Mobile banking: Overview of Regulatory framework in emerging markets

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Abstract:

Across the developing countries, millions of people rely on informal economic activity and local level networks to earn their living. Most of these populations are from bottom of pyramid and they don't have access to basic financial services/banks as access to them is costly and very limited. However, the outstanding growth of mobile sector worldwide has created a unique opportunity to provide social and financial services over the mobile network. With over 4 billion mobile cellular subscriptions worldwide, mobile network has the ability to immediately offer mobile banking to 61% of the world population[1]. A study states the biggest share of mobile payment users will be in the Asia/Pacific region by 2012(Gartner,2008). In the context of being the most promising ICT market and the largest inbound remittance receiver[2], this region is expected to be the hub of m-banking transactions.

The paper starts with an overview of existing models of m-banking and then examines the m-banking regulations in some South Asian countries and of the countries where (e.g. the Philippines, Kenya, South Africa) m-baking/payment system is already in practice or a success. The concerns of financial regulators and policy measures taken so far are discussed in light of the discussions in international forums.

The key questions this paper aims to answer are-

- ⇒ What are the practiced models of m-banking/payment systems?
- ⇒ What concerns are generally raised by financial regulators?
- ⇒ Which m-banking/payment models have drafted or enacted in South Asia?
    - Bangladesh
    - India
    - Pakistan
    - Sri Lanka
- ⇒ Which m-banking/payment models have are enacted in the countries where it is a success
    - Kenya
    - The Philippines and
    - South Africa
- ⇒ What constitutes a proportionate regulatory approach?

The answers to the above questions helps to identify a way forward which can expedite adoption of m-banking/ payments service in South Asia successfully and quickly.

[1] Wireless intelligence, 2009
[2](Ratha., Sanket & Vijayalakshmi, 2009)

List of acronyms

AML	Anti money laundering
ATM	Auto mated teller machine
CFT	Combating the financing of terrorism
CGAP	Consultative group to assist the poor
BB	Bangladesh Bank
BOP	Bottom of Pyramid
BSP	Bangko Sentral Philippino
CDD	Customer Due Diligence
CBK	Central Bank of Kenya
CBSL	Central Bank of Sri Lanka
DFID	Department of international development
EFT	Electronic Fund Transfer
FSD	Financial Sector Deepening
KYC	Know your customer
MNO	Mobile network operator
PSO	Payment service operator
PSP	Payment service provider
RBI	Reserve Bank of India
SBP	State Bank of Pakistan
SARB	South Africa Reserve Bank
SIM	Subscriber Identity Module (in mobile phone)

1. Introduction

Across the developing countries, millions of people rely on formal and informal economic activity and local level networks to earn their living. Most of these populations are from BOP **(**according to World Bank people who earns less than $2 a day: annual income less than PPP US$ 3000) and they don't have access to basic financial service e.g. banks as access to those is costly, not inconvenient and very limited. Access to financial services or banks are vital for those people as- "This lack of access to finance in some parts of the developing world stifles entrepreneurship, stunts development and leaves people trapped in a poor, cash-only society". (Alexander, 2009). Developing countries are still struggling to ensure access of most of its unbanked BOP citizens and the informal sector to the formal financial services.

Mobile banking can be seen as one solution to these problems. Advancements in mobile technology have changed our lives over the past ten years. It has the potential to even more powerfully transform the lives of the world's poorest people. The technology is no doubt the cheapest and most convenient way to connect people and provide array of innovative services. At the start of this century, just 12% of the world's population had a mobile phone. Now that figure is well over 61% per cent (ITU, 2008).

2. South Asia: Access gap

South Asia is one of the fastest growing regions in terms of mobile phone subscribers. The mobile phones are already transforming lives of people here for the better by enabling people to 'leapfrog' (Alexander,2009). Mobile phones play a prominent role in creating and exchanging information, allowing SMEs to communicate with clients and suppliers and allow individuals to remain in contact to family members. But there are scopes of doing more, above 40% have mobile phones while less than 10%[3] people have bank accounts in this region (Wireless Intelligence, 2009). There is a clear market demand that needs to be served. These 40% mobile owners can be targeted immediately, by providing financial services especially to those who may never have had a bank account.

Domestic and international remittances have become indicative of the potential of mobile banking as the case of the Philippines' G-Cash (from Globe Telecom) and Kenya's M-PESAfrom Safaricom[4] demonstrate. International remittance has significant contribution to South Asian countries' national economies. The remittance flows to developing countries reached $305 billion out of which South Asia got US$66 billion (22%) in 2008 (Ratha., Sanket & Vijayalakshmi, 2009) . The top 10 recipients includes 3 member of South Asia- *India,* China, Mexico, Philippines, Poland, Nigeria, Romania, Egypt, *Bangladesh and Pakistan*. However, 'the actual size of remittances would be much higher if informal remittances were taken into account '(Gupta, Pattillo & Wagh, 2009).

