Strategy & Research

Mobile Financial Services

A compelling solution for financial inclusion in India

Muhammad Yunus pitched the plan to sell mobile telephones to “telephone-ladies” in rural Bangladesh as a way to multiply the reach of a single phone. Today, nearly half of Bangladesh’s villages have mobile access via a telephone-lady and over a quarter million phones have been sold under the program. Today, if we turn to India we observe that a similar picture emerges on a much larger canvas driven by the convergence of Banking and Mobile Telephony industries. This paper seeks to highlight that mobile telephony can foster greater financial inclusion in the unbanked through the promotion of job creation strategies.

- 670.6 million subscribers with addition of 16-18 million per month[1]
- Rural wireless subscribers increased 71% in (2009-10), and urban subscriber base grew by 40.5%
- Wireless subscriber base expected to reach 1.1 billion by 2015
- Wireless Tele-density stands at 53.8.
- Rural tele-density grew by 69.2%
- Every 10 % increase in mobile penetration produces 0.8 % economic growth

Indian Mobile Landscape

- 5% of the 600,000 village habitations have a commercial bank branch
- 40% Indians have bank A/c
- 13% Indians have debit cards and 2% have a credit cards
- 51.4% of nearly 89.3 million farm households do not have access to any credit either from institutional or non-institutional sources.
- Only 13% of farm households avail bank loans

Indian Rural Banking

- 32 banks have been given approval to provide mobile banking facility in India; of this only 21 have started providing these services.
- Only one MSP has applied for approval to provide such services

Current status of mobile banking

Mobile technology offers the dual opportunity of filling financial gaps and improving the economic lives of customers

Mobile Technology: A catalyst for Financial Inclusion

Mobile technology for banking transactions has been gaining popularity world over. With the rapid growth in users and expansion in coverage of mobile phone networks in India, this platform has been recognized as an increasingly important medium to reach the unbanked. While e-commerce has skipped the majority of the population due to the cost of setting up such channels, mobile commerce has the capability to be inclusive due to the widespread use of mobile phones.

Mobile Financial Services fall into one of three categories: mobile payments (P2P, P2M, or M2M), mobile microfinance (loan disbursement and payments), or mobile banking (bill pay or account information, e.g. balances or alerts). The nature and breadth of the services varies depending on the consumer segment and needs, mobile technology infrastructure, maturity of financial services, and regulatory environment in a given market.

Long term goal of mobile banking is to ensure 24*7 clearing and settlement through nationwide infrastructure, enabling real-time fund transfer between two accounts held in any bank and operated by users using mobile banking services of any operator

Case Study: Kenya

M-Pesa facilitates financial transactions via mobiles. Typically, microfinance customers can pay loan installments via telephone by entering a code that transfers funds from a personal account to the bank’s account. But transactions can also flow between customers directly—as long as the two parties are in the M-Pesa network (or have access to someone who is). Someone can, say, send money to a relative who is not in the network by sending a code to the person. The relative takes the code to a local shopkeeper who is in the M-Pesa network and the shopkeeper transfers the funds. In Kenya, these transactions are facilitated by mobile phone agents in commercial areas.

1 As of August 31, 2010 (TRAI)

Regulations, Policies and Guidelines

Mobile Banking Transactions Guidelines

- Initially, only Banks with Core Banking Systems can provide Mobile Banking services
- Daily transaction limit of ₹50,000 for P2P and P2B transfers
- Per transaction limit of ₹5,000 (and monthly cap of ₹25,000 per customer) for remittance of funds for disbursement of cash through ATMs or BCs
- Compulsory two-factor authentication, one of the factors need to be mPIN or any higher standard; transactions up to ₹1,000 can be facilitated by banks without end-to-end encryption
- Interoperability must between banks and all mobile banking service operators; hence message formats like ISO 8583 mandated
- Bilateral or multi-lateral agreements between banks for clearing and settlement
- Long term goal of mobile banking is to ensure 24*7 clearing and settlement through nationwide infrastructure, enabling real-time fund transfer between two accounts held in any bank and operated by users using mobile banking services of any operator

Prepaid Instrument Guidelines

- Three broad categories – closed, semi-closed and open system payment instruments
- Only banks allowed to offer mobile banking services are eligible to offer mobile based pre-paid payment instruments (mobile wallets & mobile accounts)
- Non-banks allowed to offer only semi-closed prepaid instruments
- Non-banks not allowed to offer Person-to-Person transfer of value
- Maximum value not to exceed ₹50,000, validity period can be a maximum of 6 months
- Semi-closed prepaid instruments for utility payments can be offered without KYC up to a limit of ₹10,000
- Reload of such payment instruments allowed against payment by cash/ debit to bank account/credit card either by bank or by agent appointed by bank/non-bank

RBI has not provided any guidance on upper limit of charges to be levied by Banks and mobile network providers for provision of mobile payment services to end customers.

