Mobile Technologies and Financial Inclusion - Opportunities for Innovation

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Outline

• Introduction: Mobile Technologies & Financial Inclusion
• Financial Inclusion – Policy Framework
• Key Drivers for Mobile Based Financial Inclusion
• Mobile Governance Policy Framework
• E-Pramaan (E-Authentication) Framework
• Issues and Challenges
Financial Inclusion

• FI vital for sustainable economic growth and inclusive development in India
  – ~40% of the population has no access to financial services
  – In rural areas, only ~20% have access to banking services

• Over 75 million no-frills accounts, mostly under NREGA
Role of Mobile Technologies in FI

• ICTs, esp. mobile technologies, critical for facilitating FI:
  – Drastically reduce costs, making low value transactions viable
  – Enable real-time transactions
  – Dramatically expand access points
  – Bridge the last mile gap
  – Displace Cash
Mobile Technologies and FI – Contd.

- Role of mobile technologies in FI:
  - Remote authentication of users (OTP, e-signatures, biometrics)
  - Increase transparency, reduce rent-seeking opportunities
  - Address information asymmetries at the BOP, lower demand side barriers

- However, ICTs also pose challenges for regulators due to security, privacy, and money-laundering concerns
Financial Inclusion - Policies

- BC Model
- Identification - KYC Norms
- Mobile Banking
- Consumer protection
Financial Inclusion - Policies

• Policy Initiatives for FI:
  – IMG Recommendations:
    • Mobile linked “No-frills” Accounts to be operated through M-PIN or biometrics
  – Reserve Bank of India:
    • Relaxation of norms for appointment of BCs
    • Simplified KYC rules
    • Removal of cap on daily transaction for mobile payments
    • Remittances through mobiles to persons not having Bank A/Cs
Financial Inclusion - Policies

- National Payments Corporation of India (NPCI):
  - Interbank Mobile Payment Service (IMPS): 
    - Based on M-PIN and MMID
    - Allows SMS Banking
  - RuPay Debit Card: To drive FI by lowering costs & eliminating cash transactions
- Basically a “Bank-led” model so far – little diversification of providers with the exception of mobile wallet by a few TSPs
Financial Inclusion - Policies

- National Payments Corporation of India (NPCI):
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- Basically a “Bank-led” model so far – little diversification of providers with the exception of mobile wallet by a few telecom providers
- Issues:
  - Interoperability of BCs
  - Authentication of beneficiaries (Aadhaar may address this)
  - Security
  - Variety of mobile devices and platforms (need for open standard architecture)
  - Customer education and awareness
  - Demand side concerns
The Mobile Growth Story in India

- **Exponential growth after 2005**
- **Faster growth in rural areas, though a late starter**
- **Rural penetration expected to cross 45% by end of 2012**
Impact of ICTs on Economic Growth

Statistically Significant Association - 10% growth in Mobile penetration boosts GDP Growth by 0.8% - World Bank
Key Drivers for Mobile Based FI

- Much higher penetration compared to computers/internet - ~900 mil. mobiles compared to just ~13 mil. Broadband connections
- Low cost of handsets and low tariffs – Ideally suited for rural markets
- Successfully used to provide e-Gov, e-Commerce, and financial services in many countries
- Common Service Centres (CSCs) and BC network can exploit mobile technologies for FI – NREGA, old age pensions
- 3G – Huge opportunity for innovations in applications for m-Gov, FI

Mobiles - for payment of wages, fees, operation of bank accounts, micro-credit, etc. with appropriate applications in vernacular languages – G2C and B2C key demand drivers
Financial Services on Mobiles

1. Mobile payments (bills, remittances)
2. Payment of fees for e-Gov services
3. Operation of bank A/Cs
   - Deposits
   - Withdrawals
   - Transfers
4. Micro-credit
5. Ideal for BC model
DEIT’s Mobile Governance Policy Framework