The large amounts of money that are remitted home by economic migrants each year are sent home with cost and concerns. According a study the largest concern for those sending money is whether, it will arrive home safely, followed by concerns over excessive charges and delays in receiving the money (Porteus, 2006). Charges for sending money internationally are dependent on whether sender and recipient have bank accounts, the speed of transfer, destination country, sent amount, exchange rates, and so on. The smaller the amount of money sent, the higher the charges (expressed as a proportion of money sent). The cost of sending £100 can vary from 4% to 40% (UK Remittance Working Group, 2007). Above situation justifies expedited adoption of low/no cost, convenient and secured transaction mean in South Asia as large number of emigrant sends remittances(both domestic & international) with small denomination (even of USD50 in amount).

[3] Average of unbanked population : National average of banked population in Bangladesh is 3% (Telenor R&I, 2007) , India 5% (CGAP, 2009), Pakistan approx.2% (Alexander,2009).

[4] Mobile operator in Kenya

“The un-banked are un-banked for a reason. They will only transact electronically if there are limited or no transaction costs involved and if doing so is convenient and secure. Serving the currently un-banked profitably and sustainability requires a radically different approach. A paradigm shift needs to occur in order to determine how the poor can be profitably brought into the banking sector.” (Comninos, Esselaar, Ndiwalana & Stork, 2008). M-banking can shift the paradigm in a convenient and affordable manner. DFID study reveals “mobile remittances offer the prospect of cutting the transaction cost to the customer by half – a saving that could go directly into the pockets of many of the poorest people in the world. Indeed, if all of global remittances were sent by mobile, it would save around $13 billion a year - more than the UK’s annual aid budget. (Alexander, 2009)

3. Overview of Mobile banking model

Introduction and success of m-banking depends on three key determinants- policy & regulation, profitable/sustainable business case for all actors and client uptake. Primarily, policy and regulation sets the foundation stone of the m-banking model.

According to CGAP[5] there are two models of mobile banking. Both the model use retail agents (e.g. merchants, supermarkets or post offices) to deliver financial services outside traditional bank branches but these models of m- banking systems differ primarily on the following questions –

⇒ Who will establish the relationship (account opening, deposit taking, lending etc.) with the end-customer? The answer can be a Bank or a Non-Bank/Telecommunication Company (Telco).

⇒ What is the nature of agency agreement between bank and the Non-Bank.[6]

i. Bank-based model - Every customer has a direct contractual relationship with a licensed and supervised financial institution (whether account-based or involving a one-off transaction) even though the customer may deal exclusively with a retail agent who is equipped to communicate directly with the bank (typically using either a mobile phone or a point-of-sale (POS) terminal)

ii. Nonbank-based model- Customers have no direct contractual relationship with a licensed and supervised financial institution. Instead, the customer exchanges cash at a retail agent (or otherwise transfers, or arranges for the transfer of funds) in return for an electronic record of value.

[5] CGAP is an independent policy and research centre dedicated to advancing financial access for the world’s poor. It is supported by over 30 development agencies and private foundations who share a common mission to alleviate poverty. Housed at the World Bank, CGAP provides market intelligence, promotes standards, develops innovative solutions and offers advisory services to governments, microfinance providers, donors, and investors.

[6] Draft policy paper on regulatory framework for mobile banking in Pakistan

Following table shows the comparison of key issues under those m-banking models-

Table 1. Models of m-banking

Key issues	***Model***	
	Bank based	***Non-bank (NB) Based***
Who regulates	Financial regulator	Telco & Financial regulator
Scope	Additive	Transformational
Who holds the deposit	Bank	Bank
Cash in-out points	Bank	Telco/NB
Dominant brand	Bank	**Telco/NB**
Who has access to the service	**Limited to account holders**	**Limited to subscriber/ universal access**
Carrier/gateway	**Any**	**Telco**
Who owns the customer	**Bank**	**Telco/NB**
Examples	**MTN (S-Africa), other SMS banking services**	**G-Cash, Smart, Celpay (Zambia), M-PESA**

4. Concerns of financial regulator

Regulators need to consider many issues while attempting to increase financial services outreach. A report reveals following 6 issues as the keyconcern of financial regulators (DFID,2006)-

1. Are consumers adequately protected? - Appropriate consumer protection against risks of fraud, loss of privacy and even loss of service is needed for establishing trust among consumers which is the single most necessary ingredient for growth of m-banking. These risks increase when agents are involved and reach to a maximum in non-bank-led model.
2. How do m-payments affect the stability of the banking system and national payment system? - Soundness and stability of the banking system and national payment system are central to financial regulator of any country. However, the question whether or not mobile banking, particularly at its initial stage, becomes a systemically important payment system, needs deliberations. Answer to this question helps in determining the timing and extent of applicability of Core Principals for Systemically Important Payment Systems to mobile banking.
3. Does the law distinguish adequately between payments and deposits? - It is the purpose (for investment or borrowing) and not the mode of payment (cash or electronic) that defines deposit.
4. Does the law provide for e-money[7] issuance? By which entities? –Legal framework which gives authority to provide or accept payment in electronic form.
5. Is there provision for agencies for cash withdrawal and deposits? – Agents authority to deposit or withdraw cash
6. How do anti money laundering (AML) / combating the financing of terrorism (CFT) regulations affect account opening and cash transactions?

