Integration and Interoperability of Financial Services
Good for the Poor, Great for Banks and Governments

MicroSave Research

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Abbreviations

ATM	Automated Teller Machine
BC	Business Correspondent
BCA	Business Correspondent Agent (CSP, sub-agent)
BCNM	Business Correspondent Network Manager (or Agent Network Manager, ANM)
BIN	Bank Identification Number
CBS	Core Banking System
EDC	Electronic Data Capture
FD	Fixed Deposit
G2P	Government to People
GDP	Gross Domestic Product
HHD	Hand-held Device
IGNDPS	Indira Gandhi National Disabled Pension Scheme
IGNOAPS	Indira Gandhi National OLD Age Pension Scheme
IGNWPS	Indira Gandhi National Widow Pension Scheme
ISO	Indian Standards Organisation
KMS	Key Management System
KYC	Know Your Customer
MGNREGA/S	Mahatma Gandhi National Rural Employment Guarantee Act / Scheme
NEFT	National Electronic Funds Transfer
NFA	No Frills Savings Account
NFS	National Financial Switch
NPCI	National Payments Corporation of India
NSAP	National Social Assistance Program
P2P	People to People
POS / POT	Point of Sale / Point of Transaction
RBI	Reserve Bank of India
RD	Recurring Deposit
RRB	Regional Rural Banks
RTGS	Real Time Gross Settlement
SCB	Scheduled Commercial Bank
SCOSTA	Standard for Card Operating System for Transport Authority (Indian Standards)
UIDAI	Unique Identity Authority of India

Executive Summary

"A big challenge lies in moving beyond (business correspondent agent and enrolment) numbers and looking at how we actually make a difference. Unless banks are convinced that reaching out to the common man is not just a forced regulatory imperative but a potential business opportunity, the numbers will remain without life."

Dr. D. Subbarao, Governor, Reserve Bank of India, July 4, 2012

To date, the business correspondent model has had limited success in meeting stakeholder expectations – be it the poor consumer, the banks, the regulator, the Government or the investors in business correspondent network managers (BCNMs). It is, nevertheless, going through an evolutionary journey. With the somewhat slow, but relentless, pace of regulatory and policy amendments, as well as the persistent efforts and endeavours by banks and BCNMs, moves towards real financial inclusion are headed in the right direction.

As the business correspondent model evolves, and progressively begins to be recognised as a low-cost alternative channel, it becomes increasingly similar in nature to other banking channels – automated teller machines (ATMs), internet banking, electronic data capture (EDC) terminals based payment systems and so on. It is therefore appropriate to ask what led to their exponential growth, and how the lessons learned can be applied in the context of the business correspondent model? The diverse users of the BC channel - banks, Government departments and corporations – are wary of extensively using business correspondent agents (BCAs) for delivery of services or payments for various reasons, including a lack of confidence and trust in their capabilities to deliver. More importantly, urban and rural consumers of BC services want greater convenience, flexibility and choice of financial services; as opposed to the limited offerings they receive currently.

Overall there is a growing debate on whether greater integration and interoperability of banking and other financial services provided through the BC agents is a prerequisite for greater acceptance, adoption and perhaps the very survival of this channel.

With this background, *MicroSave* conducted a comprehensive research study on the need for integration and interoperability of financial services for the poor. The intent was to develop a point of view to inform the debate, based on perspectives of the major stakeholders and to arrive at a realistic and practical road-map for the way forward.

MicroSave tried to understand the aspirations and expectations of the urban and rural poor, based on their current experience of formal, and informal financial service providers. This was followed by an assessment of the business opportunity for banks and BCNMs (and the benefits for Governments) arising from consumers' aspirations. There was an equal focus on assessing the supply side perspectives, challenges and constraints, including regulatory and policy enablers and the amendments requested by suppliers to deliver effectively and meet consumer demand.

Major Findings

- Rural consumers have complex and mature needs for banking and financial services. They have a significantly greater preference for BCAs as a delivery channel for most of their financial needs, particularly for savings products, Government welfare payments and inward remittances.

- The rural poor want banking facilities and features (delivered through BCAs) at par with mainstream savings account holders. Due to lack of adequate integration and interoperability of BC channels, they are unable to have access to many of the services they need or aspire for.
    - In rural areas, *MicroSave* research found an overwhelming number of respondents, (in 67% of the sessions), aspiring to access ATMs. This essentially reflects their need for more convenient, anytime / anywhere access to banking, with lesser dependence on the agents, who are often not available when the rural poor wish to transact. This is also reflects their desire to save instead of withdrawing all available or surplus funds.
    - In terms of savings, in 39% of the sessions, respondents mentioned their preference for access to commitment deposit options (fixed deposits or recurring deposits). In a very significant 83% of sessions, respondents exhibited a preference for BCs as a channel for savings.
    - Rural consumers have a significantly greater preference for banks, as opposed to post offices or any informal channels, to receive a range of financial services and receipts.
    - A vast majority of poor rural consumers would prefer to receive all types of Government welfare payments (under MGNREGS, IGNOAPS, IGNWPS, student scholarships and so on) via banks and delivered through BC agents. However, for want of adequate integration and enablement of BCs, Government departments are yet not confident of relying on the BC channel to disburse all payments. Consumers are therefore forced to accept less preferred alternatives.
- Urban under-banked or unbanked consumers expressed a predominant need for money transfer (including inter-bank transfers), followed by depositing and withdrawing cash.
    - In 88% of the sessions, urban consumers wished to transfer money through their bank account (intra-bank or inter-bank). Whereas, in 68% of the sessions, they noted depositing cash into their bank account as the second important need, followed by 65% mentioning withdrawing cash.
    - In nearly 50% of the sessions, urban consumers highlighted their inability to avail inter-bank transfers from BCAs or even their banks.
    - In an equal number of sessions, consumers expressed their aspiration for access ATMs.
- A large segment of poor urban consumers are thus unable to effectively use BC services for want of greater integration and interoperability with main-stream banking. This is a major cost and inconvenience for consumers, and represents a significant business opportunity for banks and BCNMs.
- There is a strong business case for banks and BCNMs in support of greater integration and interoperability. By enabling greater channel and back-end integration, banks and BCNMs can tap into a very significant market opportunity.
    - It is estimated that banks (along with BC channel) are able to service less than 50% of the current Rs.630 billion market of domestic remittances.
    - By enabling BCNMs to freely acquire inter-bank remittance transactions, the market size for BCNMs can grow from Rs.75 billion to Rs.140 billion. Integrating financial inclusion accounts with banks' core banking systems (CBS) can enable the market potential to grow further to Rs.204 billion. And together with CBS integration of RRBs, the market opportunity for BCNMs is estimated to be Rs.357 billion.

- For banks, the current remittance business of over Rs.300 billion can grow 20% by enabling BCNMs to acquire inter-bank transactions. With integration of financial inclusion servers at the back-end to the CBS, this opportunity can grow further to Rs.577 billion. Together with the opportunity that arises with CBS integration of Rural Regional Banks (RRBs), the market potential for the banks is estimated to be three-fold their current business of money transfer.
- If the regulator selectively enhances transaction limits for transfers, BCNMs can tap into a significant opportunity of better-off individuals and micro businesses. This is estimated to be almost 6 times the current business being serviced through BCNMs.
- Given consumers' overwhelming demand to receive G2P payments through BCs, this forms a large window of opportunity for banks and BCNMs. Banks have the potential of catering to nearly an additional Rs.100 billion G2P business. This can potentially result in a bottom-line growth of Rs.10 billion for banks.

- On the supply side, the second and third generation BCNMs firmly believe in the need for significantly greater integration and interoperability. In fact several of them state that this is a pre-requisite for growth, as witnessed by alternate channels like ATMs or payment systems using EDC devices. The first generation BCs who have the largest smart card-based consumer base are divided in their perspective, however they too are gradually moving towards interoperable environments for new consumers, markets or products.
- In the absence of a standards based approach, the industry is characterised by a multiplicity of efforts in silos rather than concerted coordinated efforts. This piecemeal approach is a major obstacle to achieving standardisation and therefore better integration, inter-operability and scale.

Summary of Recommendations

- **Creating a business friendly climate**:
  - There is a need to re-establish a business friendly climate for the BC model to take roots. With multifarious, and at times conflicting, demands placed on banks, BCNMs and BC agents, coming from Reserve Bank of India (RBI), Ministry of Finance (MoF) and other Government departments, there is a lack of sense of direction and continuity for the BC sector. Often the policies or mandates laid-out for BCNMs that determine their business plans and investments, do not have predictability and longevity, causing the players to take a narrow short-term view instead of making the investments to build a long-term business. This has resulted into proliferation of standards and technologies, lack of integrated and inter-operable solutions and non-emergence of viable models that can acquire scale.

- **Integration of BC channel with mainstream banking channels**:
  - There is an acute need to bridge the divide between BC channel and mainstream banking channels.
  - This requires enabling, at a bare minimum, (a) No Frills Account (NFA) operations across BCAs of a BCNM and at linked branches and (b) allowing BCAs acquire transactions for multiple banks[1]. The

[1] RBI allowed interoperability at the retail points or sub-agents of BCNMs through a regulation in March 2012. This however has had little real impact as the customer interfaces of many BCNMs are still non-interoperable and cannot acquire transactions for alternate banks or BCNMs. Feasible technological solutions that could enable this at scale still seem distant and would need

latter needs relaxation of RBI guidelines further to make them practical and usable (such as through use of multiple devices for transaction acquisition), given the severe inter-operability limitations of current front-end technologies.

- Further steps in this direction are integration of FI systems with mainstream banking and enabling all RRBs through core banking. There is already considerable progress on both of these steps, which needs acceleration and additional focus from banks to ensure the benefits are delivered to the consumers.

- Banks should recognise the enormous business potential through greater integration and interoperability of BC services and not be constrained by the additional costs involved.

- From a regulatory standpoint there is a need to enhance transaction limits in metro and urban markets to enable the under-banked micro businesses, retailers, artisans, and small professionals to meet their money transfer needs effectively through BC channel.

- **Greater use of BCs by Government departments**:

  - The overwhelming demand of rural beneficiaries favouring BCs as a channel through which to receive Government welfare payments should be an eye-opener for Government departments. Government should place greater reliance on banks (and BC channel) for disbursements of welfare funds.

  - This needs greater symbiotic relationship between banks and State Governments. State Governments need to pay for the convenience and security of the service; and for the benefits of enhanced targeted disbursements, greater transparency and a gradual reduction of share of subsidies as a percentage of the GDP, a major fiscal target, that can be realised. Banks need to recognise and tap-into the large business opportunity this offers. In-turn they need to gain the confidence of State Departments through a promise of efficient and effective delivery of payments and consumer convenience through emphasis on better integration and inter-operability of channels, as well as greater security and consumer protection.

- **Adoption of standards**:

  - Historically ATMs and credit or debit card payment systems using EDC terminals have witnessed exponential growth and adoption due to uniformity of standards. These standards are usually adopted from existing ones, instead of reinventing them. While market forces eventually determine the success of a standard, policy makers and the regulator need to make concerted efforts and provide direction to enable greater standardisation and prevent the proliferation of non-inter-operable technology options.

  - The on-going un-coordinated, and somewhat redundant, efforts for standardisation by various bodies needs to be better coordinated. Existing proven standards that bring in economies of scale and scope

considerable investments, so regulations need to be relaxed further to enable retail or sub-agent interoperability on ground. A near-term solution could be by allowing BCs to host acquisition equipment/interfaces for multiple banks/BCNMs (who wish to be interoperable). The adherence to an agent representing and being accountable to one single bank can be achieved through suitably define business rules and processes by the regulator. This relaxation can enable meeting the end-objective with which the current regulation was designed, while not getting constrained by technology limitations.

need be leveraged instead of reinventing them. Standardisation should, to a large extent, be driven by market forces, with necessary interventions to set the broad direction. At the same time the roadmap for standardisation needs to protect historical investments as well as consumer interest.

- **Driving client protection**:

  - Last, but nonetheless quite importantly, enhanced focus on consumer protection is vital for everyone. Recognising the challenges associated with this at an early stage would enable better readiness to deal with them, as accounts and transactions acquire scale.

  - Mainstream banking adopts world class practices and measures for areas like data protection, business continuity and disaster recovery. Other industries invariably view security and protection practices followed by financial sector as benchmarks. When compared to branch-based banking or other alternative channels like ATMs and internet banking, the BC channel is not yet adequately robust from a risk control, fraud management and client protection standpoint. Going forward this needs greater attention and strengthening.

  - Once the BC channel is better integrated with mainstream banking channels, consumer security, fraud prevention and overall consumer protection will be better enhanced.

Background

Financial inclusion for the under-banked and unbanked people in rural parts of India is a major thrust area for Ministry of Finance (MoF), Reserve Bank of India (RBI) and banks. The Business Correspondent (BC) model is emerging as a predominant model to extend outreach. In order to enhance viability, institutional business correspondent network managers (BCNMs) are adopting a strategy of providing services and scaling-up in higher-potential urban centres. The rollout in rural areas is steady but slow-paced, initially focussed on extending coverage and presence. Metros and large cities with large unbanked populations offer a better business case for BCNMs and BCAs and are therefore witnessing multiplicity of service providers. Diverse business models are being followed, with customised processes and technologies for enrolment, transaction processing, cash management, authentication, repudiation, security, monitoring and controls.

Nearly every scheduled commercial bank is providing some financial service through institutional or individual BC agents, employing a diverse range of technology solutions to enable the front-end and integrate with the bank's back end systems. There has been a proliferation of BC service providers, technologies, as well as technology service providers. Over the last two years, the growth in banking and other financial services for both mainstream customers and the poor has been at a rapid pace, however with a difference. While mainstream banking has largely followed orderly growth with similar business models together with uniformity of standards and approach, this has not been the case for BC services. For a variety of reasons, including lack of standards and the pressure to achieve aggressive coverage targets, services provided by BCNMs have grown in silos and in an un-coordinated manner. There have been severe gaps in proper integration of these services with mainstream banking. Many of the services are not interoperable across banks, across BCNMs of the same bank or even within different customer-service-points or agents (BCAs) of the same BCNM. The early impact of this lack of integration and interoperability is consumer inconvenience, consumer protection issues, higher costs, scalability challenges and difficulties in monitoring as well as in ensuring compliance.

There is a growing debate about the need for greater integration and interoperability across the BCs using a standards-based approach to give consumers more choice and convenience and to address other emerging challenges. In order to investigate this in detail, *MicroSave* conducted research to assess the need for greater integration and interoperability of banking services offered through agents.

The aim of this research exercise was to understand the need and challenges around intra-operability and inter-operability, covering the supply side and the demand side perspectives. The intended outcome is to develop a point of view to inform the debate based on perspectives of main stakeholders, and to arrive at a realistic and practical road-map towards better integration and inter-operability of financial services for the poor in India.

Objectives

The key objectives of this research study were:

1. Understand client need and expectations – demand side analysis.
2. Understand perspectives, challenges and plans of providers and enabling institutions - supply side analysis.
3. Understand regulatory and policy environment.
4. Understand evolution of industry standards and specifications and their impact.
5. Conduct business potential and opportunity analysis for feasible options.
6. Develop recommendations keeping various stakeholders in view.

Defining Inter-operability

It is imperative to have a shared understanding of integration and inter-operability of financial services using business correspondent model. For the sake of this study, inter-operability is viewed as an evolution from the fundamental integration of basic banking services within a bank to a very mature state entailing portability of services across banks. This potential evolution and stages of progression from basic integration to full service inter-operability are defined on the following lines:

Level 1: Intra-bank Integration

1.1 Limited Channel Integration

An elementary level of integration would entail enabling NFA customers to be recognised at linked bank branches. This would allow customers to conduct basic NFA transactions like checking their balance, making deposits or withdrawals possible at the linked or the base branch.

1.2 Product Integration

The next level of enhancement can come through the ability to offer regular banking products to NFA holders, which they quite often are deprived of currently. This could include ability to make commitment deposits (recurring deposits (RD), and fixed deposits (FD)), deposit cheques and perhaps take micro-credit or overdraught.

This could be further augmented by enabling access to additional channels such as ability to access accounts and transact at any bank branch (not just the base branch), and even at ATMs. This might entail segmenting the customers and perhaps offering a different tariff structure, however that is a business model question.

Level 2: Assisted Inter-operability

2.1 Inter-bank Channel Integration Through Agents/customer service points (CSPs)

This starts by opening up access to customers to transact across banks. At its simplest, this can be brought about by enabling agents/CSPs to service customers of multiple banks, while being primary agent/CSP for one parent bank. In order to enable this in its simplest forms, agents/CSPs can use back-end channels like NEFT or RTGS for fulfilment.

This can provide economies of scale and scope to the agents and convenience to customers and could be termed as a nascent form of 'financial super-market'.

Level 3: Limited and Full Service Inter-operability

3.1 Limited Service Inter-Operability

Assisted inter-operability can be extended to self-service inter-operability with certain limitations keeping feasibility and cost-benefit considerations in view. These might potentially be limited to the use of only certain types of technologies, such as mobile based, that are easily and inexpensively amenable to support self-service inter-bank transactions.

3.2 Full Service Inter-Operability

Unencumbered inter-operability would mean NFA account holders can transact with any other bank account and can enjoy product offerings and features that are at par with mainstream banking customers.

Level 4: Utopia - Portability

Portability is currently being thought for high network individuals and regular bank account holders, so it is really a utopia for NFA holders. Essentially, it would allow account holders of any bank to migrate their accounts to alternate banks, while retaining their original account configuration. This is at an early stage of evolution from an Indian context.

Chapter 1 – Urban Markets

Aspirations and needs of the unbanked population in metros and large cities

In the recent years 'Financial Inclusion' has become a buzz-word. However given the emphasis on coverage of unbanked villages with population between 2,000 and 5,000, financial inclusion has almost become synonymous with the needs of the rural environment. It is important to recognise the existence of very large segments of the urban population who have inadequate access to banking services or no access at all.

