credit Penetration takes the average of the three measures: number of loan accounts per one lakh population, number of small borrower loan accounts per one lakh population and number of agriculture advances per one lakh population.

III. Deposit Penetration

Deposit penetration can be measured as the number of saving deposit accounts per one lakh population. With the help of this measure, the extent of the usage of formal credit system can be analysed.

Among the three dimensions of financial inclusion, credit penetration is the key problem in the country as the all India average ranks the lowest for credit penetration compared to the other two dimensions. Such low penetration of credit is the result of lack of access to credit among the rural households. Therefore, the problem of low penetration needs to be understood more deeply. An attempt has been made to study the problem by examining the progress of financial inclusion over the years and efforts made by the government for reducing the low penetration of credit.

The progress in the development of financial inclusion in India can be examined by understanding the stages involved in it. The concept of examining financial access became important immediately after the All-India Rural Credit Survey that was completed in the 1950s. The results of the survey revealed that farmers relied heavily on money-lenders in the year 1951-52. Only the urban areas had large number of bank branches compared to rural areas. Such a condition continued in the country until RBI started financial inclusion growth model in the 2000s. Because the urban areas were fully concentrated with numerous bank branches, this resulted in the higher absorption of bank credit in the urban areas. Thus, the

growth of the private business credit was seen in the year 1957-61 from 44 percent to 60 percent in the year 1970².

Therefore, for increasing the level of financial inclusion, the GOI and RBI have taken few actions which include the following:

- Nationalization of banks (1969, 1980)
- Priority Sector Lending requirements
- Establishment of Regional Rural Banks (RRBs) (1975, 1976)
- Service area approach (1989)
- Self-help group-bank linkage program (1989,1990)

The other measures taken by GOI, RBI and National Bank for Agriculture and Rural Development (NABARD) are shown in Table 1.

Table 1

Measures taken by GOI, RBI and NABARD

Customer Service Centres	Role of NGOs, SHGs and MFIs	Financial Inclusion Technology Fund
Credit Counselling Centres	BF and BC models	Separate Plan for Urban Financial Inclusion and Electronic Benefit Transfer Scheme
Adhaar Scheme	Micro Pension Model	Financial Literacy through Audio Visual medium - Doordarshan
The National Agricultural Insurance Scheme	Nationwide Electronic Financial Inclusion System	Support to Cooperative Banks and RRBs for setting up of Financial Literacy Centres
No-frill Account	Project Financial Literacy	Farmers' Club Program
Know Your Customer General Credit Card	National Rural Financial Inclusion Plan	Rural Volunteers as Book Writers
Project on Processor Cards	Financial Inclusion Fund	
Micro Finance Development Fund	Project on "e-Grama" SHG-Post Office Linkage	

Source: RBI, Economic Survey, Government of India, Various Issues.

Though a number of measures have been initiated by the GOI, RBI and NABARD, the status of financial inclusion in the country still needs more support. The condition of financial inclusion in the different

² RBI (2014).

states of India in 2002 was not encouraging (Table 2). It shows that the all India percentage of the level of non-indebtedness, i.e. level of not accessing formal credit, of the rural household is 51.4 percent. This low credit penetration after years of measures was a matter of concern.

Table 2**Financial Inclusion in India – 2002**

State/Region	Non-indebted Farmer Households		State/Region	Non-indebted Farmer Households	
	Lakh	%		Lakh	%
Northern	53.21	48.7	West Bengal	34.53	49.9
Haryana	9.11	46.9	Central	158.29	58.4
Himachal Pradesh	6.03	66.6	Chhattisgarh	16.50	59.8
Jammu & Kashmir	6.43	68.2	Madhya Pradesh	31.09	49.2
Punjab	6.38	34.6	Uttar Pradesh	102.38	59.7
Rajasthan	25.26	47.6	Uttaranchal	8.32	92.8
North Eastern	28.36	80.4	Western	47.92	46.3
Arunachal Pradesh	1.15	94.1	Gujarat	18.20	48.1
Assam	20.51	81.9	Maharashtra	29.72	45.2
Manipur	1.61	75.2	Southern	44.11	27.3
Meghalaya	2.44	95.9	Andhra Pradesh	10.84	18.0
Mizoram	0.60	76.4	Karnataka	15.52	38.4
Nagaland	0.51	63.5	Kerala	7.82	35.6
Tripura	1.19	50.8	Tamil Nadu	9.93	25.5
Sikkim	0.36	61.2			
Eastern	126.39	60.0			
Bihar	47.42	67.0			
Jharkhand	22.34	79.1			
Orissa	22.09	52.2	All India	459.26	51.4

Source: GOI (2008).

In recent years, the CRISIL Inclusix index for 2009 and 2010 also shows a dismal situation (Table 3), although, 2011 shows some progress in the development of financial inclusion in India. Table 4 shows the further progress of all banks that are associated with financial inclusion including RRBs.

Table 3

Financial Inclusion at regional level

Region	Inclusix 2011	Inclusix 2010	Inclusix 2009
India	40.1	37.6	35.4
Southern Region	62.2	58.8	54.9
Western Region	38.2	35.8	33.9
Northern Region	37.1	34.8	33.3
Eastern Region	28.6	26.3	24.3
North-Eastern Region	28.5	26.5	23.8

Source: CRISIL (2013).

Table 4

Financial Inclusion Progress: Banks and RRBS

	Year ended March 2010	Year ended March 2014
Banking Outlets in Villages- Branches	33,378	46,126
Banking Outlets in Villages- Branchless Mode	34,316	3,37,678
Banking Outlets in Villages- Total	67,694	3,83,804
Urban Locations covered through BCs	447	60,730
Basic Savings Bank Deposit A/c through branches (No. in million)	60.2	126.0
Basic Savings Bank Deposit A/c through branches (Amt. in billion)	44.3	273.3
Basic Savings Bank Deposit A/c through BCs (No. in million)	13.3	116.9
Basic Savings Bank Deposit A/c through BCs (Amt. in billion)	10.7	39.0
Basic Savings Bank Deposit Accounts Total (No. in million)	73.5	243.0
Basic Savings Bank Deposit Accounts Total (Amt. in billion)	55.0	312.3
Overdraft facility availed in Basic Savings Bank Deposit Accounts (No. in million)	0.2	5.9
Overdraft facility availed in Basic Savings Bank Deposit Accounts (Amt. in billion)	0.1	16.0
KCCs – (No. in million)	24.3	39.9
KCCs – (Amt. in billion)	1,240.1	3,684.5
GCC - (No. in million)	1.4	7.4
GCC - (Amt. in billion)	35.1	1,096.9
Information and Communication Technology A/Cs-BC-Transaction - (No. in million) (During the year)	26.5	328.6
Information and Communication Technology A/Cs-BC-Transactions - (Amt. in billion) (During the year)	6.9	524.4

Source: RBI Annual Report (2013-14).

Section IV: Review of Literature - Select Studies

RBI (2005) proposed financial inclusion based on the business facilitators/ business correspondent model, adapting the Brazilian success story in India. In 2005, efforts were made enabling banking services to reach the rural areas through credit facilities. While the banking network started expanding in the rural areas, there were still a majority of the population in rural areas without having access to banking services. The reasons behind these are: declining productivity of the rural branches of SCBs, digression of RRBs from their social objective of reaching out to the masses and the fragility of the cooperative credit structure. The report also identified supply and demand side reasons for the lack of penetration of banking services in the rural areas. The report mainly focused on further acceleration of efficient and effective delivery of credit to the rural farm and non-farm sectors and in order to achieve this, the suggestions provided by the committee in the report were broadly based on the three models such as business facilitator model, business correspondent model and microfinance model.

GOI (2008) examined financial inclusion as a delivery mechanism providing financial services at an affordable cost to the vast sections of the disadvantaged and low-income groups. The recommendations of the report focused on the following areas. First, financial inclusion should include access to mainstream financial products. Second, banking and payment services should be available to the entire population without discrimination. Third, promotion of sustainable development and generation of employment in rural areas should be a priority. Fourth, financial inclusion must be taken up in a mission mode and thereby suggested the constitution of a National Mission on Financial Inclusion (NMFI) in order to achieve universal financial inclusion within a specific time frame. Fifth, the Committee also recommended for the constitution of two funds with NABARD – the Financial Inclusion Promotion and Development Fund, and the Financial Inclusion Technology Fund for better credit absorption capacity among the poor and vulnerable sections of the country and also for proper and appropriate application of technology in order to facilitate the mandated levels of inclusion. In short, the report provided an understanding of one of the best ways to achieve inclusive growth through financial inclusion.

