

## **FRUGAL INNOVATIONS FOR FINANCIAL INCLUSION (FI4FI) OF YES BANK LTD.**

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### **Abstract**

Financial inclusion is today more than a policy imperative, it represents huge opportunity for banks. Despite formidable physical outreach and rural footprint of Banks, 64% Indians lack access to saving account, 87% Indians lack access to ATMs and 73% farming household lack access to institutional credit. Also, with over 60% population out of the banking and prevalence of non-institutional sources of finance, financial inclusion offers immense potential for banks' to expand their business manifold. In meeting the needs of financially excluded or 'The Next Billion' Customers, the conventional banking approach faces challenges such as huge infrastructure set-up cost, high operating cost and lack of risk mitigation measures. The problem is compounded by lack of appropriate & enabling technology solutions for reaching out to the target segment. *Jugaad* innovation i.e. a frugal and flexible approach to innovation could provide answers to meeting cost and outreach requirements by leveraging technologies and building complimentary business enablers. Frugal Innovation is a whole new management philosophy which focuses on specific un-met needs as the starting point and works backward to develop appropriate solutions which may be significantly different from existing ones. It is not just about redesigning products; it involves rethinking entire production process and business models

Working with the guiding principle of Frugal Innovations for Financial Inclusion (FI4FI), Yes Bank is continuously developing innovative business models and forging partnerships for seamless implementation of the same. YES Bank has set its sight on frugal innovations in System, Processes and Technology with a core philosophy, '*If customer cannot come to Bank, the Bank will go to customer*'. This has entailed coming up with appropriate products at right place and at competitive price through systemic effort of leveraging ICT and business models. FI 4FI initiative includes YES Sahaj Micro ATM, YES MONEY – Domestic Remittance Service & YES Livelihood Enhancement Action Program (YES LEAP).

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### **Introduction**

“Access to mainstream financial services” was a key development priority of India since Independence and remains so even today. This, today is seen as a key pivot of inclusive growth which is a key policy objective of the Eleventh Five Year Plan (2007-12). About 2.5 billion people across the globe do not have access to basic banking services. The unbanked population, which lives primarily in developing countries, comprises nearly half of the world's working-age population. Their exclusion from the formal financial system restricts their participation in

the global economy and severely curtails the opportunities available to them to pull themselves out of poverty.

In the Indian context, Rangarajan Committee (Report of the Committee on Financial Inclusion in India (2008)) defines Financial Inclusion as: “the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost”. NABARD in 2008 observed that, “there is a growing divide, with an increased range of personal finance options for a segment of high and upper middle income population and a significantly large section of the population who lack access to even the most basic banking services.”<sup>1</sup>

In its effort to extend banking services to the citizens of the country, India has achieved formidable physical outreach of over 99,000 bank branches and over 100,000 ATMs. India with 135 million households is home to the second largest financially excluded population, after China. Nearly forty years after nationalization of banks, despite formidable physical outreach and rural footprint of Banks, 64% Indians lack access to saving account, 87% Indians lack access to ATMs and 73% farming household lack access to institutional credit. The magnitude of unfinished task can be gauged from the fact that only 6% of the habitations (i.e. 36,000 out of 6,00,000 habitations) have a commercial bank branch. The proportion of people having any kind of life insurance cover was as low as 10 per cent and proportion having non-life insurance was an abysmally low 0.6 per cent.<sup>2</sup> Policy instruments such as priority sector lending and mandating banks to open certain percentage of new branches in rural areas have been utilized by the regulators for furthering the development priority. Financial inclusion is today more than a policy imperative, it represents huge opportunity for banks to expand their business manifold.

### **Need for a differentiated approach to address the challenge of Financial Inclusion**

The key parameters for success in financial inclusion depend largely on understanding the need of financially excluded customers and developing products/solutions that directly address those specific needs. The financially excluded consumers have certain unique characteristics such as low financial literacy, low and cyclical income, minimal collateral, lack of credit history, absence of formal and verifiable identity, illiteracy. These need to be taken care while designing products and services for them.

