

Mobile banking services: Overcoming the challenges

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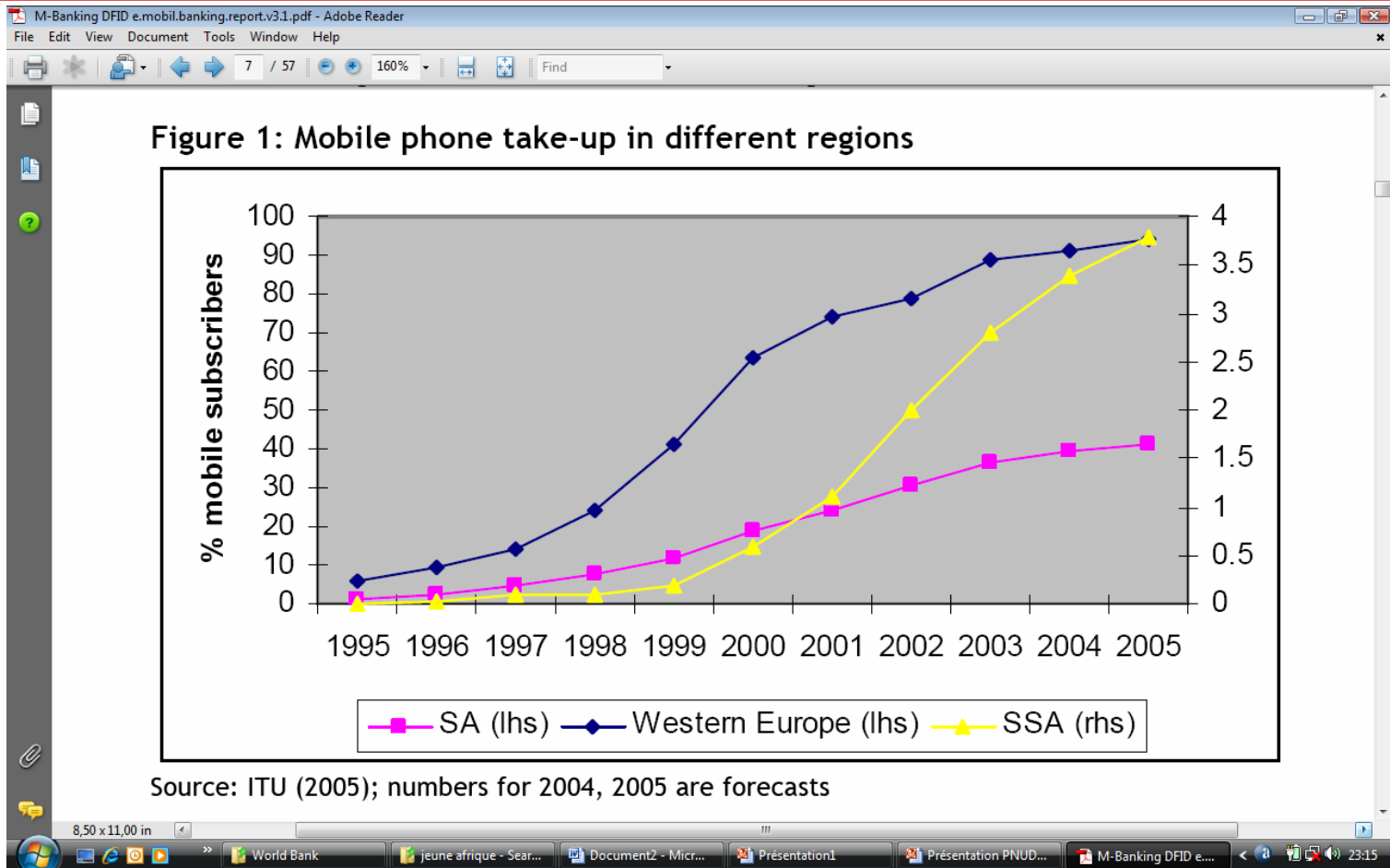
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Overview

- (1) Fact: Explosion of number of mobile phone users vs. bank account holders**
- (2) Mobile phones: an opportunity for microfinance**
- (3) Challenges of M-Banking**
- (4) Stakeholder roles in implementing M-Banking solutions**
- (5) MFI experience with M-Banking constraints**

Spectacular growth of telecommunications in Africa



Mobile Phones vs Bank Accounts

- **In April 2006: 100,000,000 mobile phone subscribers in Africa**
- **The goal for 2010: 300,000,000 subscribers**
- **Only 4% of the population in Africa has an account in a bank or an MFI**

Contrast between GSM and Bank Clients

Ratio: Mobile phone penetration/ number of bank accounts

Table 1: Good mobile coverage but insignificant number of bank accounts in DRC

2006 numbers	# of mobile subscribers	# of bank account holders	Rate of radio coverage nationally
	5,500,000*	60,000	80%
Ratio for pop. of 60 million	0.91%	0.01%	-

