



How can Technology Facilitate Financial Inclusion in India?

A Discussion Paper

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I. A serious problem

According to a nation-wide survey carried out by IISS (Invest India Incomes and Savings Survey, 2007), 97 per cent of all households do not have any health insurance and 61 per cent do not have life insurance. On the other hand, according to NSSO (National Sample Survey Organization) surveys, roughly 25 per cent of households get into chronic indebtedness because of health related emergencies. To top it all, 52 per cent of Indians do not have bank accounts. Thus, even though we have made great strides in the development of our financial markets, large sections of the population do not avail of the basic financial services in India.

Since most of these financial services are provided for by the market, both supply and demand side considerations are important. From the supply side, difficulty of access and lack of availability are prime hurdles; from the demand side, the major issues are the cost of these services and the lack of awareness of the benefits from these services.

There are about 6.3 bank branches for every 100,000 people in India. In terms of geographical accessibility there are, on the average, less than 3 branches per 100 square kilometres. For rural India, the numbers are 3.5 branches per 100,000 people and less than 1 branch per 100 square kilometres of land area. These numbers alone are sufficient to infer that the simple task of accessing the nearest bank branch is often the most severe challenge. Not surprisingly, the IISS survey results of households who have bank accounts reveal that access is the most important factor in choosing a particular bank. In particular, 45 per cent of the rural household, 28 per cent of the urban and 38 per cent of all India households have admitted that access and availability are the main factors determining their choice of a particular bank.

Table 1: Percentage of households without essential financial instruments

	Without Bank Accounts	Without Life Insurance	Without Health Insurance
Rural	59.59	68.30	98.58
Urban	36.67	45.40	94.72
All India	52.41	61.10	97.39

Source: *IISS Survey*

Obviously, the lower income categories and the poor are especially excluded from the financial market. The average incomes of households who have bank accounts are significantly higher (almost twice) than those who do not have accounts. For example, only 34 per cent of the lowest income quartile has accumulated savings and only 18 per cent of them have bank accounts. By contrast, in the highest income quartile, 92 per cent have savings and 86 per cent have bank accounts.

It is entirely possible that households choose not to deal with formal financial institutions. This could be for a number of reasons --- lack of awareness about formal institutions, lack of financial literacy, ineffective financial services that do not address the specific requirements of the financially excluded, etc. We find that more than 95 per cent of the households are aware of banks as well as that of the benefits from banking. The figure is not very different across rural and urban households, nor does it differ between households who have bank accounts and those who do not have bank accounts. Furthermore, although, there is a substantial amount of financial illiteracy, the difference is not substantial between households who have accounts and those who do not have accounts.

When it comes to alternative channels, 63 per cent of those who do not have bank accounts save in real estate, 15 per cent in agricultural land and 12 per cent in livestock. This is interesting because all these avenues of savings yield returns that are riskier, albeit higher on the average, than interest on deposits. And, this is especially significant, when we find that 32 per cent of all households that do not have bank accounts are not very financially literate. (If people were aware that high returns are associated with high risk, they were considered to be financially literate; otherwise, not.)

When does financial exclusion make a huge difference? It occurs when households are forced to avail of funds, often caused by emergencies, from informal sources. First, households that do not have bank accounts are forced to borrow increasingly from moneylenders and these loans attract high interest rates. Indeed, the clientele of the moneylenders are almost always the poorest, making a bad situation much worse. Second, the need to borrow from informal sources is much higher in rural India and a substantial portion (49 per cent) of this is for consumption smoothing. Third, the capacity to borrow, and hence the actual borrowing, is significantly less if a household does not have a bank account. Let us consider all households that have borrowed in the last 2 years. While 40 per cent of all households that have bank accounts borrow from banks, only 6 per cent of no-account households borrow from banks. Alternatively, 18 per cent of bank account holders borrow from money-lenders while the corresponding figure for those without bank accounts is as high as 40 per cent. Micro-finance institutions and self-help groups continue to be of lesser significance than money-lenders or banks.

Much of the problem is in the fact that more than 90 per cent of the employment in India is in the unorganized sector. This means that much of the insurance and pension services are not being provided through the employer. Also, much of the unorganized sector labour is poor. Thus, not only are the poor not introduced to financial services by their employers, they are also less aware of the benefits of these services. Indeed, according to the data, a household where the primary income earner is in the unorganized sector is less likely to have any sort of insurance cover.

Furthermore, approximately 20-25 per cent of the households, who currently do not have life insurance cover, did have insurance earlier. This is because some policies have matured while some others have simply been discontinued. There are two major reasons for low insurance cover --- high costs (both monetary and otherwise) and two, financial illiteracy/awareness.

About 61 per cent of the households do not have insurance because it is too costly. Data compiled across various life insurers suggest that the annual premium (for the age group 25-30 years and for the tenure of 25-30 years) for an assured sum of INR 100,000 (term plan) would approximately be INR 300. This would be around 0.5 per cent

of the average household income for financially excluded households. Prima facie, this number does not seem to be substantial and therefore, there appears to be other costs (non monetary, transactional, etc.), or lack of awareness, that play an important role. Another problem is the lapse in policies because of non-payment of premiums. The survey results show that approximately 8 per cent of the policies have lapsed because of this. Recent figures from IRDA confirm the same and put the all India policy lapse figure between 6 and 7 per cent.

More than 20 per cent of the households cite one of two reasons for not having a life insurance cover --- not aware and/or have no preference. Quite disturbingly, 90 per cent of the households, who are not currently insured, do not plan to get insured in the near future. In short, lack of awareness is aggravated by the costs of getting insurance or continuing with an existing one. Indeed, the two most important reasons for buying insurance are self-motivation and the role of insurance agents.

2. The dimensions of the problem

One thing is clear. Financial exclusion is a classic case of “missing markets”. The poor take credit, face the negative consequences of unforeseen shocks, want to set aside money for old age but the existing services are either too costly, or ineffective to meet their specific needs. For instance, an insurance company’s transaction cost of dealing with a client is largely independent of the amount of coverage bought. While for large coverage, the transaction cost is a small part of the cost per unit of coverage, for a small coverage this unit cost is very high. Since the poor want small coverage, the premiums become prohibitive.

