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Whitepaper #1

The Eko Series on Financial Inclusion:

How Inclusion Centered Financial Infrastructure Can Change the Lives of 300 Million Indians

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A Research Effort By

eko™
Meri financial aazadi

"Ancient India was a knowledge society that contributed a great deal to civilization. We need to recover that status and become a knowledge power."

-A.P.J. Abdul Kalam (Ignited Minds)

Prologue

The Power of Enabled Money (POEM) is a concept that can bring prosperity to all of us, rich, middle or poor. The idea of "available money" is what enables the common man to create real value. In simple terms, the difference between money and enabled money must be understood. It is enabled money that can truly empower and bring great wealth to the world. The money that we spend on building new and great processes, what we take and invest in our future, is enabled money. With the power of Information, Communication and Technology (ICT) we can take enabled money and create more advanced and practical systems. Our dream is to make "Universal Financial Access" (UFA) a reality for all Indians by 2013. By UFA we mean that all Indians must have access to saving, borrowing, investing, microinsurance, micropension plans, microloans and similar products. This it is not a pipe dream but one that can become a reality.

The Lead Author is a veteran banker who knows, understands and has created powerful transaction systems. The Co-Author is a vintage naval officer who served as second-in-command of the Indian Navy. He brings a distinct understanding of organization and human capabilities. They have joined to spread the idea that enabled money should be a catalyst for wealth creation and equitable growth as opposed to being a condition for staid financial notions that try to understand growth in numbers.

Financial policies are invariably predicated on mistrust in worst case scenarios and consequently have more checks than balances. Unfortunately risk imagination is more than actual risk occurrence. In our minds it is better that we create a system which allows the inclusion of all Indians, rather than creating a system that is tightly secure but discourages or even worse excludes portions of the population. Instead of such security measures, a system must aim to adapt to fraud developments and learn to identify undesired users. Indeed, the cost of exclusion is higher than the cost of possible fraud.

This paper is neither prescriptive nor prophetic. It seeks not to radicalize but offer solutions in context of "what is and what can be done", factoring the wide disparity in perception and practice among the various stakeholders, soothsayers and the policy pundits of the financial world.

Introduction: Inclusion Centric Financial Infrastructure (ICFI)

A basic prerequisite to Universal Financial Access (UFA) is the development of financial infrastructure. The infrastructure can be as simple as common standards that enable bartering to clearing houses that settle trade accounts. It should allow the flow of money to create sound trade markets while its sustainability rests on its "cost effectiveness". If we have a system that is unsustainable in terms of cost, either its reach will be limited or it will eventually fail.

An ICFI success story is the African country of Botswana. The country has transformed into a middle income country with a per capita GDP of $16,450 in 2007. Not surprisingly, Botswana has close to a ICFI, with:

- ☐ *A stock exchange*
- ☐ *Credit allocated based on market terms*
- ☐ *An emphasis on the free flow of credit*

(Index of Economic Freedom)

The development of an Inclusion Centric Financial Infrastructure (ICFI), where all Indian's have equal financial access, is neither premature nor out of reach. While added focus has been placed on developing India's minimal physical infrastructure and transportation networks, an emphasis on financial infrastructure can be far more fruitful. Improving the financial infrastructure in a sense would be the genesis of an advanced physical infrastructure. Once financial infrastructure is in place the public transportation network can be built efficiently, the markets it connects can be economically sustainable and India can become a catalyst of all around growth.

- ☐ *79% of Indian households have no access to formal loans.*
- ☐ *82% of Indian households have no access to formal insurance.*

(World Bank)

The Issue

Given the importance of financial access through formal financial infrastructure, India's current infrastructure must be made Inclusion Centric. Currently 300 million Indians who work[1] have no financial access. This means that many of the transactions performed are four or five times removed from any formal infrastructure. Being so disjointed from the multiplicative power of financial infrastructure to provide capital, means that Indian's cannot be as efficient as their potential.