Kamath (2008) attempted to understand the impact of Micro-Finance Institution (MFI) loans on daily household cash flows by analyzing cash inflow and outflow patterns of borrowers of MFI and comparing with non-MFI households. The Financial diary methodology was used to collect the data and to keep track of 11 months expenditure pattern (September 2008 to August 2009) of the households of Ramanagar area, Karnataka, India, and the Principle Component Analysis (PCA) methodology was used

to analyze the data. The findings of the study highlighted some critical issues. First, repayment of one MFI loan was done by using other MFI loans. Second, maximum repayment of MFI loan exceeded the average income of the households (as the loans were taken before September 2008). Third, none of the loans were used for productive purpose instead they are used for consumption purpose. Fourth, the households (MFI and non-MFI) did not find right option to save excess liquidity. Fifth, during the pre-ban, indebted households spent majority of income on loan repayment, food, fuel, etc. and very little was being spent on non-food items. Whereas, non-indebted households spent their income on clothes, accessories, cosmetics, travel, etc. after the food expenditure. Sixth, there was a shift in the expenditure pattern during the post ban, indebted and non-indebted households started spending more on non-staple food such as meat, snacks, rice, jewellery, medical expenses, and travel. Seventh, the expenditure pattern of households with multiple MFI's during post ban has provided the opportunity to buy more rice and grain. Eighth, majority of the indebted households found difficulty in repaying the loans. As a result, multiple MFI loans were taken to repay the debt. Ninth, tacit pressure was placed by loan officers on the group members to avoid potential default of loans. Tenth, MFI's did not adopt fare mechanism for charging interest rates. Eleventh, MFI had lent money without assessing borrowers' debt coverage ratio (credit worthiness). In short, the MFI crisis occurred due to indebtedness of the households to the multiple MFI's, and MFI repayments came at the cost of food and travel.

Development Research Project (2013) attempted to understand the financial needs of poor in long-term and short-term by exploring, how surplus fund is used to meet short-term, long-term and emergency requirements to develop strategies for financial inclusion and designing financial products. The rural households follow their own strategies of cash management for their daily expenditure and thereby taking advantage of this, several informal financial institutions and instruments are serving this section of society. In this context, the report examines 107 households of Ernakulum district in Kerala, as was suggested by the RBI. The aim of the study was to understand the nature of the cash flows and outflows of a sample of poor households in the district. The project also analysed the cash flow management strategies of the poor households. Further assessment was done to analyse the structure of the financial assets and liabilities of the poor households. The project focuses on the saving patterns of the poor households and also examined factors responsible for the extent of dependence of the poor on formal and informal financial instruments /institutions for savings and credit. Two methods were used in this project for collecting data. First, sample of poor household using questionnaire and keeping a track using financial diary method of the same sample. Second, the analysis provided emphasis on rural and urban

classifications to give an overall picture of sample households. Further, the analysis captured broad category information of households with more details.

CRISIL (2013) measured the extent of financial inclusion in India in the form of an index. It makes use of the non-monetary aggregates for calculating financial inclusion. The parameters used by the CRISIL Inclusix took into account the number of individuals having access to various financial services rather than focusing on the loan amount. The three parameters of the index were branch, deposit and credit penetration. These parameters were updated annually and based on the availability of data, additional services such as insurance and microfinance were added. The key findings of the report were as follows: one in two Indians has a savings account and only one in seven Indians has access to banking credit; CRISIL Inclusix at an all-India level stood at a relatively low level of 40.1 for 2011 (on a scale of 100). In short, CRISIL gave ground-level information regarding the progress of financial inclusion in the country's rural and also in urban areas.

RBI (2014a) focused on the provision of financial Services to the small businesses and low income households. Among the main motives of the committee included designing principles for maximum financial inclusion and financial deepening and also framing policies for monitoring the progress in the development of financial inclusion in India. Thus, in order to achieve the goal of maximum financial inclusion and increased access to financial inclusion the committee proposed the following measures: provision of full-service electronic bank account; distribution of Electronic Payment Access Points for easy deposit and withdrawal facilities; provision of credit products, investment and deposit products, insurance and risk management products by formal institutions. The main findings of the report highlighted the following key issues. First, the majority of the small businesses were operating without the help of formal financial institutions. Second, more than half of the rural and urban population did not have access to bank account. Third, savings in terms of GDP have declined in 2011-12. To address these issues, the Committee recommended that each individual should have Universal Electronic Bank Account while registering for an Aadhar card. The committee also proposed for setting up of payments banks with the purpose of providing payments services and deposit products to small businesses and low income households. Also banks should purchase portfolio insurance which will help in managing their credit exposures. Further, the Committee recommended for setting up of a State Finance Regulatory Commission where all the state level financial regulators will work together. For the interest of the bank account holders, the committee recommended for the creation of Financial Redress Agency (FRA) for

customer grievance redress across all financial products and services which would coordinate with the respective regulator.

RBI (2014b) presented a report to study various challenges and evaluate alternatives in the domain of technology that can help large scale expansion of mobile banking across the country. The report divided the challenges into 2 broad categories – Customer enrollment related issues and Technical issues. Customer enrollment related issues include mobile number registration, M-PIN (mobile pin) generation process, concerns relating to security as a factor affecting on-boarding of customers, education of bank's staff and customer education. On the other hand, technical issues include access channels for transactions, cumbersome transaction process, and coordination with MNOs (Mobile Network Operators) in a mobile banking eco-system. The report has a detailed comparison of four channels of mobile banking - SMS (Short Message Service), USSD (Unstructured Supplementary Service Data), IVRS (Interactive Voice Response System) and Mobile Banking Application, and evaluates each one of them based on accessibility, security and usability. To resolve the different problems identified, the report suggests to develop a common mobile application, using SMS and GPRS channels, for all banks and telecom operators. The aforementioned application should enable the user to perform basic mobile banking operations such as enquiring his/her account balance, transfer and remittance of money. The application is expected to be developed in such a way that it provides a simple menu driven, interactive interface to the user. Such an application can be developed by combined efforts of telecom operators and banks. The application can be embedded on all new SIM cards, so that any person buying a new card has a pre-installed application. For customers already using SIM cards, the application can be transferred “over the air” (OTA) using a dynamic STK (SIM Application Tool Kit) facility.

Section V: Select Issues

Despite concerted efforts by the government, RBI and NABARD, issues related to financial inclusion need to be looked at more carefully in order to address them by taking appropriate measures. An attempt was made to study the key issues and current state of financial inclusion in the country by visiting villages in Karnataka and also examining the efficacy of the various measures undertaken by the authorities by talking to various stakeholders in the process – the targeted segment of population and people involved with implementing the process, for developing an alternative banking solutions to provide access to financial services to the unbanked people. Also an attempt has been made to identify the exact financial

needs and requirements of the targeted set and the various constraints that may hinder the success of any solution.

Among the key issues related to financial inclusion, the following needs proper attention: Low penetration of financial services, factors responsible for less efficiency of the BCs, lack of innovation in the banking technology, lack of trust in BCs and prospective alternatives like using post offices and fair price shops for bank related work, and hesitation in using mobile phones for availing financial services. Such key issues and the factors responsible for them have been discussed in the section.

1. Business Correspondents (BC) in improving the last mile delivery

Chief stakeholders in financial inclusion are: Government, RBI, commercial banks, non-profit organizations, policy members, and at village level, village influencers, and the common man. While the GOI and the RBI can provide some direction and strategic guidance, the last mile success hinges on banks and people with non-profit organisations and village influencers acting as key intermediaries.

The BC model acts as a support for improving the last mile delivery. Though the model claims to provide a number of financial services to the rural people, the constraints that hinder the success of the model also make it inefficient. Some of the issues are also related to the functioning of a Banking Kiosk and Ultra Small Branches (USBs) (Annex 3).