The service charge for collecting an outstation cheque is around INR 50 for a cheque of value above INR 501 (Table 2). A migrant worker transacting INR 501 in this fashion will have to pay 10 per cent in handling charges; that is too large. On the other hand, the cost of transferring money using electronic medium like mobile and net banking is often free of cost. So, if the poor had access to net banking and mobile banking, the transaction cost would not have been an issue. Although mobile and net banking is free of cost, the customer still has to bear some other costs. To avail mobile

banking services, one has to have a mobile phone (a one-time cost of INR 1,000) and pay the service charges to maintain an active subscription with the service provider. (These charges need not be monthly amounts for a pre-paid card but then these are more costly than those post-paid charges.)

Table 2: Service charges for no frills savings account

Phone banking – IVR	Free
Phone banking - Non IVR	INR 50 per call (Agent assisted calls).
ATM Card	Free
ATM Card - Transaction charge for Partner banks- SBI & Andhra Bank	Balance enquiry: Free & INR 17.80 (plus taxes) per cash withdrawal
BillPay	INR 25 (plus taxes) per qtr per Customer ID
Mobile banking	Free
Net banking	Free
Visa Money Transfer	INR 20 (plus taxes) per transaction
Debit Card - Annual Fee – Regular	INR 100 per year (plus taxes)
Collection of outstation cheques at HDFC bank's location	1) Cheque value INR 0 to INR 500: No charges 2) Cheque value Rs. 501 and above INR 1 per 1000 (Min INR 50 and credit on receipt of clear funds)

Source: *HDFC website*

Table 3 below gives the rural urban distribution of mobile phones by income classes. The Table seems to suggest that large parts of the population do not have access to mobile phones and, lower the income category greater is the lack of access. This has often led to the observation that there is not enough mobile penetration and hence, any solution to financial exclusion that uses mobile phones will not be very successful. This is an unfortunate inference for the following reasons. First, mobile penetration is deeper in urban areas than in rural areas and, even in urban areas, 37 per cent (see Table 2) do not have bank accounts. Second, currently people use mobile phones for verbal

communication mostly. In other words, the simplest revenue model for the phone operators is a function of the number of number of times a user undertakes voice communications. However, as the famous example of fishermen from Kerala has demonstrated, the mobile phone can become a platform on which one could undertake activities that are more than simple verbal communication.¹ Indeed, we already know that mobile phones deliver a number of services, e.g., train timings, match scores, etc. Mobile penetration can increase only if at least one of two conditions is fulfilled --- costs decline or benefits increase. If there is an unmet demand for financial services, and mobile phones make the transaction costs of availing these services lower than they otherwise are, the benefits of possessing mobile phones will increase and then more people will avail of them. Thus, the lack of mobile users should not lead to a lack of interest in using this platform by financial institutions to push for greater financial inclusion.

Table 3: Households (%) with/without mobile connections by income classes

	Mobile connection	No mobile connection
Rural Income Classes (INR)		
0 - 21250	4.06	95.94
21250 - 42500	6.69	93.31
42500 - 51250	16.49	83.51
51250 - 93750	28.85	71.15
93750 - above	54.48	45.52
Urban Income Classes (INR)		
0 - 43750	21.36	78.64
43750 - 68750	42.56	57.44
68750 - 102500	67.53	32.47
102500 - 187500	74.24	25.76
187500 - above	89.73	10.27

Source: *IISS Survey*

¹ Kerala fishermen started using the mobile phones to check on the ruling prices in different markets to decide where they should take their catch. This not only increased the prices they received, but also reduced the volatility of the prices they faced over any given period.

In India, 40 per cent of rural and 25 per cent of urban households have not saved in the last one year and about 73 per cent of rural and 87 per cent of urban households did not borrow in the last two years. Urban households (about 75 per cent) as a whole save more than rural households (60 per cent) and borrow less than the rural households. If there are no avenues for savings, the financially excluded are literally restricted to living by the day, with no opportunity to save towards building up future income. Let us look at rural households. Both rural and urban save through either one or more of the following methods ---- in banks, through post offices, NBFCs, SHGs, mutual funds, shares, gold and residential property.² It is immediate that poorer households save less. This is not surprising since, with low incomes, there is little left after current consumption is met.

Table 4: Percentage of households who save and/or borrow

Income Class	Rural		Urban	
	Savers	Borrowers	Savers	Borrowers
Bottom 20%	38.07	30.60	45.57	13.31
40%	49.34	29.97	70.43	13.76
60%	58.91	22.47	83.55	12.60
80%	72.43	25.18	88.48	13.82
Top 20%	90.32	22.79	97.74	9.41
Overall	60.25	26.56	74.69	12.60

Source: *IISS Survey*

There could be two reasons why people save. One obvious reason is for future consumption as the return on savings means future incomes. The second and, for our purposes the more important one from a development perspective, is for precautionary purposes or, for unforeseen expenditure. As mentioned earlier, the lack of accumulated savings make people hovering around the poverty line especially vulnerable to shocks --- loss of jobs, ill-health, accidents, etc. Once these shocks occur, they are irretrievably drawn into a quagmire of chronic indebtedness. As Table 4 underlines, among the poorer households, less save and more borrow than among the richer households. This is more

² NBFC: non-bank financial companies; SHG: self help groups.

significant when one observes that borrowing rates are always higher than lending rates and, at least for unforeseen shocks, households will always prefer to spend from their accumulated savings rather than from sources outside the households.

Table 5 gives the sources of borrowing for both rural and urban households. We divide the households into those with bank accounts and those without. The reason for doing so is to highlight the fact that access to bank savings instruments encourages households to borrow more from banks. Bank borrowing rates are lower than that of money lenders and if the poorer households depend more on the latter, then their precarious position is made worse when they take loans. Households without bank accounts, in general, borrow more from moneylenders and less from banks or even from cooperative banks. This is much more among the rural households than among the urban ones.

Table 5: Sources of borrowing for households (%)

Sources	All India		Rural		Urban	
	With bank accounts	Without bank accounts	With bank accounts	Without bank accounts	With bank accounts	Without bank accounts
Relatives/ Friends	5.62	9.87	6.43	10.82	4.48	6.48
Banks	8.38	1.48	10.57	1.70	5.32	0.71
Cooperative society	1.44	1.04	2.18	1.28	0.42	0.20
MFIs	0.19	0.25	0.21	0.25	0.16	0.23
SHGs	0.85	2.16	1.31	2.53	0.22	0.85
Money lender	3.94	10.48	5.49	12.13	1.79	4.59
Chit funds/para banking	0.23	0.46	0.30	0.51	0.14	0.28
Others	0.25	0.22	0.27	0.22	0.22	0.19
Total	20.90	25.96	26.76	29.44	12.75	13.53

Source: IISS Survey

In Table 6, we give the data for household borrowing from two non-institutional sources, namely, money lenders and friends/relatives. The first thing to note is that the extent of borrowing from these sources is high, even among the highest income category. Data suggest that 68 percent of all rural and 63 percent of all urban borrowers borrow from non-institutional sources. Second, lower income categories borrow significantly more from these sources than those in the upper income categories. As already mentioned, this compounds the problems faced by the poorer categories.