Drivers for M-Finance

While the telecom penetration in India has been on the increase since the last two years and the Government in the past has mandated financial inclusion through priority lending and other measures, we believe that today M-Finance is at an inflection point driven by a combination of Government policies, changing dynamics of urban and rural India and the financial compulsions of the telecom industry.

Policy Mandates

- RBI mandated banks to chart out a road map on financial inclusion by March 2010
- RBI to allow companies, individuals, NGOs, cooperative societies and post offices to work as business correspondents for banks
- Citizens can soon open a 'mobile-linked-no-frills account' for financial transactions

Societal demands

- The number of migrant workers moving from interiors of India to main cities increasing rapidly
- Internal remittances form a significant part of household budgets (medical, education, etc.)
- M-Finance is a cost effective, secure and fast alternative to informal mechanisms of money transfer

Financial Pressures

- Telecom companies struggling to incentivize distributors and prevent churn with the entry of new players
- M-Finance can drastically increase volumes, improve stickiness by providing additional revenue stream and gain customer loyalty

Mobile banking transactions are expected to be over 340 million in the year 2015 resulting in cost savings of approximately ₹11 billion.

Value Creation

M-finance has the potential to create value on multiple fronts and improve the entire financial and societal ecosystem. The move to create value will come from two directions but has to be centered on the citizen, customer to achieve success.

Tie-ups between commodity exchanges and mobile service providers for the dissemination of crop information through calls or text messages are expected to increase demand for mobile services among the rural farm community. This is in turn is expected to increase demand for a bouquet of related value added services which will help deepen the overall base of Mobile service providers in rural India.

Branchless banking allows banks to extend reach to rural areas, and the cost of serving new territories is significantly lower. Moreover, it cuts costs of dealing in small quantities which is the case for micro loans. By reducing the high operating costs for MFIs[1] , M-Finance can lower interest rates for micro loans. Moreover, M-Finance speeds up routine processes so that field staff can focus more heavily on problem areas and new opportunities.

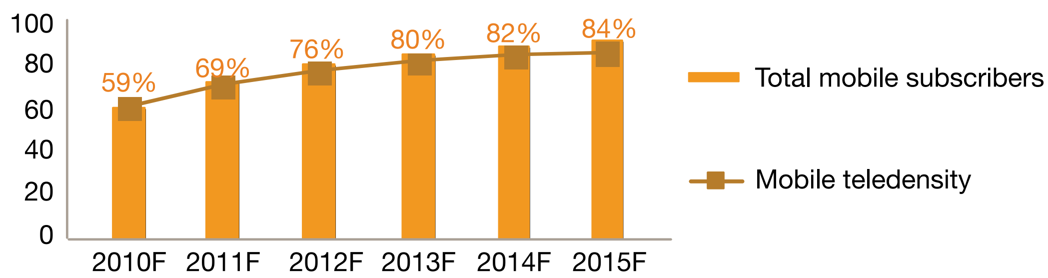
Adoption of Mobile banking can lead to significant cost advantage in distribution of banking services. As per RBI estimates, it costs close to ₹50 per transaction if conducted in a branch, an ATM transaction costs about ₹15 and a net based transaction costs the bank only around ₹4 primarily due to savings in real estate and personnel costs. Mobile banking transaction cost is expected to be of the same order as internet banking transaction cost.

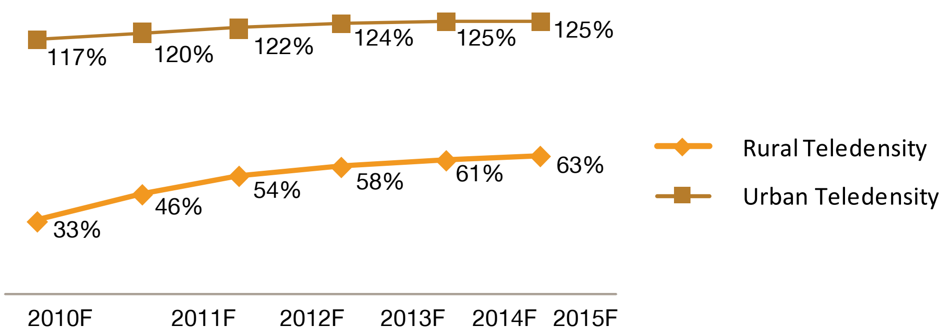
A major promise of M-Finance is that it can help expand operations in remote or sparsely-populated rural areas due to high penetration of cell phones. M-Finance holds the potential to create financial products that better fit with the needs of poor customers such as paying for education, medical expenses, etc—as well as to create more flexible products to finance small businesses thus improving the entrepreneurial capacity in the country. M-Finance may enable people in rural areas to avoid lengthy 2-3 day trips to banks in the closest large village or town not to mention the avoidance of investment in setting these local banking nodes by banks in remote rural areas.