The service providers in the financial inclusion space must acknowledge the fact that only a commercially viable and scalable business model can provide sustainable solutions for meaningful financial inclusion. In meeting the needs of financially excluded, the conventional banking approach faces challenges such as huge infrastructure set-up cost, high operating cost and lack of risk mitigation measures. As evident, even mere ‘stripping down’ of conventional products doesn’t work as banking needs of target segment are distinctively different. The problem is compounded by lack of appropriate & enabling technology solutions for reaching out to the target segment. Given this, there is a greater need for following a different approach or innovation while targeting the financially excluded.

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1 NABARD (January 2008), “Report of the Committee on Financial Inclusion”

2 Keynote Address by Dr. K. C. Chakrabarty, Deputy Governor, Reserve Bank of India at the BIS-BNM Workshop on Financial Inclusion Indicators at Kuala Lumpur on November 5, 2012).

### **YES BANK's approach to Financial Inclusion**

YES Bank is a firm believer that only a commercially viable, scalable & sustainable business model can provide effective product & services to the customers leading to meaningful financial inclusion. There is a large segment of customers at the top of bottom of pyramid and just above which are not only excluded from formal financial services but also could be profitably served through innovative business model. These are the 'The Next Billion' Customers. As explained above mere 'stripping down' of conventional products/solution doesn't work for this segment as banking needs of target segment are distinctively different. Considering this, YES Bank believes that there is a greater need for following a different approach or innovation while targeting the financially excluded and Jugaad innovation i.e. a frugal and flexible approach to innovation could provide answers to meeting cost and outreach requirements by leveraging technologies and building complimentary business enablers. The international hallmark of such innovations is our completely homegrown Tata Nano, which Bruce Nussbaum suggested contains two salient forms of innovations, 'frugal engineering' and 'inclusive innovation' and christened it as frugal innovation or Nanovation. Frugal Innovation is a whole new management philosophy which focuses on specific un-met needs as the starting point and works backward to develop appropriate solutions which may be significantly different from existing ones. It is not just about redesigning products; it involves rethinking entire production process and business models.

YES Bank firmly believe that the concept of "*Jugaad* innovation" can be well extended to financial inclusion space and has adopted the approach of '**Frugal Innovations for Financial Inclusion (FI4FI)**' and have won several awards and accolades. Few successful outcomes of this approach are YES Sahaj Micro ATM, YES Money & YES LEAP.

### **Frugal Innovations for Financial Inclusion (FI4FI) @ YES Bank**

YES Bank has introduced several innovative products and services as a response to some 'felt need' of either internal or external stakeholders. For instance, some of the prominent challenges faced by customer in availing services from the formal channel are:

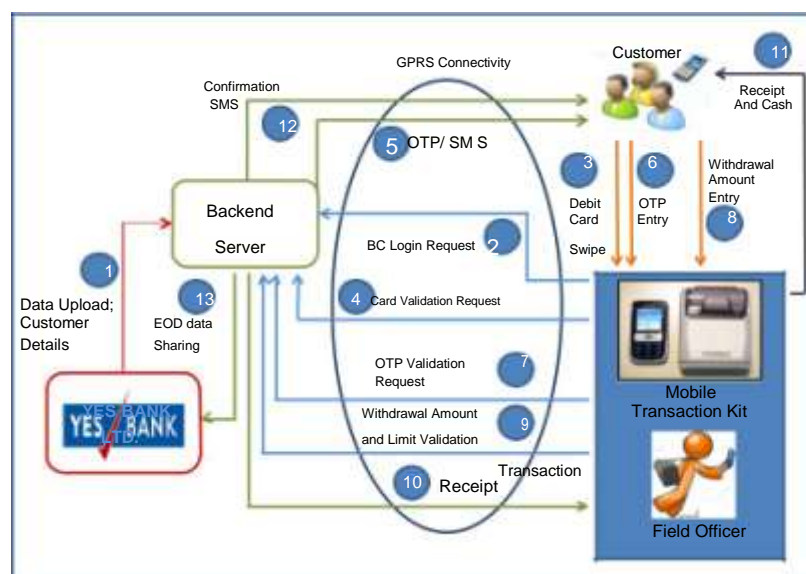
- Long transaction time and resultant, loss of wages
- Lack of convenience that they otherwise enjoy from other channels (and also invariably pay very highly for the same)
- Cumbersome paperwork

In order to address the above the frugal innovations developed by the bank were YES Sahaj Micro ATM– A Complete Handheld Banking Suite, YES Money – Multi Channel Domestic Remittance Service & YES Livelihood Enhancement Action Program (YES LEAP), Self Help Group (SHG) lending program by leveraging Business Correspondent (BC) model.