Table 6: Percentage of households borrowing from non-institutional sources

Income Class	Rural	Urban
Bottom 20%	77.25	80.06
40%	73.87	72.02
60%	66.53	59.08
80%	62.89	52.14
Top 20%	49.97	40.50

Source: *IISS Survey*

There is a common perception that microfinance institutions (MFIs) and self-help groups (SHGs) can improve financial inclusion. However, a simple reading of the data suggests that, on the ground, there is a lot that has to happen before we can start relying on these institutions to deliver what we want. One attraction of SHGs is that they encourage savings. Given that only about 60 per cent of rural households save, 36 per cent do not save in SHGs at all. Of the remaining 24 per cent who save in SHGs, less than one per cent save exclusively in SHGs. Thus, almost all households who save in SHGs also have other methods of savings and so SHGs may not be the avenue to those who otherwise would not have saved. Add to this the fact that there are very few borrowers who are being serviced by MFIs and SHGs (Table 5 above). Out of the total borrowers, 93 per cent borrow from sources other than SHGs and only 6 per cent borrow from SHGs. Indeed, more than 70 per cent of the borrowing population in rural India, and 63 percent of the borrowing population in urban India who are SHG members have not borrowed from SHGs at all but have done so from non-institutional sources.

It is interesting to look at why households borrow from the sources they do (Table 7). An interesting point to observe is that both institutional and non institutional borrowers have the same reasons while looking for a loan provider. Interest rate was the top most reason for selecting a loan service provider, even with a non institutional source. One would expect that the interest rate from institutional sources would be lower than that of non-institutional sources. The fact that borrowers use non-institutional sources more often strongly signals that the hidden costs of borrowing from institutional costs is simply too prohibitive; the simple interest rate calculations are not the effective costs faced by potential borrowers.

In other words, if the cost of reaching the train station is high, no amount of subsidies on the train fare will suffice. Similarly, subsidizing credit cost or insurance premiums will not work towards financial inclusion if the poor are unable to handle the downside risk of failed projects or, unable to make regular payments (however small) on their premium. A casual labourer may save regularly in small amounts but the amount is too small compared to the transaction cost of dealing with the bank (for instance, the bank's working hours clash with that of the daily labourer's). Any solution must address these specific issues if we want to include the excluded population.

Table 7A: Reasons for borrowing from a particular source (rural)

	Borrowers from Institutional Sources (%)	Borrowers from Non-Institutional Sources (%)
Long-term Loans in Rural India		
Getting the loan approved and disbursed quickly	14.62	31.84
The distance and time it takes to get to the provider	4.92	14.20
The affordability and flexibility of the monthly instalments	10.88	24.33
Privacy	7.65	21.06
Least paperwork/formalities	4.94	9.77
Their interest rates	12.77	33.50
The loan provider's business hours and availability	3.52	9.10
Their willingness to give you cash in hand	5.70	16.36
Where they have agents, so that you don't have to go into a branch to talk to someone	1.98	4.58
Their willingness to give loans for small amounts	4.35	10.46
Whether they are able to revolve your existing loans	1.94	3.31
Where you have, or have had, a relationship with them before	2.24	6.41
ECS facility/online transaction facility	0.46	1.24
Whether collateral required or not	1.98	5.82
	Borrowers from Institutional Sources (%)	Borrowers from Non-Institutional Sources (%)
Short-term Loans in Rural India		
Getting the loan approved and disbursed quickly	8.13	21.02
The distance and time it takes to get to the provider	6.20	16.28
The affordability and flexibility of the monthly instalments	8.66	19.17
Privacy	6.49	18.59
Least paperwork/formalities	4.15	9.11
Their interest rates	10.10	26.77
The loan provider's business hours and availability	3.95	9.35
Their willingness to give you cash in hand	5.46	14.10
Where they have agents, so that you don't have to go into a branch to talk to someone	2.60	5.99
Their willingness to give loans for small amounts	4.22	13.86
Whether they are able to revolve your existing loans	1.70	3.25
Where you have, or have had, a relationship with them before	2.39	7.35
ECS facility/online transaction facility	0.32	1.70
Whether collateral required or not	2.83	8.00

Source: *IISS Survey*

Table 7B: Reasons for borrowing from a particular source (urban)

	Borrowers from Institutional Sources (%)	Borrowers from Non-Institutional Sources (%)
Long-term Loan in Urban India		
Getting the loan approved and disbursed quickly	15.91	30.41
The distance and time it takes to get to the provider	7.22	15.13
The affordability and flexibility of the monthly instalments	13.18	23.76
Privacy	10.54	21.36
Least paperwork/formalities	7.43	11.92
Their interest rates	16.68	34.16
The loan provider's business hours and availability	6.47	11.82
Their willingness to give you cash in hand	6.30	12.01
Where they have agents, so that you don't have to go into a branch to talk to someone	4.23	5.94
Their willingness to give loans for small amounts	4.72	9.60
Whether they are able to revolve your existing loans	2.82	3.93
Where you have, or have had, a relationship with them before	3.62	7.26
ECS facility/online transaction facility	0.92	1.26
Whether collateral required or not	3.15	7.85
	Borrowers from Institutional Sources (%)	Borrowers from Non-Institutional Sources (%)
Short-term Loans in Urban India		
Getting the loan approved and disbursed quickly	8.57	18.78
The distance and time it takes to get to the provider	6.91	14.04
The affordability and flexibility of the monthly instalments	10.27	17.32
Privacy	7.96	17.33
Least paperwork/formalities	6.98	12.49
Their interest rates	15.08	28.83
The loan provider's business hours and availability	6.34	11.94
Their willingness to give you cash in hand	5.94	13.03
Where they have agents, so that you don't have to go into a branch to talk to someone	4.68	7.86
Their willingness to give loans for small amounts	6.45	12.55
Whether they are able to revolve your existing loans	2.56	4.38
Where you have, or have had, a relationship with them before	3.60	8.88
ECS facility/online transaction facility	1.16	2.44
Whether collateral required or not	3.06	8.07

Source: *ISS Survey*

3. Some initiatives

There have been some notable initiatives in India aimed at financial inclusion of specific population groups. We mention some of them below.