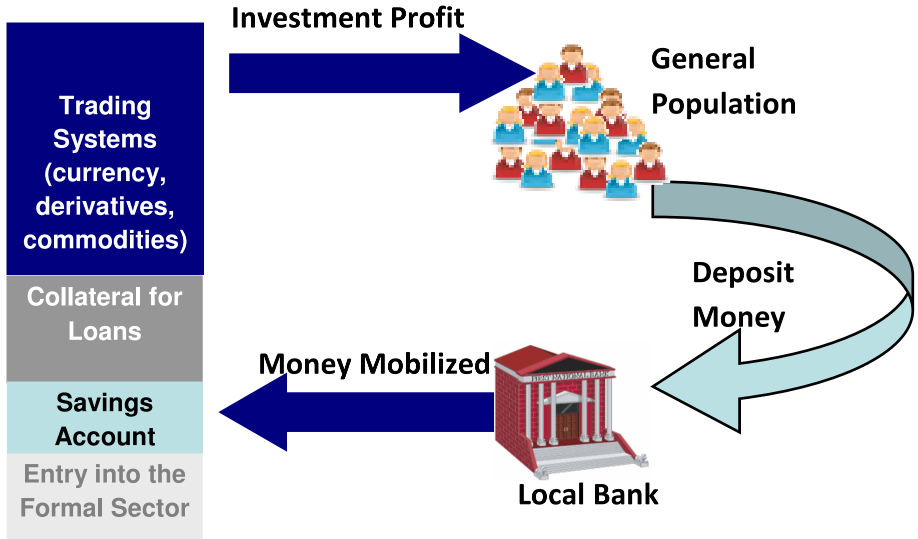
What is Financial Infrastructure?

Financial infrastructure includes among other things:

- Clearing systems for securities and payments (both electronic and paper)
- Depository systems for securities
- Trading systems for foreign exchange, derivatives, commodities and securities
- Credit bureaus
- Tax collection systems

[1] 59% of Indian households do not have financial access (World Bank). Assuming a population of 1.147 billion (CIA fact book) and that there are 5 persons per household, means 229.4 million households in India. Then assume 2.5 persons per household work (based upon the fact that 63.3% of Indians are of 15-64 age which is considered working age [CIA fact book]), and you get a conservative estimate that 338 million working Indians are affected by lack of finances. Number has been estimated downward to ensure that paper is not based upon exaggerated statistics.

Financial infrastructure needs to be thought of as everything shown to service the "General Population". Without any one of the pieces, the circle will break down.



Just as poor roads hamper an economy, friction in financial infrastructure exposes the economy to poor compliance, higher exposure to fraud, increased costs and barriers to entrepreneurship. A highly automated tax collection system for instance would increase revenues for the government and most importantly would let lenders use copies of tax returns as a basis to make credit decisions. Using this data to create a credit bureau would unleash entrepreneurial forces at the micro level that are stifled because of high interest loans, and cost disadvantages.

ICFI Through Information, Communication and Technology (ICT)

The direct consequences of lower transaction costs can be neatly summed up by invoking the Nobel Prize winning Coase Theorem: "If there are zero transaction costs, then the most efficient outcome will be reached regardless of legal entitlement". In macroeconomics efficiency is the "name of the game". There is great power in a friction free financial system.

Ronald Coase was one of the leading American economists of the 20th century

At a fundamental level, any good financial infrastructure is built upon the power of developed Information, Communication, and Technology (ICT). If ICT are the roads, bridges and tunnels of finance, financial infrastructure is the vehicle that moves the money. Of course now more than ever, the question about our vehicle is, "How efficient is it? What are the negative externalities?" The ICFI must be built in this manner: efficient and negative externality free. Can ICFI handle a number of transactions approaching infinity and sustain a cost at virtually zero? In more concrete terms, the transactional cost of handling a Rs. 500 microloan in a fraud free environment must be such that it is economically viable for the lender. ICT is the only way to solve the issue of transaction cost and to prevent any ICFI from displaying negative externalities.

Share the Existing ICT Infrastructure

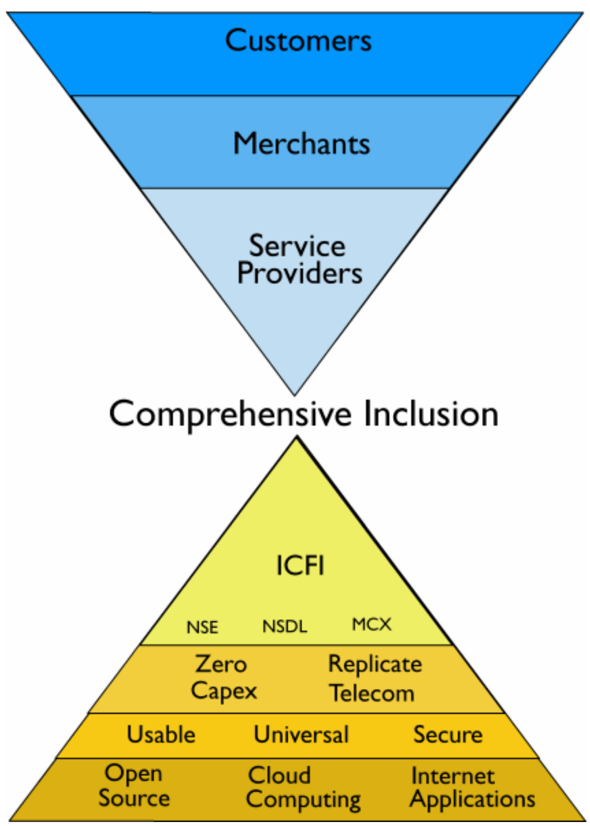
The structure of an ICFI is built upon ICT. By nature ICT brings cost advantages to a financial infrastructure. Indeed, the largest reduction in cost ICT provides is due to the fact that most ICT infrastructures are shared. Commonly used ICT infrastructures include the internet, telecom services, television and stock exchanges, all which are shared. The service providers who use shared infrastructures benefit from the fact that capital expenditure is spread evenly to multiple users. There are even cases where once the infrastructure has been built the service providers do not expend capital at all to use them.

