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MOBILE MONEY

FOR BUSINESS DEVELOPMENT IN THE EAST AFRICAN COMMUNITY

A Comparative Study of Existing Platforms and Regulations

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PREFACE

In 2006, the Council of Ministers of the East African Community (EAC) identified the creation of a regional enabling legal and regulatory environment as a critical enabling factor for the effective implementation of e-Government and e-commerce strategies at national and regional levels. Under its mandate to offer technical assistance to developing countries in the area of legal and regulatory reform related to information and communication technology (ICT), the United Nations Conference on Trade and Development (UNCTAD) has since been assisting EAC in building a harmonized framework for cyberlaws across the five Partner States. As a result, EAC Legal Framework for Cyber Laws Phase I – covering electronic transactions, electronic signatures and authentication, cyber crime as well as data protection and privacy – was adopted in 2010 by EAC Council of Ministers on Transport, Communications, and Meteorology. It is being implemented at national level. Phase II of the Framework is expected to be examined and adopted in 2012, covering intellectual property rights, competition, e-taxation and information security.

Adoption of harmonized cyberlaw frameworks and transposition of such frameworks into national laws are essential to ensure an adequate legal response to challenges and opportunities raised by the increasing adoption of information and communication technologies (ICTs). The rapid spread of mobile phone services in money transactions, which are a potentially great contributor to the region's economic development and establishment of the common market has added urgency to the need for an effective and robust legal and regulatory framework. EAC has been ahead of other parts of the world in electronic money transfers, with M-PESA which started operating in Kenya in 2007, having taken the lead in terms of innovation for providing more inclusive access to finance to a large part of the population who hitherto had been without a bank account.

Mobile commerce at large is gaining importance in many developing countries. From the perspective of small businesses, mobile solutions can be applied to facilitate money transfers as well as merchant, bill and salary payments. More sophisticated financial services, such as credit, savings and insurance schemes, are also likely to expand in the coming years. Their successful implementation will require that mobile network operators enter into effective partnerships with banks, micro-finance institutions, insurance companies or other organizations. It will also require that consumers and business users be able to trust the systems on offer.

In this context, Governments must address a range of policy challenges and issues to ensure positive outcomes from the introduction of mobile money services. Developments in East Africa or of particular relevance in this context, as countries in this region are at the frontier in terms of mobile money deployments and are actively seeking to draw maximum benefits from this new opportunity.

This comparative study of existing mobile money platforms and regulations in EAC contributes to our pool of knowledge in this area. It was conducted as a part of the work on ICT for development conducted by UNCTAD.

The principle consultant responsible for drafting the study was Ali Ndiwalana. The study was prepared by a team from UNCTAD comprising Torbjörn Fredriksson and Cécile Barayre, under the direct supervision of Mongi Hamdi and overall guidance of Anne Miroux. Statistical, administrative and secretarial support was provided at various stages by Smita Barbattini and Agnes Collardeau-Angleys.

Valuable comments and inputs were received from Robert Achieng, Luca Castellani, Xavier Faz, Shruti Kashyap, Diana Korka, Rémi Lang, George Lwevoola, Stephen Mwaura, Michael Tarazi, Dr. Jovita Okumu and Ian Walden. Special thanks are also given to the members of EAC Task Force on Cyberlaw, as well as the many representatives of Government ministries, financial and regulatory institutions, universities and the private sector in EAC who were interviewed and gave feedback during the course of the study.