Telecom players can gain from the M-finance wave in myriad ways. For instance, they can provide their retailers a value added revenue stream by offering M-Finance merchant status. The M-Finance ecosystem can open up innovative mobile services including SMS payment reminders and location based financial services such as price information from nearest

1 Micro Finance Institutions

Projected Mobile Subscriber and Tele-density Growths





Source: PwC analysis

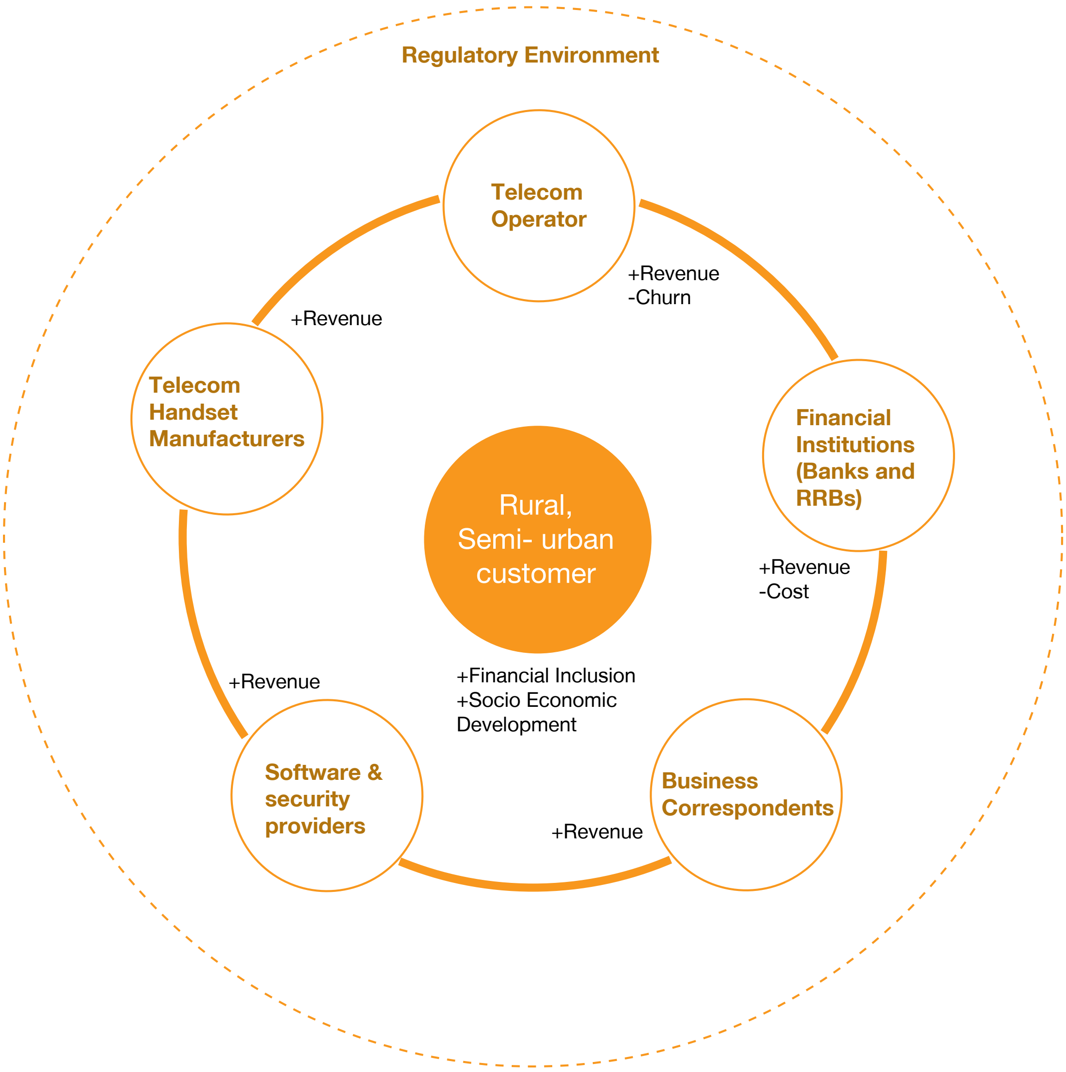
"mandis" via push or pull (taking the e-chaupal concept further), salary receipt and withdrawal facility, bill payment, remittances, cashless transactions, etc. By offering these value added services, the operators may also prevent churn especially once mobile number portability is implemented. This will also compensate for falling ARPU by not only adding volume but also improving margins.