Commercial banks generally view the financial inclusion model as social service and not a profitable proposition that increases their customer base or the deposits. As per the RBI directives, the process of reaching out to any area by the bank with population greater than 2,000 becomes another barrier as such low numbers combined with minimal 8-10 transactions in kiosks and 30-40 transactions in Ultra Small Branches (USBs) per day makes this model non-profitable for the banks. An additional cap on the value of transactions not exceeding Rs. 10,000 and amount of liquidity maintained at these branches to be not more than Rs. 10,000 makes the model less scalable. The BCs (federations/individuals) earn inadequate amount per transaction, there being an upper limit of Rs. 12 per transaction to be earned by Federation run kiosks. All these factors along with the high operational costs in terms of land rent, internet, electricity, operator salaries, etc. allow these branches to merely breakeven. The kiosks and USBs have adequate technological equipment such as computer/laptop, printer, scanner, wifi/Dongle/wi-max, etc. A card reading machine that performs biometric and other functions like deposit, remittance etc. is also available at these locations. However, the cost of technology is high.

The role of intermediaries such as Business Correspondents (BCs) and Federations of Self Help Groups (SHGs) are considered to be very important for increasing the extent of financial inclusion in rural areas. However, the insights of the field visits (Annex 1) show that their effectiveness is limited by the following concerns:

a) Low aspirational value of BC as a profession

The eligibility criterion for being a BC is Class 10 education. The newer BC interviewed were looking at other job avenues or wanted to complete higher education. Whereas, those who had been BCs for over 1 year considered it to be service to the public, even at a low salary of Rs. 3,500 in addition to some transaction based variable. However, the income generated by the BC was not the only source of family income for these people. They either had alternative sources of income or other earning members in the family. Majority of them believed that being a BC could not be an alternative to studying, implying low aspirational value of the BC profession. The lack of permanency and growth opportunities are important reasons for the low value attached to the profession.

b) Lack of suitability of retired personnel as BCs

A lack of enthusiasm was observed among retired personnel for the idea of working as BCs. They feared that their independence would be curtailed if they were to take up the BC role and so they recommended involving working professionals. This led us to believe that existing school teachers would be able to better facilitate this process given the influence they wield in the everyday life of local residents.

c) Low transaction limits for Ultra Small Branches (USBs)

Prior to the announcement by the Prime Minister on August 15, 2014, the maximum rupee value of transactions permissible for USBs had been fixed at Rs. 5,000. The low transaction limit made it inconvenient for local citizens and the banker.

d) Preference for a brick and mortar branch

In the field visit, it was revealed that a large segment of the population was not comfortable with salesman like BC and preferred a brick and mortar branch for banking.

Federations expect more initiative from banks

Representatives from the Initiatives for Development Foundation (IDF) expressed a grouse that the initiative for setting up kiosks had been from their own-end with little support from the bank. They believed that this has resulted in the sustainability issues. It is time for banks to play the leading role in taking appropriate measures for the progress in the development of financial inclusion in rural areas.

2. Role of Post Office

By access to financial services, it is implied that people should have access to not only a bank account but also affordable credit facilities to conduct their businesses and insurance facilities to have financial security in case of troubles in the family. Alongside this, also lies covering the need for financial literacy where individuals are aware of and have information about various financial products and an understanding of pros and cons of investing their hard earned money in these products.

With respect to India, the problem presents a gigantic task at hand due to a large population of 1.3 billion where nearly 58 percent of the people not having access to banking services and this number is growing at a rapid pace with the high population growth rate. The low level of literacy and vast span of the country (inaccessible villages) adds to the scale of the problem for any workable solution to be implemented. This has led to creation of multiple solutions by various departments of GOI, which may cause duplication of efforts and repeat coverage of the same segment of population. Thus, there is a need for developing solution to the problem based on utilizing the synergy between existing resources and providing an implantable and sustainable solution.

Multiple initiatives have been undertaken by both GOI and the RBI to tackle the problem of giving the unbanked people an access to financial services. Many of these initiatives were entirely new schemes with little thought about synergy with other schemes existing in the system. The existing extensive network of post offices can be targeted by utilizing it as an alternative banking solution for the unbanked people. In this context, current banking facilities available for people at post offices have been explored and also their capabilities have been observed for the cause of financial inclusion at minimum cost and maximum synergies. In India, there are nearly 1,54,856 post offices as on March 31, 2013, with nearly ninety percent in rural areas (Table 5). State-wise distribution of post offices reveals that a large network in Bihar, Orissa, Madhya Pradesh and Uttar Pradesh can be useful to extend financial inclusion (Table 6).

Table 5

Number of Post Offices (Rural and Urban)

Year	Rural	Urban
2008-09	1,39,144	15,871
2009-10	1,39,182	15,797
2010-11	1,39,040	15,826
2011-12	1,39,086	15,736
2012-13	1,39,164	15,692

Source: India Post (2013).

Table 6

Number of Post Offices in Different States

States	Number of Post offices			
	2008-09	2009-10	2010-11	2011-12
Andhra Pradesh	16,149	16,147	16,141	16,141
Assam	4,006	3,996	4,004	4,007
Bihar (including Jharkhand)	9,056	9,057	9,055	9,057
Chhattisgarh	3,122	3,123	3,125	3,127
Delhi	571	573	575	576
Gujarat	8,972	8,976	8,983	8,979
Haryana	2,653	2,655	2,661	2,664
Himachal Pradesh	2,777	2,777	2,777	2,778
Jammu and Kashmir	1,691	1,693	1,693	1,695
Jharkhand	3,091	3,094	3,095	3,095
Karnataka	9,822	9,814	9,772	9,703
Kerala	5,068	5,070	5,067	5,068
Madhya Pradesh	8,322	8,316	8,310	8,314
Maharashtra	12,850	12,853	12,860	12,858
North East	2,934	2,935	2,932	2,912
Orissa	8,162	8,161	8,161	8,163
Punjab	3,904	3,877	3,853	3,849
Rajasthan	10,316	10,313	10,321	10,324
Tamil Nadu	12,116	12,111	12,065	12,064
Uttar Pradesh	17,662	17,666	17,640	17,668
Uttarakhand	2,714	2,715	2,715	2,718
West Bengal	9,057	9,057	9,061	9,062
Total	1,55,015	1,54,979	1,54,866	1,54,822

Source: India Post (2012).

Thus the post offices and their capabilities can work as an alternative banking solution for the better improvement of financial inclusion. Capabilities of post office imply the space available in the post office, capacity of the post office to handle cash balances and qualifications and knowledge level of the post office employees for basic financial services. Further, different scales of post offices from sub-office to branch office and from urban to rural post offices can be covered. To explore the current system including the pattern of needs of the customers and the kind of services provided, kind of resources (physical, financial and human) employed and role of post offices in achieving financial inclusion, the team visited a number of post offices in Bangalore (Annex 2).

There exists a redundant dichotomy in the financial system with banks and post offices both maintaining savings accounts. Through a symbiotic model such as utilizing the post office networks can provide another way forward in extending financial inclusion.

3. Role of Fair Price Shops

Fair Price Shops can play an important role in the progress of the development of financial inclusion as there is a large network of fair price shops in the country which is well above the bank branch network including kiosks and BCs. Also, many of the fair price shop owners are familiar with the rural people which will again ensure trust in the banking.

In states like Chhattisgarh and Andhra Pradesh, smart cards and point of sale (POS) machines are being used for different kinds of transactions. Many of the fair price shops also have biometric identifiers such as finger print reader and iris detectors.

Therefore, fair price shops can become a support for the inclusive growth of the economy depending upon the number of existing shops in the country which is shown in Table 7. It shows that Uttar Pradesh has the highest number of fair price shops (73,004) in the country followed by Maharashtra (50,555). Thus, the existing network of fair price shops can be utilized in an effective way.

Table 7

Number of Fair Price Shops in 2011

State	Fair Price Shops	State	Fair Price Shops
Andhra Pradesh	43,615	Manipur	2,551
Arunachal Pradesh	1,568	Meghalaya	4,110
Assam	34,053	Mizoram	1,244
Bihar	44,480	Nagaland	241
Chhattisgarh	10,400	Orissa	28,744
Delhi	2,508	Punjab	14,348
Goa	501	Rajasthan	22,830
Gujarat	16,689	Sikkim	1,414
Haryana	9,362	Tamil Nadu	32,265
Himachal Pradesh	4,404	Tripura	1,586
Jammu & Kashmir	5,492	Uttar Pradesh	73,004
Jharkhand	14,395	Uttarakhand	8,697
Karnataka	20,475	West Bengal	20,251
Kerala	14,245	Maharashtra	50,555
Madhya Pradesh	20,688	Total	5,04,715

Source: Ministry of Consumer Affairs, Food and Public Distribution (2011).

