



DFS for the Under-Banked

Research, Design and Delivery

Pacific Microfinance Week, 2013

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MicroSave

Market-led solutions for financial services

Challenges to Financial Inclusion

- Financial inclusion faces a number of challenges ranging from the large number of resources traditionally involved in supporting small transactions, completing paperwork, providing outreach etc.
- High costs coupled with low returns have not made financial services for the poor an attractive proposition for commercial banks and profit making entities.

Historical Non-profit Organisations

- Lack of investment capital
- Inefficient systems
- Difficult to scale IT & operating model
- Resource intensive processes

Common Challenges

- Operating model not designed for low-income sector
- Inappropriate IT solutions
- Limited infrastructure
- Changing regulatory environment
- Little/no financial history
- High cost of traditional channels
- Threat from alternate providers

Commercial Banks

- Unwilling to risk shareholder money
- Inappropriate operating model
- Existing channels not accessible to low income clients
- In some markets (e.g. India) serving a burgeoning middle class offers quicker, easier profit lines

Barriers for Financial Institutions (FI)

Financial Institutions face a variety of challenges in reaching unbanked masses through its conventional branch based channel



High cost

- High setup cost for establishing a branch
- High operating cost of maintaining the branch
- Result: High cost per transaction



Poor revenue earning potential

- Small ticket size
- Low average float
- Less potential to sell asset products

Obstacles for Customers

Factors that discourage low-income households from using banks:

- Time lost and **cost** of travel (e.g. bus ticket and loss of wages)
- **Time** spent at banks (waiting, filling out forms, etc.)
- (Poor) **Behavior** of bank staff
- Lack of **literacy**
- Uncomfortable with feel of bank branch, procedures and **documentation** (not meant for them)
- Inappropriate **products** (e.g. high min. balances for savings)

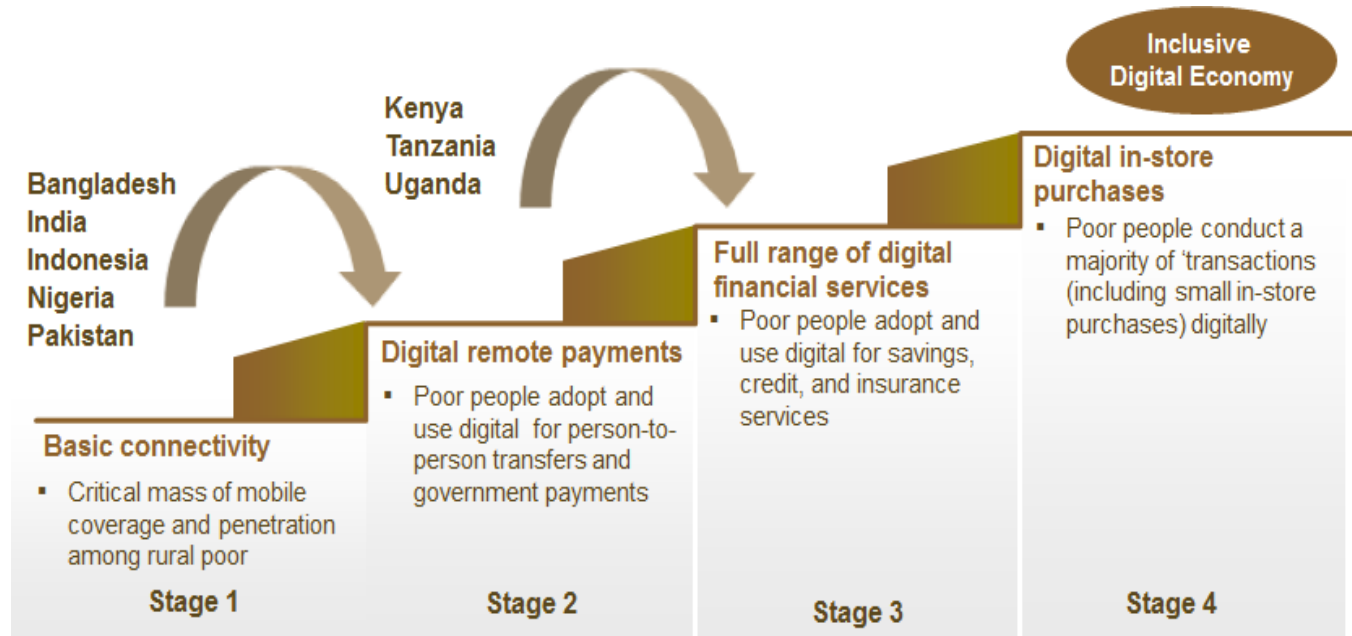
We wait for 2-3 hours to get a taxi, our whole day is wasted. Neither are we able to complete our household work nor are we able to complete the bank work.



Digital Financial Inclusion 101

Basic mobile connectivity and digital remote payments are the first two necessary steps towards an inclusive digital economy.

MicroSave's work with Equity Bank has clearly shown that a bank-led model can indeed be successful and rapidly achieve high volumes of transactions.



MNOs are better suited to managing high volumes of low value transactions (the mention of which is enough to give most bankers nightmares). Furthermore, most banks simply do not see the business proposition at the base of the pyramid or are too busy responding to more traditional high value, low volume opportunities offered by the burgeoning middle classes in most developing countries.³ Furthermore mobile- (as opposed to card-) based systems allow person-to-person and person-to-business payments (utility bills etc.) without using agents – thus offering an important user value proposition.

MNOs can (and perhaps must) play a catalytic role to bring banks into the market and thus achieve Radcliffe and Voorhies' Stage 3 ... by demonstrating that they can and will play an important role in the payments systems, and in the case of M-Shwari, beyond. This in turn will persuade banks leverage digital financial services to serve the base of the pyramid.

What Comprises Digital Financial Services ?

Operational Choices / Options

Card Banking (ATM, Merchants, VISA, RuPAY, Mastercard)

POS Banking

- Biometric
- Card

Mobile Banking

- USSD
- SMS
- IVR
- WEB / APP

Tablet Banking

Other options such as NFC

Strategic Choice

DFS as a product (Operational Intervention) such as being a BC etc..