### **YES Sahaj – Micro ATM**

YES BANK conventionally believed on the core philosophy that 'If customer cannot come to Bank, the Bank will go to the customer' which entails providing appropriate product at right place and at competitive price. In order to meet the critical need of the target segment i.e 'Doorstep banking', YES Sahaj-Mobile collection device was developed and launched

which is considered as version 1.0 of Micro ATM. The device, developed in collaboration with a Technology service provider is a cost-efficient alternative to Hand-held Devices which increases effectiveness of in-field collections at the customer's door-step. The collection system consists of a specially programmed mobile handset connected to a central server using GPRS connectivity and a handheld thermal printer which automatically prints receipts as and when triggered by the server in real time. Thus, centralized real-time monitoring of loan repayment and savings collection is possible along with instantaneous printed receipt and SMS alert to customer. In this way YES Bank could completely automate the field collection process which was previously done using manual receipt where in there were high chances of manipulation. YES Bank has adapted & integrated the device with its rural banking process & platform.



Version 2.0 of YES Sahaj, YES Sahaj Micro ATM launched in Feb'2012, is an evolved version of its predecessor. The product suite enabling 'Door Step Banking' includes 'Field Withdrawal' facility along with deposit and remittance functionalities. With effective transaction cost of less than one rupee on lease rental basis, YES Sahaj Micro ATM is highly cost effective and hence scalable Mobile Transaction Solution for the bank. YES Sahaj, is unique as it is first of its kind mobile teller machine with can service at the customer's doorstep. The authentication of transaction is well built in and is compliance with the required norms of a banking service. Yes Sahaj has combined two very simple devices namely a blue tooth printer and one low cost mobile handset to develop a full blown ATM. The total life cycle cost of YES Sahaj is significantly lower than the other products offered in the market presently due to their very high Capex and Opex cost. The convenience of 'Doorstep Banking' is critical necessity for the target segment as they can't leave business premises for banking transactions. Facilities like printed receipt and SMS alert further boast the customer's confidence. Most importantly the YES Sahaj is the bridge which links them to a full service banking account with ATM cum Debit card facility which assures 24X7 access to their savings. The Outward Cheque Clearing facility is useful to customers who earlier used 'third party cheque clearing' due to lack of own account with cheque clearing facility.

## **Cash deposit / withdrawal through YES SAHAJ – Process Flow Steps**

1. YBL shares the customers' details including account balance etc for the day.
2. Field Officer enters login request through the Mobile device.
3. On successful Field Officer login, Customer provides the Debit card to swipe through the Card slot in the Bluetooth printer.
4. Debit card validation request is sent to Technology Service Provider (TSP) server.
5. On successful validation, One Time Password (OTP) and withdrawal details is sent to customer's registered mobile number, else error message is displayed on mobile screen.
6. OTP is then shared with the Field Officer and entered through the mobile device.
7. OTP Validation request is sent to TSP backend server.
8. On successful Validation, amount to be withdrawn is entered through the mobile device.
9. Withdrawal amount and card details mapping and validation are done at the TSP backend server.
10. Then transaction receipt command is sent to Mobile device and receipt is printed through the Bluetooth printer, else error message is displayed on mobile screen.
11. Cash and transaction receipt is handed over to the customer.
12. Transaction confirmation SMS is sent to the customer.
13. End of Day data is securely accessed from TSP back end server for customers' account updation.