• Framework for Mobile Governance notified by DEIT in Feb. 2012

• **Mobile Governance Framework – Major Policy Initiatives:**
  • Web sites of all Government Depts./Agencies to be made mobile-compliant
  • Open standards to be adopted for mobile applications
  • Uniform Short Codes for M-Gov: 51969 and 166
  • All Govt. Depts. to develop and deploy mobile applications for providing their public services
M-Gov: Implementation Strategy

- **Creation of Mobile Service Delivery Gateway (MSDG):**
  - Central Hub for all mobile transactions
  - Ensures seamless interoperability for mobile transactions
  - Also integrates a Mobile Payment Gateway

- **Creation of a Mobile Governance Innovation Fund by DEIT**

- **Creation of Knowledge Portal and Knowledge Management Framework**

- **Creation of Facilitating Mechanism to ensure:**
  - Compliance with standards for mobile applications & interoperability
  - Implementation of short and long codes across multiple TSPs
MSDG Service Delivery Channels:

- SMS
- IVR (Including the Auto Dialer tool)
- WAP (Wireless Application Protocol)
- USSD (Unstructured Supplementary Service Data)
- Cell Broadcast (CBC)
- Sim Tool Kit (STK)/Dynamic STK, 3G-Video
- Others (WiFi/WLan etc.) – web based access technologies
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Mobile Service Delivery Gateway
Mobile Governance – Current Status

• Mobile Service Delivery Gateway (MSDG) being developed by CDAC
  – Device and Technology agnostic solutions for SMS, USSD, IVR, GPRS, CBC, STK
  – SMS Gateway launched in July 2011
  – 68 Depts.’ services currently live on MSDG
  – Mobile App Store launched: 2 live and 33 generic Applications
    (http://mgov.gov.in/wordpress/appstore/)
• MSDG with all its channels proposed to be developed by 31.12.2012
• 125 Depts. proposed to be integrated with MSDG for deployment and delivery of mobile based services
• MSDG enabled for Integration with all Mission Mode Projects (MMPs)
At present, no common mechanism for e-authentication across all depts.

E-authentication aims at building trust in online transactions and encourage use of electronic mode for Govt. service delivery
- Help eliminate paperwork and offline verification

**E-Pramaan Framework:**
- E-Pramaan Framework covers both web and mobile based authentication
- Defines four types of e-authentication based on application sensitivity levels
  - Username/password, OTP, Digital Certificate/ Mobile PKI, Biometric
- Incorporates and uses Aadhaar Authentication – Expected to drive FI

The National e-Pramaan Framework (NeAF) provides a set of guidelines for e-Authentication of e-Gov users and for authenticating Govt. websites
E-Pramaan: Web Based Authentication
E-Pramaan: Current Status

• E-Pramaan Policy Framework to be finalized by June 2012
• PoC for both Web and Mobile Based e-authentication completed
• Pilot on e-Pramaan under development - to be implemented by June 2012
  – For both web and mobile based authentications
Issues and Challenges

- Localization is a major challenge
- Interoperability of transactions, BCs
- Security, Authentication
  - Aadhaar, E-Pramaan may address this
- Variety of mobile devices and platforms
  - Need for open standard architecture
- Lack of demand drivers – Need for M-Gov and B2C services
- Standards for mobile applications
- Multiplicity of Telcos – providing services seamlessly to the user
Issues and Challenges – Contd.

- For Govt./public agencies - developing appropriate business models (PPP, revenue sharing, etc.)
- Scalability of services on mobile platform
- Appropriate technologies (WAP, SMS, USSD, GPRS)
- Limitations of available handsets & technologies (most phones have only basic features)
- Regional disparities in mobile penetration
- User education and awareness
Fortune at the Bottom of the Pyramid?

"Profiting from the bottom of the pyramid" is gaining momentum among large organizations.

Hey, What are these guys doing here?

Looks like somebody told them that they can find money at the bottom of the pyramid!!

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Thank you. Questions? Comments?