[7] According to the Basel Committee's definition e-money is "a stored value or prepaid product in which a record of the funds or value available to the consumer for multipurpose use is stored on an electronic device in the consumer's possession."

4.1 Existing Regulatory Framework for mobile payment in South Asian countries

The growth of mobile phone and dynamic use of mobile based[8] services among south Asian population indicates that this region can be a potential region for m-banking adoption (Deloitte,2008). Regulators in this region have been working on the framework for quite a while and have been cautious while outlining the guidelines.

4.1.1 Bangladesh

Bangladesh Bank (the Central Bank) has published the draft Bangladesh Payment and Settlement System Regulation 2009 (the Regulations) with the aim of modernizing the payment and settlement systems functioning in Bangladesh. BB will have the authority to grant licenses for payment systems[9], payment system operators[10] (PSO) and payment service providers[11] (PSP) for operation of the payment systems and payment services in bank based model of Bangladesh.

Under this Regulation the interested parties are required to acquire licenses from the BB subject to making of application and payment of appropriate fees although the Regulations exempt existing banks and financial institutions from acquiring the license

Table 2. Legal & regulatory issues: Bangladesh

Model	Bank based
KYC	Customers will have to fill out an application form at banks or agents. The bank will verify the customer under its 'know your customer' (KYC) process to issue a prepaid card. The customer's information must match the information with the bank and the information he or she provided to telecom companies, through host-to-host connectivity.
Maximum limit of transactions	BDT 10,000
AML/CFT	Regulated under ‘Money laundering prevention act 2002’
E-money issuance	Any entity authorized by BB
Payment system	Regulated under ‘Payment and settlement system regulation 2008’
Cross border money transfer	Not allowed
Other applicable law	Foreign Exchange Regulation Act 1947 Payment and Settlement System Regulation 2008

[8] Recent study out of Harvard tracked fishermen off the coast of Kerala in southern India, and found that when they started using mobile phones to call around prospective buyers while they were still out at sea, their profits went up by an average of eight per cent - while prices in the local marketplace actually went down by four per cent. Mobile phones didn’t just result in a better deal for producers – they led to a better deal for consumers as well. (Alexander, 2009)

[9] *Payment System”: means a system that enables payment to be effected between a payer and a beneficiary, involving clearing, payment or settlement service or all of them*

[10] Payment System Operator” refers to an entity licensed by the Bangladesh Bank for operating a settlement system for payment activities between participants of which theprincipal participant must be a scheduled bank or financial institution maintaining accounts with Bangladesh Bank for meeting Cash Reserve Requirement

[11] *“Payment Service Provider”* refers to an entity licensed and approved by the Bangladesh Bank that provides payment service(s) to its participants or to a payment system for the purpose of facilitating payment(s) or the payment processes settling their transactions through a scheduled bank or financial institution maintaining accounts with Bangladesh Bank for meeting Cash Reserve Requirements.

	Bangladesh EFT Consumer Protection Regulations 2008

The Regulations also lay provisions for the Bank to undertake corrective and remedial measures to protect against violation of the licensing terms and conditions including power to suspend or revoke the license, impose financial penalty and order compensation.The Regulations however leaves room open for the Bank to issue rules, procedures, guidelines and directives under the Regulations in order to govern paper-based payment items and other instruments that are eligible for transaction and electronic check image presentment. Besides the Regulations sets provisions for the Bank to recognize the new payment instrument as a Designated Payment Instrument for protecting the interest of the public by ensuring integrity, security and reliability of the payment system.

In September 2009, BB has given approval to three commercial banks to introduce e-money service named ‘Digital money electronic prepaid system’.

4.1.2 India

In year 2008, the Reserve Bank of India (RBI) issued mobile banking guidelines that permit only licensed banks with a physical bank presence in India to launch mobile banking. This disqualifies mobile network operators from offering their own service

The ‘Operative Guidelines for Banks’ issued by Reserve Bank of India specifies that ‘Only banks, licensed and supervised and have a physical presence in India, will be permitted to offer m-banking services’. Services shall be restricted only to customers of banks and holders of debit/credit cards issued as per Reserve Bank of India guidelines.

Table 3: Legal & regulatory issues: India[12]

Model	Bank based
KYC	Banks shall put in place a system of document based registration with mandatory physical presence of customers, before commencing m-banking service.
Maximum limit of transactions	Per transaction limit INR 2500, Overall cap of INR. 5000 per day, per customer
AML/CFT	Regulated under the ‘Prevention of Money Laundering Act 2002’
E-money issuance	Policy on e-money clearly does not permit issuance by non-banks
Payment system	The Payment and Settlement Systems Bill 2008
Cross border money transfer	Strictly prohibited
Other applicable law	Competition Act (2002). Consumer Protection Act (1986)

4.1.3 Pakistan

State Bank of Pakistan (SBP) is the regulatory authority of Banks, Development Finance Institutions, Microfinance Banks and rest of the financial institutions in Pakistan. SBP issued a policy paper on Mobile Banking which elaborately discusses models of mobile banking and associated risks. SBP recommends bank-based model with the scope of introducing non-bank-based model at later stage.