Table 2: Comparison of mobile users and bank account holders

2004 numbers	# of mobile subscribers	Rate of mobile phone penetration	# of adult bank account holders	Taux de couverture de la Population
Kenya	2,546,000	7.9%	10%	70%
South Africa	19,500,000	43.3%	45%	96%

Huge potential for MFI use of electronic payment systems

As providers of « credit and/or savings services to poor, economically active people who are excluded from the banking system », MFIs can use mobile applications for:

- ✓ **Piggybacking on links created by mobile operators to maximize use and outreach of POS network**
- ✓ **Mobile phone banking**
- ✓ **E-wallets**
- ✓ **Electronic transfers**

When MFIs take advantage of electronic payment systems

- **Better information management in MFIs (Spandama, India)**
- **More flexibility for MFI clients: saves time, cuts down travel costs and offers convenience of using any MFI branch or ATM (Cooperativa 23 de Julio – Ecuador)**
- **Improved customer service by shortening queues (Cerubed, Uganda)**
- **Better access for rural clients (Standard's Bank, South Africa)**

Potential technological challenges

Interoperability

- Getting products and services from competing MFIs to work together
- Going from 'intrabanking' to 'interbanking'
- Standardization of telcom policies (frequencies)
- Cryptography (legal issues of electronic certification and e-signatures)
- Going from national compensation systems to transnational transfers (automatic compensation)
- Developing a central payment recording system
- Finding trained staff to ensure smooth operations and maintenance of service

Efficiency

- Developing a payment system that is user-friendly and efficient for the economy
- Proving the cost – efficiency link of technology as an added value

Potential challenges

Trust

- **M-Banking is part of a system**
- **Interoperability and M-Banking systemic risks**
 - ✓ **Credit risk**
 - ✓ **Liquidity risk**
 - ✓ **Operational risk**
 - ✓ **Legal risk**
 - ✓ **Systemic risk**

Risk Management

- ✓ **Credit risk:** The MFI has **insufficient funds to cover current financial obligations.**
- ✓ **Liquidity risk:** The MFI has insufficient funds to cover current financial obligations within the system, **though funds may be available at a later date.**
- ✓ **Operational risk:** **Technical weaknesses or operational mistakes** cause or aggravate credit or liquidity risks.
- ✓ **Legal risk:** **Inappropriate legal framework** causes or aggravates credit or liquidity risks.
- ✓ **Systemic risk:** The failure of one institution to meet its obligations prevents other institutions from meeting theirs.

Potential challenges

Security

- **M-Banking is based on virtual exchanges**
- **Legal ramifications of carrying out transactions between people who are absent**
- **Raises issues for MFIs of:**
 - ✓ **Authentication**
 - ✓ **Integrity**
 - ✓ **Confidentiality**
 - ✓ **Cancelling past transactions**
 - ✓ **Cybercrime (new class of criminality)**

Solutions Security

Prevention

- ✓ Identify and authenticate identity of concerned parties (biometrics)
- ✓ Check instrument validity (PIN code, cryptography)
- ✓ Maintain confidentiality of certain elements and immediate warning if intercepted by unauthorized third party (protection of personal data);
- ✓ Ensure transaction ID data integrity (reliable computer systems)

Principles of Prevention

- ✓ No cancelling of payment once made
- ✓ Information on proper use and sanctions in case of wrongful use
- ✓ Centralized payment clearing house
- ✓ Banking prohibition measures
- ✓ Ability to block payments
- ✓ Anti-money laundering

Stakeholder roles in implementing M-Banking solutions

Central Banks:

- **Clearly define its goals, make public aware of its role and main activities.**
- **Ensure that systems adhere to security and efficiency principles to avoid financial shocks.**
- **Ensure compliance with other systems and have the means to do so.**
- **Work with other central banks and other pertinent national and international authorities (financial globalization)**
- **Ensure financial stability (of value of financial assets)**

Stakeholder roles in implementing M-Banking solutions

MFIs:

- **Follow sequential process in roll out of project**
- **Consider M-banking as a new investment**
- **Put in place guidelines for good planning and participative management, budget and specialized human resources**
- **Ensure involvement of all stakeholders**

Funders:

- **Support optimization of MFI M-Banking operations**

Stakeholder roles in implementing M-Banking solutions

Policymakers:

- **Promote access to finance and the use of e-payments**
- **Protect the security of M-Banking and its clients by penalizing criminal offenses**
- **Develop a national microfinance strategy**
- **Put in place well-thought out policies and regulatory frameworks for ICTs**

Financial exclusion

« **The stark reality is that most poor people in the world still lack access to sustainable financial services, whether it is savings, credit or insurance..**

The great challenge before us is to address the constraints that exclude people from full participation in the financial sector

Together, we can and must build inclusive financial sectors that help people improve their lives »

Kofi Annan, UN General Secretary, 29 December 2003

During the announcement that 2005 would be the International Year of Microcredit

THANK YOU

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