All existing infrastructures are built upon the power of ICT, bringing us all the connectivity and potential for technological additions that we need.

The internet is an example where service providers have zero capital expenditure related to setting up infrastructures.

In order to integrate an ICFI onto shared ICT, the customers, merchants and service providers must all use and be linked by the same structures. Existing financial exchanges including NSE, NSDL and MCX should be among the services universally available. Zero capital expenditure (Zero Capex) and replication of the telecom model should be the way such financial products are then provided. In turn, the financial services that are provided must be brought with three concepts in mind. They must be usable to the entire population, be universally available and be secure to the level that the general public has complete faith in transaction security.

Beyond those basics, a good system will utilize cutting edge methods of shared infrastructures. These infrastructures include cloud computing and open source, which are for sharing programs through the internet and sharing the program code itself. These thoughts are captured in the diagram below:



Once Customers, Merchants and Service Providers all are integrated onto the same ICT platform, comprehensive inclusion will become a reality.

NSE: National Stock Exchange
NSDL: National Securities Depository LTD
MCX: Multi Commodity Exchange

Consumers of cloud computing purchase server capabilities on demand. Now it has expanded past web applications to include storage, raw computing, or access to any number of specialized services.

Silicon Valley is an example of inventions that spawned a new industry. The amount of value that has been created has been tremendous.

The New Delhi Metro system is a perfect example of what India can achieve.

One of the keys to Eko's mobile banking solution is our cost effective numerical encryption. Instead of using expensive recognition systems, Eko has used ICT to bring cost effective benefits to all parties.

*Mobile penetration is becoming universal with research reporting that mobile phone numbers in India by 2012 will have reached **737 million users** (Gartner Research Services).*

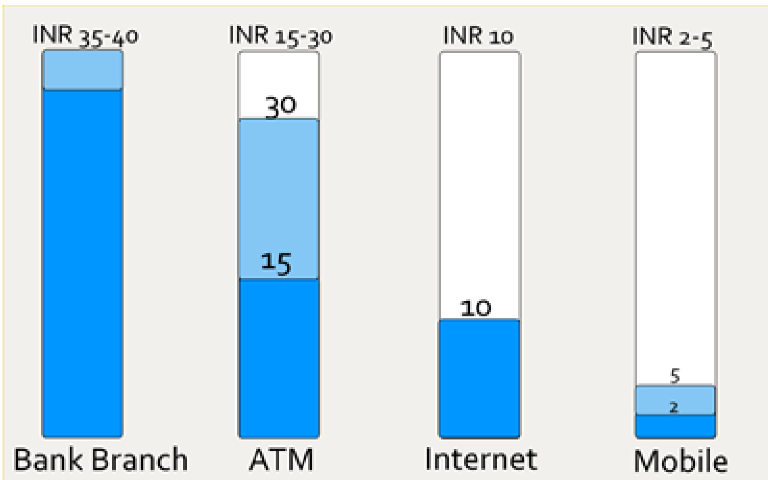
An Opportunity for Better Technology

India must also look at this as an opportunity to create technologies that are futuristic to what is currently available. The country has strength in its IT services and must use them to the full capability. Dedicated funds to research and solve this national problem would help achieve technological advances. In many cases such advances spawn new industries that add great wealth to an economy. ICFI through ICT would be the catalyst for the creation of other physical infrastructures for overall growth.

ICT: The Mobile Revolution

A good existing ICT model to expand financial services on is the shared telecom network. Eko is currently setting the building blocks for financial inclusion through mobile access. The priority is to create a system where any person can become a mobile banking customer or merchant. Eko takes the best cost cutting measures, including a replication of the telecom model, open source programs and a goal of zero capital expenditure to achieve the goal of financial inclusion that can profitably scale.