3.1 SEWA (Self-Employed Women's Association)

SEWA began banking activities with the permission of RBI in the rural districts of Gujarat in 1993. This bank aimed at financial inclusion of self-employed women, mostly in the informal sector in rural Gujarat, by providing them with loans to enable them to buy assets, raw materials, finished goods for resale, redeem old debts, buy transportation means from their homes to markets or install infrastructure in their homes for things like electricity or water supply. This was necessary mainly because these workers have no fixed employer-employee relationship and barely own capital/assets for sustaining their economic activities. Moreover, the credit worthiness of these women is always viewed with suspicion by institutional credit agencies. In view of these specific problems, SEWA designed an effective loan disbursement procedure through their bank named Shri Mahila Sewa Sahakari Bank Ltd. which aimed at providing these women with affordable, reliable and sustainable credit streams.

Disbursed loans were of both the secured and unsecured type. The collateral for secured loan was gold/jewellery, which most of these women often owned and lost to moneylenders, even after they had paid their debt. These loans went up to INR 50,000 in case of an unsecured loan, of term 3-5 years with an interest rate of up to 17 per cent per annum on a diminishing principal.

In order for a woman to be eligible for a loan, she was required to compulsorily have a savings account with SEWA Bank for at least one year. This was primarily to encourage the women to develop a saving habit, despite all odds. Assessment of the applicant is done by a field worker ("banksathi") who visits the home of the applicant and studies the economic activities and indicators of economic capacity of the woman applicant. Once the loan has been approved, the appropriate loan amount to be sanctioned and interest rate is determined by their customised credit risk instrument. The applicant data/documents required are: name, address, photo, proof of residence/electric bill/ration card and, cost quotation of stock/machine/vehicle etc. to be purchased. Any new house

(asset) that is bought from the loan is registered in the woman's name. In order to reach the targeted population, the bank has two ways: Self Help group workers and Banksathis.

Self-help groups were formed initially to locate people who could collect money and daily savings as available from women agricultural labourers and deposit it with the SEWA bank. Mobilization of these self help groups had started way back in 1977. The main objective of this activity was to bring banking to the doorstep of rural women. Self-help groups were formed by women coming together in a given geographical region. They made rules about management, membership, savings and loans. SEWA workers trained and advised these women in accounting, management and administration issues. After a year of saving, the group became eligible for borrowing. A loan is sanctioned in proportion of their savings. The group decides disbursement, interest rate and repayment schedule by themselves though they are often advised by designated SEWA bank officials. The group may also rotate their own savings as loan fund. The bank provides support for releasing mortgaged land, providing working capital and for acquiring assets. However, the formation of self-help groups is a slow procedure, mainly because trust building between the group members and between the group and the bank takes some time.

Banksathis were involved in the procedure mainly to develop a new channel for incorporating new customers that is faster and more personal. They are the bank's frontline workers who are usually from the same community and pursue the same trade as the customers of the bank from a particular locality. They have experience with maintaining bank accounts, are local leaders with good credibility and preferably literate (able to read and write). They need to have INR 15,000 as security deposit with the bank as a safeguard from misappropriation. They convince people to save and suggest ways of saving. SEWA bank provides piggy banks for its customers in order to encourage them to save. Before disbursement of the loan, the Banksathi assesses the applicant and makes a specific note of undesirable characteristics like: irregularity of income, number of dependants, unpaid debt instalments, absence of a steel cupboard for storing valuables, legal status of the slum where the applicant dwells, safety of the neighbourhood, registered police cases and stained teeth (a sign of tobacco addiction that is a source of constant expense). Special allowances are made for women with alcoholic husbands and

widows without family support. A bank facilitator follows up on the Banksathi's recommendation and probes deeper into the applicant's business activities and notes factors like competition in the business, family finances and productive assets, entrepreneurial skills and her participation in the savings program. The facilitator asks the Banksathi to explain the loan process, repayment schedule and implications of the failure to repay. The Banksathi countersigns the loan application documents to guarantee that the applicant understands the loan procedure and details. The application is presented to the loan committee which meets every third day and takes decisions. The Banksathi informs the applicants whether their loans have been approved or not. She earns 1 per cent on savings accounts and 3 per cent on loans. An efficient Banksathi can service up to 400 customers. The approved loans are disbursed within 7 to 10 days, through the main branch of the bank.

Of the total loans disbursed, 50 per cent went for housing and house repairs, rebuilding or adding new services to the house. The repayment rate was close to 96 per cent. The key to loan recovery is payment in small instalments and designing repayment options best suited to customers. In case of non-payment of instalment due to unforeseen crises, the bank reschedules the repayment dates. This strengthens the bank's image among the poor and increases chances of repayment of the loan.

3.2 National Pilot on Financial Inclusion, Indian Bank (Puducherry (rural))

This project was undertaken by the Indian Bank with support from NABARD and RBI. Its main aim was to achieve 100 per cent financial inclusion of the targeted area. Before opening any account or disbursing any credit, all basic demographic and household characteristics were collected through surveys done by teams of bank officials, SHGs, students, village volunteers, etc. During and after the survey, publicity of bank accounts offers was done through handbills. Basic details and documents like voter id/ration card, occupation, age, and income level were collected and "no-frills" accounts were opened on the spot. Arrangements for the account holders' photographs were also made at the door of the prospective clients. Analysis of the financial requirements and allotment of credit limits on overdraft and GCC (general credit cards) were made through personalized credit risk rating models. Low cost life and health insurance (under the Janashri Bima

Yojana) were also provided at the time of opening the account. Laptops were utilized to handle the transactions at site. This village pilot in Puducherry covered 744 households and 1661 fresh “no-frills” accounts were opened.

The types of loans covered overdraft for emergencies, GCC facility for undertaking economic activities of up to INR 5,000-25,000 and overdrafts of INR 1,000 to 5,000 given for no-frill account holders. The pilot that was launched in Mangalam village was extended to all the four districts of Puducherry and was completed in a year. It has been replicated in Cuddalore district of Tamilnadu and Kollam district in Kerala.