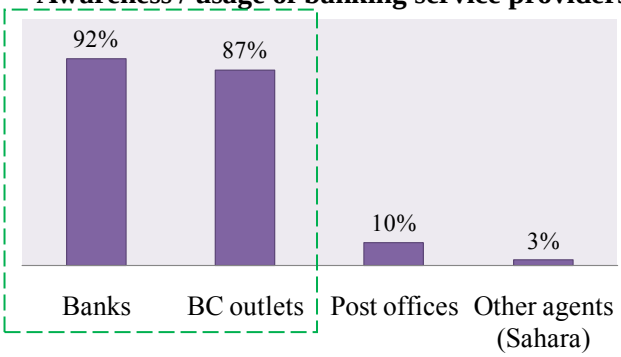
There are 53 urban agglomerates in India each with a population of more than one million.[2] According *MicroSave* estimates[3] there are about 50 million adults in these mega cities who have inadequate access to banking services and organised financial products. This untapped white space of opportunity for banks is equivalent to about 30% of their existing cumulative deposit accounts in these geographies. The major categories in this unbanked adult population include casual labourers and self-employed people. Some of the segments with a very large base in these categories are small shopkeepers, micro establishments and small enterprises, drivers, maids, security personnel, hawkers and vendors, skilled and unskilled labourers and so on.

Only very few innovative banks have started viewing this large untapped market as an opportunity. They have been trying to understand the specific needs of these segments, experimenting with products or undertaking small scale pilots, but nothing at scale. For most banks, these segments do not even seem to be on their radars.

MicroSave, through this research, attempted to gather a better and deeper understanding of the needs, expectations and challenges amongst some of these segments. The target profile included those who understood banking or were already exposed to it in some form, primarily through the BC channel. The insights are extremely interesting and very revealing.

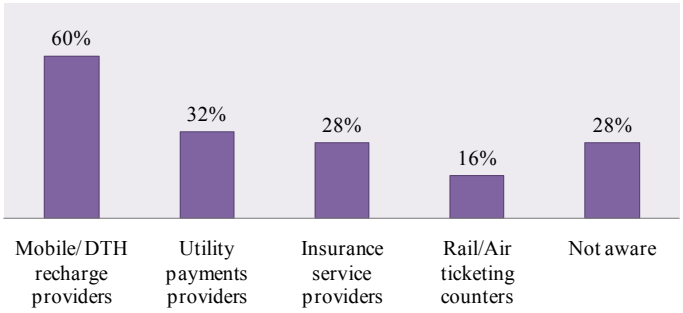
Awareness of existence of banking services and BC service providers is very high amongst urban poor. In more than 90% of the sessions, respondents were aware of or using banking (or BC services). Post offices have lost the sheen of their glory days and are no longer popular among respondents. In only 10% of the sessions, respondents reported using post offices for savings or for remitting through money orders.

Exhibit A.1
Awareness / usage of banking service providers



The degree of awareness about banking services was surprisingly much higher compared to that for several commonly available non-financial services with high penetration levels. The highest in this category being awareness or usage of mobile or direct to home (DTH) satellite television recharge services, coming out in 60% of the sessions (as against 92% for banking). This category was followed in decreasing order of awareness (or usage levels) by utility payment services, insurance services and railway ticket services.

Exhibit A.2
Awareness / usage of non-banking service providers

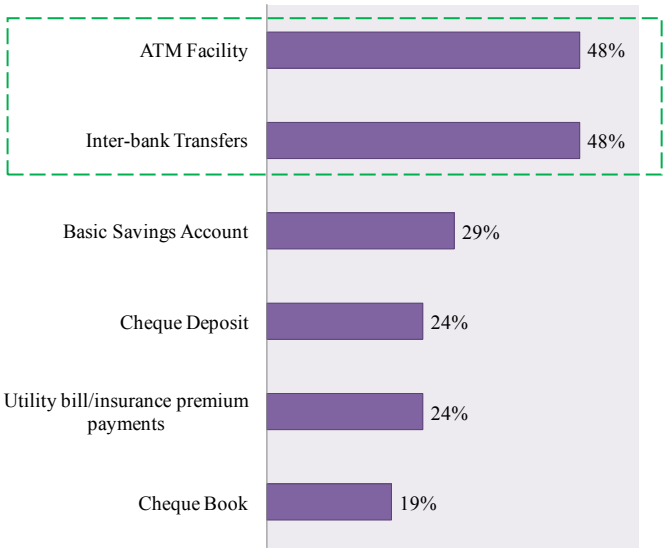


Given this high level of awareness, it is no surprise that urban poor are not content with just having 'no-frills-accounts' or basic banking facilities. Most aspire to have access to multiple banking facilities and financial products. Foremost amongst these is access to

[2] Census 2011 Provisional Data
[3] Based on NSSO Survey – 66th Round

ATMs, followed by intra or inter-bank transfers (or remittances). A very large number also wanted facilities to deposit and issue cheques. Additional product offerings like ability to make fixed deposits, receive loans, and pay insurance premium or utility bills were also significant priorities expressed by the respondents. These needs are in the main not being met by banks or BCNMs.[4,5]

Exhibit A.3
Services consumers aspire to but are unable to access

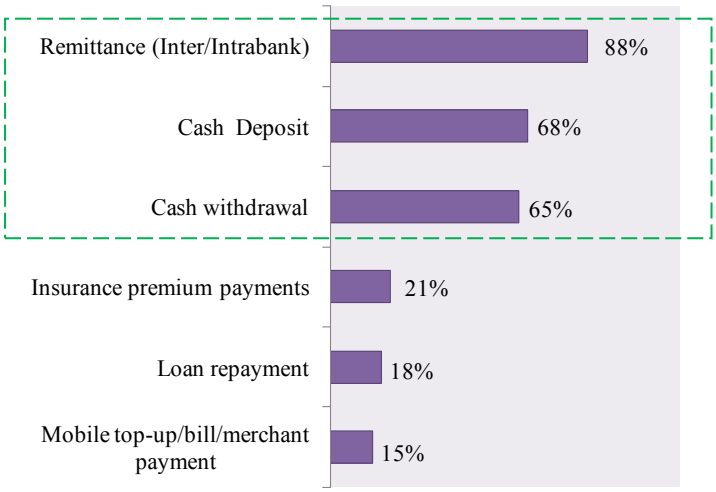


For want of these facilities, poor are left with limited alternatives and are forced to use sub-optimal tools and means to manage their finances.

Within the ambit of banking services currently available to the poor consumers, three categories of transactions types stood out as the highest priority on their wish-list. These were intra or inter-bank remittance, followed by cash-deposit and cash-withdrawal.

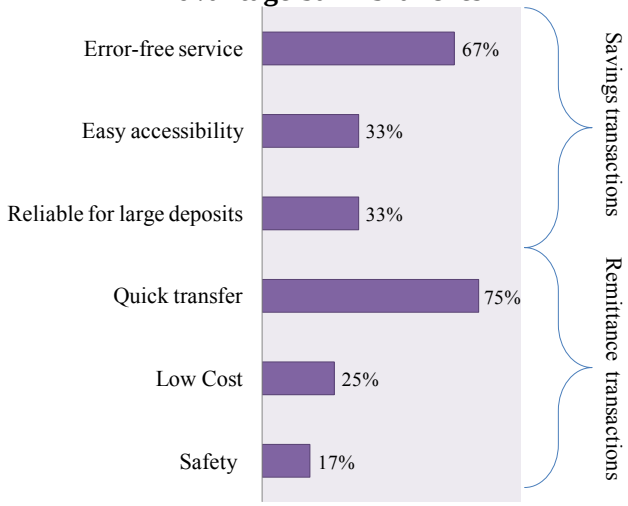
'Sending money' has emerged as one of the main needs of domestic urban migrants with respondents in 88% of sessions expressing a need to remit money. This was followed by an articulated preference for making cash deposits and cash withdrawals in 68% and 65% of the sessions respectively.

Exhibit A.4
Transaction preferences of urban consumers



Transacting at bank branches is considered to be safe, error-free and cheaper. Branches are also a preferred channel for making large value deposits.

Exhibit A.5
Advantage bank branches

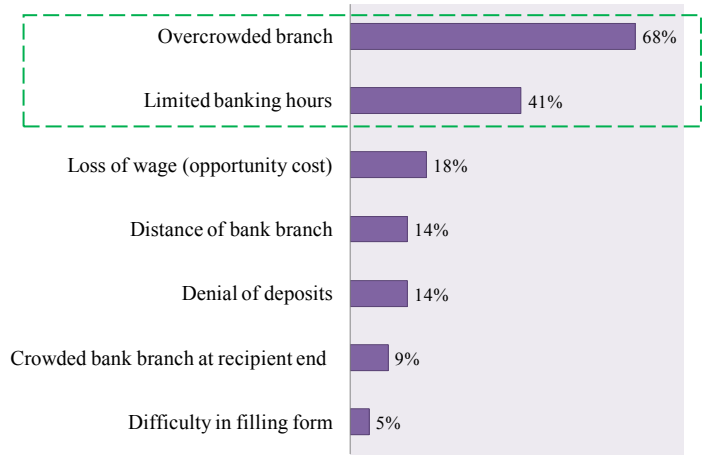


Despite the liking for bank branches on several counts, poor respondents noted that they face several challenges while transacting at branches and therefore increasingly prefer to use BCNM outlets /agents as an alternate channel. In 69% of the sessions, respondents exhibited a preference for BC channel versus banks.

[4] *MicroSave*, Dormancy in No Frills Accounts, 2011
[5] *MicroSave*, State of the BCNM Industry in India – The Supply Side Story

Bank branches are inadequately equipped to meet the expectations of poor wanting to make large volumes of small value transfers. The major challenges faced by respondents while remitting from banks are overcrowded branches and limited banking hours, leading to inordinate delays and inconvenience. Large distances to bank branches and real or opportunity loss of wages were other key inhibitors.[6]

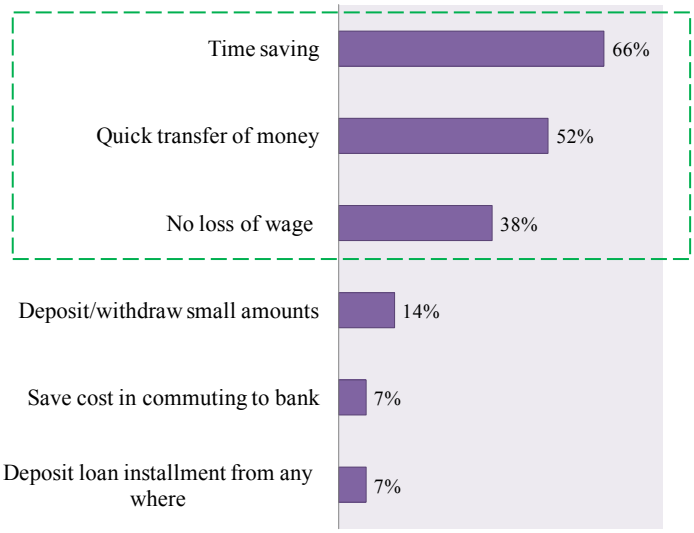
Exhibit A.6
Challenges with remitting through bank branches



Transacting through BCAs is perceived to address many of the challenges faced at branches. In 66% of the sessions, the respondents felt that they saved on time, whereas 38% felt that they could avoid loss of real wages or opportunity cost.

These advantages were echoed by agents and retailers during our interactions with them. However contrasting BC channel with banks, retailers felt that the ability to offer cheque deposit facility and providing greater safety along with interest bearing accounts were the major upside for branch based banking.

Exhibit A.7
Perception of BCs compared to bank branches



[6] *MicroSave*, Cost and Willingness to Pay in India, 2011

Agents perceive that remittance or money transfer is the most critical need of consumers in metropolitan areas, in particular the migrant population. In an overwhelming 96% of the sessions, retailers expressed this opinion. Beyond remittances, retailers believe, consumers have a need to operate basic savings accounts, open fixed or recurring deposits, deposit cheques and avail loan products.

In addition, based on consumer queries and their observed behaviour, retailers very strongly felt that ATM facilities and inter-bank transfers were a much wanted and unfulfilled need of consumers in metropolitan areas. In 52% of the sessions, retailers felt that consumers wanted ATM facilities and would be willing to pay for them. Inter-bank transfers elicited a similar response in 44% of the sessions.

Exhibit A.8
Agents' perception of consumer needs for financial services

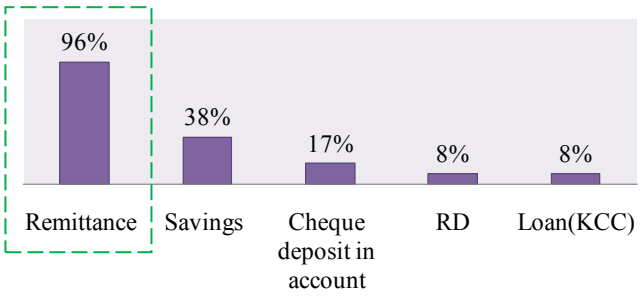
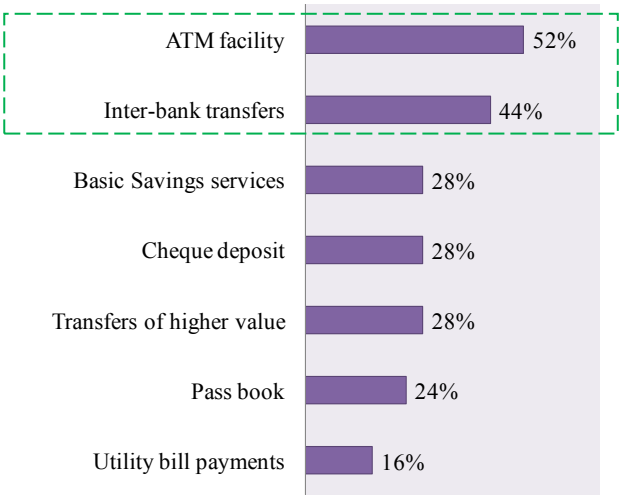


Exhibit A.9
Agents' perception of consumer needs for banking facilities



How is the supply-side equipped to meet urban consumers' demand for remittances?

According to estimates,[7] there are up to 100 million migrant workers, who contribute as much as 10% to the national Gross Domestic Product (GDP). It is reported that in some states like Uttar Pradesh, remittances make up 80% of the cash income of the households. The average annual remittance amount is about Rs.20,000. *MicroSave* studies[8] show that in industrialised states like Gujarat and Punjab, the amounts remitted are much higher at Rs.35,000 to Rs.45,000 per annum. Even the poorest of the migrants are reported to be sending money home.

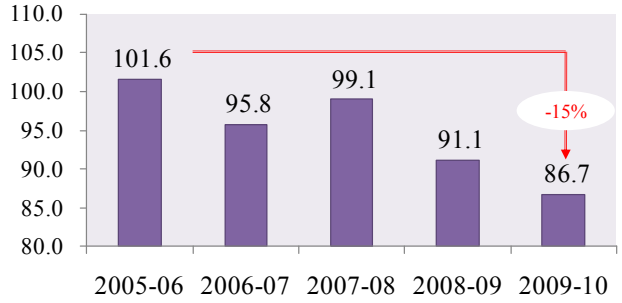
A mix of formal and informal channels continues to be used for sending money. *MicroSave* studies[9] bring out that banks or post offices are the most common formal channels used, whereas couriers, friends or carrying cash themselves are the commonly preferred informal channels.

The important characteristics driving adoption of a channel for money transfer in order of preference are:

Attribute	At Destination	At Source
Trust	1	1
Delivery time	2	2
Security	5	3
Processing time	3	4
Cost of service / transaction	4	5
Proximity of access points	7	6
Staff behaviour	6	7

Amongst the formal channels, historically post offices were the main provider of money transfer services through their flagship product of 'money orders'. Over the years while the urban and rural postal network has grown marginally, the number of money orders have witnessed a decline of 15% between 2006 and 2010.

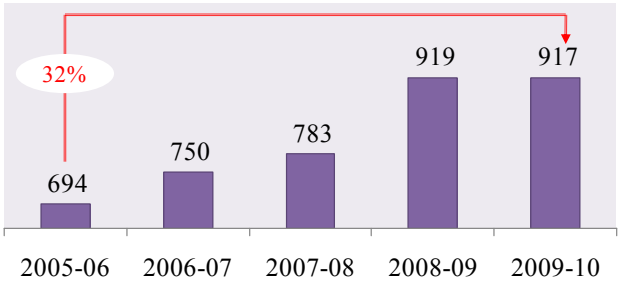
Exhibit A.10
Money order volumes (number in millions)



(Source: India Post, *MicroSave* analysis)

In the same period, there has been a significant 32% growth in the value sent per money order mainly due to: (a) the rise in number of migrants and the need for sending larger sums back home to family or friends and (b) rising income levels across board.

Exhibit A.11
Value per money order in Rupees



With better inter-connectivity through core banking and central switching systems, and subsequent introduction of innovative products like NEFT and RTGS, banks have been able to deliver very well on the attribute of 'delivery time' and over taken post-offices as the preferred formal channel of remittance.

Post offices and other channels have also been saddled with higher costs (service charges, extra and often illegal charges levied by the delivery agents), and poor reliability (lost deliveries and so on).