Source: Mint Newspaper



Transaction Cost Comparison between Different Withdrawal/ Deposit Methods

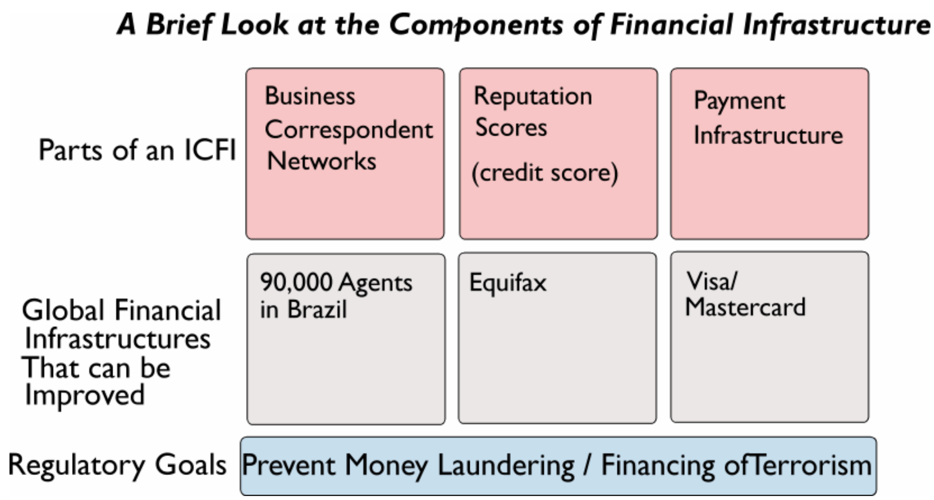
The mobiles ability to bring low cost banking transactions is unmatched. This graph shows the cost comparison of a cash withdrawal or deposit on certain infrastructures. Considering the number of such transactions that occurs everyday, it is possible to see the immense potential of mobile banking.

Four Parts to the Shared Infrastructure Model

For the shared financial infrastructure to work well, there are four main areas of the infrastructure that must be addressed. Four additional whitepapers are being written to complete the *Eko Series on Financial Inclusion*. They include:

- ☐ Whitepaper #2: The Business Correspondent (BC) Model. Discussing the potential of the BC model.

- ☐ Whitepaper #3: Reputation Networks. How India can revolutionize the way people are financially evaluated through credit scores.
- ☐ Whitepaper #4: Payment Infrastructure. How India can develop a cost effective payment structure.
- ☐ Whitepaper #5: Anti-Money Laundering (AML) and Combating the Financing of Terrorism (CFT). How to prevent ICFI from being used for money laundering (ML) and financing terrorism (FT).



Universal Financial Access

Today UFA is a dream due to the fact that sustaining a financially inclusive system with today's infrastructure requires incurring long term losses. Financial inclusion should not be left to only the non-profit NGOs, they need private sector support.

Once a substantial reduction in transaction costs is achieved through ICT and cost effective regulations, Universal Financial Access will be attainable for the general population. The four additional whitepapers in the *Eko Series on Financial Inclusion* will depict a full picture of regulatory requirements and proper incentives which make UFA secure yet profitable.

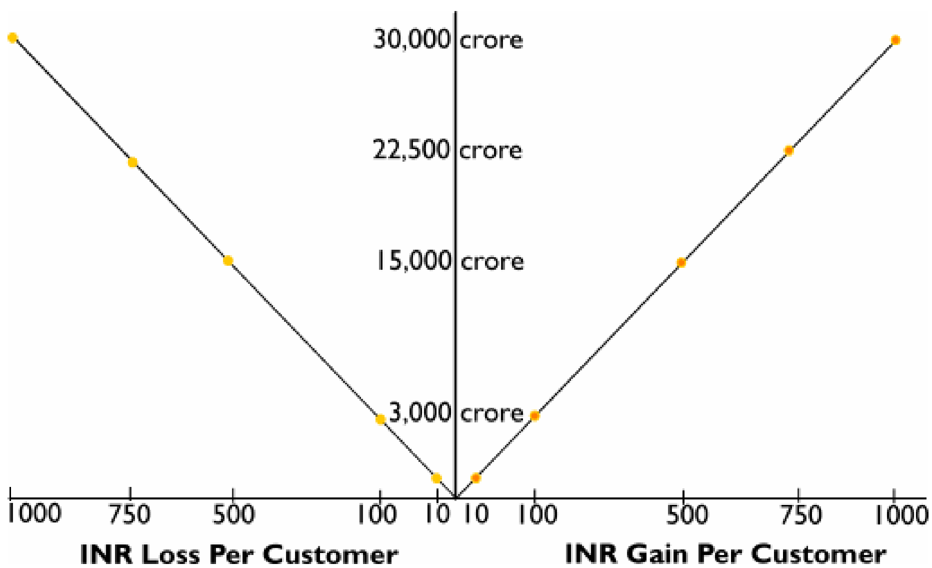
UFA means that the financial system has ensured access to all Indians the products that enable saving, borrowing, investing, microinsurance, micropension plans, microloans, etc. It is imperative that the goal of Indian financial progress includes the full provision of financial instruments. Currently the focus has been placed on microloans, however to maximize the economic value of a loan, microinsurance is needed to protect property, investment vehicles are needed to attain capital appreciation and so on. Contrary to the magnitude of such goals, it is possible to provide access to all these products. All that is needed is the dedication and determination to make it happen.