3.3 National Pilot on Financial Inclusion, Indian Bank (Dharavi (urban))

This project was launched to especially target the financially excluded migrant worker communities in large cities. This initiative also included initial door-to-door surveys and publicity. The basic concept was similar to that of the rural project, but a greater use of technology was observed. This enabled much larger volume of transactions.

Laptops with banking software were again used for opening accounts at the clients’ doorsteps. Additionally, technology was used to incorporate rural and semi-urban account holder details into the core banking system, so that technology infrastructure requirements for individual banks located near these areas do not increase greatly, given the large volume of accounts that the banks in these areas have to operate. Smart cards made by FINO (Financial Information, Networks and Operations) specifically for financial inclusion were used extensively. These cards have advantages like being usable while in offline mode and not requiring a digital signature. These cards were issued to customers after collecting relevant details. The cards store all information of the customer including a photograph and finger prints of all **ten** fingers. These cards can be used to make deposits/withdrawals merely at the swipe of the card in a hand held device. The information of these transactions is saved in the hand held device and is then uploaded on to the main servers, so that the devices can be continually used and account holder data is collated in the core banking system. Roving agents of the bank carry these hand held devices and collect deposits/withdrawals from door-to-door. They verify the identity of the person holding the smart card and carry out the transaction. They provide receipts for each transaction so that the process is transparent. This smart card also serves as an

identity proof. To overcome the barrier of digital recognition, the bank has set up voice guided, bio-metric enabled ATMs in target areas. The Dharavi model was extended to Guntur town in Andhra Pradesh and Tharamani in Chennai for inclusion of their urban poor under the financial umbrella.

3.4 OxiCash

OxiCash is a first of its kind prepaid service in India. that enables you to do a lot more than just recharge your mobile phone. It is a virtual prepaid card attached to a mobile number that can be used to deliver a host of services like prepaid mobile recharges, bill payments, travel, online games and other utilities. It works like a Mobile Wallet. For a majority of consumers not having net access, OxiCash enables services delivery through mobile phone using GPRS/SMS. For large section of consumers who do not have a bank account or credit card account, but have a valid mobile number, OxiCash can provide the means to avail of a number of services. It is accessible through all mediums, i.e., PC or mobile enabled through SMS, GPRS, WAP, Wifi, WiMax, Dial-up internet, DSL or even through 3G services.

To load a bank account, or credit card account, the OxiCash Customer uses Authorised Internet Banking/Credit Card/EFT payment Gateway to buy the OxiCash payment instrument. With authorization of payment from the payment gateway, Oxigen issues OxiCash a payment instrument of INR 1,000 and assigns a value to INR 1,000 to the customer's OxiCash payment instrument. Simultaneously, Oxigen assigns INR 1,000 from its bank account to a non-interest bearing escrow in favour of the customer. All transactions and the movement of escrow funds are settled at the end of the day.

For loading from retail, the OxiCash distributor deposits INR 100,000 in Oxigen's bank account through Cash/Cheque/DD/EFT. Oxigen assigns a limit of INR 100,000 for the distributor for issuance of OxiCash payment instruments limits to OxiCash retailers. The distributor collects cash from the OxiCash retailer via Cash/Cheque/DD/EFT. Oxigen debits OxiCash distributors' limit by the amount paid by the retailer and credits the retailer's account by the same amount. The customer can purchase the OxiCash payment instrument worth INR 1,000 from the OxiCash retailer by paying cash/cheque. OxiCash retailer uses its Point of Sale terminal to issue OxiCash payment instrument

worth INR 1,000. Oxygen debits OxiCash retailer's limit by INR 1,000, assigns this to the customer as semi-closed OxiCash payment instrument. Simultaneously, it assigns INR 1,000 from its bank account to non-interest bearing escrow in favour of the customer. Finally, at the end of the day, all such transaction would determine the movement of bank funds to escrow.

3.5 The IIMPS micro-pension solution

IIMPS (Invest India Micro Pension Services Private Limited) is creating a transparent, scalable, secure and low cost social security marketplace using which millions of low income workers located anywhere in India will be able to access professional pension and insurance services.

In order to lower transactions costs for low income workers, IIMPS operates through a network of partnerships with highly credible cooperatives, microfinance institutions (MFIs), worker associations and unions across multiple states. These agencies serve as a port for collecting “modest” pension contributions and insurance premium from low income individual workers and pooling and transferring them to regulated asset management and insurance firms. These entities also play a key role in delivering financial knowledge and the logic for retirement savings and insurance to their membership.

The IIMPS partnership network also serves as an effective proxy means test for targeting beneficiaries of pension co-contributions. This is because of the network's local knowledge of the actual incomes of their members. Central and state governments should, therefore, be able to base the targeting, delivery and administration of a co-contributory social security arrangement on these capabilities.

To further lower transaction costs and protect the interests and rights of low income individual workers, IIMPS has developed a web-based, centralized transactional and administrative platform (named the *Scalable Social Security* application or *sCube*). *sCube* delivers a unique and portable individual micro-pension cum micro-insurance account to each low income worker. *sCube*, in collaboration with SEWA, is being used already for micro-pension administration for low income women workers in Gujarat, Delhi and Madhya Pradesh. For the low income urban poor this initiative is currently

operational with the Government of Rajasthan (for its new co-contributory pension scheme). *sCube* manages over 100,000 individual micro-pension accounts. IIMPS has partnered with UTI AMC and is in the process of collaborating with one life insurance and one health insurance provider to offer customized insurance products to its micro-pension members. Through this effort, individual workers are able to receive government co-contributions directly into their individual retirement and insurance accounts. *sCube* enables governments to select individual beneficiaries on the basis of their socioeconomic profiles and access a range of reports and MIS.

In 2009, IIMPS expects to deliver micro-pension services to over one million low income workers across eight states (Karnataka, Kerala, Andhra Pradesh, Tamil Nadu, Delhi, Gujarat, Rajasthan and Madhya Pradesh). To facilitate this process, KfW (the German development bank) has recently extended a grant to IIMPS for scaling up the *sCube* capacity.