MicroSave found[10] that banks have now emerged as a far more preferred channel amongst all. In the Punjab and UP corridor, in 84% of the sessions, respondents

[7] Deshingkar et al. "Migration, Remote Rural Areas and Chronic Poverty in India" (2010)
[8] *MicroSave*, "Understanding Remittance Networks in Gujarat, Orissa and Bihar" (2011) and "Understanding Remittance Networks in Punjab and Uttar Pradesh" (2011)
[9] ibid
[10] ibid

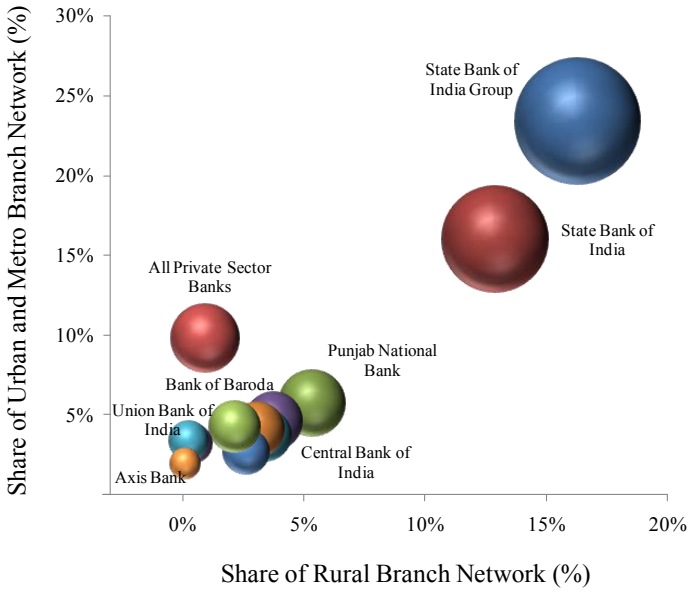
preferred banks. By comparison, a mention of preference for all other channels came up in only about 30% of the sessions.[11]

The other dominant factor has been the growth of the rural network of bank branches, enabling proximity of access points at source. Rural bank branches (including those of regional rural banks or RRBs) have grown by over 11% between 2001 and 2011, to 36,248.[12]

However amongst all banks, State Bank of India (SBI) has achieved a pole position by establishing a very large share of both the urban and the rural bank branch network. While most public sector banks have enhanced their rural penetration, this has not been uniform across India. Growth in penetration is primarily driven by where a bank has presence as the lead bank in a State.

Exhibit A.12

Urban and rural penetration of bank branches[13]



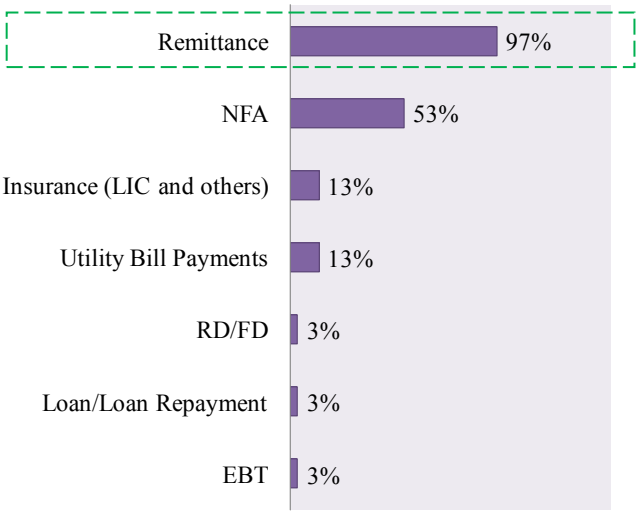
SBI's '*Taltkal*' product[14] offering has been another significant catalyst, enabling it capture a large share of the remittance market. Allowing a direct deposit instantaneously into any SBI account meets the two highest priority attributes from consumer's standpoint – trust (facilitated by real-time transactions and ease of confirmation by the recipient) and quick delivery time.

All these factors have led SBI establish a significant lead in the remittance market for the corridors between major metro or urban cities to rural country-side.

The significant demand for transferring money and growing consumer preference for the BC channel is reflected in the bouquet of offerings of BC service providers. In as high as 97% of the sessions, agents, CSPs or retailers in metro locations mentioned offering remittance services through BC access points. Only a few are additionally offering utility or insurance payments. Financial products, like pure savings, fixed or recurring deposits and so on, are being offered by an extremely small percentage of urban BCs.

Exhibit A.13

Dominant offerings through metro BC access points



A survey of BCNMs[15] by *MicroSave* corroborated this heavy focus of providers on remittances services in urban areas with 64% of the responding BCNMs offering it as the core product. Nearly half of them are offering a variety of non-banking products such as airtime top-ups, insurance payments, utility bill payments and so on.

Though BCNMs have a wider portfolio of offerings with a bouquet of 3 to 4 products (typically including

[11] Multiple responses recorded – hence percentages sum to >100.

[12] RBI Reports on Trends and Progress in Banking

[13] State Bank of India group constitutes five associate banks (originally seven) namely State Bank of Bikaner and Jaipur, State Bank of Hyderabad, State Bank of Mysore, State Bank of Patiala and State Bank of Travancore. State Bank of Saurashtra and State Bank of Indore were merged with SBI in 2008 and 2009 respectively.

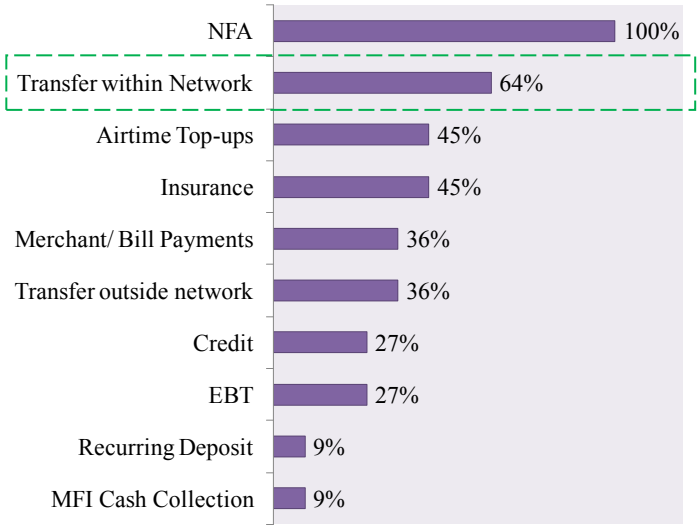
[14] See *MicroSave* India Focus Note 68 ""SBI *Tatkal*" - From Cash to Cash Cow"

[15] *MicroSave*'s Survey of Institutional BCNMs

an NFA with remittance/transfers or EBT payments as banking products and the rest being non-banking products), the last mile of the channel – urban agents or retailers/CSPs has an uptake of only 1 to 3 products, that too with remittance leading by a wide margin. This demonstrates a major gap since, despite the demand for them, the remaining products, are not being pushed through the BC channel.

Exhibit A.14

Products offered by institutional BCNMs

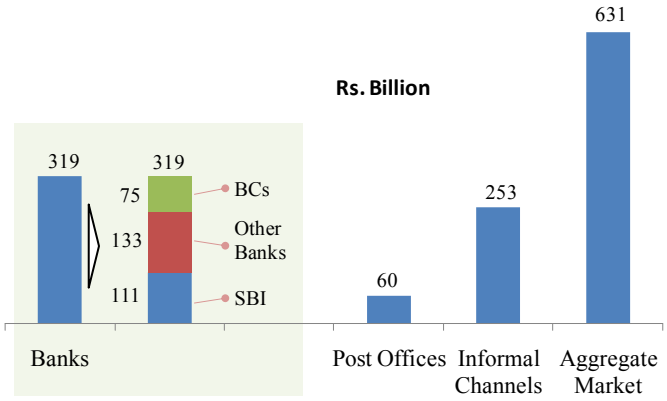


What is the size of the unaddressed market?

Even with a near exclusive focus of private sector banks and select PSU banks on money transfer services, they are addressing only a fraction of the consumer demand. Apart from the inability to meet consumer aspirations, banks and BCNMs are losing a significant business opportunity

We estimate the total domestic money transfer market in India in 2010-11 at Rs.630 billion.[16] Of this, about Rs.379 billion is through formal channels, with banks constituting Rs.319 billion of this market and the post office network catering to about Rs.60 billion (or 16% of the formal market). Informal channels constitute about Rs.253 Billion, or nearly 40%, of the existing market.

Exhibit A.15
Domestic money transfer / remittance market size



We estimate that SBI, despite being a dominant market player in domestic money transfers, is catering to about Rs.168 billion out of the total estimated market size of Rs.630 billion, which is less than 27%.

With nearly 3,500 urban BC service access points and a dominant focus on capturing the market for money transfer, all BCNMs cumulatively have a market of about Rs.75 billion, which is a mere 12% of the total demand.

However banking channels are unable to tap into a large market being served by post offices or informal methods, in spite of their multiple shortcomings. This is because:

- Several banks are yet to recognise the full potential of domestic money transfers.[17]

  (The market is driven not only by migrants but also peer-to-peer transfers and small value commercial transactions. This is further compounded by the RBI imposed transaction limits on such transactions).

The other major impediment is a lack of network footprint, limiting the market banks can penetrate and service. Most banks' inability to connect to banks with large networks and deeper penetration at source or destination (SBI group and RRBs) is leading to a significant loss of business opportunity for money transfer.

- Most banks with large branch (and BC) networks have only enabled intra-bank transfers.

  (For example, other than self-serviced NEFT and RTGS transactions, money transfer transactions both at SBI branches and BCs can only be within the bank. This means despite having the largest metro, urban and rural bank branch network, SBI can serve only 13% of the potential corridors in the country.)

[16] *MicroSave* estimated the current domestic market size for money transfers served through both formal and informal channels. The approach adopted was a mix of top-down and bottom-up analysis, referring various existing market sizing studies on the subject, analysing data available on domestic remittance volumes handled by India Post and by large banks (SBI, PNB, Union Bank, ICICI Bank and so on) along with volumes of remittances managed by leading BCNMs. These were extrapolated for various geographies according to established remittance activities in these areas. The formal market was segregated into that served by India Post and banks. The volumes and value of domestic money transfers managed by banks were broken down into estimates for in-branch transactions and through BCNMs. SBI being the largest bank serving this market, the business conducted by SBI was computed separately.

[17] The market opportunity is driven not only by migrants but also peer-to-peer transfers and small value commercial transactions. The market expansion is limited by the RBI imposed transaction limits that prevent low value commercial transactions to be carried out through BCs.

- Even intra-bank transfers are limited only to accounts accessible through branches at the source end.

  (Rural commercial bank branches cumulatively number 20,773, whereas there are now over 76,801 rural BC touch-points and another 15,480 rural RRB branches,[18] providing just under four times the reach of branch network. However almost no bank has enabled real-time or even offline peer-to-peer transfer of funds into accounts serviced through their BCNMs / individual BCAs or RRBs in their network.)

[18] RBI Report on Trends and Progress of Banking 2011

Chapter 2 – Recommendations for Urban Markets

Can greater integration and inter-operability aid in addressing service provider challenges and meet aspirations of the urban poor?

The solution lies in decomposing the constraints for the sending and the recipient points (destination and source end for migrant remittances) and addressing them accordingly.

Enabling Channel Inter-operability

At the sender's end, BCAs could be enabled to acquire transactions for multiple banks. Typically this might be possible by enabling BCAs to link to NEFT switch (as the transaction size would be small for RTGS). This single step would allow any of the rural branches to receive transfers from anywhere in India, and not just within their bank network, opening up access significantly.

Many smaller banks have adopted this approach by enabling their BCAs to use NEFT services for inter-bank transfers. However, since smaller banks only have a handful of branches and BCAs, the impact and benefits remain very limited unless the large banks too recognise the opportunity and take steps in this direction.

MicroSave interacted with several retailers and agents on the potential benefits of enabling customers to transfer money at multiple access points. A vast majority were very enthusiastic of the impact such a move could have on their business.

Recognising the need, RBI has recently permitted BCAs to become transaction acquirers for multiple banks, as long as they represent a single parent bank.[19] This is on the lines of acquisition of transactions through the ATM channel. However in reality this is likely to have little impact. As against ATMs, BCNM deployments largely lack inter-operability and therefore the currently deployed front-end systems cannot easily acquire transactions for another BCNM or bank, unless significant changes and investments can be made to enable this.

In order to support mass adoption, going forward there would be a need for greater standardisation of transaction acquisition through micro-ATMs, common mobile based architectures, deployment of inexpensive RuPay cards or similar approaches to ensure greater inter-operability of the BC channel. Adoption of common standards such as *Aadhaar* enabled bank accounts and payments would go a long way in making this possible.

Bringing RRBs on to Core Banking

In order to widen access and outreach at the recipient end, there is a need to enable RRBs and accounts serviced through BCAs to be enabled to receive funds through P2P transfers. Both these require the respective systems to be connected to national switches through appropriate core banking systems.

The Ministry of Finance has undertaken a drive to push all RRBs to migrate to core banking systems with online connectivity. During the budget speech of 2011-12 it was reported that 81 out of 82 RRB have already been migrated to CBS. This could go a long-way towards facilitating direct fund transfers for large number of rural recipients who tend to bank more often with RRBs than with SCBs.

Enhanced Integration of Financial Inclusion (FI) and Mainstream Banking Systems

The enablement of BCNM serviced accounts to receive and service P2P transfer funds, requires the FI servers to be fully integrated with the bank's CBS.

In a separate move, RBI has mandated the need for providing balance details to no-frills-

[19] RBI circular on extending interoperability at retail outlets and sub-agents of BCs

accounts holders with information fetched online from the banks' CBS; to the extent network connectivity allows it. Most banks and BCNMs are already working on adhering to the timelines suggested for achieving this.

Those banks who believe in expanding their share of domestic money transfer market, can go the extra mile and allow branches to accept deposits for multiple banks. This might sound like an antithesis to branch congestion, however if it is allowed along with enabling the BC channel, together with a tariff structure that does not cause arbitrage opportunities to appear, banks would benefit immensely, as highlighted in the following section.

Enhancing Transaction Limits

The fourth major area of intervention is to enhance the transaction limits with certain safeguards. This would open up the market for non-migrant transfers, which in itself is a significantly large market.

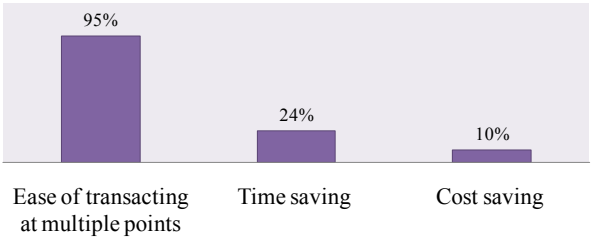
MicroSave research found considerable support for raising the transaction limit to Rs.25,000 per day, in metro cities to begin with. This would go a long way in addressing the needs for small traders and micro-businesses wanting to use the BC channel. And of course lead to symbiotic benefits for both.

What are the potential business opportunities?

During *MicroSave* research, in 43% of the sessions, the agents and retailers responded that they were losing business opportunities or had the risk of losing customers who wished to transact at BC outlets of other banks.

In 60% of the sessions, the respondents believed that there would be an increase in footfall if they could acquire transactions for multiple banks. The following exhibit demonstrates the impact on customers as perceived by the retailers.

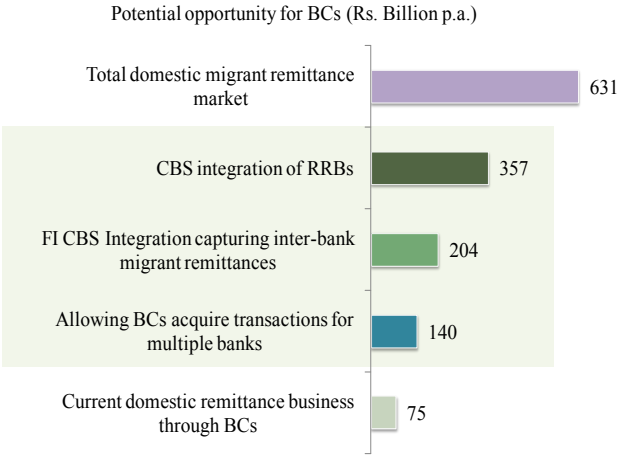
Exhibit A.16
Business opportunities for BC agents/retailers



Business Opportunities for BCNMs and Agents

There is immense business potential for BCNMs and their agents or retailers. Exhibit A.17 brings out the business potential arising out of each of the recommendations above being put into action by banks or accepted by the regulator as the case may be.

Exhibit A.17
Business opportunities for BCNMs and agents/retailers



(Source: RBI database, Annual reports of SBI and other banks and *MicroSave* analysis[20])

A. Allowing BCAs to acquire transactions from multiple banks can expand the market opportunity to Rs.140 billion, almost two fold from the current size of Rs.75 billion.

B. Impact of integration of RRBs to CBS and enabling connectivity through NEFT, could take the potential opportunity for BCNM sector further to Rs.357 billion, more than four times the current market size.

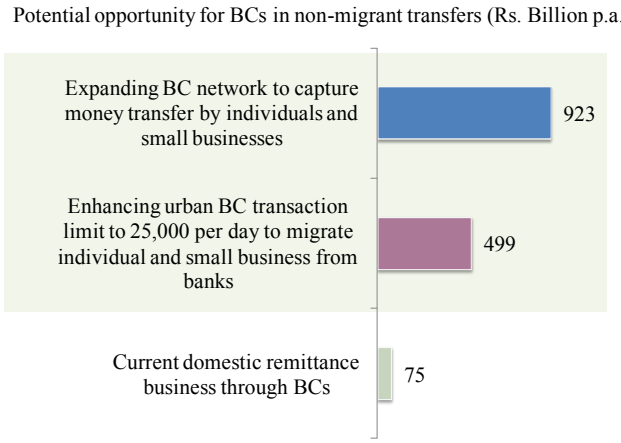
C. Integration of FI CBS of banks to enable inter-bank migrant transfers can expand the potential further to Rs.204 billion.

[20] Additional business opportunities that can be enabled after undertaking the actions outlined above is estimated based on factors including: (a) potential up-take of formal channels by consumers who continue to use informal channels. As banking/BC channel address consumer challenges and meet their aspirations (of convenience, speed, service availability, security, lower relative costs and so on) there would be a shift of non-customers towards these banking channels; (b) there is a significant un-tapped market that largely is based on the cash-economy. As their aspirations, such as enhancement of transaction limits, are met through the recommendations made here, some of them would start to use formal banking facilities and this would lead to market expansion for banks and for BCs; and (c) with the maturing of bank based money transfer services, market expansion through inclusion of new consumer segments using these services has also been factored in our estimates.

D. Enhancing the transaction limit per day to Rs.25,000 for metro cities would enable migration of certain business from banks, decongesting branches. It would also lead to several additional non-migrant segments, like small businesses transact at BC access points. This could expand the money transfer market for BCNMs to Rs.499 billion.

Market expansion due to new segments wanting to use BC services could give the sector additional boost. This expanded market for BCNMs, driven by money transfers for individuals and small business establishments is expected to be Rs.923 billion.