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ACRONYMS AND ABBREVIATIONS

Term	Description
AML/CFT	Anti-Money Laundering/Combating the Financing of Terrorism
ARCT	Agence de Régulation et de Contrôle des Télécommunications
ARPU	Average Revenue Per User
ATM	Automated Teller Machines
BCR	Commercial Bank of Rwanda
BNR	National Bank of Rwanda
BoT	Bank of United Republic of Tanzania
BOU	Bank of Uganda
BRB	Bank of the Republic of Burundi
CBK	Central Bank of Kenya
CCK	Communications Commission of Kenya
EAC	East Africa Community
EACO	East African Communications Organisation
FCC	Fair Competition Commission
FCT	Fair Competition Tribunal
FIU	Financial Investigation/Intelligence Unit
GPRS	General Packet Radio Service
GPS	Global Positioning System
IMEI	International Mobile Equipment Identity
IRA	Insurance Regulatory Authority
ISP	Internet Service Provider
KADET	Kenya Agency for Development of Enterprise and Technology
K Sh	Kenyan Shillings
KWFT	Kenya Woman's Finance Trust
KYC	Know Your Customer
LDC	Least Developed Country
NWSC	National Water and Sewerage Company
N/A	Not Applicable
MFI	Micro-Finance Institution
MNO	Mobile Network Operator
MM	Mobile Money
P2P	Person-to-Person
P2B	Person-to-Bank
PIN	Personal Identification Number
POS	Point of Sale
RTGS	Real Time Gross Settlements
RURA	Rwanda Utilities Regulatory Agency
SIM	Subscriber Identity Module
STK	SIM Toolkit

SMS	Short Message Service
TSh	The United Republic of Tanzanian Shillings
TCRA	United Republic of Tanzania Communications and Regulatory Agency
UCC	Uganda Communications Commission
U Sh	Ugandan shillings
URA	Uganda Revenue Authority
USSD	Unstructured Supplementary Service Data
UTL	Uganda Telecom Limited
VAT	Value Added Tax
VCN	Virtual Pay Card Number
WAP	Wireless Application Protocol

A. INTRODUCTION

There is growing enthusiasm about the increasing number of mobile phones in the developing world and the potential of the mobile platform in helping to address the needs of individuals and small businesses.[1] On the back of the rapid uptake of mobile telephony in developing countries, many wireless applications of relevance for small enterprises have emerged. Mobile money is one of the most notable applications of this trend, a phenomenon that took off in earnest only in the past few years. According to data from the GSM Association, some 130 mobile money deployments had been implemented at the end of March 2012, spanning all developing regions.[2] Interestingly, Africa is leading the trend with 60 such systems. And within Africa, the East African Community (EAC) is at the forefront.[3]

Mobile money offers new possibilities for making financial services more inclusive in EAC and beyond. Unlike conventional banking and financial services, mobile network operators (MNOs) have made huge investments to create networks that reach further and deeper into rural areas historically marginalised in an effort to satisfy their demand to communicate.[4] As average revenue per user (ARPU) from traditional services decline, MNOs and their partners are looking at this network platform to offer new kinds of services. In addition, there is a wide range of cheap mobile phones making them affordable to a wider section of the population and a common artefact across EAC.

Ordinarily, regulators and Governments in EAC tend to look towards the developed world for prior art. But in the case of mobile money, the situation is the reverse. EAC region is at the forefront of the mobile money revolution with a number of implementations amongst the few that are gaining traction globally and, as a result, has few examples to draw from elsewhere. Instead, countries in this region—four of which are least developed countries (LDCs)—can provide leadership and example through experimenting with new models and ways of doing things such that they do not erode past achievements but instead create more development opportunities.

Box 1: What is mobile money?

Mobile money is there used loosely to refer to money stored using the SIM (subscriber identity module) in a mobile phone as an identifier as opposed to an account number in conventional banking. Notational equivalent is in value issued by an entity (an MNO in this case) and is kept in a value account on the SIM within the mobile phone that is also used to transmit transfer or payment instructions, while corresponding cash value is safely held elsewhere, normally in a bank for the case of EAC. The balance on the value account can be accessed via the mobile phone, which is also used to transmit instant transfer or payment instructions.

This report is a survey of mobile money services across EAC, providing an analysis and comparison between the different platforms currently on offer. The methodology used to undertake this study is detailed in Box 2. The report presents the environment in which mobile money is operating and how it has shaped the emerging models and services. Attention is given to the different regulatory environments in which the respective systems operate. Based on this review, the report draws lessons and makes recommendations in terms of policy and regulation geared towards the increasing adoption and use of mobile money, notably amongst small businesses.

In this report, a small business is defined as having anywhere between 1 and 25 employees.[5] A distinction is also made between small businesses that work directly within the mobile sector—***small mobile sector enterprises***—and those that are users (or potential users) of mobile money services in the day-to-day management of their businesses—***small non-mobile sector enterprises***. An example of the former is a mobile money agent, while a market vendor selling agricultural produce is an example of the latter.[6]

[1] See e.g. UNCTAD (2011). "Information Economy Report 2011: ICTs as an Enabler for Private Sector Development". United Nations: New York and Geneva.