DFS as a core channel (strategic/deep immersion)



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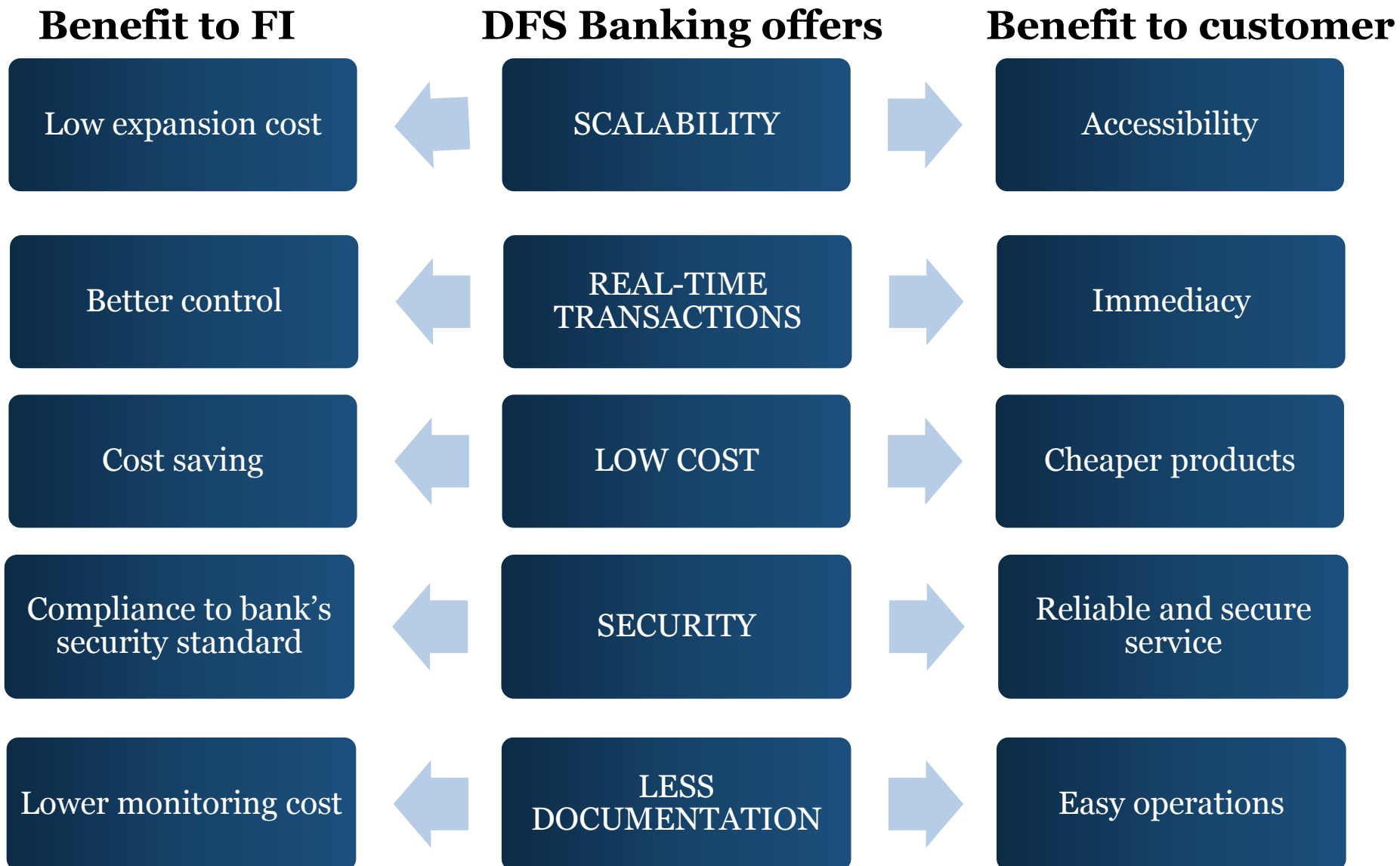
Strategic Choice

DFS as a product (Operational Intervention) such as being a BC etc..

**DFS as a core channel
(strategic/deep immersion)**



What Digital Financial Services (DFS) Offer



While high-income savvy customers are graduating to a “mobile life”, the poor cherish the most basic features

1 Mobile Banking

- Account statement, transaction history
- Wire transfer
- Real time assistance, ATM locator



2 Mobile Payments

- Pay for goods at a store (NFC)
- Bill pay, digital download, m-Commerce
- Funds transfer, international remittance
- Payment of goods to distributors, salary disbursement, social benefits



3 Mobile Life

- Ticketing for transport, car park, in-flight connection
- House/company access control
- Event, promotions, loyalty vouchers