Exhibit A.18
Additional opportunities for BCNMs

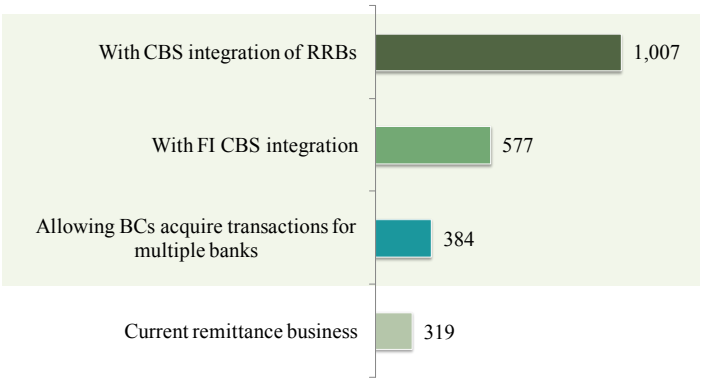


(Source: RBI database, Annual reports of SBI and other banks and *MicroSave* analysis)

Business Opportunities for Banks

Banks stand to gain substantial business from each of the measures above being put into action. They gain indirectly from the additional business captured by BCNMs as well as expanded and new opportunities that arise directly for the banks. Estimates for these business opportunities for banks are below.

Exhibit A.19
Business opportunities for banks[21]



(Source: RBI database, Annual reports of SBI and other banks and *MicroSave* analysis[22])

1. Taking the first step of enabling BCAs acquire transactions of multiple banks can expand the business by nearly Rs.70 billion for the banks.

2. While leveraging the integration of the FI CBS and enabling rural BCAs to service the market at the recipient end can generate an opportunity of Rs.270 billion for banks.

3. With the opening up of the new segments, the domestic money transfer and remittance market can be expected to increase to Rs.1,007 billion from the current Rs.630 billion. This translates to a growth potential of 60% for the entire market.

[21] See footnote 18
[22] Ibid

Consumer challenges due to lack of integration and inter-operability

From a consumer standpoint, inability to transfer money at BC outlets of alternate banks causes heavy dependence on the (recipient's) bank and its access points. *MicroSave* studies[23] highlight the following consequences.

- Consumer inconvenience. *(In 75% of the sessions consumers reported greater convenience if they could transact at multiple outlets, as long as charges do not go-up substantially*)

- Increase in direct costs (multiplicity of accounts) and indirect costs (travel related, wage loss, opportunity costs)

- Inadequate competitive pressure causing poor quality of service, arbitrary pricing and arbitrage opportunities.

[23] *MicroSave* India Focus Notes 63, Why People Do Not Use Present Banking Systems – A Case For BCs, 66, What Do Clients Want in E/M-Banking Agents?, 67, Clients' Willingness to Pay "Reasonable Fee" for BC Services, 79, Graduating SBI Tatkal Customers, 82, Lessons from CSMs: Customer Perspectives, Briefing Notes 97, The Business Case for Branchless Banking -What's Missing?, 101, Mobile Money - Questions That Your Clients Will Ask You, 111, Managing Customer Satisfaction in Agent Banking, and Research Papers Understanding Remittance Networks

Case Studies: Issues and Concerns of BC Account Holders

Existing BC Customers	Issue and concerns with the current BC model
 **Name:** Rajmahal **Age:** 35 **Occupation:** General Store **Village:** Kathori **District:** Chandauli	**Lack of Trust** Although Rajmahal has a opened an NFA account with the BC agent but does not trust the BC channel. In the past, he suffered losses when private companies fled with his savings. He believes that unless a government scheme is available on this channel, it would be difficult for him to accept it as a regular bank account. For the very same reason many other villagers who have opened their BC enabled account never use it for savings purposes.
 **Name:** Shyama **Age:** 30 **Occupation:** Wage labourer **Village**: Niyamtabad **District**: Chandauli	**Difficulty in Withdrawing Remitted Amount** Shyama needs to visit the bank every time her husband sends her money for family expenditures. This makes her lose a day's wage. In addition to this, she rarely leaves any portion of received money in the bank due to high cost of withdrawing money from the bank. Once money is withdrawn, it is difficult for her to keep a track of it and it gets spent. A major challenge can be resolved for such families if the remitted money could be received by their families in the village itself through the BC.
 **Name:** Ashfaq **Age:** 66 **Occupation:** Agriculture and Dairy **Village**: Malkhand **District**: Yavatmal	**Challenge in Withdrawing Pension Funds for the Elderly** Sheikh Ashfaq is a beneficiary of Niradhar pension scheme. His pension account is in a bank branch located at a distance of 4 km from his village. It is very challenging for senior citizen to visit bank to withdraw their pension. They have to hire an auto and need another person to accompany them. Since the pension for beneficiaries of 3-4 villages is credited on the same day, many customers visit the branch to withdraw, and at times the branch runs out of cash. When this happens the beneficiary has to go again the next day. Since most of these beneficiaries are not able to write or read or are even unable to stand in queues, many agents charge Rs.20 to fill up the form and stand in queue for them.
 **Name:** Durgesh **Age:** 36 **Occupation:** Agriculture and Dairy **Village** **District**	**Inability to make business payments** SBI tiny account opened by Durgesh does not provide the ATM facilities or an option to withdraw from the branch. To make business purchases outside the village, he has to either carry cash or deposit cash in his regular savings bank account after standing in a long queue. If ATM or in-branch withdrawal facilities were allowed from the BC enabled account, then he would be able to deposit cash for business purchases in the village and withdraw from an ATM or branch at the time of making payments. *" Aisa system ho jaye ki paisa yahan dalo aur nakadi nikalo wahan"* (System should allow flexibility of deposits and withdrawal).

Existing BC Customers	Issue and concerns with the current BC model
 **Name**: Bhagwaan **Age:** 50 **Occupation:** Agriculture **Place:** Papal Village, Budaun District	**Inability to withdrawal larger amounts during emergencies** Bagwaan uses his BC enabled account to deposit cheques received for his sale of agricultural produce and to receive remittances from his son working outside the village. His NFA account does not provide the facility of ATM or withdrawal from branch. In the absence of such a facility he is not able to withdraw higher than Rs.10, 000 in case of emergencies. If the BC counter in his village is closed he is not able to withdraw from his savings account and has to borrow from friends and relatives during emergencies.
 **Name: Kallu** **Age: 26** **Occupation:** Unskilled labour **Village:** Fathepurkhas **District:** Mordabad	**Inability to transact outside village** Kallu works in factory located in Mumbai. He is not able to open a savings account in Mumbai due to lack of KYC documents. Therefore he opened an NFA account at the BC counter located in his village because it has relaxed KYC requirements. However, he is not able to withdraw from his savings account in Mumbai as there is no BC counter in his residential and work area in Mumbai. His NFA account remains dormant because he does not deposit into his account as there is no facility to withdraw from ATM, branch or other BC outlet.

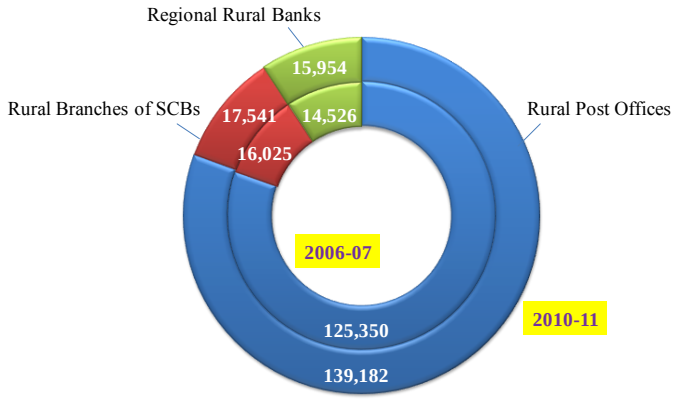
Chapter 3 – Rural Markets

Aspirations and needs of the unbanked in rural areas

India Post has traditionally been the largest provider of formal financial services to rural India. The post office network, covering rural areas is well established and vast. Rural post offices accounted for more than 80% of the total postal network in India for all of the last decade, growing to 90% in 2010-11.[24] In 2006-07 rural post offices formed 80% of all formal rural financial access points.

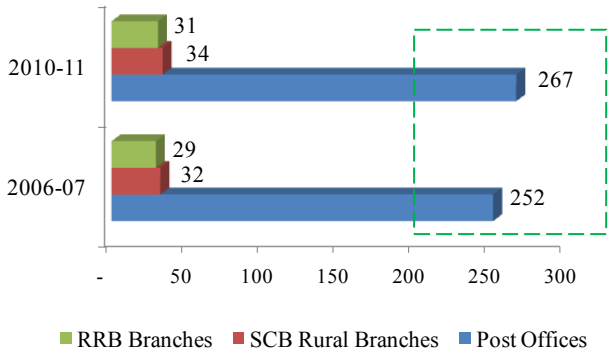
Rural bank branches of scheduled commercial banks and branch network of RRBs too have been growing rapidly. However compared to a share of 20% in 2006-07, they have been able to expand their share of network by only 1% (to 21%) in four years, ending 2010-11.[25]

Exhibit B.1
Network of formal rural financial service providers (number of branches)



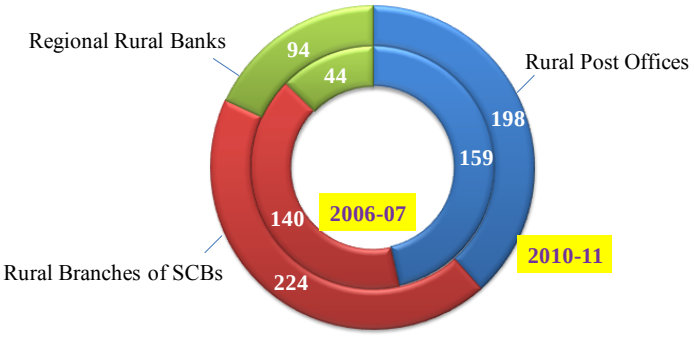
The deep penetration of postal network is reflected in the coverage they have been able to extend. In 2006-07, there were 252 post offices for every million of rural adult population and this has grown to 262 post offices per million, in 2010-11. In the same period, rural network of banks has only grown from 61 to 65 branches for every million of adult population.

Exhibit B.2
Coverage per million of rural adult population



Banks, despite their poor network and coverage, are nevertheless, rapidly emerging as a preferred channel for financial services. There has been considerable growth in the number of accounts held by rural bank branches – both in absolute terms and as share of cumulative rural savings accounts.

Exhibit B.3
Distribution of rural accounts (million)



Banks have expanded their share of rural accounts by 8% from 54% in 2006-07 to 62% in 2010-11. 5% of this growth has been contributed by RRBs.

[24] India Post Annual Reports and *MicroSave* analysis
[25] RBI Reports of Trends and Progress of Banking and *MicroSave* analysis

Accounts held	Share in 2006-07	Share in 2010-11
Rural post offices	46%	38%
RRBs	13%	18%
SCB rural branches	41%	43%

In terms of average deposits in these accounts, rural branches of SCBs seem to be emerging as the winner. Both post offices and RRBs have been witnessing a rapid dip in value, while SCBs have been gaining at an accelerating pace. In 2010-11 rural branches of SCBs were holding an average value per account of Rs.19,362.[26]

Exhibit B.4
Average value per rural savings account (Rupees)

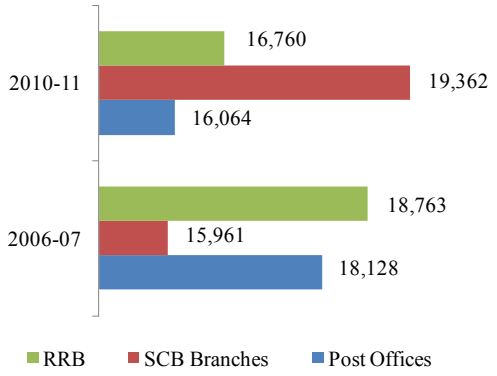
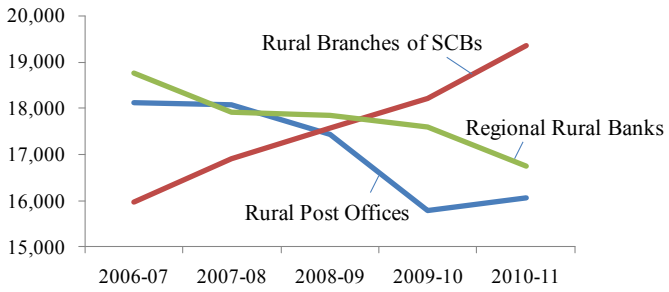


Exhibit B.5
Trend of average value held per rural savings account (Rupees)



These macro findings were corroborated through the *MicroSave* research[27] covering a variety of rural population segments.

During this research we tried to get an understanding of the aspirations, needs and preferences of the rural poor for a variety of financial services they commonly access today. These included savings, credit and receipts. We also tried to gain an understanding of the financial services needed but not yet available to the rural poor. In this report we have also analysed and tried to provide insights on ways through which these unmet needs could be fulfilled.

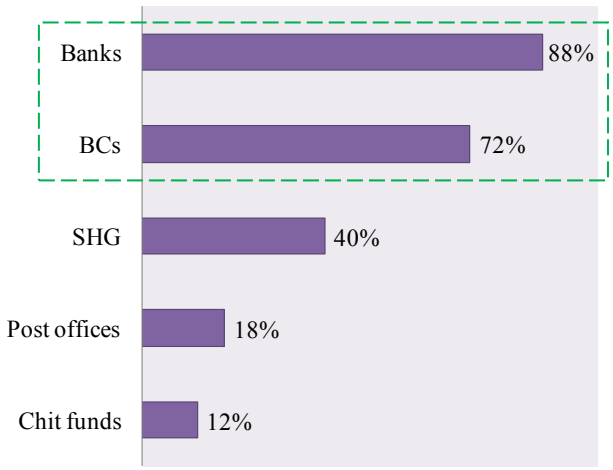
Rural Poor's Channel Awareness and Preferences

Channels for Savings

MicroSave's research found that for the purpose of savings, banking channels are now a preferred choice by a very large number of respondents.

In 88% of the sessions, respondents were aware of banks as a channel for savings. In 72% of the sessions, a similar response was received for BCs. SHGs were mentioned in 40% of the sessions.

Exhibit B.6
Awareness of channels for savings

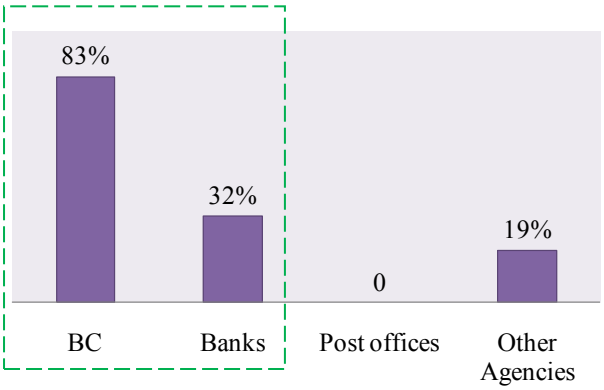


As against this, in only 18% of the sessions, respondents mentioned that they were aware of or recognised post offices as a channel for savings, while 12% were aware of chit funds.

[26] RBI Database and *MicroSave* analysis
[27] See for example *MicroSave* Deposit Assessment – India, (2011) and *MicroSave* "Savings Perceptions and Preferences in India: The Relative Risk to the Savings of the Poor - Summary Overview" (2012)

When it came to rural poor's preference of channels for savings, the response was significantly in favour of banks, followed by BCAs, with all other channels a distant third.

Exhibit B.7
Preference of channels for savings



In 83% of the sessions, respondents exhibited a preference to save through the BC channel as against banks, which was stated as a preference in only 32% of the sessions.

This demonstrates the compelling need by banks to enable and leverage BCNMs/BCAs as a full service savings channel with the ability to offer suitably tailored savings products, and not view them merely as an outsourced agency to provide coverage or to conduct enrolments for new accounts.

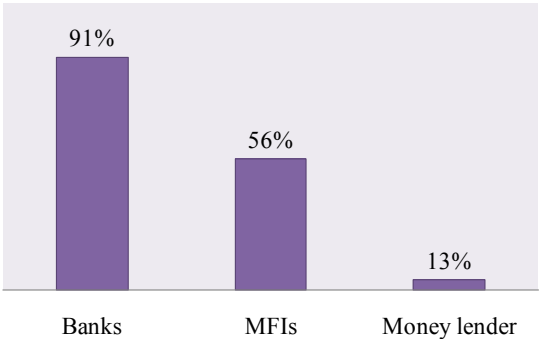
Sources of Credit

With the considerable down-turn in the MFI sector, banks have emerged as the main source of credit for the rural poor. Banks have been aggressively driving the penetration of Kisan Credit Cards. Over 92 million KCCs[28] have been issued so far, representing over 18% of the rural adult population. This is an important factor influencing preference for banks as a source for credit.

In 91% of the sessions during *MicroSave* study, respondents were aware of banks as a channel for credit, including KCCs. In contrast, only during 56% of the sessions, did respondents mention awareness about MFIs as a source of credit.

The hold of money lenders seems to have reduced considerably, at least in parts of Uttar Pradesh and Maharashtra, where this research was conducted. Moneylenders and other informal channels came in a distant third with respondents in only 13% of the sessions reportedly preferring them.

Exhibit B.8
Preference of channels for credit



As regards preference of channels for credit, the responses were very revealing. A very large number of respondents have a preference of BCAs vis-a-vis banks, whereas they exhibited little preference for other channels.

[28] Kisan Credit Cards – A Study by NABARD (2010)

Case Study: Why poor like BC channel and how it has impacted their lives?

The BC channel has been put into innovative usage by different sections of the society. The real challenge faced by the segment targeted by most BC channels is their propensity to spend as soon as they receive their wages. BC provides an alternative to save even small amount of daily saving. We saw some interesting observations on the field:

During Emergency
Lalita is a housewife who needs an account for liquid savings for use during emergencies. In past, this saving helped her to pay off for her daughter's marriage expenses and her son's emergency hospital expenses. "*Kiss ike samne haath nahi phailana pada"* (I did not have to beg or borrow.) Old age people also like to keep their money with BC, so that in any emergency they do not have to rush to bank.