4. Role of Technology

Despite the efforts like nationalization of State Bank of India in 1955, commercial banks in 1969 and 1980; setting up of RRBs; encouraging urban and rural cooperative banks; and instituting priority-sector lending scheme put in by the GOI and RBI, financial disparity still remains one of the major issues plaguing the Indian rural population. These efforts have failed to build the social capital and consequently failed to achieve desired level of financial inclusion.

Technology has started playing a very important role in financial inclusion. Indian banks are using all the avenues available to increase their reach and penetration. One of the recent technologies that has made the banking system much easier is the Automated Teller Machines (ATMs). The statistics that provides the distribution of ATMs in rural and urban areas as well as the different states of India are shown in Table 8 and Table 9.

Table 8

Distribution of ATMs (Rural-Urban)

2014				
Banks	Metro Centres	Urban Centers	Semi - Urban Centres	Rural Centres
Public Sector Banks	26,767	35,093	32,994	21,810
Private Sector Banks	19,163	14,535	11,394	3,982
Foreign Banks	903	201	20	32
Total	46833	49,829	44,408	25,792
2013				
Public Sector Banks	21,366	24,469	20,412	9,645
Private Sector Banks	18,115	13,742	9,664	3,190
Foreign Banks	968	228	20	28
Total	42,226	40,884	33,015	13,700

Source: RBI (2014).

Table 9

State wise Distribution of ATMs in 2014

State	Public Sector Banks	Private Sector Banks	Foreign Banks
Andhra Pradesh	10,516	4,157	66
Arunachal Pradesh	164	12	0
Assam	2,635	429	2
Bihar	4,476	776	3
Chhatisgarh	2,239	349	1
Goa	563	323	2
Gujarat	6,945	2,868	32
Haryana	3,627	1,979	79
Himachal Pradesh	1,286	179	0
Jammu & Kashmir	916	1,044	0
Jharkhand	2,481	481	0
Karnataka	8,075	4,682	227
Kerala	4,772	2,530	11
Madhya Pradesh	6,688	1,057	8
Maharashtra	11,284	7,502	313
Manipur	1,013	36	0
Meghalaya	256	56	0
Mizoram	81	20	0
Nagaland	233	35	0
Orissa	4,071	897	2
Punjab	4,614	1,788	9
Rajasthan	5,205	1,541	14
Sikkim	117	46	0
Tamil Nadu	9,516	6,791	112
Tripura	1,684	45	0
Uttar Pradesh	8,795	3,105	53
Uttaranchal	1,849	346	1
West Bengal	6,714	2,471	63
Total	1,16,664	49,074	1,156

Source: RBI (2014).

The ATMs and other available technologies such as hand-held devices with Business Correspondents, Automatic Teller Machines (ATMs), Cash deposit Machines, etc. in the banking system provides a glimpse of the recent changes in the Indian banks. The detailed explanations of these technologies are as follows -

a. Automatic Teller Machines (ATMs)

Automatic Cash dispensing machines are already in place in cities and towns. The machine identifies the bank user through his card and password. The user can withdraw cash through these machines, check his account balances and use it for some other small transactions. Generally,

these ATMs are owned by the banks or bank outsources it to third party to run an ATM on their behalf.

b. Deposit taking Machines

These are the machines which take cash deposits from customers and update the status of their deposit in real time. These machines are currently present only in the bank branch premises of few banks in cities.

c. Hand held devices

These are devices which are used to identify user accounts usually through a card and biometric identifier. The main purpose of the device is to update the transactions happening at BC location in the bank servers. These devices update the deposit and withdrawal information in the servers. The Handheld devices either operate through uses of mobile data networks or through the Local Area Network (LAN) connection.

d. Computerised transactions in Kiosk

Computers at kiosk can directly connect to banks website and use the website for banking transactions like deposits, withdrawals, etc.

e. White Label ATMs

White Label ATMs variants of normal ATMs wherein it is operated by a private entity and different banks can provide the service through this ATM.

f. Internet Banking/ Mobile Banking

Bank account holders can use their accounts using internet banking and mobile banking to transfer money to different accounts and pay their bills.

Though the technologies are available but effective implementation of the technology to increase the reach of banking services is yet to happen. The low cost solutions like computerised kiosk and handheld devices have increased the penetration in last few years but they are still prone to network connectivity and maintenance issues. Moreover the low number of transactions due to limited product suit, lack of interest by people and technology hiccups has made the business unsustainable for many BCs which is affecting the scaling of the current models.

Payment Banks

Financial inclusion entails not just the availability of financial products – credit, deposit, insurance, etc. but also the ability to transfer money around in an affordable manner. While banks have found this

transfer unviable the mobile technology platforms came to the fore offering services like mobile wallet, mobile money, etc.

However, despite the penetration of the mobile channel, this platform has been vastly underutilized for monetary transactions. One reason is the requirement of the bank as a partner for the cash out transaction. Thus, the person performing the cash out needs to have a bank account. Other important issue with the system is that of risk transfer and market inefficiency. An escrow account is used for the money in these mobile wallets that earns no interest for the mobile company. Moreover this also exposes the mobile wallet to risk if the bank defaults.

Thus, apart from these operational issues, affordable remittances could lead to overall development of those who are financially excluded. Currently this is being deterred by high transaction costs accorded by the banks. Therefore, with the objective of providing low cost (through high volume) remittance services to the migrant laborers and other entities, RBI (2014a) has come up with the concept of Payment Banks. Non Banking Financial Companies (NBFCs), mobile companies, corporate BCs, public sector entities, current Payment Protection Insurance (PPI) providers etc. can register and set up payment banks.

Restricted to a maximum of Rs. 100,000 per customer, the payment banks will be allowed to accept current and saving deposits. While the primary purpose of these accounts is to effect low cost remittance services, the holder will be eligible for interest income on these accounts. While the payment banks cannot lend unlike banks they can however act as Business Correspondent for banks and lend on their behalf. Thus, the primary source of income for payment banks would be the interest they earn by depositing the customer money in Government Securities as directed by RBI. They would also have access to interbank call money market to sort out any liquidity issues. Payment Banks are essentially exposed to operational and limited market risks (investments are held till maturity) and no credit risks (no lending allowed), while a minimum CAR of 15 percent and a net worth of Rs. 100 crore is required to be maintained.

Given that the payment banks are not allowed to directly lend, the profits would essentially be derived from transaction fees (which will be small due to competition) and the Net Interest Margin. While theoretically, this looks an interesting opportunity, how the firms face the ground level challenges will be important. Firms will need to find answers to challenging issues of thin profit margins, interoperability, technical limitations and regulations.

Thus, with the use of the available technologies, it is being looked upon as a great enabler for financial inclusion and technology vendors have justified this faith by providing cutting edge technology solutions. Biometric enabled and multi-lingual hand-held terminals, backend infrastructure integration with Aadhar, NREGA and pension payments transfers to the bank accounts etc. substantiate the success of technology. However given the ground level realities, there is a need to build strong technology framework with innovative solutions to utilize the existing resources in an efficient and effective manner. An attempt has been made to examine the role of technology for improving better access to financial services by visiting the villages in Tumkur district, Karnataka (Annex 3).

5. Role of Mobile Phones

The penetration of financial services in India is very low and the problem is predominant in rural areas. Only 50 percent of Indians today hold a savings account and one in seven individuals have access to banking credit.³ Without access to formal banking services, the only means of savings and transferring value is through physical assets like cash, jewelry or livestock, and this happens often with small time money-lenders at a higher cost. This not only increases risk exposure, but also perpetually marginalizes this segment of the population from the formal economy, as it is difficult and costlier for banks, insurance companies and government agencies to transact with them.⁴

On the other hand, 74 percent of households⁵ possess a mobile phone, and out of the total subscription base of 933 million, about 40.5 percent comes from rural areas.⁶ India, including in the semi-urban and rural areas, is witnessing important trends such as huge growth in smart-phone segment of mobile phones, and increased access to internet enabled communication. While the exact numbers may be a subject of debate, technology and improving user education presents a clear potential for mobile phones for large scale disbursement of financial services. Given this scenario, an attempt has been made to study, the present conditions and future potential of financial inclusion using mobile phones in India by studying it from international and Indian context.