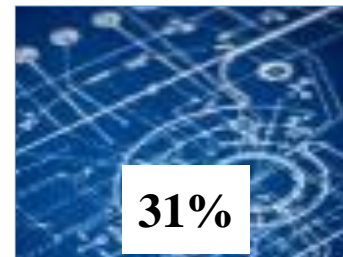
Savvy & high-income group



Give Me Control and Choice

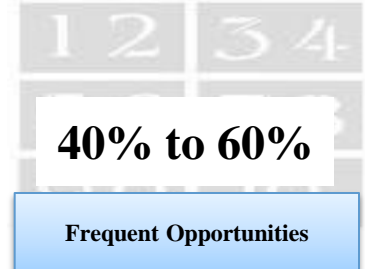


Help Me Help Myself



Know Me Everywhere

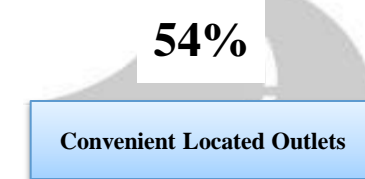
Low income group



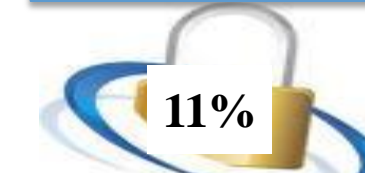
Frequent Opportunities



Transact in Small Amounts



Convenient Located Outlets

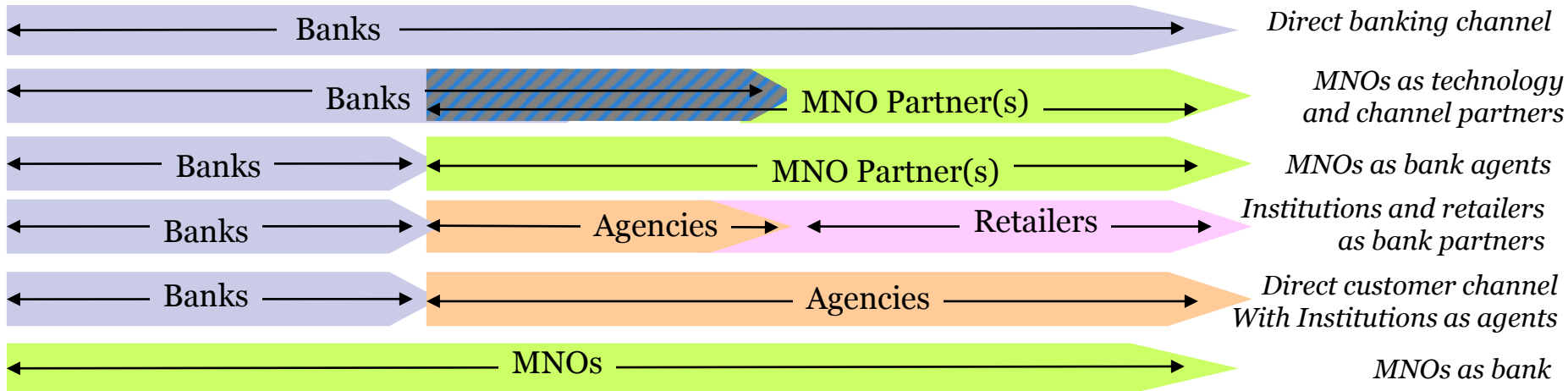
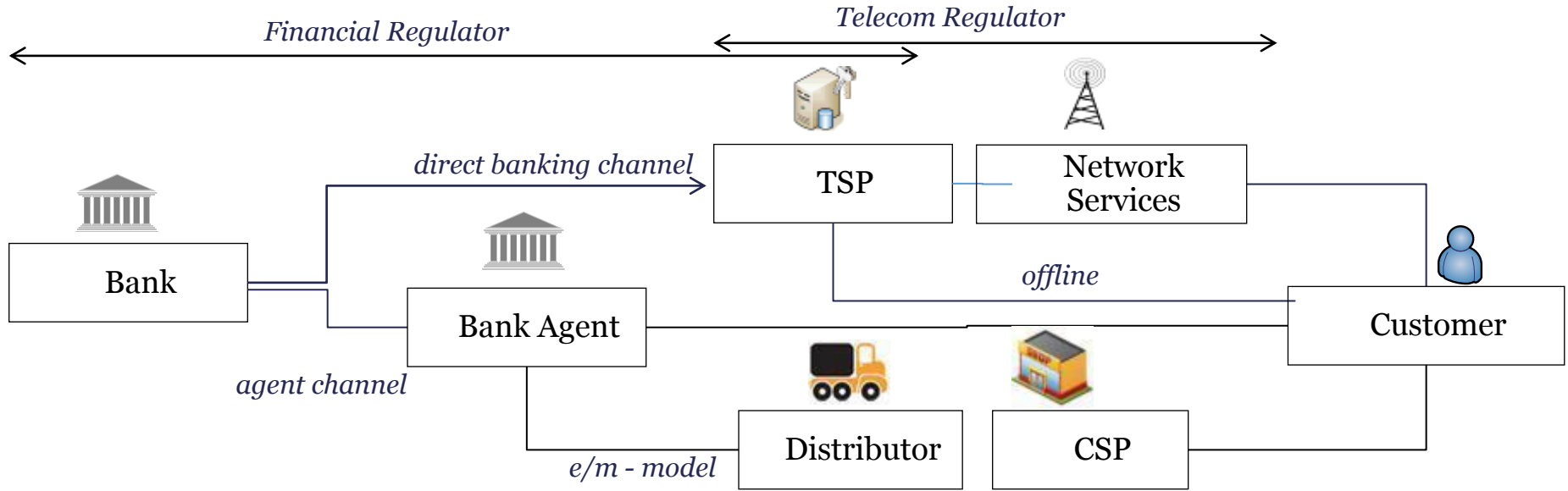


Trustworthy and Secure Institutions

1: Accenture Multi Channel Consumer Survey 2010
 2: *MicroSave* Deposit Assessment in India, IFC study, March 2011 and IFN 67 Clients' Willingness to Pay "Reasonable Fee" for BC Services
 3: Mas, Ignacio (2010), New Opportunities to Tackle the Challenge of Financial Inclusion

4: Group Savings and Loans Associations, Impact Study, DAI, 2010
 5: Mas, Ignacio (2008), CGAP FN 45
 6: Capturing the Promise of Mobile Banking, McKinsey Quarterly

Business Model Alternatives in E/M-Banking



Basic Models in E/M-Banking

In most countries there are two common models of mobile banking:

1. Bank-led model or
2. Non-Bank/MNO-led model (mobile network operator/ telecommunications/ telco)

Both typically use retail agents (e.g. merchants, supermarkets or post offices) to deliver financial services outside traditional bank branches, but these models differ primarily on the following questions:

- What is the regulatory situation/guidance on who must lead m-banking efforts?
- Who will establish the relationship (account opening, deposit taking, lending etc.) with the end customer?
- What is the nature of agreement between bank and non-bank?

Bank Led Models

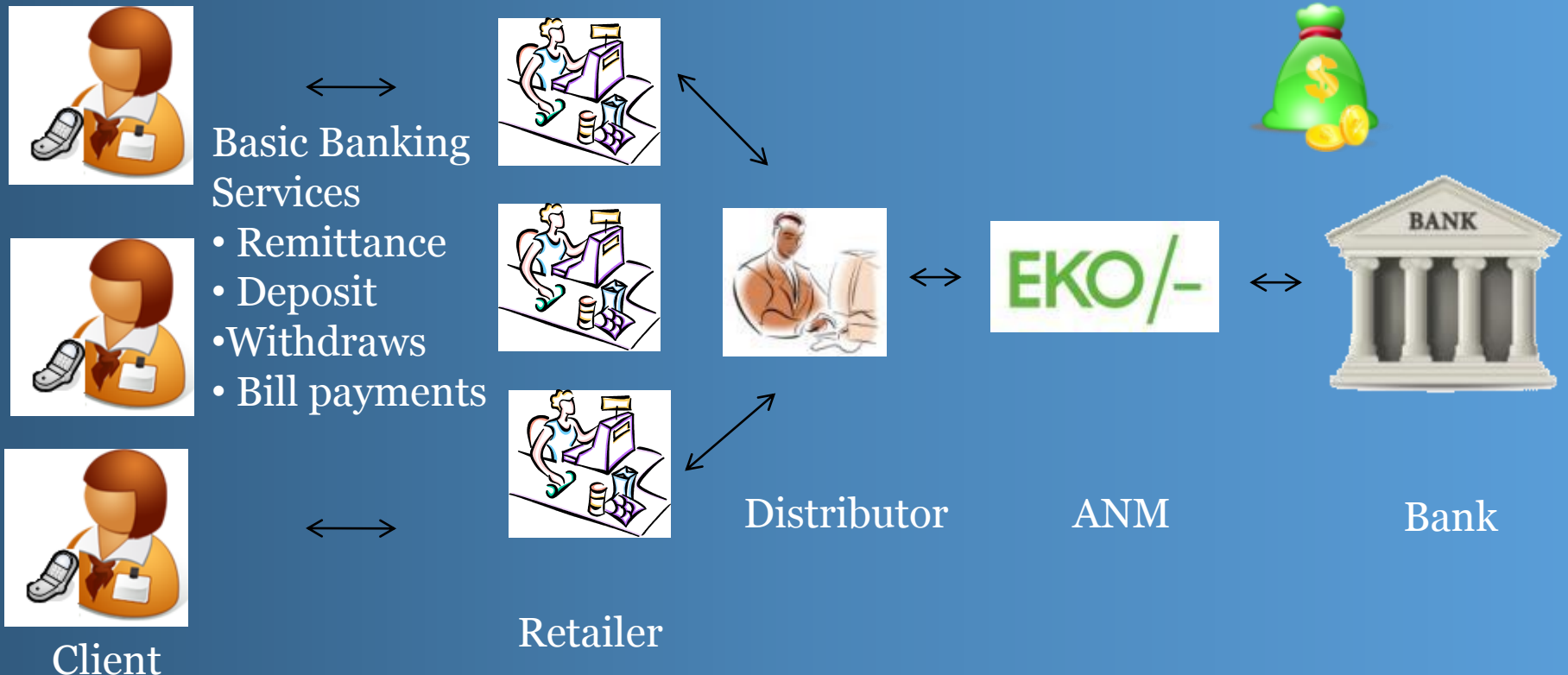
- Offer financial services beyond the conventional branch based banking with the bank as the main driver of the service.
- May be completely handled by the banks themselves or through partnering with non banks (telcos/corporate retail outlets/agent network managers, etc...)
- The customer account relationship and account management remains primarily with the bank. Partnering with non-banks can help in outreach.