For Livelihood
Lalmani always wanted to construct cow shed before the summer season but could not do so as she was not able to accumulate her savings. Once she got her NFA account opened with BC agent, she started to save Rs.10 on a regular basis. This focused saving helped her to accumulate a major portion of the required amount. She is now hopeful of building a cow shed in a few more months' time.

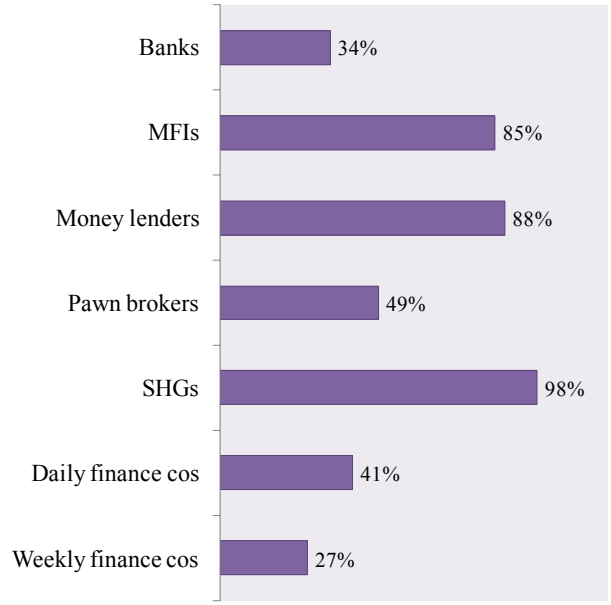
To Pay Off Loan
In general, MFIs require weekly repayments. Some of the members accumulate their savings by contributing daily. On the day of payment, clients withdraw the instalment amount from the BC accounts and pays off the MFIs. The remaining amount is kept as savings. Many MFI customers who have bank account with the BC use this strategy, so that they do not have to make last minute arrangements to pay the weekly instalment of MFIs.

School Fee Payment
Guru Charan is a FINO-BC, who entered the BC business as a social service. Apart from working as a BC agent, he also runs school for primary and higher secondary students. Though he has set a nominal fee for his educational services, it puts pressure on some of the parents at the end of the month. In addition, children sometimes are without books, uniforms etc. which hinders their studies. For this, he has asked parents to open an NFA account first and then contribute Rs.10 per child daily, which helps them to accumulate enough to finance their children's school expenditure for a year. Interestingly, parents will also be able to save an additional Rs.1,200, after meeting all the school costs .

Rural customers are using the BC channel to make planned savings for meeting different goals. However, there are two shortcomings of using this channel for savings purpose, first they get regular low rate of interest of just 4%, and second they have no restriction on withdrawal, which may lead to erosion of savings. A simple array of products like recurring deposit (RD) or fixed deposit (FD) can cater to these customers in a similar way, but with added benefit of a RD or FD.

Interestingly, in another study[29] conducted by *MicroSave* during November 2011, on sources of credit in Andhra Pradesh, the response was very different. Not surprisingly, in Andhra Pradesh, respondents had a significantly greater preference for SHGs and MFIs as sources of credit compared to banks. Post the crisis moneylenders too had re-established themselves as a significant source of credit.

Exhibit B.9
Sources of credit in Andhra Pradesh



Our study also tried to get an understanding of the preferences of rural consumer for various forms of receipts. These include inward remittance and G2P payments. The most prominent amongst G2P receipts are MGNREGS and pensions under the social-security pension programme.

Channels for Inward Remittance

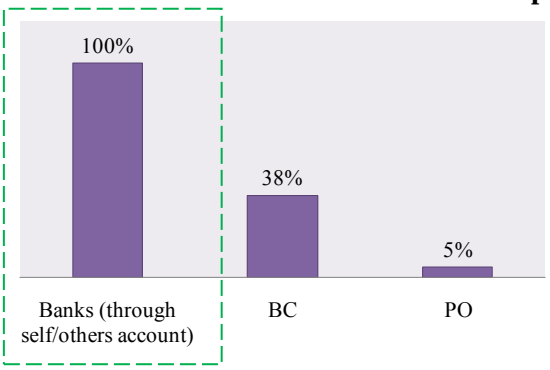
Rural geographies are believed to have very dispersed recipients of remittances. Our research in the specific geographies covered, however, discovered that nearly all the respondents were indeed receiving inward remittance through banks, BCAs or post-offices.

In an overwhelming 100% of the sessions, respondents mentioned receiving remittance through banks. This was either through their own account with a bank or through accounts of others (friends, neighbours, village head and so on).

Due to lack of economies of scale and scope, BCNMs have largely stayed away from providing remittance services (essentially cash-out) in rural geographies. As a result, bank branches and post offices are the predominant formal services providers. Not very surprising, in only 38% of the sessions, respondents mentioned awareness about BCAs as a channel for receipt of inward remittances.

This demonstrates that despite an awareness level for BC channel, in 72% of the sessions (see Exhibit B.6) and well-articulated dislikes for transacting at bank branches, rural poor do not perceive BC channel as appropriate for delivery of remittance money. Much needs to be done to make BCs a more suitable channel for receipt of remittances. As discussed later, amongst other options, inter-operability can play a crucial role to enhance the effectiveness of this channel.

Exhibit B.10
Preference of channels for remittance receipts



Post offices have lost most of their hold on the market for money transfer. This was evident from the consumer response during our research. In only 5% of the sessions, post offices were reported as a preferred channel for receipt of money transfers.

Channels for Receipts of Wages under MGNREGS

The outlay of funds for MGNREGS has grown from Rs.113 billion in 2006-07 to Rs.400 billion in 2011-12. The actual spent from this outlay is usually smaller. In 2011-12 the actual expenditure is estimated to be Rs.277 billion.[30]

[29] See "What are Clients Doing Post the Andhra Pradesh MFI Crisis?", *MicroSave*, 2011

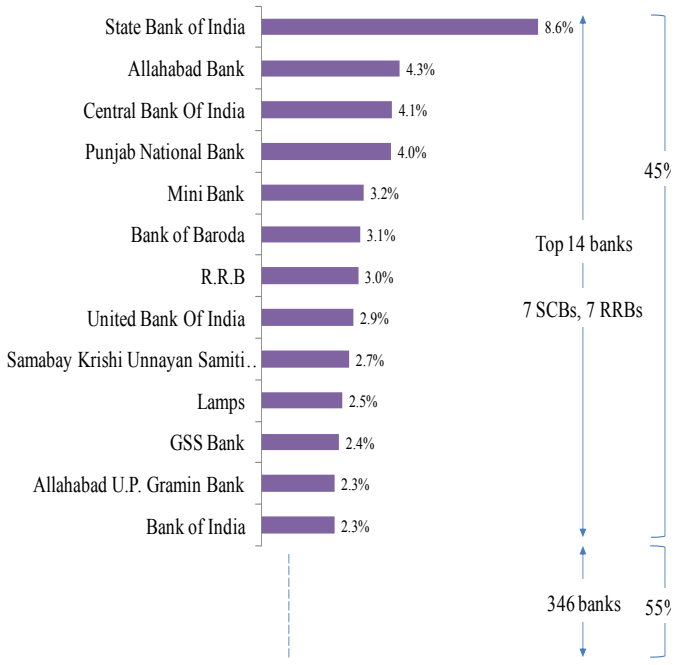
[30] NREGA Implementation Status Report 2011-12

Nearly 68% of the actual spent is on wage pay-outs. Of the remaining, about 27% is spent on material for the works and 4.5% to 5.0% is earmarked for administrative expenses.

Over the years payments under MGNREGS are increasingly being routed through post offices and banks. However their share is still very low. According to MGNREGS data for 2011-12, the cumulative pay-out through banks was Rs.72 billion, and almost a similar number for post-offices. This translates to about 30.3% (of total wage pay-out under MGNREGS), distributed through banks and 30.1% distributed through post offices. The rest is paid out in cash, by cheques, through other modes, is in transit or returned to the State for not being claimed by the intended recipients within a stipulated period.

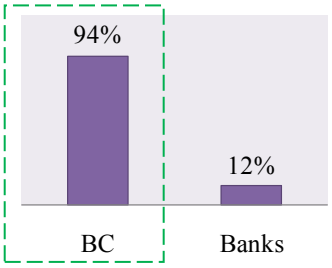
Even the 30.3% of MGNREGS wages paid out through the banks is done in a very fragmented manner. Over 350 different banks are involved in the distribution of these wages. Of these 45% is handled by 14 banks and the remaining 55% by as many as 346 banks. Within these top 14 banks, only 7 are national SCBs, the rest are RRBs.

Exhibit B.11
Bank involvement in distribution of MGNREGS



According to *MicroSave* research, rural recipients of MGNREGS wages would prefer to receive the payments through BCAs. In virtually 94% of the sessions, the response favoured receiving the pay-outs from BCAs, against a near zero response for preference of post offices. Banks came a distant second.

Exhibit B.12
Channel preference for MGNREGS receipts



As against this huge articulated preference to receive MGNREGS payments directly through BCAs, the actual share of the payments being distributed through BCNMs is very miniscule. The causes, challenges and potential solutions to address this imbalance are discussed subsequently.

Channels for Receipts of Social Assistance

National Social Assistance Programme (NSAP)[31] is a welfare programme of Government of India, which was launched in 1995. Under this programme poor citizens with certain incapacities are provided regular financial support. The support is extended to aged citizens, those with disabilities and to widows, amongst others.

The corresponding schemes to provide this support are

- Indira Gandhi National Old Age Pension Scheme (IGNOAPS)
- Indira Gandhi National Widow Pension Scheme (IGNWPS)
- Indira Gandhi National Disability Pension Scheme (IGNDPS)
- National Family Benefit Scheme (NFBS)
- *Annapurna*

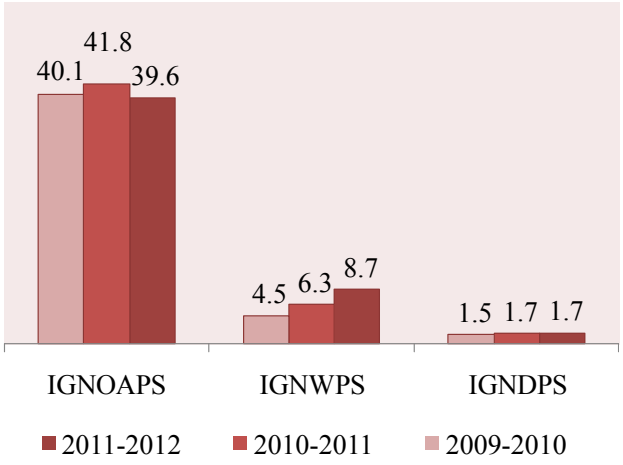
These are completely Central Government sponsored schemes, although a few State Governments enhance

[31] http://nsap.nic.in

the quantum of pay-outs for certain schemes according to their policies.

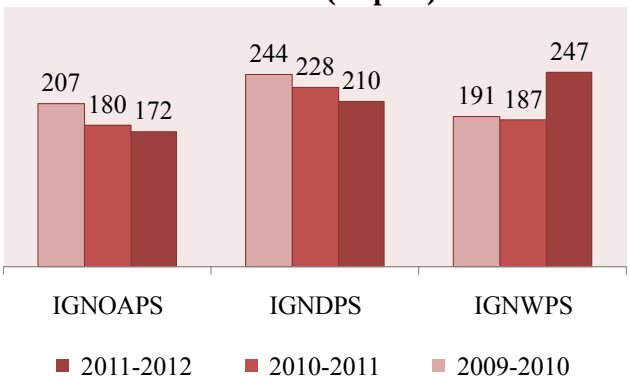
IGNOAPS is by far the largest program amongst these with an annual disbursement of Rs.40 billion.

Exhibit B.13
Annual disbursements under NSAP schemes[32] (Rupees Billion)



Under these welfare schemes, the monthly pay-out to the recipients ranged from Rs.172 to Rs.247 in 2011-12.

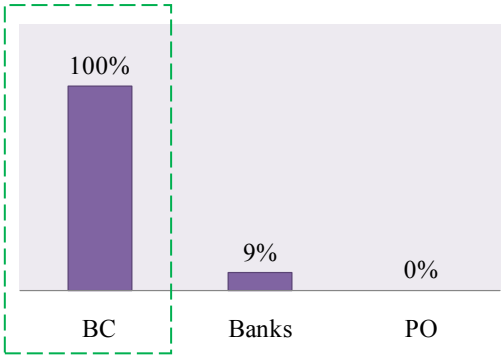
Exhibit B.14
Monthly pay-out per recipient under NSAP schemes[33] (Rupees)



From the *MicroSave* research it is clear that banks are viewed as the predominant channel for delivery of these welfare payments. In 100% of the sessions banks were mentioned as the channel respondents were aware of. This was followed by BCs being mentioned in only 2% of the sessions. No other channels were articulated.

When it came to preference of channel for distribution of welfare payments, BCs were the most preferred channel, despite lower awareness levels. In an astounding 100% of the sessions, respondents mentioned their preference to receive welfare payment through BCs rather than banks. Post offices were not mentioned as a preferred channel by any of the respondents. However this also means the BC agents need to be enabled to make the transactions really convenient, particularly in this case for the elderly or disabled who have an acute need for receiving door-step service.[34]

Exhibit B.15
Channel preference for welfare receipts

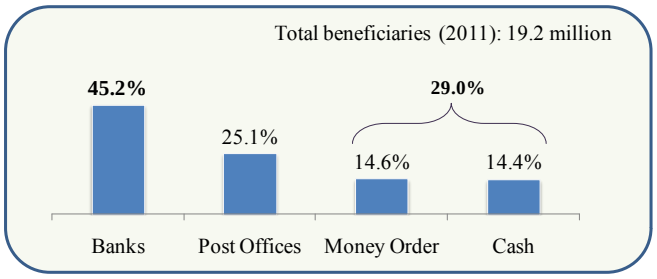


Compared to the unanimous preference of the beneficiaries to receive NSAP benefits through banks (and particularly from BCs), the State authorities' reliance on even banking channel for disbursements under most welfare schemes is very limited.

In the case of IGNOAPS, with 19.2 million beneficiaries in 2011, only 45.2% of the pay-out was routed through banks. As much as 29% of the disbursements were still being made in cash or through money orders. These modes are inefficient and a cause of leakage in the system, with fictitious recipients and involvement of kickbacks for delivery to the intended beneficiaries.

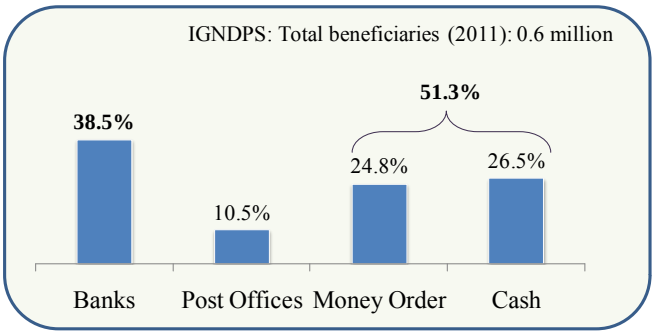
[32] Ibid, *MicroSave* analysis
[33] Ibid
[34] See Dreze et al, "Experiments with Aadhaar"

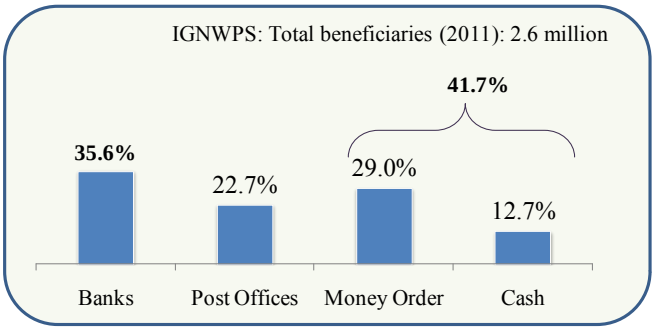
Exhibit B.16
Channels used for disbursement of IGNOAPS[35]



The use of banks for disbursements under the remaining NSAP schemes is even lower. For IGNDPS only 38.5% is disbursed through banks in 2011-12, and for IGNWPS the figure stands at 32.5%. The share of disbursements via cash and money orders were much higher at 51.3% and 41.7% respectively for IGNDPS and IGNWPS.

Exhibit B.17
Channels used for disbursement under IGNDPS and IGNWPS





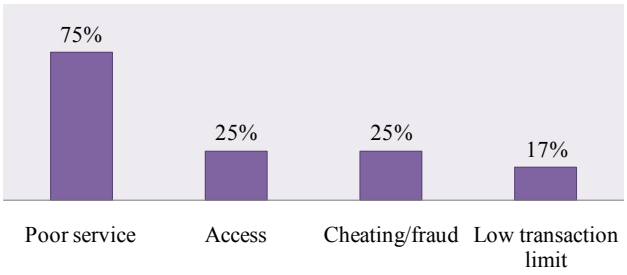
The big gap between the consumer preferences and delivery mechanisms for welfare payments is a massive opportunity for Governments and banks alike. By levering more of the formal channels with greater security through use of electronic and biometric means for authentication and non-repudiation, Governments stand to benefit in multiple ways. Firstly they can ensure better targeting of disbursements than possible currently, which has been the objective of the Government for a long time, and secondly there is an opportunity to reduce the quantum to funds required to meet the obligations, in-turn bringing down the fiscal deficit burden.

Banks on the other hand would find this as a significant business opportunity. This is brought out in more detail in a latter section of this report.

Why Rural Consumers Prefer Banks and BCs?

Amongst the formal channels, post offices have lost credibility and trust with most rural poor. The poor associate poor quality of service, inadequate access, lack of trust and lower transaction limits as the most common attributes of post offices.