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[12] CGAP-Notes on Regulation of Branchless banking in India, January 2008

in that context the bank based model 'EasyPaisa' the m-banking service by Telenor Pakistan[13] and Tameer bank, went live on Oct 14 2009 in Pakistan. Telenor during this short span has seen modest success. Within the first few days, they handled 20,000 bill payments ranging from very large to small, with the average amount transacted being USD 13.

Table 4: Legal & regulatory issues: Pakistan[14]

Model	Bank based
KYC	National Identity card (Easy paisa is using it for customer authentication)
Maximum limit of transactions	A customer can do a maximum of 3 transactions per month. The monthly limit for sending or receiving is PKR10,000
E-money issuance	Electronic Transaction Ordinance, 2001 permits an appropriate authority to provide or accept payment in electronic form
Other applicable law	The Electronic Crime Bill (2006)

4.1.4 Sri Lanka

CBSL Central Bank of Sri Lanka) has all the necessary legal powers to regulate the mobile payments under the 'Payment and Settlement System Act of 2005'. The framework for mobile payments is expected to be finalized in 2009. Sri Lankan regime allows non-bank-based model of m-banking under the broad framework of the 'money, payment, clearing and settlement service provider's regulations no. 1 of 2007.[15]

4.2 Successful models of m-banking

The question for South Asian regulators is to what extent the m-payment or banking should be regulated. We can take the practical examples of the regulatory regimes of Kenya, the Philippines & South Africa and learn from their successful examples.

4.2.1 Tested model: Kenya

Vodafone and Safaricom's[16] mobile money transfer service in Kenya M-PESA was launched in September 2007. When this non-bank based model was launched, Vodafone were aiming to add 200,000 subscribers in the first year. Two years later with 6.3 million[17] subscribers, there are more M-PESA customers in Kenya than there are bank accounts.

[13] Second largest mobile operator in Pakistan

[14] CGAP-Notes on Regulation of Branchless banking in June 2007 & the draft policy paper on regulatory framework for mobile banking in Pakistan

[15] Mobile payments- will Colombo keep its leadership in South Asia by Muhammad Aslam Hayat (Sunday Times- July 2009)

[16] mobile phone operator in Kenya

[17] (Rasmussen, 2009)

Following results from a survey done by (FSD, 2009) shows the impact of M-PESA to the life of Kenyans(figure 1,2,3,&4).

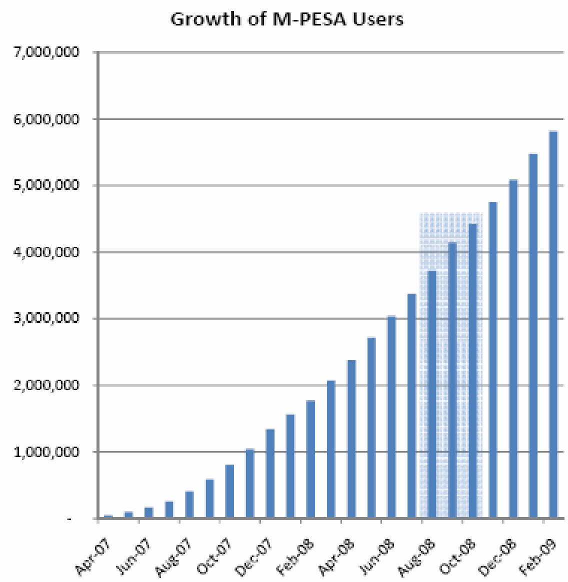

Figure-1: Growth of M-PESA
(Safaricom, 2009)

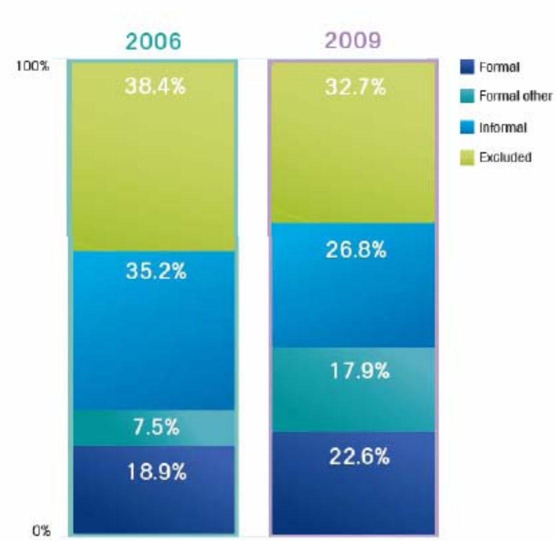

Figure 2: Financial access scenario
(Fin Access, 2009)