Example: State Bank of India appointed Eko Aspire Foundation as a business correspondent and Eko India Financial Services (P) Ltd. provides the technology support



Example of Bank Led Model: EKO (India)

- A customer can conduct transaction at a CSP point (generally a retailer) with access to Eko's portal through a mobile handset.
- CSPs are supported by Super CSPs (or aggregators) in cash management.
- Super CSPs purchase e money in bulk from Eko and sell to retailers as per their demand.



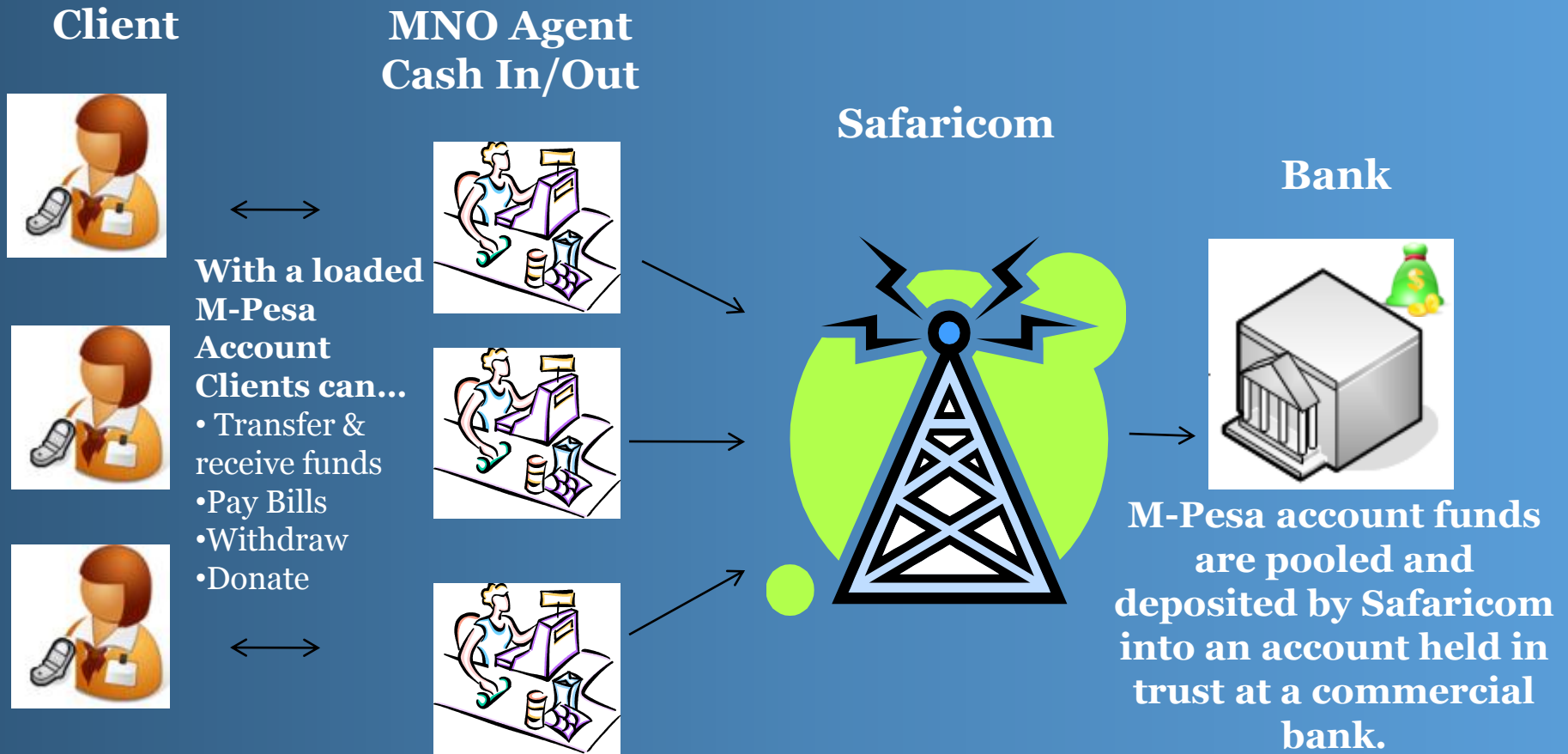
MNO Led Models

- Wallet/ accounts are issued by MNOs.
- Customer can deposit and withdraw cash from the wallet in addition to other financial services provided by MNO
- Typically the role of the bank is limited to ensuring safe-keeping of funds in a pool account/ trust account
- MNO carries out most of the activities, including product development, customer acquisition and enrollment, and account management



Example: M-PESA is an electronic payment and store of value system that is accessible through mobile phones. Individual customer accounts are maintained in a server that is owned and managed by Vodafone/Safaricom, but the full value of its customers' balances on the system are pooled accounts in two regulated banks on a 1:1 basis.

Example of MNO Led Model: M-PESA (Kenya)



In the M-Pesa “MNO-Based model,” clients cash-in/out at thousands of M-Pesa agents. M-Pesa wallets are held by Safaricom & are not classified as deposits. E-Money is backed 1:1 by pooled funds deposited in trust at a commercial bank.