³ CRISIL Inclusix (2013).

⁴ Radcliffe, Dan (2012).

⁵ Euromonitor International (2010).

⁶ TRAI (2014).

International Context

Mobile phones have a potential to significantly simplify transactions and play a vital role in extending financial inclusion. Few experiences with mobile banking are listed below:

Kenya

The mobile banking revolution took its birth in Kenya in 2007, when Safaricom, the leading telecom service provider in Kenya launched M-PESA (“pesa” means money in Swahili). M-PESA was originally conceived to enable microfinance loan re-payments using mobile-phones. Owing to convenience, safety and significant reduction in transaction costs, Safaricom gradually extended its services to transfer and receive money across other bank accounts, disburse salaries, pay bills and even offer loans and savings opportunities. As of 2013, the volume of mobile transactions amount to 25 percent of Kenya’s GDP and the service is being subscribed by nearly 70 percent of its adult population.

The success of mobile banking services in Kenya can be widely attributed to the following factors:

1. Strong support of the regulator during the early stages of the project, allowing pilot work without formal approvals.
2. Significantly low cost of remittances and safety, as compared to existing medium.
3. A safe mode of money transfer, particularly during politically troubled times of 2008, during which safety levels in banks were no longer trustworthy
4. Aggressive promotion, strong network of telecom agent and effective monopoly of Safaricom in the Kenyan telecom industry.

Uganda

Uganda, another impoverished African nation offers an inspiring story of financial inclusion, enabled by mobile technology. Uganda primarily suffered from poor infrastructure and low standards of living. As of 2008-09, the country had 30 banks but serviced less than 10 percent of the population. Poor infrastructure, need for financial services and such low banking penetration presented a case for financial inclusion for MTN Uganda, the then leading telecom service provider. Pairing up with Fundamo, (now a subsidiary of international payment gateway service provider VISATM), MTN Uganda launched “Mobile Money” in 2009 on the lines of M-PESA. Extending similar services as in M-PESA in Kenya, MTN developed a robust and easy-to-use product with the expertise of Fundamo, clocking 1 million registrations in 1 year (about 16 percent of its customer base). Mobile Money’s agents, known as “foot soldiers” toured across the country, educating people about the services. The model was received positively by the Ugandan

Government and the society in general as it generated SME employment to unemployed youth in the country.

Indian Context

In India, mobile banking has primarily grown over the past 5-6 years. It all started with some banks providing basic account related information to customers on their mobile phones. Today, technology has matured to a state where one can transfer money to any individual using their mobile phones, including those without a bank account. Mobile banking growth in India has been led by the development of IMPS (Immediate Payment Service) in 2010.

Payments' Platform

The National Payments Corporation of India (NPCI) created IMPS platform primarily to facilitate real time inter-bank transfers using mobile phones. The pilot run began in 2010 with 4 participant banks and today, it has 63 banks and 7 Prepaid Payment Instrument Issuer (PPI) as its members.

Using IMPS, individuals can transfer money across various mobile banking channels (Annex 5) such as SMS, USSD, IVRS and mobile internet (GPRS). IMPS can be used for remittances and commercial transactions in following different ways:

- By using the mobile number and MMID of the beneficiary (P2P)
- By using account number and IFSC of the beneficiary (P2A)
- By using Aadhar number (ABRS)

Mobile Banking Models in India

There is a need to understand the mobile banking models in India for further strengthening of financial inclusion by using mobile phones. Mobile banking in India is primarily carried out in the following three models:

a) Bank led Model

Under this model, services are provided by banks to its account holders, using mobile phone plainly as a medium for implementation.

b) Joint Venture Model

Telecom operators create bank accounts called as “open wallet” accounts, collaborating with banks, providing basic financial services such as deposits and money transfers, through the mobile wallets.

c) Third party Model

Telecom operators collaborate with third party entities to create “semi closed wallets”, accounts independent of banks. These wallets restrict withdrawal of cash and usage is restricted to specific services, often at authorized outlets.

For a deeper understanding of the ways in which mobile phones can be used as a part of the formal credit system and also the various hurdles for the spread of mobile banking in India, an in-depth interviews and discussions were conducted with the regulators, bankers, villagers and telecom operators. The insights and the key findings from the interviews are presented in Annex 4.

Section VI: Conclusion and Recommendations

Despite 67 years as an independent nation, India is still lagging behind in the process of providing financial services to the masses with nearly half the households remaining unbanked, and nearly ninety percent villages not having bank branches. More importantly, people in these unbanked areas do not fully appreciate why they need a bank account at all, or why loans from the formal sector are more useful than the informal sector. The advantages of a financially inclusive model are many-fold. Illustratively, unbanked and underprivileged could receive appropriate and timely payments for social benefit and employment schemes through the Direct Cash Transfer program.

The government and Reserve Bank of India have been making concerted efforts since mid1950's and with renewed vigor since 2005 but success has been rather slow, due to lack of a strong network, and financial instruments not suited to rural residents. Moreover, lack of awareness and financial literacy among rural population are primarily responsible for low penetration of financial services.

More incentives for the BCs, utilizing existing network for banking such as post offices, creating awareness for the use of banking technologies as well as mobile phones etc. will help in creating a big difference in the economy. The proposed solutions that target the above issues and suggest a way forward for sustainable inclusive growth are presented below:

General

- Preference should be given for a physical branch. The existing network of more than 1, 55,000 post offices and more than 5,00,000 fair price shops, an outlet of public distribution system with some semblance of government approval, can be explored, especially in rural areas.
- There is a need to have granular schemes, preferably different schemes for rural and urban areas. Further, distinct schemes can be made on the basis of nature of employment of different people. For example, daily wage laborers can be allowed to make tiny deposits on daily basis - a special RD scheme for daily wage laborers can be introduced.
- Methods of financial literacy need to be changed from distributing printed literature to audio and visual media such as radio and TV programs, especially in local languages.
- Financial literacy needs to be given importance in schools, and student small saving programs, where bankers visit schools and collect small deposits, need to be revived.

Business Correspondents

- A BC need to be rebranded as a banker against the existing image of a travelling salesman which would enhance the acceptability of BCs among general public. This could be achieved by a contractual arrangement, thereby giving a semi-official status of a bank employee to a BC. This would reduce the attrition rates of BCs and increase their loyalty towards the profession.
- The rebranding exercise of BCs would also heighten participation of women as BCs. The status of a bank employee would help them to counter regressive objections of women being salespeople.
- The possibility of appointing house-wives as well as people with limited handicap as BCs could also be considered as that might reduce the attrition rate.
- As opposed to retired personnel, school teachers could be tapped as BCs.
- Allowing BCs to offer additional financial products like insurance and mutual funds would increase their scope.
- Banks could also look at skill development by conducting regular, structured training sessions for BCs.
- The improved BC role as envisaged above would be effective if the right people are recruited to take up the role. While educational qualifications are necessary, they are not sufficient. Banks could carry out rigorous background verification procedures on prospective candidates to ascertain a prospective BC's trustworthiness and influence in the locality. Once BCs have been recruited based on background verification, raising the permissible limits of cash disbursement and maintenance at the BC and USB level can be considered.

- There is a need for analyzing the compensation of the BC. Instead of having a uniform remuneration across BCs, their performance could be monitored and appropriately appraised so as to incentivize them to work with the right spirit.
- The incentives for BCs should be customized based on the effort which might be required to operate in a specific area and output generated by them. As the effort cannot be measured directly, proxies like distance of village from nearest bank and similar metrics can be used to classify BCs into different categories. The performance of each BC should be based on some key performance metrics which should be compared within each category to decide the incentive structure.
- As each village is different from other the demographic factors like income and propensity to save and take loans will differ from village to village. So, there is scope for having differential limits for BCs based on location and customer profiles. Demographic and historical transaction data can be used to evaluate the risk to define different limits of transaction with each BC instead of keeping it uniform across BCs.