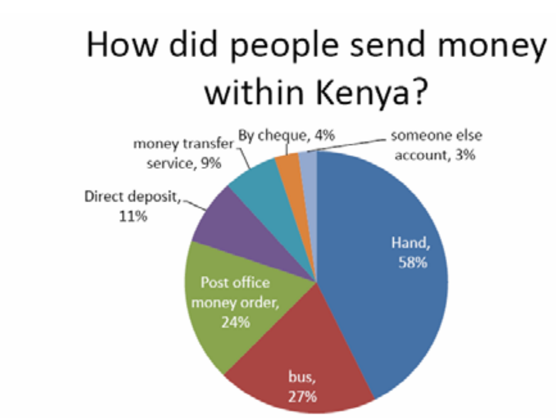

Figure-3. Money transfer scenario 2006
(FSD Kenya,2009)

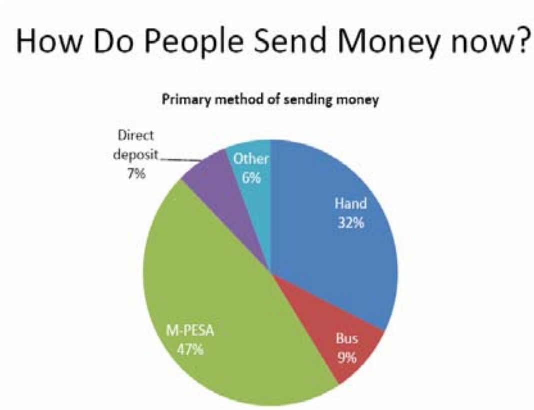

Figure 4: Money transfer scenario 2009
(FSD Kenya,2009)

4.2.2 Regulation

Prior to the launch of M-PESA services in Kenya, Safaricom sought authorization from the Central Bank of Kenya (CBK) to undertake the money transfer service. In evaluating the proposal, the CBK considered the request on the basis of safety, reliability and efficiency of the service (Sirken,2009). Two CBK departments had been involved in this effort. The Financial Institutions Supervision Department (FISD) is responsible for the prudential regulation of banks and deposit-taking MFIs. Its primary concern regarding M-PESA was whether the operator (Safaricom) is stretching or even breaking the rules for the business of banking. By contrast, the National Payment System (NPS) Division of the Banking (which focuses on the integrity, effectiveness, efficiency, and security of the payment system) viewed M-PESA as a payment service provider. The NPSD were more willing than the FISD to permit experimentation with the nonank-based model of m-banking[18]. (CGAP, 2007). Interestingly, in Kenya telecommunications regulations require that a mobile network operator offer only the telecommunication services listed in its license andm m-banking falls under the definition of telecommunication service in the law . hence, Safaricom stand was should therefore the service should be listed in the license agreement.[27] However, the primary regulator with respect to a mobile network operator's m-banking activities will be the banking regulator (i.e., CBK) (CGAP,2007).

Precautionary measures were put in place to ensure that the services did not infringe upon the banking services regulatory framework as provided for under section 2(1) of the Banking Act. Specifically, the proceeds from issuing e-money are held by M-PESA Trust Company Limited in trust for the clients in a pooled account with the Commercial Bank of Africa. Any interest earned on this pooled account cannot benefit Safaricom (without triggering the definition of "banking business"); use of interest proceeds is currently under consideration. Customer claims against M-PESA Trust Company arising from negligence or intentional wrongdoing by the trust company or by Safaricom shall be covered by Safaricom. In addition, caps on the maximum account balance (about US$ 750) and maximum transaction size (about US$ 530) provide CBK with additional comfort because they limit the risks of money laundering and the amount any individual customer could lose in case of insolvency." (CGAP,2007)

Table 5: Legal & regulatory issues: Kenya[19]

Model	Non-bank based
KYC	Account opening (both on site and remotely) while maintaining adequate "know your customer" (KYC) standards. Domestic and international transfers of funds are not subject to specific KYC rules.
Maximum limit of transactions	KES 50,000 per M-PESA account per day and a transaction limit of KES 35,000 per day in order to mitigate against settlement risk
AML/CFT	AML bill 2007
E-money issuance	Kenya has no laws, regulations or policies dealing directly with e-money
Payment system	There is no law in Kenya expressly governing the payment system.

4.2.2 Audit Order

Then acting Finance minister, John Michuki, in 2008 ordered an audit of M-PESA operations citing money laundering concerns. The purpose of the audit note was to provide insights as to how this innovative money transfer service has developed, how it has enabled the transfer of funds to the un-banked and how the Central Bank of Kenya (CBK) continues to oversee its operations in order to ensure their safety and efficiency.

The issues and risks that had been raised over M-PESA, Mr Kinyua said, have been mitigated through a number of measures which CBK and the Communication Commission of Kenya (CCK) monitor regularly.

[18] CGAP-Notes on Regulation of Branchless banking in Kenya, November 2007

[19] CGAP-Notes on Regulation of Branchless banking in Kenya, November 2007

The central bank has proposed and formulated the enactment of the National Payment System Bill that will strengthen its mandate as an oversight body over all payment systems including money transfer.