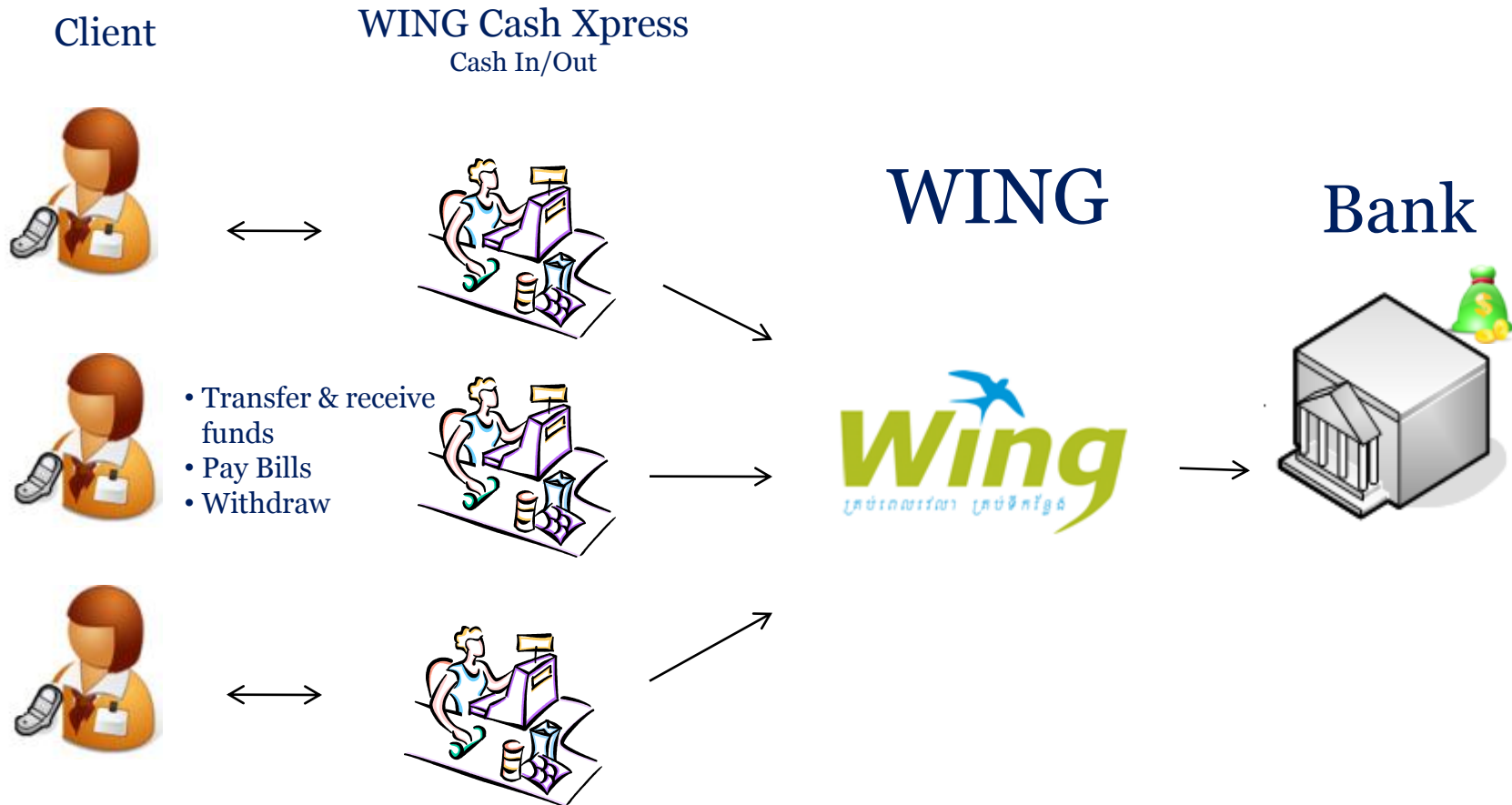
Third Party Led Models

E- wallets are offered usually by specialised third party players. Normally a bank account would be at the back-end for these e-wallets. These typically offer services including savings, transfers, airtime top-ups etc.



Example: WING is a service in Cambodia which provides e/m - banking services. It has relationships with Telcos as well as the ANZ bank. The e-wallets issued by WING are meant primarily to facilitate P2P transfers.

An example of Third Party Led Model: WING (Cambodia)



WING e-wallets are backed by corresponding individual bank accounts in ANZ bank.

Comparing Various Options And How To Select The Best One ?

Options	Advantages	Disadvantages
SMS Banking	<ol style="list-style-type: none"> 1. Quick acknowledgement and information 2. Low investment 	<ol style="list-style-type: none"> 1. No/limited financial transactions 2. Literacy issues 3. Security issues
Mobile Van	<ol style="list-style-type: none"> 1. Withdrawals at doorstep 2. Real time transactions 	<ol style="list-style-type: none"> 1. Not stable/ permanent 2. Expensive 3. Not scalable
ATM / Card / Prepaid card	<ol style="list-style-type: none"> 1. Instant plug in to a large number withdrawal points 	<ol style="list-style-type: none"> 1. Higher cost 2. Not doorstep 3. Limited financial transactions
Tablet	<ol style="list-style-type: none"> 1. Powerful visualisation for clients 2. Affordable (not if you add other functions/devices) 	<ol style="list-style-type: none"> 1. So many extra attached devices... (biometric, printer, internet) 2. More time consuming 3. Complex troubleshooting and maintenance 4. Not very stable / tested

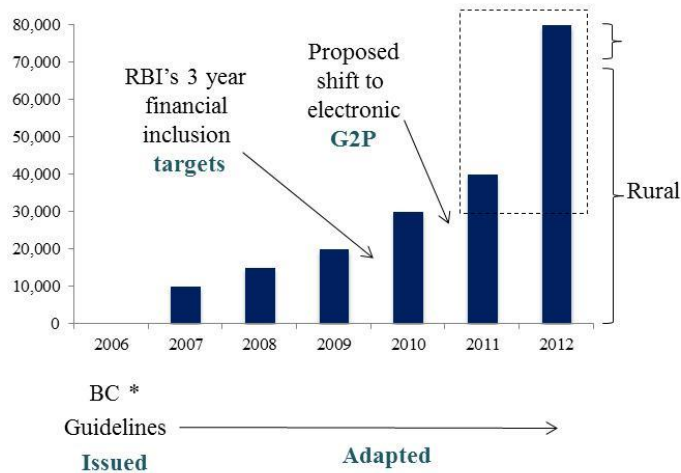
Comparing Various Options And How To Select The Best One ?

Options	Advantages	Disadvantages
PoS	<ol style="list-style-type: none">1. Multi functional2. Future-ready3. Easy to use4. More durable as compared to tablets5. Can offer a wide range of transactions / services	<ol style="list-style-type: none">1. More expensive than tablets2. Remote transactions not possible
Mobile Banking	<ol style="list-style-type: none">1. Easy to deploy and affordable2. Best for remote transactions3. Quick acknowledgement and information sharing (financial literacy, reminders etc.)	<ol style="list-style-type: none">1. Owning mobile is must2. Difficult for totally illiterate clients

Lessons Learned Over The Past Several Years: Enabling New Players and Improving Business Models