Post Office Networks and Fair Price Shops

- Banks can tie-up with India Post to utilize their extensive network by setting up small banking counters at each of their post offices, especially rural branches. The government owned post offices have sufficient space in the post offices to set up such a counter with a computer and printer, to be operated by a commercial bank employee. With existing arrangements at the post offices, these can be converted into extended banking counters.
- Once banking extension counters are offered at the post offices, and then fresh opening of accounts in existing postal banking schemes can be discontinued, with a forward-looking approach for banks to spearhead the financial inclusion process, through deposit mobilization.
- As a large part of post office revenues comes from existing postal banking services, the banks would need to pay a “rent fee” to India Post for use of their facilities/premises – hence solving the high fixed cost issue for banks in establishing a new brick and mortar branch.
- To leverage the existing relationship with the post offices, banks could seek introduction to potential customers on payment of a stipulated fee. The business correspondent could accompany the post man to register deposits, withdrawals, and request for opening accounts and loan requisitions with the exact amount and a thumbprint on the hand-held device to register a signature. This could serve as a KYC in many cases.
- To explore methods to attract potential customers to visit the post office with banking facilities, critical information could be provided by local language handouts or on big screens installed on the premises. This could constitute expected weather, crop and commodity prices, news of new farming techniques, business ideas and other rural innovation initiatives.
- Similar to the post offices, network of fair price shops can be utilized by launching a joint venture of banks and Food Corporation of India to install devices which will be used for both Public Distribution System (PDS) and banking transactions through smart card and biometric

identification. This solution can be enabled in places where the currently PDS is not using the smart card and point of sale (POS) machines. But for the places where these devices are already present the banks can modify them to enable banking transactions with the same smartcards. The launch of common POS will not only ramp up the financial inclusion process but also reduce the cost as the same device is being used for dual purposes.

ATMs

- Encouraging banking habits amongst the unbanked masses by installing audio-video enabled ATMs to announce simple instructions in the local language to assist the customer in the unbanked areas, could be considered.
- In case such ATMs are installed in the premises of post offices, then trained guards could facilitate withdrawals, deposits and also account opening forms.
- The issue of security can be addressed by installing inbuilt CCTV cameras in the ATM machine as well as the post office.

Training and Financial Literacy

- There could be regular interactive training workshops organised in the post offices or fair price shops or gram panchayat offices on financial products suited to the local population.

Banking Technology

- A self-sustaining solution wherein cashless payments are enabled through payment transfers by a mere swipe of the card using Point of Sales device at each prospective transaction points (like retail stores, equipment vendors, commuting medium like buses etc.). By having such terminals, the user would just be required to swipe his/her card to effect the payment thereby reducing the number of cash transactions in the system, hence also reducing the demand for currency in the system.
- Currently, ATM and deposit taking machines operate separately in the market. If these two machines can be clubbed into one and introduce features like document scanning, finger print reader/ iris detector and camera then it can offer all the banking services automatically. Biometric identification of users, voice commands and narration for all facilities will make the machine more users friendly. Also, these machines can be initially employed in urban areas as people might be technology friendly and trust in such machines. Then, after successful implementation, it can be tried in rural areas as well. This machine provides a unique opportunity to act as a small ecosystem of money wherein the cash deposited by some can be used for withdrawals by others and hence will require less replenishment of cash as compared to a regular ATM.
- The kiosk can offer loan application and new account opening through scanning of the documents.

- Data entry errors pose a major source of delay in the account opening process. Such errors lead to lot of back and forth between the branch and the BC location causing unnecessary delays. Digitization and automation of the same would not only quicken the new account opening process but also enable better utilization of bank resources. Checks and validations could be put in place in the automated solution to further reduce the overhead allowing for paper less account opening.
- Lack of seamless connectivity is one other issue that the BCs face while using the hand-held terminals in certain remote areas. Intermittent connectivity would render this channel inefficient and cause consumer distress. Upgrading the hand-held device so that it contains basic information like account details, balance etc. in an offline mode can enable the BC to use the device even when the connectivity is lost for performing basic transactions like deposit and withdrawal (within a limit). Once the connectivity is restored the transactional data can be pushed into the bank's main server. Further, we need to better leverage the satellite connectivity technology in these remote areas to avoid connectivity bottlenecks. While multiple withdrawals from different locations could cause an issue; proper validations and checks should be in place to put limits on such transactions.

Mobile Phones

- Common mobile banking applications with minimal usage of text should be developed leveraging channels such as SMS or GPRS. These applications should be self-explanatory and should incorporate image-based interactive user interface, as well as higher usage of voice based commands.
- The proposal to disburse limited amounts of credit to customers through the telecom channel must be revisited and may be restricted to users of open wallet accounts. This will encourage people to borrow from formal channels, instead of small time moneylenders and also add to revenues of telecom companies, who in-turn can reduce transaction charges for their customers. Banks and MFIs, which are authorized to lend credit, can partner with telecom companies. On an aggregate level, this will increase the demand for mobile banking manifold.
- Targeted advertisement campaigns should be devised for mass media and locally effective media. Government agencies should actively participate in these campaigns that communicate mobile banking to be user friendly and safe.
- Common consumer knowledge in rural areas about dialing to a toll-free number should be leveraged to provide introduction to financial literacy as well as instructing people on steps to use mobile banking.
- Banks should educate their staff and BCs about latest developments in mobile banking, and mandate them to promote these facilities during financial literacy campaigns in rural areas.
- Banks should revise their commission schemes, incentivizing BCs in increasing mobile banking registrations in their respective territories.
- The Government should commission an audit system for banks, telecom operators and handset manufacturers to certify security levels of mobile banking services, across various channels.

Banks and telecom operators may favorably advertise these ratings to improve their customer base.

References

Agarwal, Parul (2014), "*Financial Inclusion in India: a Review and Initiatives and Achievements*", IOSR Journal of Business and Management, Volume 16, Issue 6, June.

Chakrabarty K.C. (2011), Keynote address on Financial Inclusion, Mumbai, September.

Chakrabarty, K.C. (2012), "*Financial Inclusion: Issues in Measurement and Analysis*", Keynote address, BIS-BNM Workshop on Financial Inclusion Indicators, Kuala Lumpur, November.

CRISIL (2013), "*Inclusix Financial Inclusion Index*", June.

Euromonitor International (2010), "*Emerging Focus: Emerging market economies drive global growth in mobile connectivity*", November.

Gupta, Sanjeev Kumar (2011), "*Financial Inclusion – IT as an enabler*", RBI Occasional Paper, Volume 32, No. 2.

Government of India (2008), "*Committee on Financial Inclusion*" (Chairman: Dr. C. Rangarajan).

India Post (2012), "*Book of Information*".

India Post (2013), "*Annual Report*".

Joshi, Deepali P. (2014), "*Strategy Adopted For Financial Inclusion*", Speech, Workshop of Government of Madhya Pradesh, New Delhi, January.

K., Divya (2014), "*A Study On Impact Of Financial Inclusion With Reference To Daily Wage Earners*", Journal of Business Management & Social Sciences Research, Volume 2, No. 6, June.

Kamath, Rajalaxmi (2008) "*Ramanagaram Financial Diaries: Loan repayments and cash patterns of the urban slums*", IIMB Working paper 268.

Ministry of Consumer Affairs, Food and Public Distribution (2011), "*Number of Ration Shops in the country*", June.

Planning Commission (2009), "*Report on Financial Sector Reforms*" (Chairman: Dr. Raghuram G. Rajan).

Radcliffe, Dan (2012), "*A Digital Pathway to Financial Inclusion*", Bill & Melinda Gates Foundation.

RBI (2005), "*Report on Rural Credit and micro finance*" (Chairman: H.R. Khan).

RBI (2013), *“How the poor manage their finances; A study of the portfolio choices of poor households in Ernakulum district, Kerala”*, Development Research Project, Mumbai and Centre for Socio-Economic and Environmental Studies, Kochi.

RBI (2014), *“Annual Report”*.

RBI (2014) *“Quarterly Report”*, June.

RBI (2014a), *“Report on comprehensive financial services for small businesses and low Income households”* (Chairman: Dr. N. Mor).

RBI (2014b), *“Report of the Technical Committee on Mobile Banking”* (Chairman: Mr. B Sambamurthy).

Srikanth, R. (2013), *“A Study on - Financial Inclusion - Role of Indian Banks in Reaching Out to the Unbanked and Backward Areas”*, International Journal of Applied Research and Studies, Volume 2, Issue 9, September.