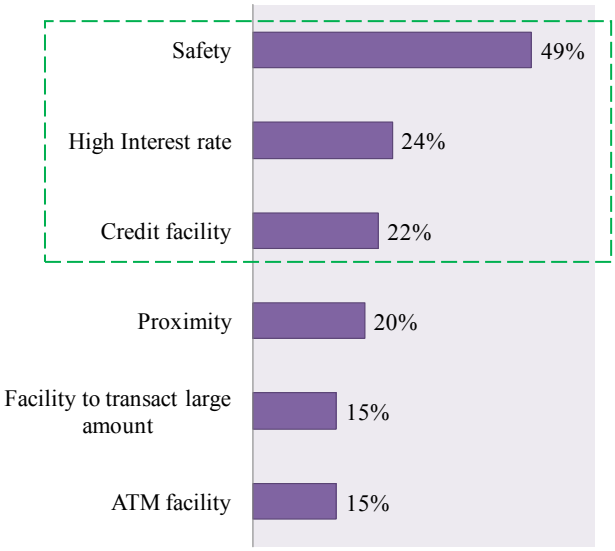
Exhibit B.18
Post offices are not preferred anymore



In contrast to post offices, we found that rural poor associate several benefits with banks and BCs. Banks are perceived to be secure, offer higher interest rates on savings, offer credit facilities, allow higher value transactions, provide ATM facility and so on.

[35] ibid

Exhibit B.19
Attributes and benefits associated with banks



On the other hand, BCs are preferred due to reasons of proximity, ability to transact rapidly and conduct small value transactions, convenience of access, lower costs, absence of paper-work while dealing and the like. The rural poor associate most of these challenges with banks, and find that BCs address several of them.

Exhibit B.20
Perceived downside of branch based banking

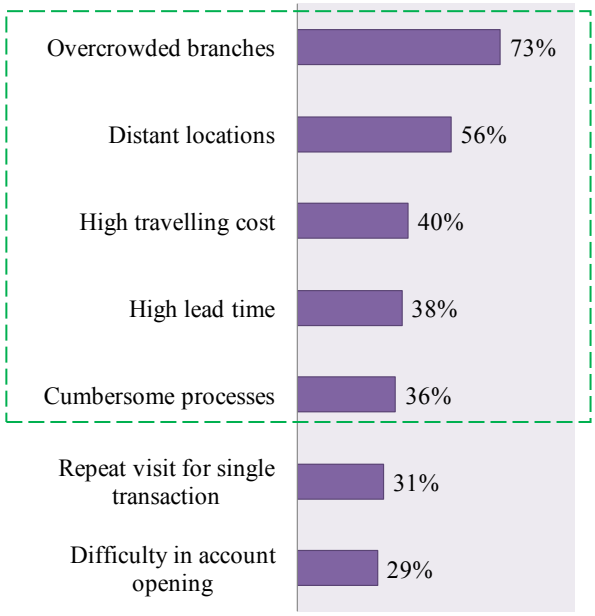
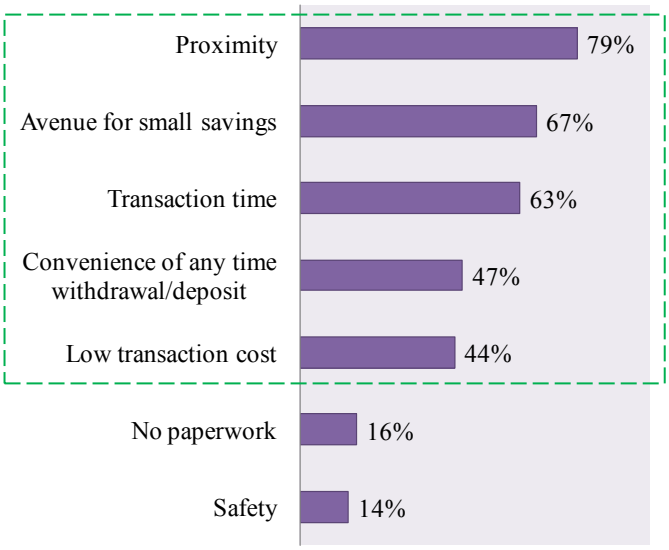


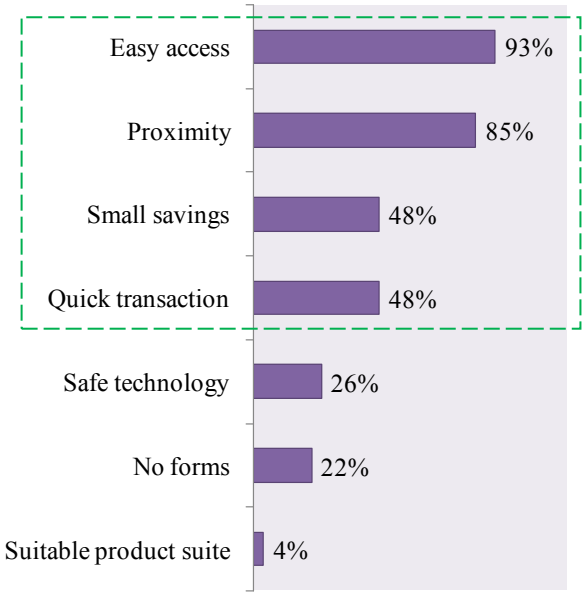
Exhibit B.21
Attributes and benefits associated with BCAs



Our interactions with BCNM agents servicing rural customers provided similar opinions on the reasons for consumer liking for, or satisfaction with, BC services.

Ease of access, proximity, ability to make small savings and to transact faster, came out as the top reasons for preferring the BC channel.

Exhibit B.22
BCAs perception of consumer likes for their channel

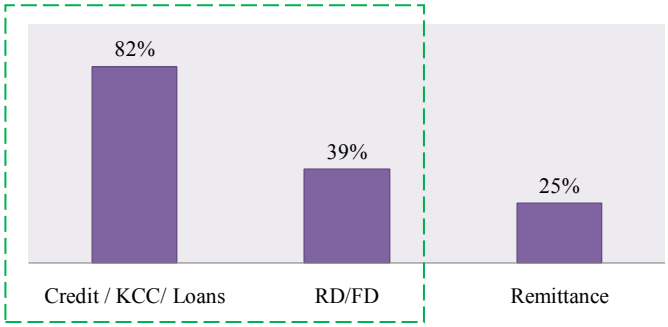


Unmet Needs and Aspirations

Despite the expressed preference for banking channels to receive payments and financial services, many rural respondents felt that a very large set of services and products needed by them or on their wish-list, were not currently available.

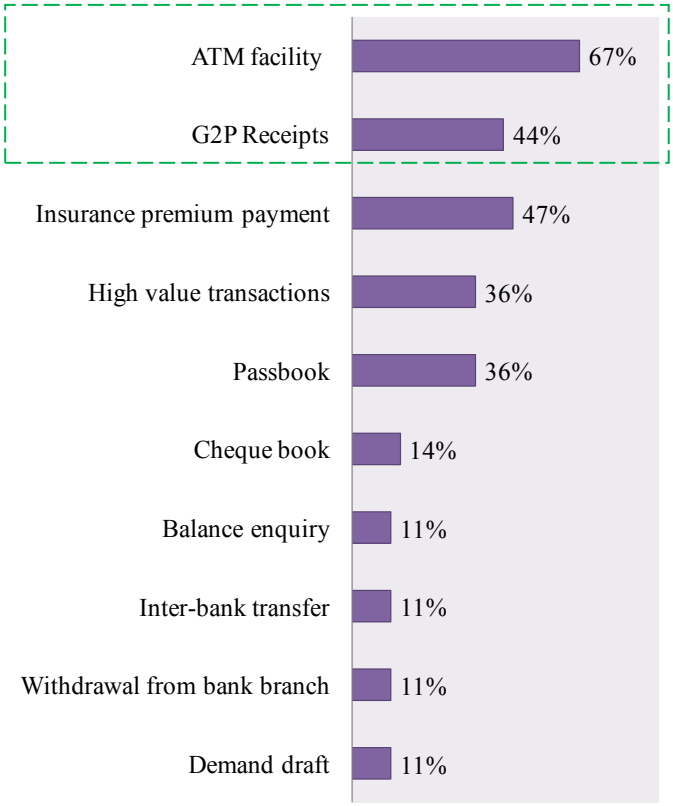
The most wanted products that are not on offer or are inaccessible include credit or loan products, recurring or fixed deposits and receipt of inward remittances.

Exhibit B.23
Bank products rural poor aspire to



Additionally there are a number of services that the rural poor aspire to receive from banks or BCs servicing them. Rural consumers not only have broader and more complex needs than is often believed, a sizeable percentage of them are also very aware and savvy about new offerings and technology.

Exhibit B.24
Banking services rural poor aspire to



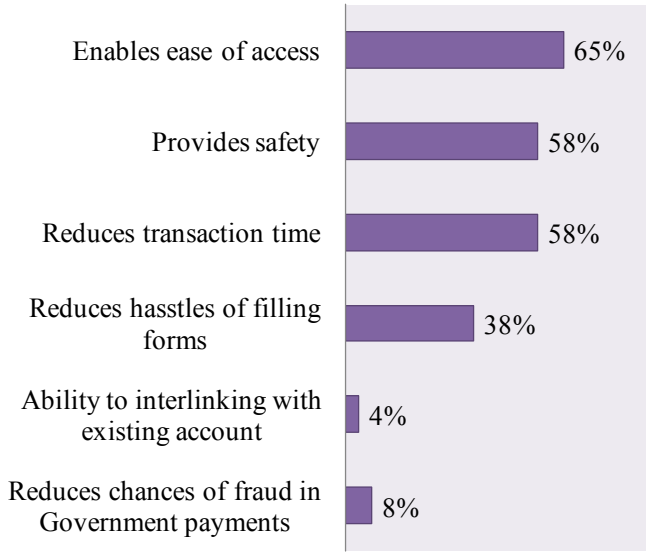
It is surprising to find 'ATM facility' being an aspiration right at the top of the list of services wanted by the rural poor. This represents (a) an un-articulated need for being able to get the best of branch based banking without the associated inconveniences of long queues or challenges with filling up forms; (b) convenience of withdrawing anytime and anywhere, without over-dependence on an earmarked BC agent (possessing and operating the specific hand-held device where their no-frills-savings account has been opened); and (c) greater trust in the system through availability of receipts and transacting with a more reliable machine interface.

The other major unmet banking services aspirations were mentioned as – significant desire to receive Government payments (of various kinds) through banking channels (with a preference for BCs, as explained earlier). This was followed by ability to pay insurance premium; and a need for raising limits to enable carrying out high value transactions amongst others.

Respondents were also very aware of the technology enabling branchless banking services, and in ways it could benefit them. In 85% of the sessions, respondents were aware of biometric and PIN based branchless banking solutions and had some perspective on the differences between them as well as on the upsides and the downsides from a user standpoint.

With regards to perceived benefits of technology, respondents stated ease of access to their account, greater safety and reduced time to transact to be the main perceived benefits.

Exhibit B.25
Perceived benefits of technology



These responses are an indication of the maturity levels of rural poor. Contrary to the popular belief that rural consumers need vanilla savings accounts with no frills and features, their awareness of ATMs and similar advanced facilities and how they have benefitted from use of technology, is evidence of their unique and complex needs and aspirations. These findings also call into question the commonly held belief that the poor need basic "financial education".

Summary of Aspirations of Rural Poor

- Rural consumers have a significantly greater preference for banks, as opposed to post offices or informal channels, to receive a range of financial services.

- Rural consumers have complex and mature needs for banking services. The top-level unmet needs include: (a) availability of a wide range of relevant products; and (b) inter-operability of delivery channel for a variety of reasons.

- An overwhelming majority of rural consumers have enormous preference for BCs as delivery channel for consuming a variety of banking services.

- Rural consumers wish to have greater convenience, control, flexibility and trust for operating their savings account and hence want to access ATMs or an equally reliable, convenient and inter-operable access channel.

- A vast majority of the poor rural consumers would prefer to receive Government payments of all types (MGNREGS, NSAP and others) through their BC agents.

Governments, banks and BCNMs need to take cognisance of these complex aspirations and work towards delivery mechanisms that meet them effectively. A real impact through financial inclusion can be meaningfully brought about only when delivery of services is aligned to address these needs of rural consumers.

Case Study: Accounts for Student Scholarships

Name: Navneet Kumar
Village: Adole
District: Moradabad, U.P.

Navneet Kumar runs a school offering classes from 1st to 12th. There are around 450 students studying in his school. Students themselves withdraw scholarship from their account. Students face difficulty in opening bank accounts because none of the banks will open accounts on the basis of school ID card. Students generally do not have any standard KYC proof as mandated by RBI. Additionally, banks will not open bank accounts for students whose residential area does not come under their jurisdiction. As a result students struggle to open bank accounts. Students also face difficulty in travelling to the bank to withdraw cash for their school fees and then returning to school.

If students' accounts are opened through the BC channel, this would be very convenient for students. Bank accounts could be opened either using a school ID or *Gram Pradhan's* approval letter. It would be easier for students to withdraw their fees as agents are located near to their school. They would also be able to withdraw after school hours. At present they have to visit the branch during school hours because bank closes at 5pm. The savings account opened at the BC could also be used by students to keep their small savings, something they are not able to do with regular bank accounts.

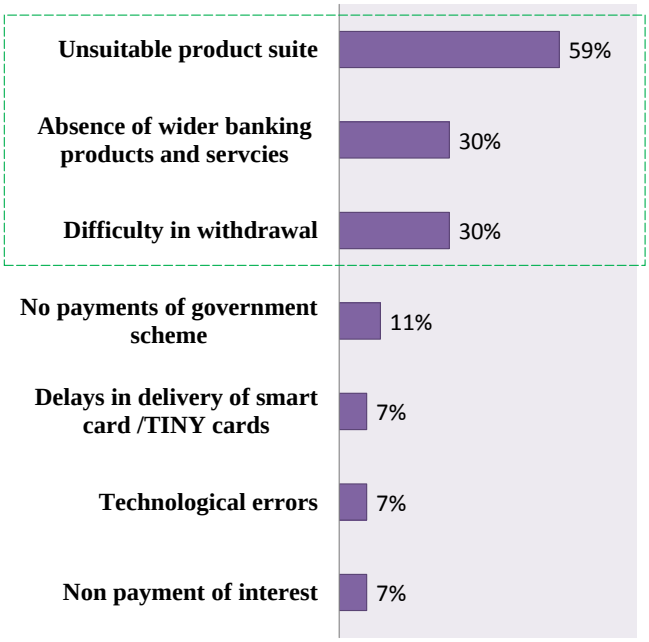
Many students receive tuition fees, which they could deposit at BC. If ATM facilities are provided to students, it would allow them to withdraw from their account even when they go away from their home village to study. For students PIN might be a better option than biometrics, as they are literate and have better ability to remember a PIN and understand that it should not be shared.

Readiness of suppliers to meet aspirations of rural unbanked

What is the feedback from the field?

During the *MicroSave* study, interactions with agents yielded valuable insights on the currently unmet expectations of rural poor, which in-turn cause dissatisfaction and dislike for BC channel or banks in general.

Exhibit B.26
Causes of dissatisfaction amongst rural poor



Case Study
Liquidity and withdrawals problems and consequences

Vinod started working as an agent in 2007 by collecting small deposits from villagers. He accepted deposits as low as Rs.10 and opened around 3,000 accounts in a few months' time. He made two rounds daily one in the morning and another in the evening and met more than 150 customers daily to take their deposits. In the process he built a saving corpus of Rs.1.3 million within two years.

The problem began when individual customers started withdrawing from their accounts after having accumulated enough corpus. Initially Vinod entertained two-three withdrawals daily but when the number of withdrawals increased day by day he started to deny or delay them. This made account holders think that their money was unsafe in the account. The news spread like a wild fire and customers from all the villages started to turn out in numbers and requested Vinod to give back their entire balances. Vinod raised the concern with the BCNM but they did not help.

Sensing the situation getting serious, Vinod went to the bank branch along with customers and asked the bank manager to repay their money. The bank manager took stock of the situation and asked the BCNM to make arrangements for paying the customers.

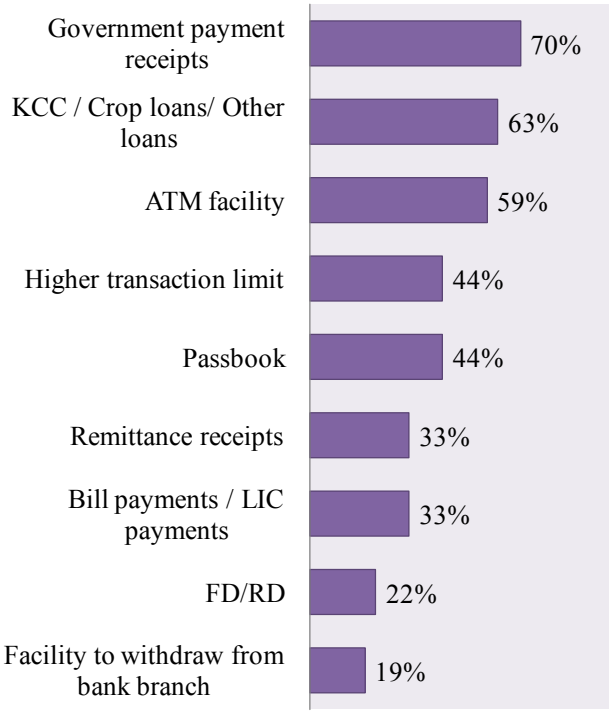
The BCNM finally employed 10 agents to respond to the large numbers of withdrawal requests and paid around Rs.200,000 daily to the customers for 4 days consecutively.

According to Vinod, in order to avoid such situations from arising again, the BCNM needs to either make smart cards empowered to enable customers to withdraw from an ATM, or set up a small office where an agent is available all the time to entertain customers' withdrawal requests. Vinod feels that unless arrangements for convenient and quick withdraw are made, customers will avoid making deposits in their accounts.

Our interactions with BC agents corroborate the consumer feedback on unmet needs and aspirations.

These responses from a large sample of agents covered indicate several unmet needs that are increasingly leading to discontent and dissatisfaction with banking services.

Exhibit B.27
Agents' perspective on unmet consumer needs



Going deeper into these unfulfilled wants and aspirations one can see they fall into three categories.

A. ***Account upgrade and enhancements:***
Upgrade and enhancements to no frills accounts covers rural poor's need to access their account and transact at multiple locations including bank branches or even ATMs.

