MicroSave India Focus Note 70

Leveraging Unique Identification (UID) for Mobile Banking in India

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Introduction

The Unique Identification (UID) project, *Aadhaar*, "the base", as Mr. Nandan Nilekani, (Chairman of Unique Identification Authority of India, UIDAI) puts it, provides an identity infrastructure that will make identity portable; just as mobile phones made communication portable. Among various expected benefits of the UID card, one is supporting the financial inclusion agenda in India – by providing everyone with a UID card linked to a mobile phone number, and/or linked to a bank account.

The potential for m-banking worldwide to serve the financially excluded has been enthusiastically promoted.[1] India is also seeing burgeoning activity around m-banking, and large mobile network operators are making strategic tie-ups with leading financial institutions, to focus on financial inclusion.[2] Financial inclusion has many hurdles in India, but the two of the most troubling of them to regulators and customers are: 1) authentication of individuals without a fixed address or formal documentation; and 2) secure access to banking services in remote areas.

Aadhaar is seen as a way for people to establish their identity easily and effectively, to any agency, anywhere in the country, without having to repeatedly produce identity documentation.[3] The success of M-PESA in Kenya is partly due to the fact that Kenya has a national identification card. Conversely, the absence of an easy identification mechanism in Tanzania, has been identified as one of the many factors for the relatively slow growth of mobile money in Tanzania.[4]

The following discussion takes a closer look at how UID can make m-banking more accessible in India.

Authentication of Individuals

Aadhaar equal to identity/address proof and KYC

Department of Communications, Government of India (GOI) has recently acknowledged *Aadhaar* as a valid proof of identity (POI) and proof of address (POA) for the purpose of obtaining a new mobile connection. The Reserve Bank of India has also recently recognised UID number as an officially valid document to satisfy Know Your Customer (KYC) norms for opening no frills accounts with banks.[5,6] These two significant decisions provide impetus to the inclusion drive through mobile banking as it:

- Empowers people to join the financial system who could otherwise not obtain a mobile connection for the want of proper identity and address proof;
- Makes the bank accounts accessible to a large section of the financially excluded Indian population who have the UID numbers; and
- Also helps the bank to make the process of account opening relatively easy.

Secure Access to M-Banking

UID as an m-banking enabler: Account Mapper

The Account Mapper essentially facilitates the matching or verification the identification details of a customer with details in the UID database. The major challenge faced by m-banking service providers in India is identification of customers at the time of opening bank accounts and authentication during transaction.[7] This secure and quick authentication provided by the Account Mapper may be used as an integral part of the financial service delivery framework.

Doorstep authentication for micro ATM withdrawals

Micro ATMs allow customers to perform basic financial transactions using only their UID number and their fingerprint as identity proof. A micro ATM is a hand held device, for example, a mobile phone with finger print reader attached to it, which can be a suitable replacement of full fledged ATM machine. This way, the bank can reduce the cost of making money accessible to customers in distant villages by bringing down the cost of the device and the cost of servicing the customer. The process of transaction with micro ATMs is same as the normal ATM machines. Thus it involves going to a micro ATM, authenticating through the finger print reader and then

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[1] See "Mobile Money in Developing Countries" http://english.cri.cn/7146/2011/04/21/2702s633311.htm, accessed on April 28, 2011. The RBI recently increased the transaction amount limit with mobile banking: RBI Monetary Policy 2011-12

[2] See "Are You Ready For M-banking" at http://www.business-standard.com/india/news/are-you-ready-for-m-banking/422760/, accessed on April 28, 2011

[3] For more details on ease and effectiveness of Aadhaar please see UIDAI website http://uidai.gov.in

[4] For further reading please refer to: Gunnar Camner & Emil Sjöblom, "Can the Success of M-PESA be Repeated? – A Review of the Implementations in Kenya and Tanzania"; Dr. Lennart Bångens and Björn Söderberg, " Mobile Banking Financial Services for the Unbanked?"; Paul Makin, "Regulatory Issues Around Mobile Banking"

[5] Vide circular number 800-29/2010-VAS dated 14th Jan, 2011, Department of Communications

[6] Vide notification RBI/2010-11/487: RPCD.CO.RCB.AML.BC. No.63/07.40.00/2010-11, dated April 26, 2011

[7] TRAI consultation paper: Consultation Paper
On Quality of Service requirements for delivery of basic financial services using mobile phones October 28th, 2010

performing the required transaction. The only difference is that (unlike a regular ATM) the micro ATM lies with, and relies on, a business correspondent (BC) of a bank. The BC executes the transaction for the customer after performing the required authentication.[8]