Since inception YES Sahaj has developed many folds both as a product and as a service. From basic mobile collection device, YES Sahaj is now a Micro ATM machine capable of servicing rural unbanked masses in the hinterland. It has added many features like secure One Time Password (OTP) and backend validation and functions like mobile domestic remittance facility and infield withdrawal facilities. Service wise it has been widely used as Mobile transaction device for servicing the banking needs for the Self Help Group (SHG) under YES Livelihood Enhancement Action Program (YES LEAP)-a credit facility to rural poor. As on 31<sup>st</sup> March 2014, YES Sahaj is catering to more than 40000 SHGs and touching more than 5,20,000 unbanked and underbanked individuals pan India. As of 31<sup>st</sup> March 2014, 4,30,000 transactions worth INR 325 crore were conducted through the YES-Sahaj Micro ATM. YES Sahaj version 3.0 is under development which will cater to more business and social segments including dairy sector and cooperatives with customized banking products along with the normal remittance, savings and withdrawal facilities.

### **YES Money Domestic Remittance Service**

As per 'Remittance Needs and Opportunities in India (Thorat & Jones 2011)', upto 100 million circular domestic migrant workers, who mostly come from low-income households, are confronted by the problem of sending the hard-earned income back home to their families where the money is needed. Of the 100 million migrant laborers, around 58 million send Rs. 20,000/- annually to their families. Hence the market potential is huge (Rs 1, 16,000 Cr). Bring-

ing remittances into the mainstream of the financial system can act as an important gateway for the financial inclusion of domestic migrants. Though migrants value the security and speed of money transfer the highest, they continue to mainly use informal transfer methods. While commercial banks have the necessary technical infrastructure, they lack convenient delivery channels. Know-Your Customer principles and other banking requirements add to the inconveniences. Overall, remitting money back home proves to be cumbersome, costly and vulnerable to fraud for the migrants. The key problems faced by migrants for remitting money are:

- Insecure due to dependence on informal channels
- Unavailability of formal channels in non-banking hours
- High cost and time consuming process
- Time taken for the money to reach the recipient is high

The Bank has limited number of branches in the rural areas and has large presence in the urban centres which is the remittance originating corridor. To capitalize on this, Business Correspondent (BC) model was introduced for providing remittance services to this segment. Keeping in mind the vast opportunity and with a vision to become “The First Ranked Micro-Payment Bank of India”, YES Bank conceptualized and designed an innovative way of providing remittance services to the so called financially excluded segment under “YES MONEY” initiative. YES Money is a multi-channel, multi-platform banking product suite comprising of service such as National Electronic Fund Transfer (NEFT) based on Outward Remittance Service through Business Correspondent (BC) partners. The service is targeted towards people who have access to formal bank account at the Terminating Point (rural/native) but do not have such access at originating point (Urban/Metro). Key customer segment is the migrant labourer who work in cities away from their home towns and do not have Bank accounts in the cities.

The use of BC partners helps to bring the transaction touch-point closer to the customer that is available even at non-banking hours. A Business Correspondent (BC) agent (usually neighborhood Kirana Store owner) can initiate Remittance transaction on the terminal which flows through YES Bank’s NEFT system and lands in destination account within 24 working hours. YES Money provides remittance facility to all NEFT enabled bank branches (currently over 85,000 branches, 99 banks). So Yes Money customer can send his remittance within five minutes as per his convenience. Furthermore, YES Money service generally costs the customer up to 1% of transaction value which is at least 4% less than other options available to the senders. Further, the sender save their day’s wage because of convenience of service in non-banking hours and reduced waiting time in queues.

A robust web based common technology platform, Remittance Knowledge Bridge (RKB) has been developed to connect all present and future BC partners for remittance services. This platform will enable customers to transact across any of the Bank’s BC and across geographies. RK Bridge enables YES Bank to reach wider number of customers as the BC partner can simply connect to this platform and start providing remittance services. In future the platform can also be used to provide other banking products through the BC channel.