UFA and a National Mission for Financial Inclusion (NaMFI) by 2013

A National Mission for Financial Inclusion (NaMFI) would go along way towards bringing UFA through dedication and determination. A commitment on the part of the Indian government would signal to the private sector that capital investment creating financial inclusion will be profitable. A goal of total inclusion by 2013 is very ambitious but possible with guided effort. By setting a final date for when UFA will become a reality, India can become a pioneer and recognized as a country willing to take the next step.

Creating a Cost Effective Mission to Ensure Success

A major part of a NaMFI is to make the regulations cost effective. Once the government makes a commitment to creating cost effective regulations, there will be no barrier high enough to prevent UFA. The following graph demonstrates the reason why cost effectiveness and a reduction of waste is a requirement if capital investment is to flow.



Assuming you create a financial infrastructure that has managed to include the 300 million Indians currently excluded, this graph displays the multiplicative potential to either create great wealth or destroy the Indian economy. If your system generates on average Rs. 500 profit per customer per annum, you have added 15,000 crore per year to the Indian financial system. However if the system is cost ineffective and regulations mandate that paper statements must be mailed to each and every customer at a total cost of Rs. 500 a year, the system will incur losses of 15,000 crore over the use of statements. It is clear that whatever we plan for today must be highly efficient and waste free. Keeping unnecessary costs out of the equation can create great wealth as well as financial inclusion.

An Empowered Body

Under this National Mission an empowered body must be created. With a sole focus on financial inclusion, this body will pass pragmatic laws that are cost effective and encourage entrepreneurship by the private sector. The regulatory suggestions put forth in the four papers which complete the *Eko Series on Financial Inclusion* should be improved on by NaMFI. Quick and prudent actions are the keys to keeping up with growing consumer demand.

NaMFI Goals

NaMFI could focus on the following ideas in this whitepaper (further considerations should be placed on the issues dealt with in whitepapers #2-5):

- The Indian Financial Infrastructure must be Inclusion Centric.
- The Financial Infrastructure must strive to use Information, Communication and Technology to bring financial services to the under served.
- The Financial Infrastructure must be built upon existing infrastructures.
- To provide proper incentives, funds or cost advantages must be made available to companies that develop new technologies in the financial inclusion space.
- The regulations that secure the financial infrastructure must be designed to reduce waste. “Create 15,000 crores of wealth as opposed to a 15,000 crore loss.”
- Providing financial inclusion must be profitable.
- The provision of Universal Financial Access is required. All financial services must be available to all Indians.

Conclusion

This first whitepaper emphasizes the possibilities of wealth creation through an inclusive financial infrastructure. Focusing on a cost effective financial infrastructure would enable UFA to become a reality. This would positively impact the lives of 300 million working Indians and also create profits for private companies.

To make the future as bright as this paper predicts, a National Mission for Financial Inclusion must be created at the earliest. It will let private ventures become aware that India is creating favorable investment situations. There is little doubt that if India addresses this problem with such vigor and commitment the goal of Universal Financial Access would be achieved by 2013.

Epilogue

India is on the takeoff stage to become an economic powerhouse. NaMFI would help in coordinating more and controlling less. At the same time it would ensure enforcement of prudent and pragmatic regulation and also motivate all stake holders to self govern in a win-win environment.

Seven Sins in the World

Wealth without work
Pleasure without conscience
Knowledge without character
Commerce without morality
Science without humanity
Worship without sacrifice
Politics without principle

- Mahatma Gandhi