The 16 points audit finding states that M-PESA service[20]

1. Does not accept from members of the public money or deposits that are repayable on demand or at the expiry of a fixed period or after notice;
2. Does not employ money held or any part of the money for purposes of lending and investment or in any other manner for the account and at the risk of the person so employing the money.

- In M-PESA, money collected by agents is deposited in a trust account in one of the leading commercial banks in Kenya. This trust account provides the legal protection for the beneficiaries. The money in this trust account is not under the control of Safaricom and cannot be employed for purposes such as lending, investing or in any other manner for the account. Legal protection of the money in the trust account is provided for in the trustee deed. Various legal instruments pertaining to this service, including the trustee deed have been presented to the Central Bank and reviewed accordingly. Further to this, funds in the trust account deposited in the designated commercial bank are regulated by the Central Bank of Kenya under the Banking Act. The Trustee holds funds on behalf of all M-PESA System participants under a Declaration of Trust (the Trust Deed).

A number of critical issues and risks have been reviewed during the audit that could compromise the safety, efficiency, integrity and effectiveness of the M-PESA system.

These risks have been mitigated through a number of measures which the Central Bank and the Communications Commission of Kenya (CCK) monitors regularly.
The Central Bank of Kenya has continued to oversee the service in line with its 'Oversight Policy Framework' document on payment systems in Kenya[21].

4.3 The Philippines

The Philippines has been proclaimed one of the leaders in mobile banking with its Smart Money and G-Cash initiatives. Their non-bank-based/Telco model allows person to person transfers, purchase of goods from merchants and bills payment.

Smart Money: a re-loadable payment card issued by Banco de Oro that may either be accessed through a Smart SIM card or a MasterCard powered card, similar to a debit/cash card.

G-Cash (offered by Gxchange, a wholly-owned subsidiary of Globe Telecom[22]): a cash-less and card-less method of transforming a mobile phone into a virtual wallet.

The BSP (central bank of the Philippines), has practiced a flexible but hands-on role in the emergence of mobile banking in the Philippines. In 2000, BSP issued two circulars requiring banks wishing to offer services via electronic channels to seek prior approval from BSP before offering them to the public. Pursuant to the circulars, five commercial banks (each having applied individually) have entered into partnerships with Smart, the largest MNO, to use the Smart Money mobile payments platform for account opening, marketing, data processing and other functions. Meanwhile, rural banks seeking a similar partnership with GCash[23] follow a different path.

[20] http://kenyapolitical.blogspot.com/2009/01/ministry-of-finance-audit-findings-on-m.html
[21] , www.centralbank.go.ke
[22] A telecom company in the Philippines
[23] The mobile banking service offered by Globe, the second largest MNO in the Philippines

The general banking law of 2000 allows micro-finance as a legitimate banking activity. The law gives "full authority to regulate the use of electronic devices, such as computers, and processes for recording, storing and transmitting information and data in connection with the operations of a bank… including the delivery of services and products to customers by such entity." (CGAP,2008). The Philippines also adopted an Electronic Commerce Act in 2000 (the "E-Commerce Act'), which recognizes the validity of electronic transactions and electronic signatures and provides the basis for the prosecution of electronic crime, giving a degree of security to private sector actors concerned about repudiation of transactions, legal standing of electronic records, and standards for prosecution of e-commerce crimes. Both of the above laws cover mobile and electronic banking risk management, security procedures, internal controls, anti-money laundering regulations, know your client requirements and consumer protection. The BSP also created a core IT supervisory team to effectively supervise and remain abreast with the latest development in mobile and electronic banking.

Table 6: Legal & regulatory issues: Philippines[24]

<table>
<tr><td>Model</td><td colspan="2">Non-bank based</td></tr>
<tr><td></td><td>SMART money</td><td>G Cash</td></tr>
<tr><td>KYC</td><td colspan="2">Formal ID card,</td></tr>
<tr><td>Maximum limit of transactions</td><td>Daily limit: PHP 50,000 (approx. USD 1,100)</td><td>Single transaction limit: PHP 10,000 (approx. USD 220)

Daily limit: PHP 40,000 (approx. USD 880)

Monthly limit: PHP 100,000 (approx. USD 2,200)</td></tr>
<tr><td>AML/CFT</td><td colspan="2">Comply with the Anti-Money Laundering Act(AMLA)</td></tr>
<tr><td>E-money issuance</td><td colspan="2">Electronic Commerce Act in 2000</td></tr>
<tr><td>Payment system</td><td colspan="2">No law/regulation for the national payment system</td></tr>
</table>

4.4 South Africa

The South African government has taken an active role in creating regulations to facilitate the development of bank-based m-banking. Currently it has two m-banking models WIZZIT and MTN Mobile Money – both of which involve non-banks and banks working in partnership. For both, the bank account application is fully integrated with the mobile phone, enabling the customer to use the mobile phone itself as a payment instrument.

SARB (Central bank of South Africa) issued two documents impacting m-banking-

I. Position Paper on Electronic Money which stated that only banks will be permitted to issue electronic money. Stored value payments products in South Africa can therefore only be operated by banks.
II. Bank Circular 619 allowing banks to open mobile phone-operated bank accounts (within certain transaction and balance limits) without having to undertake face-to-face KYC (know your customer) procedures.