[2] See http://www.wirelessintelligence.com/mobile-money.

[3] See also Duncombe, R. and R. Boateng (2009). "Mobile Phones and Financial Services in Developing Countries: a review of concepts, methods, issues, evidence and future research directions." Third World Quarterly 30(7): 1237 – 1258. | Porteous, D. (2006). "The Enabling Environment for Mobile Banking in Africa." DFID. | Donner, J. and C. A. Tellez (2008). "Mobile banking and economic development: Linking adoption, impact, and use." Asian Journal of Communication 18(4): 318-322.

[4] Mas, I. and K. Kumar (2008). "Banking on Mobiles: Why, How, for Whom?" Washington DC, CGAP.

[5] United Nations Conference on Trade and Development (UNCTAD). (2010). "Information Economy Report 2010: ICTs, Enterprises and Poverty Alleviation." United Nations: New York and Geneva. Pg. 8.

[6] Esselaar, S., Stork, C., Ndiwalana, A. and Deen-Swarray, M. (2007). "ICT Usage and Its Impact on Profitability of SMEs in 13 African Countries." Information Technologies and International Development Fall 2007, Vol. 4, No. 1: 87–100.

Box 2: Methodology

The methodology used to carry out the study included:

(a) Desk research to gather data from a variety of online resources, including websites of different industrial associations, regulators, operators, financial institutions and other mobile money stakeholders across EAC.

(b) Field missions (May/June 2011) with structured interviews with various stakeholders that play different roles in the mobile money ecosystem in all five countries. Interviewees covered people from financial regulators, communications regulators, operators with mobile money offerings, financial institutions, mobile money agents, users as well as mobile money researchers, particularly in Kenya and Uganda. The field missions also provided an opportunity to experience some of the different mobile money platforms from the customer perspective by engaging in different processes, such as registration, locating agents, cashing-in/out, sending money as well as using mobile money to pay for services.

(c) Peer review of the draft by key stakeholders, including EAC Task Force on Cyberlaws and EAC Secretariat.

The report is organized as follows: Section A provides a background to mobile money across EAC. Section B examines the different mobile money service offerings along with their associated fees. Section C looks at some salient features of the services currently on offer across EAC and identifies some usability issues such as access channels, security, registration and transaction limits, agent networks and consumer awareness and support. Section D provides an analysis of regulatory issues structured around the different functions embedded in a mobile money service. Section E draws on lessons across EAC to make policy recommendations to help direct the development of mobile money in a way that is inclusive and that also favours mobile money use amongst small businesses. Country profiles in the Annex provide in-depth detail and comparison across mobile money platforms within each country in EAC.

1. Players involved in the Mobile Money ecosystem

A typical mobile money platform involves several players and stakeholders who play different roles or derive diverse benefits from the whole ecosystem.[7] These include:

(a) An MNO that provides the mobile infrastructure and customer base that is already using its communication services. An MNO ensures compliance with telecommunication regulations and policy within the country. In EAC, many MNOs also have a recognisable brand that has been cultivated through extensive marketing and service provision. MNOs potentially benefit from mobile money by increasing and maintaining the number of customers, reducing the cost of airtime distribution and by generating new revenue.

(b) A bank or other financial institution with banking license and infrastructure that enables the exchange of money between different parties. These also provide oversight and regulatory compliance with national financial regulations and policy. Banks can leverage mobile money platforms to reach more people in traditionally underserved areas with their services at much lower cost.

(c) Regulatory institutions across different sectors. The key regulators in EAC include Central banks for the financial sector and telecommunication regulators for the communications sector. Driven by the need for national development, regulators would like to see more people served by formal financial and communication services.

(d) An agent network (of people, automatic teller machines (ATMs), branches) that facilitates cash-in (converting cash into mobile money) and cash-out (issuing cash on demand) to afford convertibility between mobile money and cash. MNOs in EAC have developed extensive agent networks to sell airtime and other products while those of the banks tend to be limited to urban or highly populated areas. Agents earn commission on various transactions carried out by mobile money users.