It can also include provision for accepting cheques or providing cheque books and a higher transaction limit. These could be provided to specific customer segments that aspire to and would be willing to pay for these services.

B. ***Expanded banking product offerings***:
Enhancing the suite of banking offerings covers consumers' needs for access to relevant commitment deposit products (e.g. RD/FD products), credit and loan products, and receipt of money transfers and Government payments.

C. ***Non-banking financial services***:
This covers the articulated needs around payment of insurance premium, payment of utility bills, and repayment of loans and so on.

MicroSave carried out an extensive research and interactions with various stakeholders in the service provider eco-system to understand their perspective on delivery of services and meeting these consumer aspirations.

The main stakeholders covered included:

- Banks
- Business Correspondents
- Enabling entities such as NPCI, UIDAI and IDRBT
- Thought leaders influencing the direction branchless banking is taking

This section brings out the perspectives, challenges and solutions adopted by various players in the eco-system, together with identification of changes and reforms needed to ensure progress is sustained and the current momentum is not lost.

Applying lessons learned from ATMs

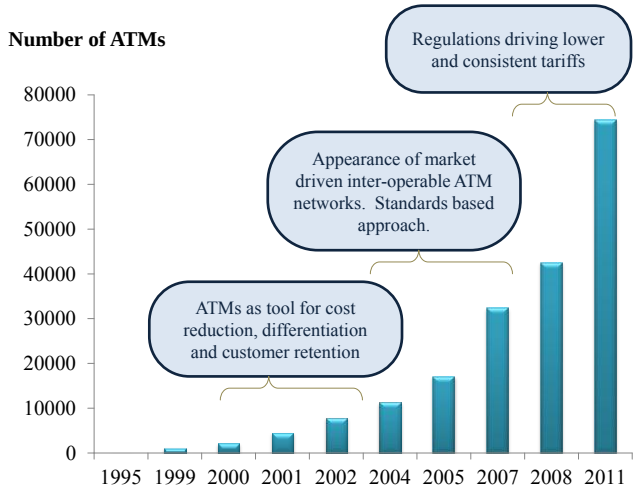
- Why have ATMs grown and proliferated so rapidly?
- What do both urban and rural consumers aspire to have access to ATMs and consider this one of the most important missing service?
- Why is inter-operability of basic banking services (withdrawal, balance enquiry, mini statement) through ATMs treated as a given by the users?
- What made this possible?

These are some interesting questions, the answers to which can provide pointers to a solution for addressing aspirations of the rural consumer.

When Citi Bank came up with its first ATM in India in 1976, it was an inordinately expensive machine with no takers.

The high growth of ATMs during the 1998-2000 period was on a low installed base. The subsequent real growth from 2000 to 2003 was driven by: (a) recognition by banks of ATMs as a tool for cost reduction, differentiation, marketing and customer retention; and (b) adoption of 'ATM outsourcing' approach by even public sector banks, wherein the ATM vendors offered total implementation solutions for outsourced setting-up of ATMs.

Exhibit B.28
Drivers for exponential growth of ATM networks



The strategy of outsourcing was later extended to operations and maintenance, and more importantly to cash management. These came to be known as 'brown label' ATMs, where hardware and maintenance were the responsibility of ATM vendors, but cash management and connectivity was managed either directly by sponsor bank or through a different set of vendors. Innovative arrangements between the banks and ATM vendors, such as revenue share from transaction processing, also drove growth in this phase.

Sensing the potential in inter-operability of ATM networks, a variety of inter-bank ATMs networks were created using apex level switches (such as CashTree, BANCS) for communication. IDRBT established and started operating National Financial Switch (NFS), another shared ATM network interconnecting bank ATM switches together, from 2004. This was a significant step forward in optimising and enhancing the usage of ATM as a delivery channel.

Thereafter banks entered into bilateral or multilateral arrangements with other banks to define tariffs for use of these inter-operable networks. However the consumer charges ('interchange fee') levied for such transactions varied considerably.

The next phase of growth during 2008-2011 has been driven by regulatory approval for inter-operability of ATMs with prescribed tariff mechanisms. The RBI regulations[36] were very forthcoming in defining the basic business rules for such interoperability such as: (a) consumer charges and limits; and (b) revenue share between the acquiring and issuing banks, thereby providing the fundamental direction for banks to link-up their ATMs, while giving room for growth to be driven entirely by market forces.

ATMs have adopted the universal ISO 8583 standards for communication with switches. This has been a major enabler allowing ATMs from any vendor to communicate and transact with those of any other provider.

With the opening up of the regulations for 'white label' ATMs, an expectation of banks and vendors for many years, growth is likely to get substantial boost in the times to come.

Drawing parallels from the evolution and proliferation of ATMs, one finds there are fundamental differences in the way channels and underlying technology has been adopted for the purpose of delivery of financial services to the masses.

1. Lack of standards based approach:

Historically the design of technology for branchless banking for financially excluded was based on the premise of unavailability of telecommunication coverage, erratic power supply and no bank branch network, in large parts of the rural areas where the target beneficiaries reside. Consequently there was a preference for offline, but secure and intelligent, solutions that could be operated by staff with lower literacy levels and without the need for enforcing maker-checker arrangements.

Smart card based solutions emerged as the prominent option to cater to this unique need. However there were no comprehensive standards available to follow, except for the SCOSTA (Indian standards for Smart Card Operating System for Transport Application).[37] These, although developed at the behest of Ministry of

[36] RBI circular on 'Customer charges for use of ATMs', March 2008
[37] http://www.scosta.gov.in

Transport and Highways, were generic standards based on ISO-7816 standards.

For lack of any comprehensive standards or even guiding principles, the early entrants amongst the business correspondents adopted SCOSTA standards for smart cards and proprietary standards for key management between the cards and the card readers (POS/POT devices) that fitted the requirements from a service delivery and cost standpoint. This proliferation of a proprietary approach continued and several business correspondents and banks adopted them but each vendor followed their own technology, architecture and design in areas like key management system, data management and storage, interfaces with CBS and so on.

As the operations gained scale, this strategy of proprietary and non-standards based approach resulted in the following issues.

- Difficulties in achieving economies of scale.
- Challenges with interfacing with CBS platforms.
- Lack of inter-bank or even intra-bank interoperability.
- Lack of standard technology components across industry for reference, manufacturing, design, testing and certification.
- Challenges with data security of cards and terminals during storage, transit or loss.

In 2010, a technical committee of IBA and IDRBT came out with 'Open Standards for Smart Card Based Solutions for Financial Inclusion'.[38] The intent of these specifications was to propose common standards to bring about uniformity in the smart card solutions used by banks for financial inclusion. These common standards were seen to mitigate the following challenges that the banks had started to face.

- Intra-operability between banks and common approach to enable scaling up.
- Demand aggregation and economies of scale.
- Enhanced convenience to consumers.
- Opportunity for BCNMs to reduce costs and enhance viability of business models.

These specifications were more in the nature of guidelines and adoption was left to the discretion of individual banks.

By this stage however, many BCNMs working with several banks had enrolled millions of rural consumers and issued smart cards to them. Considerable investments had been made by the various participants to issue cards, and in POT/POS machines, back-end servers and infrastructure. It would therefore not have been financially prudent for the service providers to switch-over existing operations and adopt technology based on the new guidelines.

This change would have necessitated replacing all the smart cards that had been distributed, as well as making considerable upgrades to the POT/POS machines. It would have also required some central non-participating agencies to: (a) take ownership for development of a common security architecture including the key management system (KMS) that could be deployed by all banks; and (b) issue bank identification numbers (BIN) centrally for numbering the smart cards in a uniform manner according to the standards proposed.

It is also felt that the IDRBT standards have certain gaps that prevent the aforesaid objectives to be met. Some of the major gaps being:

- Absence of 'Business Rules': The standards do not prescribe any business rules such as for updating various fields in consumer data card, choice of fingerprint templates, storage of fingerprint templates and so on, resulting in different interpretations and ambiguity in implementation.
- Lack of uniform 'Key Management System': There is no recommendation on a common approach for key management system and which central agency would manage it. As a result, even if the other recommendations are adopted, smart cards from one provider cannot be read or written by the reader from another provider unless both follow a common key management system.
- Lack of common 'Security Architecture': There is a need to have a commonly agreed and monitored approach to the overall security architecture to make the various systems interoperable. IDRBT standards are silent on this aspect.
- Insistence on SCOSTA OS: Even though SCOSTA OS has been adopted by several Governmental agencies (for driving licenses, RSBY cards, BPL cards and so on), over the years new possibilities for operating system have emerged. It is now possible to use Java

[38] IBA-IDRBT, (2010), Open Standards for Smart Card Based Solutions for Financial Inclusion

cards to achieve similar functionality. Therefore insisting on SCOSTA OS is not warranted.

BCNMs that entered the market more recently had the opportunity to consider IBA-IDRBT standards as a starting point and have therefore followed an approach that is more standardised and amenable to inter-operability.

Some BCNMs have adopted mobile based technologies using SMS, USSD, SIM tool kit (STK) or application based approaches. The mobile ecosystem, being significantly mature globally and having considerable scale in India, has followed a standards based approach. Even at the industry level, there have been intense efforts to standardise mobile based services. This has helped BCNMs using mobile technology to avoid several of the challenges and pitfalls that smart card based solution providers went through. However mobile base solutions too have other limitations.

Mobile solutions have mostly adopted a PIN based approach for security. There is a perception that given the low literacy levels of rural consumers, PIN based solutions are less secure than biometric ones. This is despite the fact that if the quality of fingerprint template is degraded as a trade-off to reduce failure rates while transacting, fingerprint based biometric solution can become very unsafe too. However favourable perception towards biometric solutions has driven a wider acceptance amongst Government departments, legal fraternity and even banks.

UIDAI took giant steps for the first time in defining micro-ATM standards. The intent behind these was to develop online, interoperable, low cost payments platform that could be adopted by everyone. These standards were influenced by credit/debit cards used on POS machines, along with *Aadhaar* enabled authentication. These micro-ATM standards are only for online environment, as against IDRBT standards, which are prescribed for offline solutions.

However standardisation of smart cards has remained a challenge till date. A committee under Professor Ashok Jhunjhunwala constituted by the Department of Financial Services, Ministry of Finance, also decided to put on hold any efforts on standardisation of smart cards due to complexities and costs involved.

2. Banks yet to recognise the potential from BCs as a legitimate alternate delivery channel:

Banks recognised ATMs as a low cost delivery channel very early on in their growth journey. This was aided by the greater understanding of the impact ATMs had brought about in the western world and in China, where ATMs had been deployed rapidly at scale. Online connectivity and therefore better control over the ATM operations enabled banks' trust with this channel to be established faster.

On the contrary, the approach to BC network as an alternate delivery channel has been mostly driven by a compliance mind-set to meet the targets laid down by Ministry of Finance (MoF) or commitments made to RBI. This has prevented the opportunity for the bank-BC partnership to flourish and gain legitimacy. The relationship has to transform from BCs as vendors to partners with whom banks can work to deliver quality financial services.

- **Isolation from mainstream banking:** Initially many banks preferred to develop independent systems for hosting and servicing financial inclusion accounts, keeping them segregated from the CBS. A few progressive banks like State Bank of India provided direct CBS access to BCs, thus taking giant strides to bridge the divide between FI and mainstream banking. Other banks are only recently recognising the value from greater integration into mainstream banking and preparing for the business opportunity at the bottom-of-the-pyramid.

- **Inadequate focus on relevance of products**: *MicroSave* has established the need, and RBI has repeatedly emphasised that FI objectives include, offering savings with demand deposit and possibly overdraft products, pure savings with commitment deposit products, remittance and suitable credit products. Banks have not taken any significant measures to understand the distinct needs to rural poor and to tailor financial products that would meet those aspirations.

  The product offerings through BC channel are therefore standard and limited. Even here, not many efforts have been made to tap into consumer-demand driven services. As pointed out earlier, as large number of products and

facilities that rural consumer's expect are not available through banks or BCs.

- **Lack of operational collaboration**: Compared to ATM operations, which irrespective of location (onsite or offsite) are fully integrated into bank operations (liquidity management, operations, security and so on), bank branches often have a limited role with, visibility into or support for BC activities. FI is considered as non-core, one-off business, managed centrally or through local head offices.

Chapter 4 – Recommendations for Rural Markets

Recommendations to address service provider challenges and meet aspirations of rural unbanked

Business Friendly Climate

It is imperative for the long-term sustainability of financial services for the poor that service providers follow market-driven viable models. Offering services as a 'public good' could be a short-term measure, but cannot ensure longer-term provision of quality services.

Banks are already subjected to a wide range of priority sector targets, and financial inclusion targets in the current form increases that burden further.

Creating a business friendly environment in which banks and business correspondents can flourish is a critical role better played by enablers than being prescriptive about the business rules, business models to be followed or creating conditions that are not driven by the market forces. While there is a need to drive greater standardisation of technology platforms for reasons mentioned earlier, business operations and rules need to be left to market forces.

At the State Government level there is a need to ensure greater predictability and stability of policies involving banking services for the poor. Many Governments have been seen to roll-back mandates to banks for distribution of MGNREGS wages or welfare payments without considering the adverse impact on the bank or their partnering service providers.

Central and State Governments in India, under various social welfare and poverty reduction programmes, disburse over Rs.550 billion worth of direct cash benefits every year. Subsidies on food, fuel and fertilisers amount to another Rs.1,650 billion. Despite constant innovation and use of technology, the delivery mechanisms for these funds, amounting to nearly 35% of the Centre's budget outlay, continue to be highly inefficient. An estimated Rs.1,000 billion does not reach the desired recipients[39].

Causes of Inefficiency

Most welfare schemes have a complex multi-tier structure to implement, administer and audit the programmes, often, by design, starting at the grass-root level with active participation and authority of *Gram Panchayats* (village local self-governments) to the apex bodies at the State or the Centre. This results in significant administrative and overhead costs. For example MGNREGS, a flagship programme, earmarks 6.0% of its outlay for administrative expenses.

The second factor driving inefficiency is transaction costs for the benefactors and the beneficiaries. Many schemes continue to use cash or cheques as modes of payment, resulting in considerable manual fulfilment, reconciliation and audit efforts. The recipients suffer on account of inordinate delays, travel costs and wages lost while transacting to receive their dues.

The most significant factor is leakages, accounting for 75% to 80% of the total losses. Common causes being fraudulent muster rolls, reporting the creation of fake assets, and ineffective social audit. It is difficult to identify and control the pilferage due to lack of systems and continued dependence on manual processes.

Even where programmes like MGNREGS have enforced payments directly into bank accounts, the challenges of inaccessibility of banks, forged accounts and fraudulent withdrawals (for lack of full and fool-proof, and non-repudiable authentication mechanisms) still remain unaddressed for the beneficiaries. Cases of villagers taking quick loans from local moneylenders by pledging their job cards or even handing over the bank withdrawal request to the village head (*Sarpanch*) are quite common. The moneylenders in-turn claim the payments in connivance with local officials using fake signatures or muster rolls, and the *Sarpanch* or village officials take a large kick-back.

[39] McKinsey, 2010, Inclusive growth and financial security, The benefits of e-payments to Indian society

Greater Use of BCs by Government Departments

One of the underlying facets of the BC model is the reliance on technology and automation to build-in security to de-risk from (often) insufficiently qualified non-bankers (agents), undertaking banking services in un-supervised remote rural settings. Most BCNMs involved in cash management leverage: (a) some form of biometric or alternate proven authentication mechanisms that are non-repudiable; and (b) information technology (IT) for enhanced automation, reporting and reconciliation.

Engaging such BCNMs in the delivery of welfare payments can go a long way in overcoming the challenge of leakages. Additionally, benefactors can achieve better control over and visibility of service delivery through near real-time transaction processing and improved reporting that BCs are usually capable of providing, with support from their partner banks. This can be given teeth and enforced through appropriate reward and penalty mechanisms (for example service level agreements (SLAs) with the parent banks). The direct savings and indirect benefits that can accrue to the Governments can more than compensate the pay-out to BCNMs (2.0% is earmarked cumulatively for banks, BCNMs and TSPs under MGNREGS; the actual pay-out is believed to be less). Given the direct and indirect benefits that Government departments stand to gain, these rightful dues to banks should not only be conscientiously paid-out, but also be raised to incentivise banks and BCs for effective service delivery and improved performance.

The other key facets of BC services are the trust consumers repose in them and their ability to offer door-step delivery. Even though the on-ground coverage by agents needs considerable expansion, there is a clear preference for service points in the vicinity of the villages. This has the potential to bring down the transaction related inefficiencies that exist in traditional methods.

BCNMs' ability to extend agent coverage is considerably influenced by economies of scope, as the scale can be limiting due to small size of villages and long distances between them. If Government departments work more cohesively and encourage delivery of multiple welfare pay-outs though a common channel, BCNMs would be viable enough to deploy more agents to improve access and quality of services. This warrants conscientious efforts, as some progressive States or departments have undertaken, and perhaps a policy push for the rest.

Is There Evidence to Corroborate?

There is ample evidence to support how BCNMs have been effectively leveraged by several Government departments to bring about transformation in delivery of welfare payments or even for regular wage pay-outs.

On channelling MGNREGS payments in several districts electronically through BCs, the Andhra Pradesh (AP) Government has seen utilisation of funds increase by as much as 25%. Its daily irregularity reports mention less than 0.9% deviations from close to two third of works inspected. It has gone a step further leveraging its superior IT infrastructure and connectivity, enabling online availability of information for each work sanctioned, its location, status of completion, status of payment, disbursement delays and ageing. This is an extraordinary method to bring about access to information, generate awareness and to create transparency.