4. The regulatory structure

4.1 Small transactions and mandated interest rates

The regulatory environment discourages small transactions, primarily by imposing the same transaction cost on small players as on the big ones. Therefore, small payments, small savings and localised financial transactions become unviable. The foremost example is that of interest rate caps and floors for lending institutions. This implies that small loans become unviable for banks and other financial institutions. The first regulatory issue therefore that comes in the way of any attempt at financial inclusion at a village level is the interest rate cap that kicks in whenever small credit or priority sector lending is discussed.³ A number of studies shows that the viable interest rate range for small loans is anywhere between 25 to 50 per cent. The processing fee that a bank is allowed to charge is usually only enough to cover the cost of customer acquisition. In villages, where liquidity is a serious concern and cash is required almost immediately, there is a trade off between low interest loans and faster credit access and it is but obvious that farmers and labour would prefer higher interest loans available immediately

³ Sharpening the Debate: Assessing the Key Constraints in Indian Micro Credit Regulation, Daniel Radcliffe and Rati Tripathi, Centre for Micro Finance, IFMR, 2006

to low interest credit that comes with a delay. Similarly, mandating interest rates for savings accounts (at 3.5 per cent now) also comes in the way of allowing viable savings institutions that are unable to offer this for small amounts of money collected in poor neighbourhoods. There is enough argument for doing away with this floor, as the customer would again prefer small savings with very low interest if it comes with an ease in withdrawing money on one hand and depositing small and marginal amounts on the other.⁴

4.2 Greater flexibility to use business facilitators

Business correspondents necessarily have to be non profit organisations (Trusts/Societies under Trust Act, the Societies Act or the Income Tax Act). This is a major impediment to a private firm wanting to act as an aggregator of small savings and deposits independently or on behalf of a larger institution. Non Banking Finance Companies are barred from acting as business facilitators for banks. The failure of Urban Cooperative Banks accompanied by frauds in some of these firms has made the Banking regulators suspect and therefore wary of allowing any firm to take up any role in the financial sector. No company other than a banking company that has obtained a license from the RBI for “banking business”) can carry on the business of banking in India. Under the Banking Regulation Act, 1949, section 7(ii) “Banking” is defined to include, “*the accepting for the purpose of lending or investment, of deposits of money from the public, repayable on demand or otherwise and withdrawal by cheque, draft, order or otherwise*”.⁵

4.3 What can banks outsource?

While the *Guidelines on Managing Risks and Code of Conduct in Outsourcing of Financial Services by Banks, 2006* allow banks to outsource to an affiliated entity or an external entity, activities on a continuing basis that would normally be undertaken by the bank itself, not all financial services can be outsourced. The guidelines mention that the

⁴ Athukorala, Premachandra, and Kunal Sen. 1995. “Economic Reforms and Rate of Saving in India.” *Economic and Political Weekly* 30:2184–90.

⁵ A deposit repayable on demand can be taken by an entity registered as a deposit taking NBFC. A new firm cannot provide services involving creation of a new separate stored value account with itself without being registered as a bank or a NBFC.

banks cannot outsource core management functions to third parties. This ensures that banks are over cautious in allowing local business correspondents or facilitators to take on any meaningful role that could result in reducing transaction costs. Banks are not permitted to outsource financial services “*which are the core management functions including internal audit, compliance function and decision making functions like determining compliance with KYC norms for opening deposit accounts, according sanction for loans (including retail loans) and management of investment portfolio*”. A simpler set of rules that made firms liable to report and stand guarantee to small savings would probably have worked more efficiently, even as it maintains credibility in the banking system for the customer.⁶

4.4 Rural banks

Rural banks were set up primarily to include a larger number of rural poor into the formal financial system. Rural banks are governed by section 6 of the Banking Regulation Act. However this section, rather than working on a negative list works otherwise and restricts the activity of RRBs. No wonder that the entire exercise has withered away without extending into interior parts of the country side.⁷ It would greatly help inclusion if the Act either increases the approved activities of Rural Banks or better still, gives a simple list of what Rural Banks cannot do. In increasing financial inclusion at a village level, a freer and more enabling rural banking system would allow a local intervention to tie up with the RRB in providing various banking and insurance activities in the locality. The differentiated bank licensing that allows firms to offer a limited set of services; payments, small loans and savings would benefit MFIs and telecom operators. This would also encourage experiments of the kind where small retailers are allowed to handle cash transactions in rural areas. Experimentation could also go to the extent where policy holders are allowed to sell insurance that is not permitted by the Insurance Act now.

⁶ Banks may outsource financial services “*including applications processing (loan origination, credit card), document processing, marketing and research, supervision of loans, data processing and back office related activities etc*”.

⁷ Do Rural Banks Matter? Evidence from the Indian Social Banking Experiment, Robin Burgess† and Rohini Pande, <http://econ.lse.ac.uk/staff/rburgess/wp/dobanksmatteroct16.pdf> 2002

4.5 Regulated technology

The Information Technology Act governs electronic banking and therefore brings a narrow focus into regulation. For example, it only recognises what is known as the asymmetric crypto system and the hash function. At a nascent stage of development and in the interests of innovation, this aspect should have been technology neutral. Also, regulation that does not allow shared infrastructure inhibits the use of technology with high capital costs not allowing local banks to convert to e-systems. The integration of financial information through electronic means also allows small players to access large databases at marginal costs. Common infrastructure platforms and appropriate technology solutions allow cooperation and collaboration. This comes at the expense of customisation that is not too big a cost to pay for increased inclusion. Internet banking, which works on digital signatures, requires certification and certifying authorities. Banks ought to have been allowed to apply for a licence to issue digital signature certificates and function as certifying authorities. This again would reduce time and costs. Innovation would allow rural banks to offer tele-banking facilities that work with automated voice recognition systems and voice response systems to allow those with telephones to access banking facilities without having to be literate or travel to the bank. Touch screen banking allows this too, but will need to be far less capital intensive to reach larger numbers of customers. Technology up gradation and reform could also pave the way for Home banking services, especially for rural areas with rich pockets.

The Department of Telecommunications (DoT) has issued guidelines for registration and operation of 'Other Service Providers' (OSPs). These OSPs are companies providing 'Application Services'. 'Application Services' are defined as provision of services like tele-banking, tele-medicine, tele-education, tele-trading, e-commerce, call centre, network operation centre and other IT Enabled Services, by using telecom resources provided by authorised telecom service providers. As per OSP Guidelines, any entity wishing to engage in the provision of Application Services would require a license from DoT.