However for the M-Finance wave to succeed, the focus must shift from the industry players and regulators to the citizen, customer. The applications of M-Finance will require new and innovative ways of understanding the needs of a citizen, customer who lives below ₹120 per day income. Their requirements for finance are linked to obtaining livelihood from agriculture, services and myriad new entrepreneurial opportunities. This citizen, customer must be coached and stimulated for him to discover the potentials and benefits of M-Finance. Only then will the M-Finance wave become a viable proposition. So far the focus has remained on technology and financial processes while not enough has been said about the entrepreneurial mindset that will create the need for scalable M-Finance.

The focus must shift from the industry players and regulators to the citizen, customer.

This will shift the debate from a conceptual understanding of the potential of M-Finance to an integrated approach to execute on this strategy at local, state and national levels.

Who are the stakeholders and how are they driven?



The M-Finance ecosystem promises opportunities for myriad stakeholders

1. Large Banks - can tap into this large opportunity. Partly driven by regulatory pressures and partly by profits, this initiative can also double up as brand building exercise. Banks provide the basic service framework, ensure compliance to KYC/AML norms, create a risk management and mitigation framework, and ensure settlement of funds.
2. Rural Regional Banks - Given a mandate by the government, they can further extend the reach of their products and come up with innovative products taking advantage of the mobile technology.
3. Telecom operators / Mobile Service Providers –Their role is limited to providing the SMS/WAP/GPRS/USSD/NFC GSM or CDMA voice and data services connectivity and in hosting certain technology solutions like USSD. Riding on their huge penetration levels in urban and rural India, the telecom operators would be the providers of the critical infrastructure – both, in terms of the telecom network and the agents (distributors and retailers) that enable the service. They can earn a service fee for all the transactions routed through their network.
4. Microfinance Institutions - helps in improving their reach and business. Improves loan quality due to novel features of mobile technology. This technology also saves MFI loan officers from lengthy (and sometimes dangerous as they might get robbed of the cash collections) travels to different villages.
5. Business Correspondents – RBI will allow companies, along with individuals, non-governmental organizations, cooperative societies and post offices to work as retail agents engaged by banks to provide banking services at locations other than bank branch/ATM. However, NBFCs (including MFIs) have been barred from doing so.
   i. FMCG players - (initiatives such as e-chaupal) with strong distribution network to step in by using Kirana stores or other such stores as point of contacts for the M-banking network
   ii. Department of Post – The large distribution network of 155,000 post offices covering 89 % of rural India can be leveraged for providing mobile linked services to complement their existing financial services.

iii. Others – Door is open for other entities with strong rural or semi urban distribution networks to tap into this opportunity. Bharat Petroleum Corp. Ltd (BPCL), an Oil marketing company, already has a pilot project on at Mangalore through which it provides banking products for their customers.

Mobile phones and related technologies will alter the nature of banking relationships themselves

6. Technology providers – can provide solutions for enabling M-finance services on the phone. They would also be required for security solutions as M-Finance model would pose concerns of money laundering and the safety and security of the transactions.
   i. Telecom handset manufacturers – The telecom handset manufacturers would play a role in ensuring that their handsets are enabled for M-Finance services.
   ii. Interoperability hub operators - can step in to allow inter network transfer.
   iii. IT products and services companies – can provide security and software solutions.

What will it take for M-Finance to take off?

Many large banks in India have already set up a financial inclusion cell. M-Finance seems to be a key component of that strategy. Globally, M-Finance has been implemented successfully in both developing and developed countries indicating potential. In less developed countries, where banking infrastructure is still immature, the chances of development of M-Finance are high. In order to succeed, however, M-Finance requires convergence of telecom operators, banks and enterprise promoting organizations that can bring about a change in the citizen, customers' minds towards use of M-Finance. This will require extraordinary cooperation across mobile telephony and financial services players not to mention a thorough understanding of the requirements of rural citizen, customers. The situation gets complicated because banks are risk averse while telecom operators are more entrepreneurial leading to expectations mismatch between the partners.