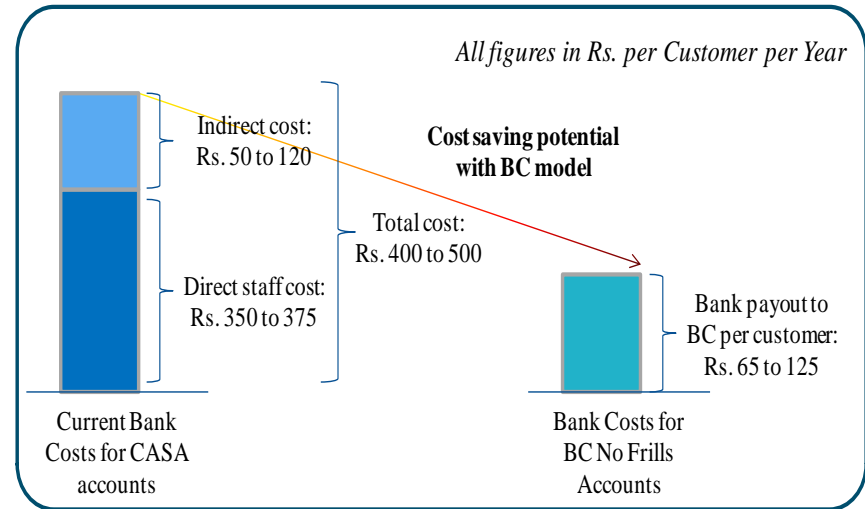
Growth of Agent Touch-points

Estimated (all India) Business Correspondent*
Customer Service Points

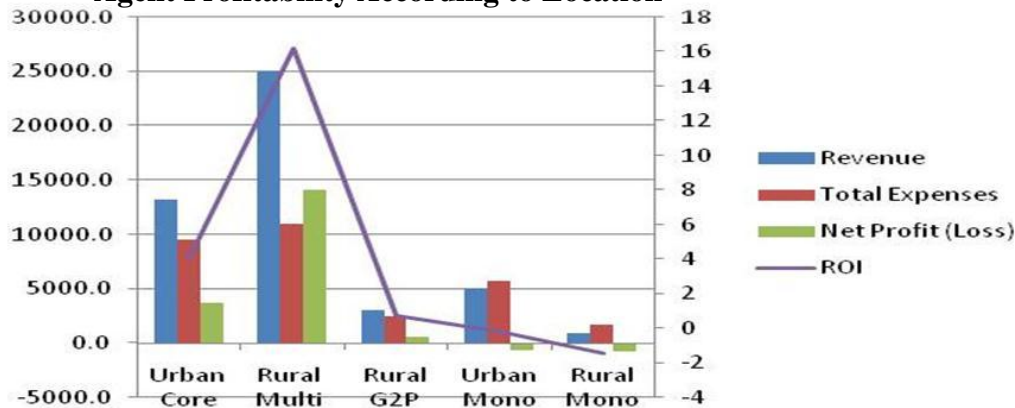


Costs to Maintain Accounts

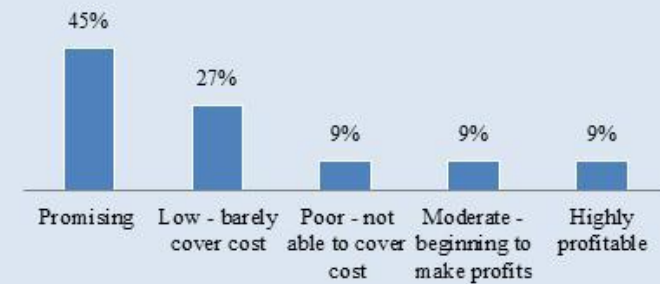
Hard economics²



Agent Profitability According to Location



Future sustainability of the BC Operations^{1ea} As perceived by BCNMs















































1: MicroSave Survey : [State of Business Correspondent Industry in India – The Supply Side Story](#)

2: MicroSave Paper : [Why E/M-Banking Will Soon Reach Scale In India](#)

3: MicroSave [IFN 80 Driving Viability for Banks and BCs](#)

4: MicroSave [Policy Brief # 2 State of Business Correspondence Agent Networks in India](#) and [Policy Brief # 6 Assessing Agent Profitability](#)

Comparison Of Technology Options¹ And Their Potential In Enabling Financial Inclusion At Scale

Technology	Mobile ^{2g} (USSD)	Mobile ^{2g} (SMS)	Mobile Apps	Mobile (STK)	POS (Card) ^{2g, 3g}	Mobile ATM	Voice IVR
Features							
Ubiquity	 Supported by most basic to smart phones.	 Supported by most basic to smart phones.	 Needs data capabilities and high memory on phone.	 Constrained by SIM card memory and distribution.	 Low for banking usage.	 Very low penetration	 At trial stage
Complexity / Usability	  High volume transactions are of few types only. Needs ability to read/write numerals and characters.	 Needs ability to read/write numerals, words and characters.	 Users should be fairly literate and technology savvy.	 Some degree of literacy required. At times supported by school going children.	  Complexity is usually around biometric recognition.	 Users literacy required	 No need to remember PINs or hold smart cards
Security & Trust	 More prone to human errors	 More prone to human errors	 Security can be embedded	 Security can be embedded	 Biometric authentication	 Can print receipts	 Voice authentication not yet proven
Cost	 \$20 upwards ⁴	 \$20 upwards ⁴	 \$20 upwards ⁴	 \$20 upwards ⁴	 \$400+ (device)	 \$400+ (device)	 \$400+ (device)
Ability to Scale	 Also high priority format	 Also high priority format	 Also high priority format	 Also high priority format	 Also high priority format	 Also high priority format	 Also high priority format
Overall	 Overall score	 Overall score	 Overall score	 Overall score	 Overall score	 Overall score	 Overall score

1: [MicroSave BN# 67 Communication Formats](#),

2: [MicroSave BNs # 66 POS v. Mobile and 80 Does Mobile Banking Require A Card?](#)

3: [Mas, Ignacio and Siedek, Hannah, Banking Through Networks of Retail Agents](#)

4: In large and emerging markets like India. Nokia online store nokia.co.in



So, given so many choices / options, how do we select the best one ?

Factors Affecting Uptake of DFS (1)

Alternate Channels

- Bank penetration
- ATM penetration
- Informal service providers
- Postal network

Demographics

- Age profile
- Literacy levels
- Density and spread of population

Socio-economic Conditions

- Sources and level of income
- Avenues for spending
- Cultural views about savings/ loan
- Awareness levels and use of technology

Factors Affecting Uptake of DFS (2)

Regulations

- Payment systems
- Roles and responsibilities of stakeholders:
 - Banks/ FIs
 - Technology providers
 - MNOs/ service providers
 - Aggregators
- Chosen model: Bank led or Non-bank led

Flow of Money

- Proportion of Government schemes/ subsidies
- Tax laws- affecting the use of formal channels versus use of cash
- Urban centers (too few or too many)

Why Will People Switch Over?

Compelling Value Proposition for Users

- What pain points does the new system address
- Is it more convenient and easier to use?
- Does it provide value for money (if not less expensive)?
- Is it more secure than alternates?