4.6 Value of transaction

The Income tax Act mandates that payments greater than INR 20,000 be made only through crossed cheques and demand drafts. This can easily be extended to include electronic transfer too, a recommendation made by the S R Mittal Working Group on Internet Banking. ATM's face similar restrictions under the Banking Regulation Act and therefore cash withdrawals of large amounts not permitted. Also cash dispensation is restricted to certain denominations and therefore does not allow flexibility among small account holders to withdraw fractions of money as required. In addition is the need to allow electronic cheques. If electronic cheques were allowed and could be written out, bill payments become much simpler and cheaper.⁸

4.7 Prepaid instruments

The RBI is understandably cautious on these payment mechanisms. Non-banking entities issuing pre-paid payment instruments need to maintain an escrow account with their banks to the extent of outstanding balances in the cards issued by them. The amount has to be kept separated from the working capital and other funds of these entities. The use of such funds by companies for any other purpose other than settlement of claims is prohibited. Pre-paid payment instruments can be used for transfer of funds online (internet) or using mobile phone networks. The schemes which facilitate such transfer require greater safeguards against misuse. Therefore only banks are permitted to issue such cards. This obviously has a debilitating effect on using this scheme to ensure financial inclusion in a specific village.

4.8 Electronic purse schemes

The RBI prohibits companies from providing 'internet based electronic purse schemes'. An individual who wishes to be a member of the scheme can register herself by going to the website and filling up a simple form which contains only her personal details. The registered person now owns an account with the service provider. Accounts are funded by transferring the money from bank accounts or credit card accounts. The money is credited into an electronic purse account of the account holder and the actual money is credited into the current account of the service provider with the clearing and settlement bank.

⁸ Examples of such solutions exist with Microsoft's "Money" or Intuit's Quicken.

The electronic purse account holder can use the funds in her account either to transfer the funds to another electronic purse account or transfer to any other account anywhere or do on line purchases. The Electronic Purse Circular states that these activities are in the nature of acceptance of deposits which are repayable on demand and therefore in violation of the provisions of the Reserve Bank of India Act, 1934. The RBI has advised banks against associating themselves with such schemes.

4.9 Internet Banking

Internet banking in India is governed by RBI which aims at regulation and supervision of the internet banking activities of the banks. The banks are now permitted to offer internet banking facilities based on the board-approved internet banking policy and no longer require prior RBI approval. The Internet Banking Circular lays down technology and security standards to be observed by the banks offering internet banking services and also the legal, regulatory and supervisory issues in relation to such operations. The products can be offered only to account holders and cannot be offered in other jurisdictions. From a legal perspective, security procedure adopted by banks for authenticating users needs to be recognized by law as a substitute for signature. In India, the Information Technology Act, 2000, in Section 3(2) provides for a particular technology (viz., the asymmetric crypto system and hash function) as a means of authenticating electronic record. Any other method used by banks for authentication should be recognized as a source of legal risk.⁹

4.10 Mobile Banking

In October 2008, the RBI came out with guidelines for mobile payments in India for regulating mobile banking to ensure appropriate safeguards and security of financial transactions. The mobile payment service providers are intermediaries for providing the technology framework for the implementation of the mobile payment services. The mobile network operators provide the telecom infrastructure. The guidelines lay down the technology and security standards to be observed by the banks offering mobile banking

⁹ Reserve Bank of India had set up a 'Working Group on Internet Banking', <http://rbidocs.rbi.org.in/rdocs/notification/PDFs/21569.pdf>

services and also the legal, regulatory and supervisory issues in relation to such operations. Only those banks that are licensed and supervised in India and have a physical presence in India are permitted to offer mobile banking products. These services can be extended by banks only to their own account holders. The banks are required to have a system of registration before commencing mobile based payment services to a customer. Banks that have already started offering mobile payment services are required to review their position and comply with the guidelines within three months of the notification of the guidelines. The RBI, in July 2008, had asked banks to keep their mobile payment services on holds until final guidelines are issued. However, mobile alerts for credits and debit, balance enquiries and other services in the nature of providing information can be continued.

5. Enabling financial inclusion

Let us consider one example from outside of India, M-PESA in Kenya, to understand the importance of technology solutions in reaching financial services to the hitherto excluded groups and the regulatory implications of developing such technology platforms. Using the mobile phone, M-PESA allows one to deposit cash into one's account, send or transfer money, withdraw money using ATMs and, of course, pay bills and to manage one's M-PESA account. This has, in particular, helped people working away from home to send in money to their families back home. M-PESA has had a huge impact on the ability of people to obtain some basic financial services at low rates and whenever they wanted to. The network of M-PESA agents are many times more numerous and their counters operate well beyond the usual banking hours.

While it has definitely helped the users, it has also raised alarm among many who see the whole process as a disaster waiting to happen. Of course, its most ardent critics are the banks in Kenya and they have an interest in seeing it closed down as it has taken much of the business away from the banks. Nevertheless, the use of M-PESA type instruments in a regulatory vacuum can, indeed, have serious consequences. However, the response of the regulator should not be to close them down, or ban them, but to bring them under regulatory scrutiny without diminishing, in any way, the opportunity they provide for financial inclusion.

Much of the focus of regulation, as it must be, is on maintaining the credibility of the payment system. Adhering to regulation is costly and it raises the cost of transaction. Transaction costs tend to be independent of the amount transacted. The poor undertake small transactions and their costs of transaction through regulated institutional mechanisms, therefore, become too high compared to the amounts they transact. This keeps them away from institutional finance and more dependent on informal systems like money-lenders and family. Regulation, therefore, seems to go against the banks' developmental role wherein they must make special efforts to reach out to those who are poor and in remote areas.

Any institution is easier to regulate if it carries out well-defined transactions within established premises and within well-defined hours of business. The poor, however, do not have regular incomes from established sources and do not have one place of employment. Since they are often self-employed or daily wage earners, any time spent accessing financial services within stipulated business hours means loss of income for them. Consequently, anything that requires frequent and regular visits to "exclusive" service providers becomes prohibitively costly for them.

Two characteristics were obvious in the various initiatives discussed above. First, they used local human resources and networks to deliver the financial services at the door-step or, within a close neighbourhood. Second, the initiatives are in some way or the other making use of the new information and communication technology. The advantage of the new technology is two-fold. It precisely addresses the problems faced by those currently excluded from institutional finance. First, all transactions are triggered by the clients themselves. They do not have to wait for "business hours" or for someone to be at a counter at regular hours to complete a transaction. Second, by having a technology platform on which all transactions are carried out, the cost of a transaction is essentially zero. Of course, there is a set-up cost for the platform, but the operational cost is zero. Therefore, smaller players are no longer burdened by a transaction cost that otherwise cannot be scaled down.