Subbiah, Nalini (2014), *“Role of Banks in Financial Inclusion”*, Research Journal of Commerce and Behavioural Science, Volume 1, No. 4.

Telecom Regulatory Authority of India (2014), *“Highlights on Telecom Subscription Data”*, New Delhi, May.

Annexure 1

Field Visit to Villages

The team undertook two extensive visits to Kunigal village and Dodda Agrahara village in Tumkur district (Karnataka), respectively. During the field visit, members held extensive discussions with bankers, business correspondents, NGOs workers, bank customers, farmers, school teachers and SHG members. The key findings of the visits are as follows:

- I. While bankers/ BCs stressed safety as the value proposition of the bank, citizens believed it to be safer to keep their money at home rather than to save it in a bank.
- II. People's confidence in banks was significantly higher in villages where the bank has a physical presence.
- III. People also indicated wariness, impatience and discomfort with the processes of formal banks.
- IV. Another irritant was the high base limit for availing of RD facility. The recent laws of a minimum RD Account balance of Rs.1,000 hinders people from operating these accounts.
- V. Several people have availed loans from banks far in excess of their deposits. Banks are caught in a vicious circle, where they cannot refuse loans to people who might not have the capacity to repay them.

Annexure 2

Field Visit to Post Offices

The key findings of the visit to post offices in Bangalore and nearby areas are as follows⁷:

- I. J. P. Nagar Post Office**

This was a two years old establishment and was located on the ground floor with 10'x 20' area and a corner location of the residential area. There were two lady full-time employees and one male material handler. The counters were fitted with glass for security. This post office maintained around 5,000 RD and SB accounts each. There was a daily settlement of cash with the bank and post offices could keep upto Rs. 20,000 cash for immediate disbursal. This post office had ample space available for any extension to existing facilities.
- II. Jayanagar Post Office**

This was an old set up located on the first floor covering an area of around 20' x 40' on the corner of the busy Jayanagar Market. There were three female employees and one material handler. This post office handled around 8000-10000 SB and RD accounts and had a relatively larger "Vault" to keep cash up to Rs. 1 lakh. As with the previous post office, this also had enough space for extension of facilities. This post office had three counters and a separate room for managing files/documents.
- III. Tumkur Village Post Office**

This post office was located in an area of around 20' x 40' in small market. There were three female and two male employees. This post office had three counters fitted with glass in the front and a modern Vault kept inside a small room with a person stationed near the room. The cash kept by the post office ranged from Rs. 2 lakhs to Rs. 3 lakhs since this was catering to a larger set of population in nearby villages. There was renovation work under progress here and included setting up of a channel gate for the vault security.

⁷ These views have been arrived at after observing the respective post offices.

Annexure 3

Field Visits to Kiosks

SBI-IDF Kiosk at Tumkur

Initiative for Development Foundation (IDF) is a BC for SBI and is headed by Mr. Sathyamadhavan. Vattikuti foundation is the donor foundation of IDF. According to Mr. Arvind Pandey who is a consultant for IDF from Vattikuti, they are a non-profit organisation supporting this initiative. The foundation is mainly operating in Kunigal and Gubbi Taluk. IDF initially started in 36 villages along with Kunigal. They operate through Kiosk model, IDF had maximum of around 12 kiosks but due to operational and profitability issues currently only 6 kiosks are operational.

Concept of Joint Liability Groups (JLG) and Self Help Groups (SHG)

Problems related to lending

In rural India, the agricultural land which farmers use is either inherited or rented from the land owner. After issuance of the rule that the farmer who tills the land becomes the owner of the land, the owners of the land stopped providing any documented proof for renting and gave land on lease through oral leasing. Hence, in either case renting or inheriting, the farmer does not have any proof of the land which can be used to show his operations or as collateral for borrowing.

Solution

In 2009, an initiative “Sujivana” was started for agrarian communities in the areas where there is a lack of banking services. Farmer groups were made and they were trained to save money to create a corpus of their own which can be used for lending to each other within the group and act as a contingency fund for them. After 3-4 months of formation of this group these groups are linked to SBI bank through Business Correspondent (BC) or Business Facilitator (BF). The BC/BF gets commission from SBI for the task of enrolling the group. Because of the group lending guidelines of RBI, it is possible to lend money to a group without collateral.

Two types of groups, JLGs and SHGs, are present to provide assistance to the rural people. These groups are run by the farmers and female working women groups. There is a field officer present for the kiosks who provides assistance to the JSGs and SHGs in the group meetings to help them make informed

decisions and take their loan applications as well. Current coverage of IDF is 30,000 members in 2,000 groups from 45 villages.

Banking Kiosk

According to the RBI guidelines any village with a population of 2000 or more is a potential place to open a kiosk. A banking kiosk is around 10x10 sq. feet rented place having different equipments such as laptop, finger print reader, printer, currency note counting machine and a UPS.

The kiosk is operational from Monday to Saturday 9:30 AM to 5:30 PM. The kiosk is operated by a person who is trained by IDF. The minimum educational qualification for the kiosk operator is 10th pass and a test of computer competence.

Banking facilities available in the kiosk

Online opening of the zero balance bank account through SBI website. Documents related to the account are scanned and sent by the kiosk, a physical hard copy is also sent to the bank. It takes around 4-7 days for an account to open. Deposit and withdrawal up to a certain amount can be done from the kiosk using deposit and withdrawal forms present in the kiosk. For each such transaction, a receipt is generated which is given to the customer. RD facility is also provided with minimum deposit amount of Rs. 1,000.

The loan applications are also available in the kiosk but the actual sanction of loan takes place in the bank branch. For loan sanctions by JLGs, three representatives have to visit the bank and sign on the documents on behalf of the group. Loan amount for SHGs is Rs. 25,000 and JLGs is Rs. 50,000. The sanction of the loan takes 2-3 days for the JLGs and around 15 days for SHGs this is because the final processing of SHGs takes place in the Bangalore office. Generally the loan is given at around 7 percent interest rate, if the group pays back the loan within 1 year then 3 percent interest is reversed and the effective cost of interest just remains as 4 percent. Remittance can be done within SBI.

Financial and Transaction details

Initially when the kiosks were started they used to get Rs. 2,000 for every Rs. 1 lakh cumulative transaction value. This used to work on a year on year basis. Around 2-3 years later this incentive was stopped. The commission for the kiosk was 0.5 percent of the total transaction value transacted from the kiosk. In recent times, this commission has been capped with a floor of Rs. 6 and Rs. 12 per transaction.

The maximum transaction limit is capped at Rs. 10,000 per transaction. Also, the same limit applies for daily withdrawal and deposit. Further transaction details are provided below ⁸:

Cost Head	Amount (in Rupees)
Operator Salary	5,000 - 5,500
Rent	1,000 - 2,000
Internet	500 - 600
Electricity	300
Stationary	300
Total	8,000 - 9,000

Suggestions and Observations

- Inclusion of insurance product in the existing Kiosks.
- Elimination of physical copy requirement for the account opening.
- Interbank remittances.
- Money deposit and withdrawal limits on the kiosk should be revisited.
- Processing of the final SHG loan application in the same branch which processes the JSG application to speed up the process. private business credit was seen in the year 1957-61 from 44 percent to 60 percent in the year 1970
- Change the incentive model of the kiosk so that they can at least breakeven which will ensure the sustainability of the kiosks and the interest of the kiosk managing company in the business.

Canara Bank – Ultra Small Branch (USB)

With a view to increase the legitimacy, credibility and enhance efficiency, Canara Bank has opened an Ultra Small branch at Doddagrahara. Currently this base location houses one BC who along with three other BCs operate in the neighbouring twelve villages.

Client Base

As stated by the BC at the branch, accounts of approximately 1,800 (of which around 500 are operational) clients from the Doddagrahara village and another 600 clients from the neighbouring villages have been opened so far.

⁸ The numbers are indicative/representative and are obtained based on the interaction with the employees.

Technology

The BC uses an Integra hand held terminal to carry out his day to day transactions. A computer workstation is also available at the USB, typically used by the Canara Bank official who would visit the location once in a week to facilitate formalities with respect to loan disbursal, account opening, etc.