(e) Merchants and retailers, who accept mobile money payments in exchange for different products and services. They help increase demand for mobile money by offering more

[7] Jenkins, B. (2008). "Developing Mobile Money Ecosystems." Washington, DC: IFC and the Harvard Kennedy School.

Table 1. Mobile Money snapshot across the East African Community (as at 31 August 2011)

Category	Burundi	Kenya	Rwanda	United Republic of Tanzania	Uganda
Population (thousands)[8]	8 413	40 669	10 660	45 012	33 532
% of the population 20 years and above	62.3%	57.7%	57.5%	55.5%	51.7%
Mobile network operators	5	4	2	7	6
Mobile subscriptions[9]	1 076 478	24 960 000	3 730 000	21 203 698	16 015 959
Mobile money platforms	1	4	2	4	4
Mobile money subscriptions	29 000[10]	17 800 000[11]	309 127[12]	9 200 000	2 100 000
Ratio of mobile money subscriptions to mobile subscriptions (per cent)	2.7	71.3	8.3	43.4	8.1

Sources: UNCTAD field interviews, EAC Communication regulators' websites and the United Nations, Department of Economic and Social Affairs, Population Division (2011). World Population Prospects: The 2010 Revision, CD-ROM Edition.

avenues through which users can spend their mobile money. In return, they can minimise the need to handle cash.

(f) Businesses that utilize mobile money as a means to deliver their services, i.e. MFIs, insurance providers, as well as large-scale disbursers and bill issuers.

(g) Equipment manufacturers and platform providers include a wide array of stakeholders like mobile phone makers, network equipment vendors as well as application providers. These benefit from the increased sale of end-user devices like mobile phones, equipment to handle increased network capacity and fees or subscriptions respectively.

(h) Mobile money users are normally subscribers to an MNO's other services. Users derive benefits by getting cheaper and more efficient means of transferring or paying money to other people or businesses within the network.

2. Mobile Money Platforms in EAC

At the time of preparing this report, there were 15 mobile money platforms operated by different MNOs across EAC. Table 1 provides a summary of mobile-phone-related statistics across EAC. In August 2011, Kenya, the United Republic of Tanzania and Uganda, the most populous countries in EAC, totalled 4 mobile money platforms each. Kenya represented 60.5 per cent of the total mobile money subscriptions in the region. At the national level, Kenya counted 71.3 per cent of mobile money subscriptions out of the total mobile subscriptions.

The M-PESA platform in Kenya stands out in several respects (Table 2). At the end of March 2012, M-PESA was reported to have 15 million active customers who transferred an estimated K Sh.56 billion every month. With over 37,000 mobile money agents, M-PESA is linked with 25 banks and can be accessed via 700 ATMs.[13] M-PESA has been dominant not only in

[8] United Nations, Department of Economic and Social Affairs, Population Division (2011). World Population Prospects: The 2010 Revision, CD-ROM Edition.

[9] In EAC, mobile subscription numbers are determined on the basis of active SIM cards (make or receive call/SMS) over a 90-day period. Given that many individuals own multiple SIMs, this compounds computing mobile teledensity. Figures for Burundi, Kenya, Uganda and the United Republic of The United Republic of Tanzania got from interviews with regulators as at end of March 2011. Mobile money subscriptions reflect customers that have completed both registration and activation procedures for the service, but provide no indication of whether customers have ever made any transaction or how recently.

[10] Email interview with Cyrille Nibigira, General Manager, Business Development for Econet Wireless Burundi who run Ecokash the only mobile money platform in Burundi (June 2011).

[11] CBK Governor's speech on the relaunch of Airtel Money Transfer Service (August 2011) www.centralbank.go.ke/downloads/speeches/2011/Governor's%20remarks%20at%20Launch%20of%20Airtel%20Money%20Transfer%20Service.pdf.

[12] Rwanda, The New Times (August 2011), www.newtimes.co.rw/index.php?issue=14718&article=44174.