Governments of Haryana and Odisha have successfully piloted BC channel to deliver and track welfare benefits using biometric smart cards and mobile phones. There are several other isolated but distinct examples of Government departments riding on electronic payment methods for improved delivery. Even in States like Uttar Pradesh (one amongst the four under-developed States of Bihar, Madhya Pradesh, Rajasthan, and UP, referred to as BIMARU, or unwell), progressive departments like the UP Forest Corporation are extensively and effectively using electronic/mobile banking channels to tackle inefficiencies like underpayment to Tendu leaf collectors,[40] diversion of funds, discounting of coupons, understating quantity of leaves, black marketing, loss of coupons and bogus payments. Another illustration is a model of wage payment to health workers (ASHA) being pilot-tested by the Government of Bihar in collaboration with State Bank of India.[41]

AP is often viewed as a role model for e-Governance and IT innovation that many other states might not be in a position to replicate in the foreseeable future. However even the basic capabilities that BCs bring to the table (namely secure authentication, enhanced transaction processing, automated record keeping and

[40] See *MicroSave*, "FINO's Electronic Benefit Transfer System for Tendu Leaf Collectors - A Study

[41] See *MicroSave*, Review of MMT Payments to Accredited Social Health Activists (ASHAs) in Sheikhpura, Bihar

reporting, and convenient access to banking services) can have considerable impact in the other States that consider leveraging BCs more effectively.

Enabling Common Infrastructure

The network infrastructure and assets being created by BCs needs to be viewed by all stakeholders – public and private – as common channel for delivering a variety of financial services, while preventing proliferation of multiple agencies working in isolation. Though policy initiatives are on-course to facilitate this, the ground reality still tends to be duplication of efforts, multiplicity of accounts and high-levels of dormancy.[42]

Additional enabling infrastructure being established will open up further avenues for effective administration and delivery of public services. Some of the major constituents of this blueprint are:

1. UIDAI enabled '*Aadhaar* Payments Bridge' (APB) being established by National Payments Corporation of India (NPCI), will allow Governments to post payments centrally using *Aadhaar* number for KYC.

2. Government of India e-Payment Gateway is being set-up leveraging the capabilities of core banking systems and with the objective of eliminating physical cheque processing.

3. Common Service Centres (CSCs) have the wherewithal to offer BC services and much more. 95,700 CSCs are already operational at *Panchayats* across the country and can be made use of.

State Governments often have the last word on how even Central Government schemes are implemented, and the involvement and remuneration of banks and BCs. Many States paid only lip service to leveraging the potential of BC services and the underlying infrastructure, to the extent of not even compensating banks after using their services. Banks have continued to deliver with the promise of receiving future business from Government departments, rather than due to the motivation of efficiently paying G2P beneficiaries.

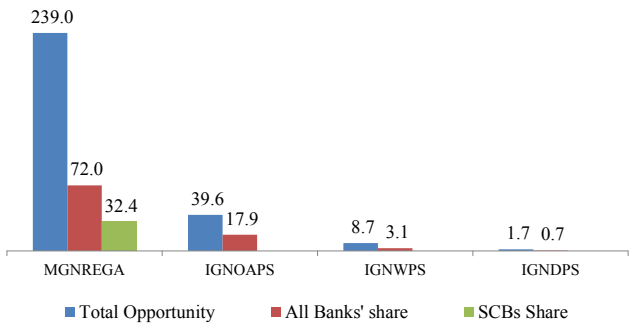
This perspective on either side has to change. State Governments and banks need to re-examine their symbiotic relationship in light of the BC model, and how together they can improvise on the efficiencies of the system, broaden the pie of benefits and harvest the gains – financial and social.

Greater integration of BC Channel with mainstream banking

The need for banks to provide greater legitimacy to BCs and plan, build and use them as an alternate channel has been covered earlier at length.

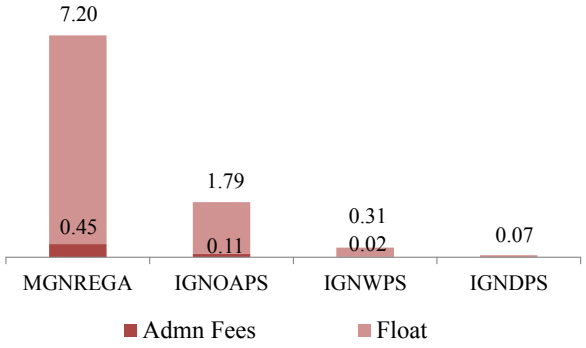
This is equally compelling from a business opportunity stand-point. As brought out earlier, Government wishes to undertake disbursal of a large part of MGNREGS and NSAP payments through banks. Exhibit B.29 below illustrates banks current share of G2P payment disbursal. Exhibit B.30 highlights the business opportunity for banks if 25% of additional G2P payments in these categories could be made through banks and the State Governments accept credit into beneficiary account as acceptance of disbursal. In additional to a share of the administrative costs that the banks can gain, this would also lead to considerable float being available to banks.

Exhibit B.29
G2P payments and banks' current share (Rs. Billion)



[42] A significant decelerator to the entire programme could be the newly designed process of reverse auctions for selection of BCNMs on a turn-key basis for an entire cluster / state. There are several challenges and potential implications of this approach that need some rethought.

Exhibit B.30
G2P payments – Revenue potential for banks (Rs. Billion)



Banks on their part would need to provide reliable, transparent and consumer friendly services to the beneficiaries receiving G2P payments. The tendency of Government to push for pay-out of the entire amount in the hands of beneficiaries in cash is driven by factors such as:

- Poor service offered by BCNMs;
- Non-availability of agents or illiquidity challenges, when beneficiaries need to make withdrawals; and
- Dependence on an earmarked agent and his POS/POT device to transact limiting beneficiaries' flexibility to withdraw from a linked/base branch or an alternate device or agent, much less an ATM.

Countering this would require banks to ensure that BC services are much better integrated into mainstream banking. Only then can consumers transact at bank branches or with alternate agents and withdraw cash with greater ease and flexibility and thus trust leaving their hard-earned savings behind in their accounts.

The bottom-line would be for banks to be able to deliver according to State Government's expectations outlined earlier.

Driving Client Protection

With branch-less banking accounts growing to a sizeable fraction of branch-based accounts and rise in transaction volumes led by Government payments, risk control, fraud management and client protection become hugely significant. A much greater dependence on technology and automation for branch-less banking processes makes these even more relevant and high impact areas.

There are enough safeguards built in the mature banking channels - branch based, ATMs and increasingly for mobile banking - to ensure client data and funds are protected and secure. This has been achieved through multiple interventions for authentication, non-repudiation, data handling and safety, disaster recovery and so on. For authentication and non-repudiation, self-service channels employ mechanisms of two or multiple factor authentication and a feedback mechanism for transaction completion through a combination of printed receipts, SMS alerts, transaction statements and so on. Assisted transactions employ maker-checker arrangements along with access to real-time information (in both online or offline modes) and a feedback mechanism through pass-book updates, SMS alerts, transaction statements and so on.

Many of these techniques work due to better integration and inter-operability of mainstream banking systems. Core banking enables providing one-single view of client data and account information for all access channels and likewise enables transaction information to be fed-back to the customers.

BC channel is not yet as robust from risk control, fraud management and client protection standpoint. The level of controls and protection varies across technologies and processes followed by different BCNMs. Offline smart card based deployments are most vulnerable in this regard. The transaction data resides on the POS/POT machines and there is a lag of one to two days (with certain banks allowing T+2 settlement cycle to their BCNMs) before a synchronisation with account information residing in bank's systems is possible. In order to prevent fraud and to protect clients, the commonly employed solution is to allow consumers to transact only with the parent hand-held device and prevent transaction processing elsewhere. This avoids multiple simultaneous transactions within the settlement cycle being carried out without visibility to the actual bank account details. The consumers however pay the price through severe inconvenience, heavy dependence on a single hand held device and the agent operating it for any transaction or account information.

Additionally for the mainstream customers, banks usually employ extensive mechanisms of business continuity and disaster recovery to ensure data security, back-up and recovery in case of a technical failure, an unexpected loss or a disaster.

Offline systems are prone to the risk of losing consumer data and account details in situations of

front-end device failure or loss. This is compounded many fold for BCNMs using their own FI systems and tools for back-up and disaster management. These are unlikely to be as robust as those used by banks for mainstream customers.

Another dimension is the challenge associated with churn of BC agents or situations wherein the BCNM institution itself terminates delivery of services. Lack of inter-operability with the branch leads to situations where clients have no access to their accounts until a replacement is identified and made operational. This again is a serious situation, where consumer's own funds with their bank are inaccessible for no fault of theirs. Furthermore, there could be considerable uncertainly about how long these funds might remain inaccessible even in emergency situations. Such constraints can have severe implications for trust in the banking system.

At the first level, it is vital that the consumer data and transaction information between the consumer and the agent is secured adequately. This is the weakest area with the highest risk for the bank. Accordingly, securing greater protection at this level should be bank's responsibility.

The next level of data protection required is for transaction processing between BCNMs and their banking partners. There has been considerable improvement on this front, with the RBI's regulation requiring banks to integrate FI and mainstream CBS on real-time basis.

In addition to transaction processing, there are several risks arising from the front-end processes followed by BCNMs around which consumer protection needs to be built. The critical ones are:

- Enforcement of two-factor authentication,
- Providing authentic and instantaneous acknowledgement of transaction records,
- Cash management practices, and
- Information on products and tariffs and enforcement thereof.

The risks arising out of some of these can be mitigated through better integration and interoperability. For instance, if the customers can even check balance details or last few transactions at a linked branch, they can reconcile with the information received from agents servicing them. This would enable consumers have greater trust in the system and deter agents from attempting fraudulent activities. Likewise if the account and transaction information can be available only centrally, there is one source of truth that everyone can rely on. Discouraging manual receipts and following a practice of system generated receipts is a deterrent for errant agents and a major comfort factor for customers. This too can be enabled more effectively if bank systems are better integrated, even if not fully interoperable.

Adoption of Standards

A significantly greater focus on standardisation of technologies and basic processes is fundamental to scaling-up at acceptable costs and viable investments.

In addition to the success story of ATMs and lessons learned about following a common standards based approach, one can also look at the evolution of electronic payments in India through EDC devices.

EDC terminals have proliferated at a rapid pace. There are some key lessons learnt from how the payments services have grown. The banks who sign up / acquire merchants and lease EDC terminals have essentially adopted standard off-the-shelf technology as far as these devices are concerned. Banks' role has been largely in market development, establishing innovative business models and creating customer pull for the payments service. The device, its underlying technology and maintenance or upgrade has been left to the manufacturers of the devices, who are required to be standard and inter-operable – else there would be no business for them or for the bank. The biggest advantage of adopting standard devices has been steep fall in hardware costs that eventually resulted in wider penetration and growth. The exponential growth led by having critical mass and then economies of scale through standards based approach has been witnessed in many other sectors, including mobile phones. The need for adopting a standards based approach is equally compelling for urban and rural markets.

If financial inclusion has to acquire scale and grow driven through consumer pull, the lessons learned from growth of ATMs, EDC terminals and mobile phones need to be applied.

There is also an important learning for banks. In the initial years all banks investing in merchant acquisition were bleeding. Yet they kept investing to grow the sector. Some of them might still be in the red, but most are about to turn the corner and derive very healthy

returns. Banks need to adopt a similar perspective for penetrating the BoP market for financial services. There are enormous opportunities once the market is developed. They should not shy away from making investments at this stage to develop the market.

Although many different attempts are being to achieve standardisation, coherent initiatives are still lacking. Multiple bodies have mandated elements of standardisation that contradict the efforts made other agencies or institutions. There is an acute need to review, borrow from and accept standards for certain areas that are universally followed or working well in India. These could be areas like storage of bio-metric data on cards (smart cards or mag-stripe cards) using UIDAI standard, which is going to have the largest volumes by far.

For the rest, there is a need to bring the various stakeholders under the ambit of a single body, which should be empowered to develop or refine standards where there are major gaps and a buy-in from banks and BCNMs to enforce these standards. This body could be one amongst the various committees currently constituted on this subject, but working in isolation and an un-coordinated manner.

The approach should consider how best to protect the investments already made in poorly integrated and non-inter-operable proprietary solutions and a roadmap for transition, as these solutions depreciate in value or need to be replaced for better functionality over a period of time. There would certainly be a need for a greater emphasis on making the future better integrated and inter-operable, while trying to leave as much as possible for market forces to drive.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Chapter 5 – Study Approach

Research Approach

MicroSave conducted this study through primary market research across select urban and rural geographies, supplemented with secondary analysis and building a point of view. In addition to the needs of the target segments, the study team interacted with major banks, business correspondents (BCs), technology solution providers (TSPs), mobile network operators (MNOs) offering BC services, RBI, NPCI, UIDAI and other key stakeholders and influencers to understand their perspective on interoperability, challenges that they foresee and the likely emerging scenario.

Methodology

Literature Review / Secondary Research

To get insights from success stories and failed intra/inter-operability initiatives regarding lessons learned, challenges faced, costs involved. Secondary Research would cover the following:

a. *MicroSave's* research documents highlighting the need, issues challenges around inter-operability.
b. Other documented research and experiences around intra/inter-operability in financial services for the poor.
c. *MicroSave* team's review and analysis of past or on-going initiatives in India and select other countries and critique thereof.

Primary Research – Demand Side

Primary research on the consumer side would be carried out to understand the need, perceptions and challenges of the poor segment consuming financial services. This will be carried out using market research tools from *MicroSave's* MR4MF toolkit. Main tools proposed to be used are 'Focus Group Discussions', 'Personal Interviews' and 'Attribute Ranking' to understand client needs and preferences.

Primary Research – Supply Side

The objective of supply side analysis would be to understand the perspectives, efforts, challenges and plans of the policy makers, enablers and providers of financial services for the poor. These will be done largely through personal interviews with various stakeholders including representatives from regulatory and quasi-regulatory bodies, enabling bodies (such as NPCI, UIDAI, IBA), commercial public sector and private sector banks, MNOs, BCNMs, TSPs, Agents etc.

Focus Group Discussions and individual interviews were conducted with groups of urban and rural customers of BC enabled banking services and BC agents. Many other stakeholders were also interviewed, who are also involved in the provision of financial services through the BCs and whose viewpoints are assisted in shaping several findings covered in this report.

Sample

The needs and demands for financial services, and the challenges associated with accessing these services, vary across the demographic spectrum. There are also significant differences in exposure to the financial products and services as well as the associated customer experience. The sample therefore covers respondents from the metros, urban, semi-urban and rural areas.

Location	Location Type	Sample Size
Delhi	Metro	24
Mumbai	Metro	21
Badau (U.P)	Rural	20
Bhopal (M.P.)	Rural	26
Chandauli (U.P)	Rural	37
Jabalpur (M.P.)	Rural	09
Moradabad (U.P)	Rural	36
Nanded (Maharasthra)	Rural	11
Varanasi (U.P.)	Rural	49
Yavatmal (Maharasthra)	Rural	26

Profile of Respondents

Metro

The respondents from the cities of Delhi and Mumbai, had exposure to business correspondent services. The majority of the respondents are male and a majority of them are less than 35 years of age with only a few illiterates. The majority of them are migrants who are employed in salaried jobs and use the BC outlets for remittance.

Rural

The rural respondents covered were from the three states of Madhya Pradesh, Maharashtra and Uttar Pradesh and spread across eight districts. The majority of the respondents had exposure to some form of formal financial services such as banks, post offices, business correspondents or microfinance institutions (MFIs). One-third of the respondents were females, members of MFIs and having taken credit for income generation activities. The male respondents were primarily engaged in agriculture or agri-allied activities and access banks for saving accounts and Kisan Credit Card (KCC).

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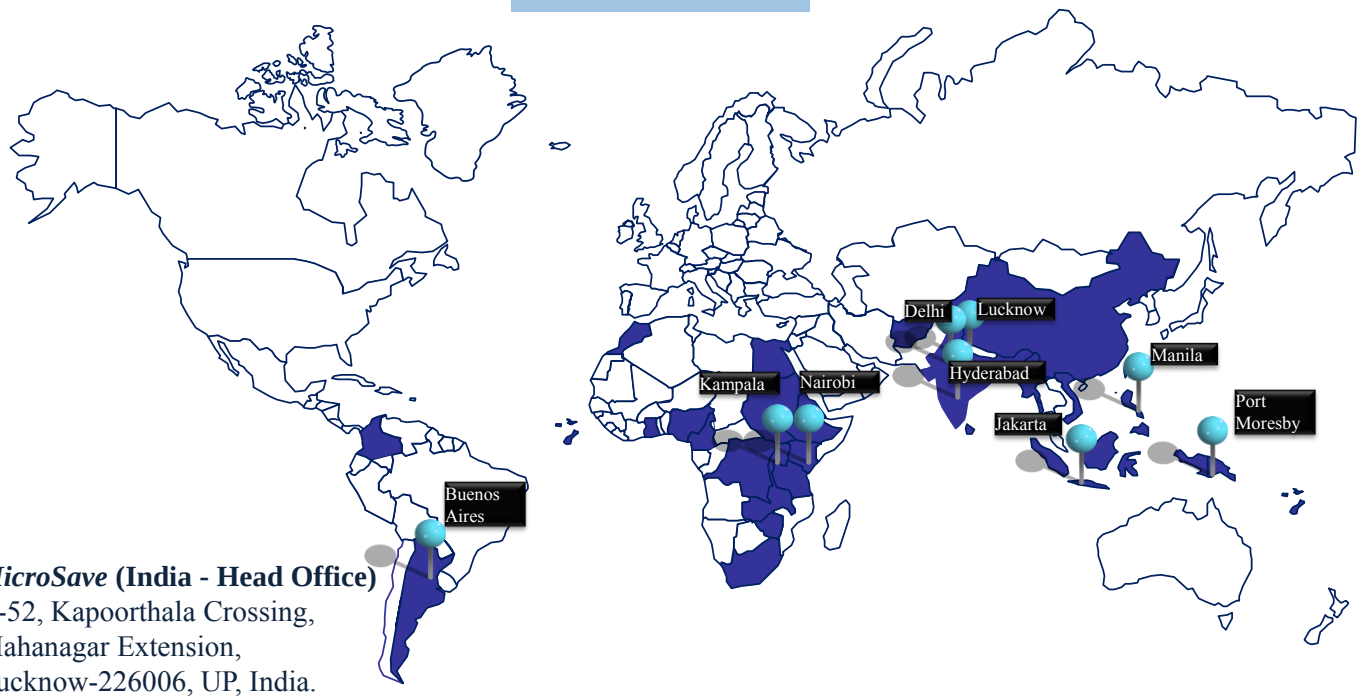

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