[24] CGAP-Notes on Regulation of Branchless banking in the Philippines , May 2008

Table 7: Legal & regulatory issues: South Africa[25]

Model	Bank based
KYC	South African Identity number
Maximum limit of transactions	ZAR 1,000 per day
AML/CFT	The Financial Intelligence Center Act (FICA) and its regulations govern anti-money laundering.
E-money issuance	Only banks can issue
Payment system	Regulated by National payment systems act

4.5 Comparison of Regulatory framework

Among the above three m-banking models of Kenya, Philippines and South Africa (SA), SA has relatively less impact compared to others. A study states "South Africa's position is surprising: experiments began there comparatively early and several well known pioneering models such as Wizzit and MTN Mobile Money emanate from there, but the role that non-banks can play in issuing e-money is circumscribed by the current guidance note on e-money which has frustrated some potential innovators. To further enhance its environment, South Africa would have to amend its position, for example by creating a category of regulation for non-bank e-money issuers, or 'narrow banks,' a step that has in fact been suggested". (Porteus, 2009)[26]

[25] CGAP-Notes on Regulation of Branchless banking in South Africa, February 2008
[26] Porteus. D. Mobilizing Money through Enabling Regulation,2009

Table 8: Impact of different m-banking models

Deployment	***M-PESA***[27]	***MTN Banking***[28]	***G cash***
Launch date	2007	2005	2005
M-banking model	Non-bank based	Bank based	Non-bank based
Some key figures	- 6.3 million customers - 9000 agents - US$170 million P2P transaction in Feb. 2009	Not reported as yet	- 1.2 million registered users into virtual wallets, posting a transaction volume of about PHP 5 billion a month[29]
Customer experience	-Users say it is faster (98%), more - Convenient (97%), and safer (98%) than alternatives • 4 out of 5 say not having it would have a "large negative impact" on their lives • It is the main means of sending money for 50% of Kenyans	- MTN Banking charges are among the highest - For a client using the full service basket, none of the South Africans — WIZZIT, MTN, or the countries Big 4 gets close to meeting the threshold for affordability. - Fees ranged about 4 to 7 times greater than what would be affordable.	G Cash one of the most affordable among the m-banking products[30]
Impact on the life of unbanked	Medium/High	Low	Medium/High

Above overview of regulatory frameworks in different countries highlights that the successful cases of m-banking or payment are in those regimes where non-bank based models has been introduced. That is why, most of the countries are adopting the liberal model i.e. non-bank based model, According to a study 'Number of countries where non-banks have found accommodation has been larger than where it is prohibited'. (Rasmussen, 2009)

5. Way Forward

In south Asia the arguments between bank and non-bank based model has been debated for quite a long time. On that note, the issue of rigorous regulation has already been questioned by regulatory specialist/ industry analyst. "Mobile payments should not be seen as a turf war between the financial and telecommunication sectors but as a complement to existing financial services. The genuine concerns of banking regulators about mobile payments and mobile banking must be addressed in any framework touching the financial system of a country. For a banking regulator it is important to provide adequate

[27] Rasmussen, S. (2009). The hype, cycle and mobile banking.

[28] Rosenburg, J, (2008). How do you price a mobile banking service. Retrieved from CGAP website on 5 December,2009. http://technology.cgap.org/2008/08/25/how-do-you-price-a-mobile-banking-service/

[29] http://www.mb.com.ph/articles/232220/globe-showcasing-gcash-mobile-money-summit

[30] Rosenburg, J, (2008). How do you price a mobile banking service. Retrieved from CGAP website on 5 December,2009. http://technology.cgap.org/2008/08/25/how-do-you-price-a-mobile-banking-service/

protection for consumers, ensure economic stability, provide interoperability of electronic systems and guarantee security of transactions. Central Banks, while allowing mobile payments, have to ensure the stability of the banking and payment systems and also ensure that issuance of e-money does not harm the national economy. For the purpose of checking how much credit is in the market, there should be an adequate level of transparency. The Anti-Money Laundering and Know-Your-Customer principles must also be applied to mobile payments"-(Hayat, 20*09)*[31].

On this area, the regulatory practices of Kenya or the Philippines where m-banking has been successful) can clearly help the regional regulators to customize their model accordingly. While drafting existing laws/regulation in the financial sector, the convergence of banking, payments and telecommunications were not taken into account. Hence, those laws may be over or under protective. In this case the regulators can start with existing law or with a modified version of exiting law. Later they can make changes on an as-required basis or rapidly to keep the pace with developments (CGAP,2008). Regular monitoring with a capable monitoring team (capacity of monitoring is very crucial in this case) and periodic audit would help to maintain balance between the benefits and the risks[32].