## Process Flow

The process in brief is mentioned below :

- i. The Customer registers his/her mobile number with BC outlet for this service. For registering he/she needs to provide ID proof and a minimal one time charges. The hardware at field includes a PC, printer and Broadband device; software requirement is met by our BC through their own platform. There is no incremental cost that the BC outlet need to incur for the initiative as it is an additional service.
- ii. For money transfer, the customer (sender) needs to first register the beneficiary by providing details of intended beneficiary that essentially includes Beneficiary Name, Beneficiary Account number, Beneficiary bank name, IFS Code of beneficiary Bank. The front screen created for our BC outlets, assists the sender in this process. In the front screen, the BC selects the city, bank and the branch from the guided drop down list. Basis this selection, an IFSC code of the relevant bank branch is automatically displayed.
- iii. To ensure the accuracy of beneficiary / transaction details, various checks and balances have incorporated at the field level that includes SMS confirmation through One time pass-word (OTP) generation, system checks on human errors, generation of receipts
- iv. The Actual money transfer is initiated by customer from any BC outlet by providing his / her registered mobile number. Thereafter the sender states the beneficiary (of the ones he has registered) whom he intends to send the money and amount he / she wishes to send. Once these details are captured in the system, the system sends an SMS to the customer, giving the details of Bank account number, Bank name, Branch and City and a One Time password (OTP). This OTP is entered in the system to confirm the acceptance by the sender that the details are correct. The BC then receives the cash from the sender and provides him with a system generated receipt.
- v. Similar requests are submitted continuously from various BC outlets throughout the day. At the BC Back end, the system accepts these requests and in batch mode uploads the request file on the Internet Banking platform of YES Bank.
- vi. YES Bank processes these requests through NEFT transaction cycles and sends the money into the respective accounts of other Banks across the country.
- vii. The recipient in turn withdraws cash from the bank.

Further, National Payments Corporation of India (NPCI) has introduced a new transaction settlement service Interbank Mobile Payments Service (IMPS) that offers an instant, 24X7, interbank electronic fund transfer service in a secured manner with immediate confirmation features. This has been brought into the RKB and now real time transaction is possible.

## YES Livelihood Enhancement Action Program (YES LEAP)

YES LEAP is an initiative to provide banking services to the underserved Self Help Groups (SHGs). Under the YES LEAP program, credit and saving facilities are provided to the SHGs through Self Help Promoting Institutions (SHPI), appointed as Business Correspondent (BC) for the same. There are over 8 million SHGs in the country which are promoted by NGOs and Govt. These are basically women groups who come together to involve themselves in some

economic activities. Reaching out to this segment is very much challenging as these are poor women remotely located. Considering the fact that YES Bank has limited number of branches, an innovative way of providing banking services to this segment was designed under the banner YES LEAP. The bank partnered with credible NGOs/Self help promoting institutions and provided savings and credit facilities through them. Again, lot of finetuning was done in the traditional approach to serve this segment in order to bring in efficiency and effectiveness. For example, in traditional model credit is linked to the saving amount and one has to wait for a long time to avail such facility where as under YES LEAP, credit is determined by following a robust grading system which doesn't link much to the saving part. The detailed process flow has been depicted below.

### Conclusion

YES Bank's key FI4FI initiatives can be summarized as below:

Product	Customer pain point particularly addressed	Major Innovation (s)	Outcome
YES Sahaj Nano Teller	a) Long transaction time and resultant loss of wage b) Lack of convenience	Integration of existing handheld device kit (bluetooth printer and mobile handset) with the Banking process. Enabling the device to process request for deposit & withdrawal (validating transaction through regular ATM / Debit card)	Banking at door-step
YES Money	a) Un-availability of Bank account in cities b) Long transaction time and resultant loss of wage c) Lack of convenience	Integration of the Banking Correspondent model for Cash collection and originating NEFT and leveraging the branch network of all the other banks	Secure & affordable remittance service in the neighbourhood even in non-banking hours
YES LEAP	a) Un-availability timely credit sufficient credit b) Long waiting period for availing credit	Finetuning the traditional approach by introducing frugal innovations. Delinking savings in taking decision on the credit facility	Required credit facility to the underserved segment

The biggest challenge of Banking Sector related to Financial Inclusion is how to develop viable and scalable business models to cater to 'The Next Billion' customers (about 120 million households in Annual Income bracket of Rs. 90,000 to 200,000, who have willingness to avail and ability to pay for banking services). Despite tremendous market potential, banks will not scale up Financial Inclusion initiatives beyond Regulatory Compliance or CSR Visibility levels if it's unviable in the long run. This challenge can only be addressed through 'Frugal Innovations' which provides cost-effective solutions.