To mobilize mobile telephony as an important medium for achieving financial inclusion requires:

- Focused efforts by banks to partner with mobile service providers. Co-operation rather than competition between these two important stakeholders would be critical.
- Identification of appropriate user groups such as producer co-operatives, Kirana shops etc that can serve as points of contact between the end user in rural areas and the provider of banking services.
- Harnessing local SHGs (self help groups) in rural areas and small towns to expand the base of rural bank customers
- Creation of databases on mobile users in rural areas by corporates which will assist in identification of user groups and the formulation of appropriate strategies for each group. MNCs are currently using a new breed of entities like the database vendors `Rural Relations' to gain access into rural markets.
- Fraud detection and prevention technology to be in place for regulators – RBI and TRAI and the other stakeholders to get confidence from the model.
- There should not be any compromise on Know Your Customer (KYC) and Anti- Money Laundering (AML) issues. The synergy of the current Unique ID project needs to be dove-tailed with mobile banking initiatives to address concerns over KYC and AML.

Mobile financial transactions involve consumer behaviour change and lack the personal touch and counseling capabilities of traditional banking channels so user addition may be slow initially. Moreover, the service must take into account typical societal factors in order to be successful.

Case Study: Pakistan

Amaana operates out of Pakistan. Out of ~170 million people in Pakistan, only 5% have bank accounts whereas 50% have mobile phones. There are dozens of banks and 5 mobile operations. Due to the intense competition, the phone rates are cheap. A small shopkeeper, selling cigarettes, is normally the agent. He is typically paid by the operators to top up the Amaana account. Transactions are primarily P2P and free. Consumers are only charged when money is removed from the system. All is powered by SMS. There is no application on the phone. Amaana is aligned with a bank to protect balances in case anything happens. In 6 months, the Amaana system has 200K users, and growth has been totally viral – there has been no advertising. Amaana is now introducing merchant payments, from consumers to businesses.

How will M-Finance impact your business?

Mobile phones will allow banks to do their existing business more cost-effectively. By cutting costs, the technology can make it feasible to reach a broader population thus enabling financial inclusion.

Mobile phones and related technologies will alter the nature of banking relationships themselves. This may enable the entire financial system to better meet financial demands of poor households. For example, migrant workers can avail emergency loans without going back to moneylenders while outside their native place. Also, traditional issues in Microfinance, such as need for frequent repayments and connectivity can be overcome by M-Finance. M-Finance may facilitate that by frequent alerts and reminders and by overcoming infrastructural hurdles such as proximity to a branch.

M-Finance has the potential to impact the value chains of your business in a radical manner. Companies need not be a Telco or a Financial Services Institution to take advantage of this revolution.

In addition, M-Finance has the ability to generate an entrepreneurial fillip across a vast swathe of classes of India by providing financial services to meet widely-ranging needs – loans for buying stock, seeds, livestock, etc. M-Finance holds the potential to create significant gains in developing an India that has been left out so far.

Case Study: Cambodia

WING Cambodia is one of the newest mobile payment services in the world. Cambodia has a population of 14 million, of which only half a million have a bank account, while there are over 3 million mobile phone subscriptions. The service was launched commercially in January 2009. It provides cash in, cash out, airtime top-up, person to person payments, and pass code enabled sending of small amount of money to non WING customers. It works on any phone -even for customers without a phone, who can use their unique customer registration number and PIN even on a shared phone. There's no cash-in fee, but the sender pays a person to person fee based on a three tiered pricing structure, and the recipient pays to cash-out. Since Cambodia is quite a patriarchal society, the women (garment factory workers) didn't sign up for the service initially until their fathers told them to. After building awareness with these fathers in rural areas, the service picked up. Urban customers can use debit cards to withdraw cash from ANZ Royal ATMs in Cambodia. These cards help to improve much of the merchants' liquidity problems because of fees not charged to merchants. This enables them to turn money over quicker.

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Strategic insight and advice that can be implemented in the market place – "Creative strategies that work"

PwC's strategy practice helps organisations to continuously evolve and adapt in the face of a changing and complex business environment. We assist our clients in responding with speed and agility to the opportunities by undertaking strategic initiatives that are forward looking and that enable the organisation to sustain its competitive advantage.

We recognize the fact that organizations are at differing stages of maturity and growth even in the same industry and tailor our approach and recommendations accordingly. Our key value proposition for clients is "strategy as execution" i.e. to create a pragmatic strategy with execution focus right from strategy design, thus creating value through execution, not a "report". To achieve this, we would undertake a collaborative approach with you, working out the "what" and "how" to execute the strategy from the word "go"

Our practice thus addresses a variety of CEO/Board's agenda ranging from a strategy health check through strategy development to strategy deployment. This group focuses on a three to five year performance horizon.

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