On the other hand, in certain issues neither governments nor regulators alone will be able to determine which m-banking/payment model will really work in respective market. Especially for those governments who face difficulties on the questions - how to balance extending the reach of financial services as quickly as possible to as many as possible, while ensuring that they protect the vulnerable. DFID wants, to support those Governments in taking these tough decisions. That is why they announced three year project to help regulators to share experience, learn from where others have gone before and in so doing, help expand the availability of this m-banking across the developing world (Alexander,2009). The developing countries can harmonize with DFID announced program FAST[33](Facilitating Access to Financial Services through Technology program. This program plans to support m-payment/banking area in three ways:

- Firstly, DFID will provide support to introduce branchless banking to mass markets in developing countries across Africa and South Asia where there are high numbers of people without access to finance. This will include helping Governments to look at using technology for their own social protection payments to citizens – helping to bring down public costs at a time when literally every penny counts.
- Secondly, DFID will carry out at least eight research studies world-wide to look into how new technologies such as mobile phone banking, smart cards and biometric banking are already helping the poor to access financial services. And
- Thirdly, DFID will help to develop the industry standards for this new area of regulation – starting with a conference in London next month, which will bring together financial and technology regulators from 20 developing countries to share lessons.

6. Conclusion

Challenge regarding m-banking to policy-makers and regulators is two-fold: Firstly, to encourage banks and mobile operators to develop solutions that are not proprietary, and secondly, to allow access to potential new entrants that can disrupt the lucrative business models of the banks and mobile operators. The key challenge is to do this while at the same time ensuring high levels of security and trust. "Just like convergence forced the integration of broadcasting and telecommunications, so mobile banking is forcing the convergence of the financial and telecommunications sectors. Unfortunately, the convergence of two such heavily regulated industries means that this potential is unlikely to be met unless policy-makers lay the ground rules for innovation." (Comninos, Esselaar, Ndiwalana & Stork 2008)"

[31] http://sundaytimes.lk/090712/FinancialTimes/ft323.html
[32] CGAP-Notes on Regulation of Branchless banking in the Philippines , May 2008
[32] CGAP-Notes on Regulation of Branchless banking in South Africa, February 2008
[33] http://www.dfid.gov.uk/Media-Room/Speeches-and-articles/2009/Douglas-Alexander-sets-out-how-branchless-banking-can-help-the-poorest-people/

Rather than being very conservative or getting confused with Bank-based or non-bank based model, we should adapt a tested version (of course with some customization according to specific national circumstances) which has been already successful in some parts of the world. Generally the transferred amounts are capped and extensive/ regular monitoring is done on transactions, so there should not be very conservative approach from the financial/ relevant regulators. " Banks need to get back to basics and focus on making money through financial intermediation rather than through transaction fees. Policy-makers and regulators need to ensure that evolving systems serve the broader objectives of economic growth and development as well as protect consumer interests, while creating an environment that encourages and rewards innovation". (Comninos, Esselaar, Ndiwalana & Stork 2008)"

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Reference:

1. Comninos, A., Esselaar, S., Ndiwalana, A. & Stork, C., (2008).Towards evidence-based ICT policy and regulation m-banking the unbanked, (Policy Paper 4)

2. DFID (2009, February 12). Douglas Alexander sets out how branchless banking can help the poorest people. Retrieved September 26,2009, from http://www.dfid.gov.uk/Media-Room/Speeches-and-articles/2009/Douglas-Alexander-sets-out-how-branchless-banking-can-help-the-poorest-people/

3. Kumar, Anjali, Nair,A., Parsons, A., & Urdapilleta, E,. (2006). Expanding bank outreach through retail partnerships: correspondent banking in Brazil, Working Paper No. 85. Retrieved September 25, 2009, from World Bank Web site:

http://siteresources.worldbank.org/INTTOPCONF3/Resources/363980Retail0p101OFFICIAL0USE0ONLY1.pdf.

4. Lyman,T., Ivatury & Staschen (2006). Use of agents in branchless Banking for the Poor: rewards, risks, and regulation. Retrieved September 25, 2009, from CGAP Web site: http://www.cgap.org/portal/binarycom.epicentric.contentmanagement.servlet.ContentDeliveryServlet/Documents/FocusNote_38.pdf)

5. Porteous, D. (2006). The enabling environment for mobile banking in Africa. DFID.

6. Philippines regulator shares experience of mobile banking with Nigeria's bankers. Retrieved September 25, 2009, from Aitec Africa Web site:http://www.aitecafrica.com/news/view/79

7. Ratha,D., Sanket & Vijayalakshmi, K.M. (2009). Remittance flows to developing countries are estimated to exceed $300 billion in 2008. Retrieved September 24,2009, from the Migration, remittance and development blog:
http://peoplemove.worldbank.org/en/content/remittance-flows-to-developing-countries

8. Rosenburg, J, (2008). How do you price a mobile banking service. Retrieved 5 December,2009 from http://technology.cgap.org/2008/08/25/how-do-you-price-a-mobile-banking-service/

9. Sirken. (2009). Ministry of finance audit findings on M-Pesa money transfer services. Retrieved September 25, 2009, from the Kenya political blog:
http://kenyapolitical.blogspot.com/2009/01/ministry-of-finance-audit-findings-on-m.html