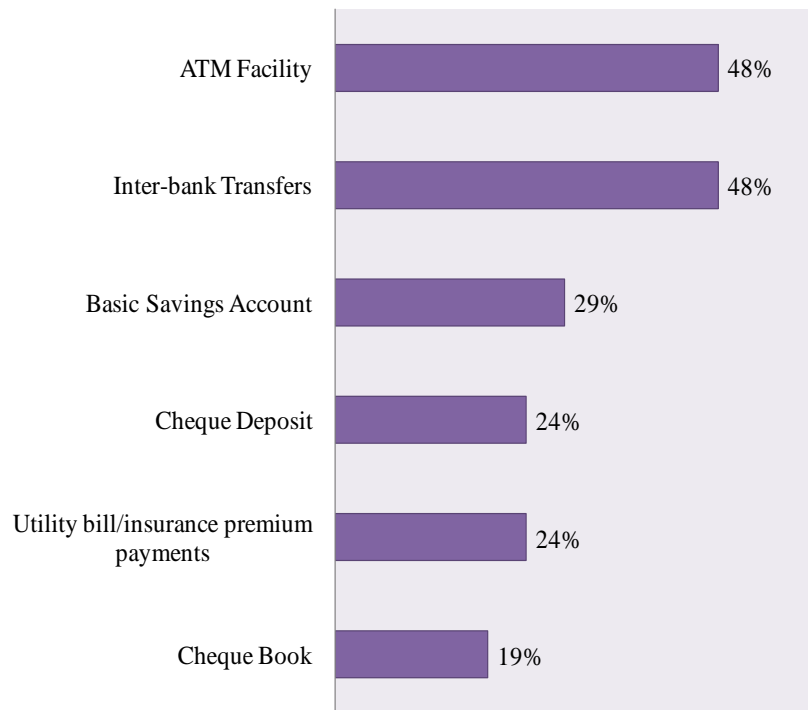
Strong Business Case for Banks and Service Providers

- Costs and revenues involved
- Out reach, number of new customers
- Does it make MIS, reconciliation easier?
- What kind of monitoring and supervision will be required?
- Does it lead to drastic changes in Org. Structure?

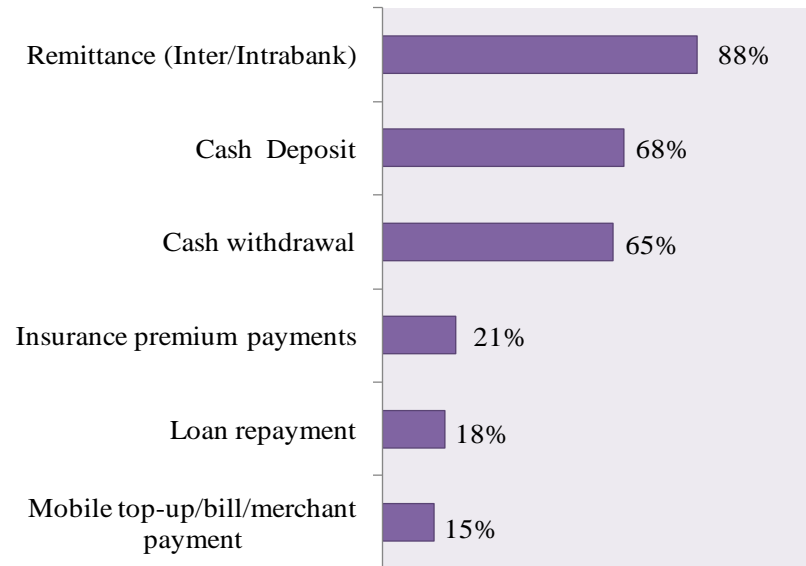
Consumer-pull Is Key!

Certain products like money transfers / remittances and welfare receipts have a natural pull. A deeper understanding of consumer aspirations and preferences is essential for the success of other products that do not have the benefit of a natural pull

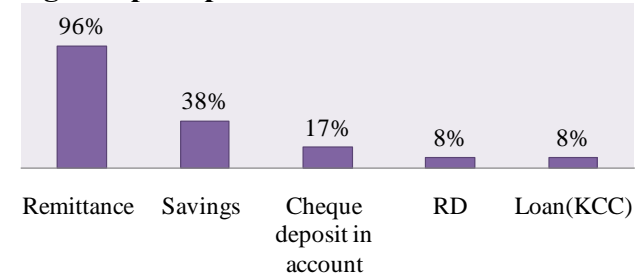
Services urban consumers aspire to^{1da}



Transaction preferences of urban consumers^{1da}



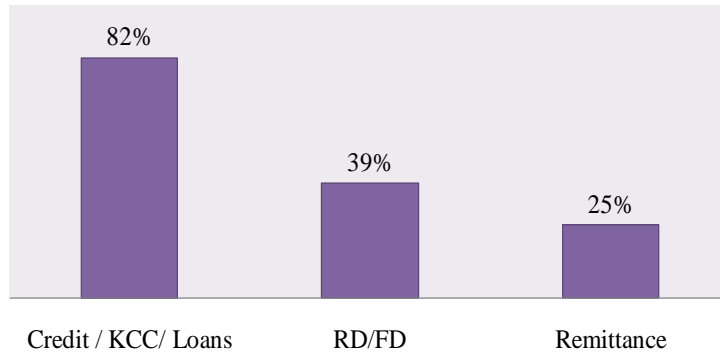
Agents' perception of urban consumers' needs¹



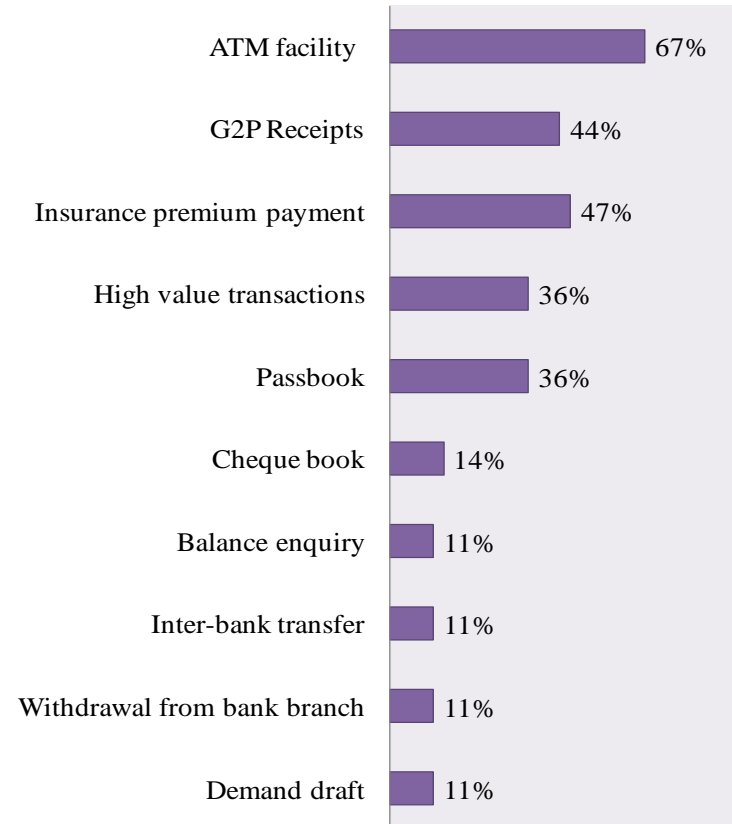
1: *MicroSave* Research on [Integration and Interoperability of Financial Services](#)
2: *MicroSave* BN#52 [Removing the Pain from Using Cash: An M-banking Solution?](#)