As far as banks are concerned, such initiatives taken by them are lauded by their regulator, viz., RBI; indeed, there are guidelines encouraging such activities. When it

comes to private, non-bank players, the regulator faces a problem. The RBI is worried about allowing non-bank entities to accept “deposits”. RBI sees such activities as being very close to those that enable the payment system and, hence, falling under its regulatory functions. However, it is wary of regulating non-bank type institutions, especially those that perform functions outside of financial markets. For instance, if mobile banking is operated by telecom companies, it becomes very difficult for the RBI to distinguish company actions that are for purely telecom operations and those that correspond to its role as a supporter of the payment system.

There is also the problem of over-lapping jurisdictions. For example, TRAI oversees telecom functions. So, when RBI wants to put some conditions on a telecom operator who is handling mobile banking, does it have to go through TRAI? Second, it is usually not a good practice to allow non-financial companies to control large parts of the payment system. Given the network of telecom companies, they can suddenly end up with large amounts of money; recall that more than 90 per cent of mobile customers use pre-paid cards and are, therefore, eligible to use many of the initiatives talked about above.

Third, the RBI has to ensure that whenever somebody charges a card by making a deposit with the card-provider, there is a corresponding transfer of a similar amount from the card provider’s account to that of the customer. This is to ensure that there is no creation of money in the system. Suppose that A pays INR 100 to a telecom retailer, B. At the beginning of the transaction, A had INR 100 in hand and some money, say INR 50,000, in her bank account; B also had some cash, say INR 10,000, and some more, say INR 100,000 in a bank account. Together, they have INR 160,100. Immediately after the transaction, A has transferred her INR 100 to the retailer and has charged her card by the same amount. So, A has the same amount as before; INR 10,000 in her bank account and INR 100 as virtual money (on the card). However, the retailer now has whatever he had before plus the INR 100 from the customer. It is important that as soon as B gets the money from the customer and charges the card, a corresponding deduction of INR 100 is made from B’s account. Otherwise, a simple transfer of money to a card, without the money being destroyed as the card is charged, will increase the money in circulation by INR 100.

An ideal solution, that addresses (or, makes it easy to address) the three issues raised above is some version of the following idea. Suppose there were kiosks, counters, service points, where people could bring in their money and convert it “logically” into virtual money. They use their mobile, or internet facility, to connect to their bank. They then pass their note through a scanner type instrument that checks whether the note is genuine, accepts it if it is, electronically transfers the amount to the customer’s card and shreds the note. This transfers the paper currency to virtual money and destroys the paper money. Observe that this gradually converts paper money into virtual money. If everybody uses only e-money, many of the problems of financial exclusion will go away since, once the platform is built, the cost of operating on the platform is near zero. So the large per unit cost of dealing with small amounts is no longer an issue. Indeed, much of the problem is that in many of the current solutions, there is some time when the paper and virtual money, i.e., the original and its copy, are simultaneously usable when only one of them should be.

The current debate is all about whether technology companies can operate as banks or, provide services that are otherwise being supported by banks. And, given that the financial system must be stable and credible, it becomes a serious regulatory issue. However, if one follows the various initiatives referred to above, one notices that all that the poor need are “anywhere, any time” financial services. As long as there is some method to do this, financial inclusion is realizable. Thus, telecom companies do not need to provide insurance; they need to provide the service that allows the smaller players to access the insurance services the insurance companies are selling. Technology needs to become a platform on which financial services are traded; it need not become the service provider itself. The regulator needs to ensure that the technology standards are such that the platform is stable, there are no leakages (payments intended to go from A to B do not end up in C), costs of accessing the platform are minimal and, there are enough incentives to make the platform offer better and more services over time.

While regulators need to encourage experimentations to find a workable solution, private enterprises need to develop a system that creates the platform on which everyone can transact. Openness and inter-operability of systems is essential; for real inclusion, clients using the platform, rich or poor, must have freedom of choice while service

providers must earn revenue from the number of transactions and not through premiums from exclusive clients.

6. Conclusion

An overwhelming majority of rural India, and a significant portion of urban India, do not avail of financial services. While availing of any service is a matter of choice in a market economy, it is mandatory for society to allow access to all services for the entire population. Unfortunately, as we have discussed in this paper, while most are aware of the benefits of the various basic financial services, few are able to partake of them because of the way these services are delivered in India. The transaction costs of availing financial services are simply too large for them. Once the transaction costs are brought down to a minimum, the distribution of these services can then be determined by the pricing of such services.

While one can decide on train travel given the price of tickets, people should not be discouraged from such travel because of the high cost of getting to the train station! The decision to save in banks should be driven by the return on savings and not by the cost of visiting the bank; insurance bought should be governed by their premiums and not by the difficulty of making payments on the premiums. As we have demonstrated, technology can play a major role in reducing the cost of availing financial services. The current information and communication technology opens up new avenues of service delivery that are cheap and can be customized to the needs of everybody.

According to the IISS survey, only about 7 per cent of people avail of electronic payments in India. In any payment mechanism, the larger the volume of transactions, lower is the cost per unit transaction; also, the more people use the mechanism greater is the value generated through transactions. This is the so-called “network” effect and building an electronic payment system that allows everyone to access them will add to the overall value creation in the economy. However, the value of the electronic payment system, like all such systems, is enhanced by its credibility. For this a regulatory structure is a must; a properly regulated system must guarantee the authenticity of all transactions, as well as keep them secure, confidential and stable.

The technologists and the regulators need to work together to identify the system that achieves financial inclusion. The objective of the technology should not be simply to increase value to those already in the market place for financial services; the objective of the regulator should not be to restrict anything that is too innovative. One way to encourage innovation is for the regulator to lay down the characteristics of any transaction rather than giving a list of activities that are allowed and those that are not allowed. For instance, if cash is transformed into an electronic format, the amount transformed must be simultaneously destroyed in its currency form. How this will be done should be left to the technology to work out.

One way to proceed towards a solution is to encourage experiments in limited geographical spheres and with select groups of people, under strict monitoring, to see how different mechanisms can work. In addition to satisfying all the characteristics of a credible payment system, these experiments must encourage the excluded from participating in the use of these mechanisms. This latter is very important --- the objective is not one that earns more revenue from existing market participants but increase the number of participants.