Facilitating transactions among villagers
The UIDAI's authentication process helps banks to verify distant customers and to authenticate transactions happening at far-off locations. This helps to reduce the dependence on cash and the need to maintain high cash balances at customer service points – thus reducing transaction costs. Eventually, this might also result in the reduction of the use of physical cash, which in turn, would give impetus to the flow of electronic money into the system and a cash-light economy.[9]

More potential BC options
The authentication service provided by UIDAI gives a variety of options for BC Network Managers to choose from, (such as SHGs, *kirana* stores, dairy agents), who earlier, due to lack of identification, could not apply to become BC agents. This allows banks to choose the best BC agent, based on the attributes that customers look for in a BC agent.[10] With the increased number of potential BC options, the bank can recruit more and better BCs for an area. Allowing multiple BC agents to operate at the local level increases m-banking options for the villagers. This could create a healthy competitive environment leading to service improvements – assuming that there are adequate customers to make BC agents' business viable.

Development of technological ecosystem
Aadhaar provides a solid foundation for technology service providers on which to build a technological ecosystem to provide a range of financial products and services through mobile banking. The possibilities in this field are numerous including, for example, building applications to route social benefit payments, provident funds and various other government subsidies delivered through the mobile banking platform.

Issues and Challenges of UID in M-banking
UID's challenge
The biggest challenge with UID right now is to accurately generate unique numbers. Another challenge is to capture the personal information from everyone, including the "uneducated" and "difficult to reach", and subsequently to enter the data collected without errors in order to issue the UID numbers.[11] Also, it is of prime importance that access to what is set to be the biggest database in the world is purely for authentication purposes, with systems to ensure the security and confidentiality of information.

Meeting customer anxieties
M-banking has its own challenges. M-banking security technologies are not still perfected.[12] There is a very fine line between optimal bank-grade security and acceptable levels of time and effort users will expend. Clients with limited education, literacy and particularly confidence in the banking system may be even less patient and forgiving – thus potentially putting the agenda of financial inclusion into reverse gear.

Socio-political
The idea of delivering government welfare payments through a UID/m-banking channel is also debated by experts who argue that getting access to social security schemes is the main hurdle for targeted populations and not their inability to prove identity. A customer with a UID linked, m-banking activated, no frills account sees no value if he/she is excluded from the list of those eligible for benefits or if his/her the money simply does not arrive. This could discourage future efforts to create financial inclusion.[13]

Technical issues
Only one bank account can be linked to a mobile number and UID number for the purpose of m-banking. Issues of downtime of database, incorrect authentication because of lack of iris detection devices with service providers (to compensate for the short-comings of fingerprint-based authentication), delays in authentication etc. all challenge the idea of m-banking using UID as the identification instrument.[14]

Summing up, UID can play a big role in proliferation of m-banking and financial inclusion in India. The success (or failure) of the UID will lie in its ability to provide a secure, safe and accessible platform for m-banking on the basis of its identity database.

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[8] Please read concept paper on micro ATM at http://uidai.gov.in/UID_PDF/Working_Papers/MicroATMStandards_v1Draft.pdf
[9] This is also echoed by Ignacio Mas at MMU blog, please see http://mmublog.org/blog/three-enemies-and-a-silver-bullet/
[10] *MicroSave*'s research paper, "Optimising Agent Networks"
[11] Census 2011 website: "India at a glance" http://censusindia.gov.in/2011-prov-results/indiaatglance.html
[12] A.B. Platt, interview , 2 May 2011, re authentication research at AT&T Interactive New Media Development Division, Morristown, NJ, USA , Axsionics, Biel-Bienne, Switzerland, October 2009, August 2010; KGFS, Dehradun, India, September 2010."
[13] EPW editions, http://epw.org.in
- 　Ruchi Gupta, Justifying the UIDAI: A Case of PR over Substance?, October 2, 2010 vol xlv n 136 o 40;
- 　Reetika Khera, The UID Project and Welfare Schemes, February 26, 2011 vol xlvi 38 no 9
[14] K Gopinath, Prof at IISC Bangalore has written extensively about technical issues with UID usage, http://indiacurrentaffairs.org/uid-project-some-technical-issues-ok-gopinath/ There are instances where customer is unable to provider fingerprints as authentication, in these cases iris authentication would play a measure role. *MicroSave* field research studies have shown that not all the customers using mobile banking like the idea of giving finger prints.