Rural Consumers Too Are Increasingly Maturing – Aspiring To Multiple Banking Products And Advanced Services / Facilities

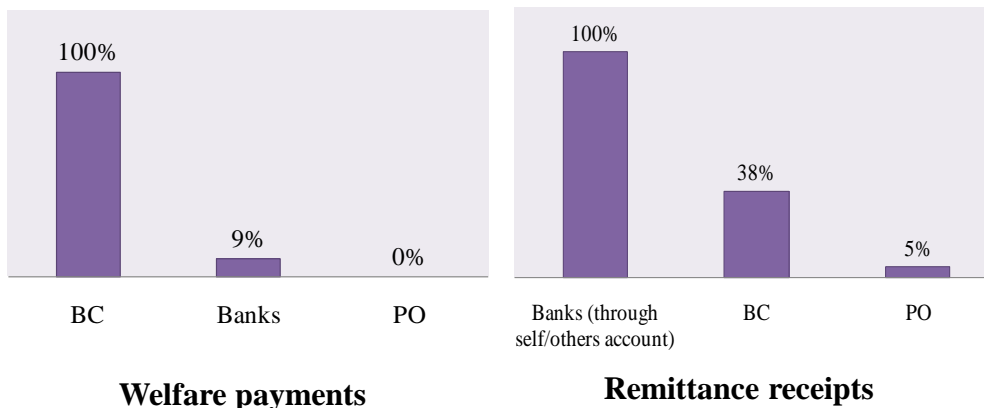
Banking products rural consumers aspire to¹



Services rural consumers aspire to¹



Channel preferences of rural consumers¹



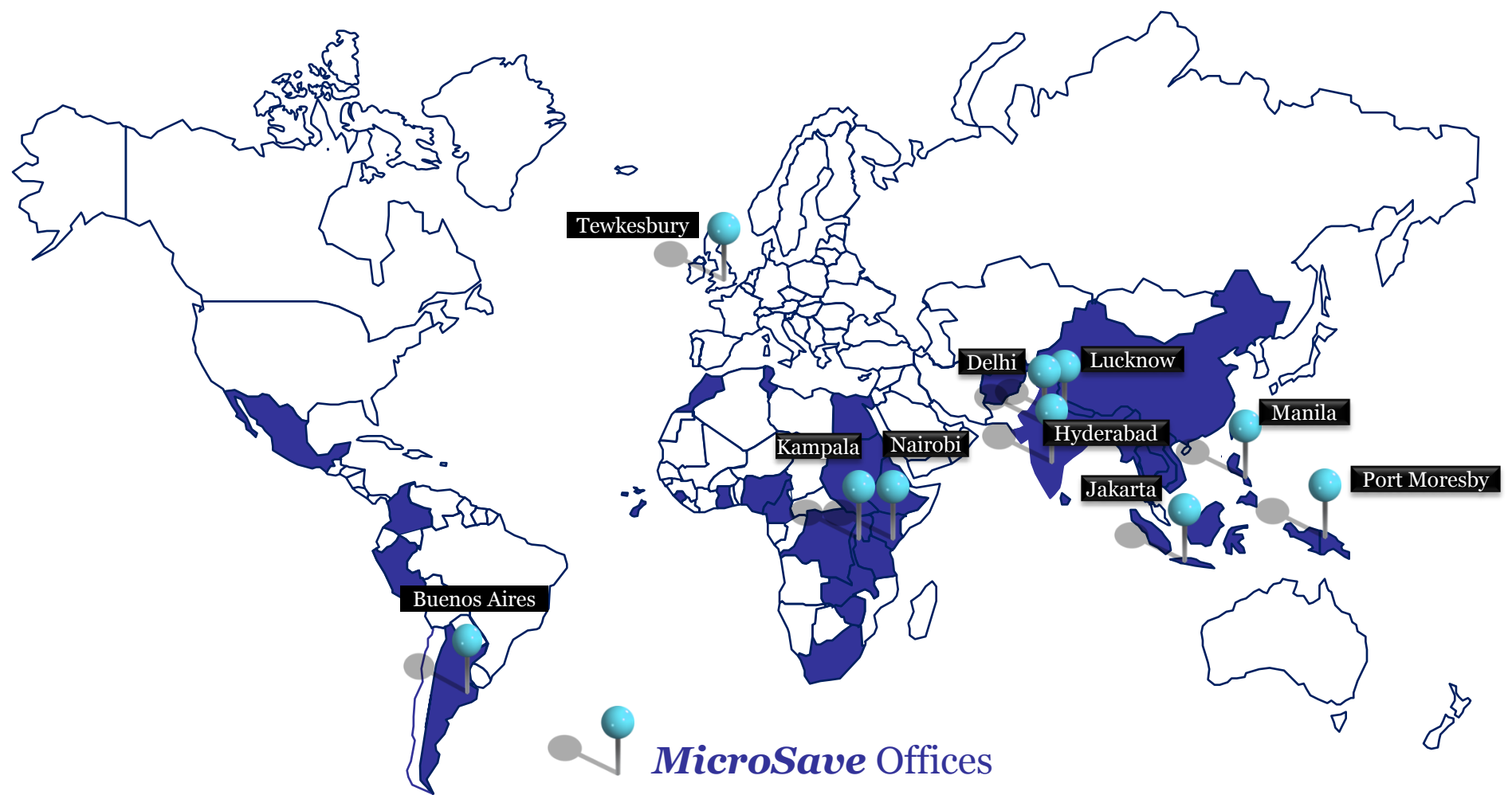
Aspiration to access ATMs and cheque books and ability to discern channel preference for varied types of financial transactions (welfare payments versus remittance receipts) is evidence of rural consumers' maturity and complex financial needs. This also call into question the commonly held belief that the poor need basic "financial education".

1: *MicroSave* Research on [Integration and Interoperability of Financial Services](#)

Framework For Making the Customer Journey Delightful

-Lightly Modified by *MicroSave* from Awareness to Ongoing Activity (CGAP)

	Awareness & Decision	Sign-up	First Agent Tx	First Remote Tx	Ongoing Usage
Product features/ Pricing	Does the service meet a customer need at a competitive price?		Are tx fees perceived to be too expensive?	Are tx fees perceived to be too expensive?	Do customers see ongoing value in using product?
Marketing	Does the customer understand the value of the service?				How often touch customers with reminders/incentives?
Agent Network		Locations appropriate? Are agents incentivized to sign up the “right” customers?	Do agents hold cash or float? Locations appropriate?		Agent service consistent?
Customer Service		Can customers find agents?	If there is a problem is it resolved quickly and satisfactorily?	If there is a problem is it resolved quickly and satisfactorily?	How often touch customers with reminders/incentives?
User Experience		How long and painful is the sign-up process?	Does the customer know how to transact? How long and painful is the tx process?	How long and painful is the tx process? How easy is the user interface to use?	
System Network		Do network outages hinder sign-ups?	Do network outages hinder transactions?	Do network outages hinder transactions?	Do network outages hinder transactions?



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