The Integra Hand-held terminal used to carry out banking transactions had voice guidance in local languages which also helped the locals to understand the amount available in the account and the amount used in the transaction. It communicated with the backend Bank server over GPRS (an Airtel tower was stationed just besides the BC location). It supported only online transactions and had an integrated printer along with 2 RFID Smart card slots (one for the BC and other for the customer). NREGA and pension payments were integrated through the smart card. Once the Aadhar number was linked with the accounts in the Canara Bank back-end, the transactions could be done on the machine using the eight digit Aadhar number. The transactions on the machine are not interoperable with other bank accounts. The machine approximately cost Rs. 40,000.

Financial Details

Typically 30-50 people visited the branch daily. In the following table we present the various cost heads and the corresponding expenses⁹–

Cost Head	Amount (in rupees)
Approximate expense of USB	25,000
Maximum number of transaction per user per day	5
Cap on ticket size per transaction	10 – 5,000
BC Commission per transaction	1.46
Conveyance and Telephone compensation to BC	300 each
BC fixed salary	3,500

⁹ The numbers are indicative/representative and are obtained based on the interaction with the employees.

Issues & Observations

Transaction limits cause hindrance for few account holders who then prefer to go to bank branch to withdraw in large amount. KYC documents are collected at BC location, but then they need to be submitted to bank branch for approval process which could cause delays. Since, the KYC and due diligence is anyways performed by the BC, perhaps he should be given permission to open the accounts so as to reduce the delays.

The above field visits and interactions in the villages highlights some issues that have been identified and which could be broadly classified as follows:

- I. Technology - Maintenance & Serviceability**
Though there is a potent technology framework, uniform application across banks, serviceability and maintenance of the devices pose a major hurdle, more so for the smaller technology partners. Frequent machine breakdowns and connectivity issues hamper the seamless experience and at times result in huge delays resulting into bad customer experience.
- II. Operational Inefficiencies**
Administrative formalities for account opening, credit appraisal, KYC, loan disbursal etc. typically take 7-10 days in these villages as these formalities are being ratified at the main branch. With the advancements in technology there is lot of scope to bring down this turn-around time.
- III. Business Model**
High BC attrition in short time is resulting in high training cost and is creating disruption in banking services. Currently daily transaction limits are placed which deter big ticket customers from using kiosks and ultra-small branches. Also this restricts the commissions of the kiosks. Unavailability of insurance and full-fledged remittance products is further limiting the financial inclusion.

Annexure 4

Field Visit to Villages

The key findings from interviews and discussions are presented below:

Consumer Perspective

This phase of research included visits to kiosks, a “micro ATM”, and interactions with Business Correspondents operating in villages of rural Karnataka. Banking facilities provided in these areas were sound, both in terms of technology and portfolio of services offered. To better understand consumer insights, an oral survey was conducted among villagers regarding the current scenario of rural banking, knowledge about mobile banking and their willingness to switch to the same.

Research showed that there was practically no awareness about mobile banking among the villagers. Neither the Business Correspondent nor the bank’s staff promoted mobile banking during financial literacy programs conducted in these villages. This could be a case of conflict of interest, as increased adoption of mobile banking would reduce importance of the BC, who is an important figure in the social structure the village.

The user friendliness and advantages offered by mobile banking, as compared to their nearest bank branch or the “micro ATM” evoked interest, especially among those villagers involved in small businesses. Within the limited scope of the survey, majority of the rural population expressed willingness to adopt mobile banking.

Telecom Operators¹⁰

In depth discussions with a major telecom operator provided sound insights upon the concerns faced by telecom operators in the context of mobile banking.

¹⁰ These views have been arrived at after discussing with a concerned manager at one of the telecom majors in India

Regulatory concerns

1. Telecom operators are subject to regular RBI guidelines, including verification of KYC norms. This process is time consuming, costly, and requires risk management capabilities hitherto unused in the by operators. One important concern is that the end user of mobile wallet may not be the individual registered with the operator, and may not be verified for KYC norms, significantly increasing risk.
2. Lack of inter-operability (a user registered with operator A cannot withdraw from another operators' outlet or transfer into another account registered with operator B), will significantly limit spread of mobile banking in India, given the oligopolistic nature of telecom sector in India. Moreover, several telecom operators may not support inter-operability, as it may eliminate an element of differentiation among competing operators.
3. Limited cash-out facilities (facility to withdraw money from mobile banking network) is also likely to hinder the growth of mobile banking.
4. The soon to be introduced IMPS using common USSD platform is seen as major threat by telecom operators to their existing business models in mobile banking. Currently, any USSD platform is owned and operated by telecom operators. Once a common platform is made available to banks, then the control exerted by telecom operators in the mobile banking channel would reduce, also significantly lowering their revenue share with the banks. Also, steep reduction in transaction costs once the platform is introduced may result in huge customer churn from their existing services, dealing a death blow to their mobile banking businesses.
5. Telecom operators suggested that the demand for credit products was much higher as compared to savings products, which were regularly thrust upon by the regulator. This mismatch was also a reason restricting large scale utilization of mobile banking in India.

Operational concerns

1. Lack of cooperation from the agent network (low demand for mobile banking, and hence low turnover) and high operational expense limits efforts of the operators along the telecom channel. Insufficient support from the channel restricts consumer education and usage, which further provides voice to not adopt the program, eventually leading to a self-fulfilling prophecy.
2. Popularly promoted banking channel, the USSD, is not without operational shortcomings, despite advantages like compatibility with multiple languages and security. Even simplest of transactions take about 5-7 steps and such a lengthy process forms a barrier in the context of rural population.

The insights from the interaction and interviews lead to four major hurdles that are restricting the spread of mobile banking. These include:

1. Heavy usage of text-based channels such as SMS (Short Message Service), USSD (Unstructured Supplementary Service Data) and WAP (Web applications).

2. Inadequate awareness about mobile banking in rural areas.
3. Unwillingness to adopt mobile banking, owing to lack of trust in the security of the channels.
4. Lack of cohesion between telecom operators, banks and regulators in terms of revenue sharing agreements, technology platforms enforced upon by the regulator and the supply-demand mismatch for services provided.

Annexure 5

Channels for Mobile Banking

Mobile banking transactions are enabled by four major channels. Each of them offers their own set of advantages and disadvantages, which are enlisted below.

1. SMS, an acronym for “Short Message Service”, is a text message based service. SMS is one of the most popular modes of data transfer across mobile phone.

The advantages SMS offers are as follows:

- High levels of user education, being the most extensively used channel of communication, after voice.
- Availability on all mobile handsets.

Some of its disadvantages are:

- There is no end to end data security in SMS transactions. Unlike other channels of mobile banking, these transactions are not session based.
- M-PIN and other transaction related information gets stored in the user’s mobile phone in the “outbox or sent” folder, after every transaction.
- Syntax for the transaction is very long, especially considering rural users. It also varies for different operations and therefore, the user needs to remember each one of them.
- Syntax are not available in all local languages.

2. IVRS or “Interactive Voice Response System” is a voice enabled interaction service.

The major advantages IVRS offers are as follows:

- Highly interactive, as user can perform all the operations by listening to the instructions.
- The system is easily scalable across many languages.
- Availability on all mobile handsets.
- Session based transaction.

Some of its disadvantages are:

- No end to end security for the data transmitted across the channel.
- Often a time consuming process.

3. USSD or “Unstructured Supplementary Service Data” is a system where service providers’ computers interact with the mobile phone user.

The major advantages USSD offers are as follows:

- Availability on all mobile handsets.
- Can support several local languages.
- Session based transactions.
- The user need not remember long syntax as he/she needs to select the relevant option from the displayed menu and only provide basic account information during the transaction.

Some of its disadvantages are:

- No end to end security across the channel.
- As the medium of instructions is text based and multiple steps are involved during the process, hence the entire process becomes highly cumbersome for the user.

4. Mobile application using GPRS or “General Packet Radio Service” is a system used for transferring data over mobile network.

The major advantages GPRS offers are as follows:

- Session based transaction, along with end to end security.
- Interactive applications can be developed that use images and voice, instead of text for imparting instructions.

Some of its limitations are:

- Connectivity issues of data services are significant, especially in rural India.
- Available on only GPRS enabled handsets, which are costly and may not be affordable to large proportion of rural population.
- There could be phishing attacks by hackers to gain access to sensitive user information.