[13] http://www.businessdailyafrica.com/Corporate+News/M+Pesa+drives+innovation+five+years+after+launch+/-/539550/1371628/-/n5wti3/-/

Table 2. Mobile network operators, their mobile money platforms and bank partners across the East African Community, December 2011

Country	Operator	Mobile Money Platform	Bank Partners
Burundi	Econet Wireless	EcoKash	National Post Office
	Africell	None	
	Smart Mobile	None	
	Onatel	None	
	U-Com	None	
Kenya	Safaricom	M-PESA	Commercial Bank of Africa Standard Chartered Kenya CFC Stanbic Equity Bank Kenya
	Airtel Kenya	Airtel Money	Citigroup
	Econet Wireless	Yu Cash	
	Orange Kenya	Orange Money	Equity Bank Kenya
Rwanda	MTN Rwanda	MTN MobileMoney	Banque Commerciale du Rwanda (BCR)
	Tigo Rwanda	Tigo Cash	Banque Commerciale du Rwanda (BCR)
	Airtel Rwanda	None	
United Republic of Tanzania	Vodacom	M-PESA	National Bank of Commerce CRDB National Microfinance Bank
	Airtel The United Republic of Tanzania	Airtel Money	CitiBank The United Republic of Tanzania Postal Bank CRDB
	Tigo The United Republic of Tanzania	Tigo Pesa	National Bank of Commerce National Microfinance Bank
	Zantel	Z Pesa	FBME Bank
	Smart Mobile	None	
	SasaTel	None	
	TTCL	None	
Uganda	MTN Uganda	MTN MobileMoney	Stanbic Uganda
	Airtel Uganda	Airtel Money	Standard Chartered
	Uganda Telecom	M-Sente	DFCU Bank
	Orange Uganda	None	
	Warid Telecom	WaridPesa	

Source: UNCTAD field interviews.

terms of numbers of subscribers, cash flow volumes and agents, but also through its influence on the regulatory landscape and the shape of subsequent platforms across the region. Some of the areas in which the other platforms have followed in M-PESA's footsteps include the following:

(a) M-PESA proved the business case for domestic remittances in Kenya. This has been the core function of all mobile money platforms that have since been launched in EAC.

(b) M-PESA agent commissions are fixed and automatically deducted by the system from a user account at the time of transaction. Safaricom reconciles and pays the agent at a later date. Airtel Money across EAC is the only notable exception to this. It recommends rates but each agent can charge more or less depending on supply and demand forces. In addition, an Airtel agent collects the transaction fees at the point of transaction and does not have to wait to be paid later by the MNO.

(c) M-PESA's transaction fee structure has greatly influenced those of other mobile money platforms. An MNO converts these into their local currency and then applies the same bands to their mobile money offering.

(d) Practically all MNOs with the approval of their respective central banks have copied the same thresholds/limits in terms of what users can send or keep in their wallets.

(e) All central banks in EAC have had to work out how to regulate mobile money in their jurisdiction by learning from how the Central Bank of Kenya has handled M-PESA in Kenya.

Within global mobile money circles, MTN Uganda's mobile money platform is also closely observed, in part because it is on track to become profitable within 3 years from launch – just like M-PESA. Other MNOs have made significant investments in mobile money but are still a long way from recouping them.[14]

B. SERVICES AND FEES

Mobile money has evolved to provide a range of services that currently have different fees for customers in EAC.

1. Types of Services

Mobile money services can be broadly categorized into three groups:

(a) M-transfers: where money is transferred from one user to another, normally without an accompanying exchange of goods or services. These are also referred to as Person-to-Person (P2P) transfers and may be domestic or international.

(b) M-payments: where money is exchanged between two users with an accompanying exchange of goods or services.

(c) M-financial services: where mobile money may be linked to a bank account to provide the user with a whole range of transactions (savings, credits) that they would ordinarily access at a bank branch. In other cases, users can access novel financial-related services like insurance, micro-finance, etc. via their mobile phone.

Some transactions span different service categories. For example, a user can access his or her bank account and transfer money to another bank account holder or mobile money wallet without an accompanying exchange of goods or services. This entails both m-transfers and m-financial services. Currently, mobile money transactions can be local (within the jurisdiction of one country) or international (across different national borders). International money transfers by Western Union in partnership with M-PESA are an example of the latter.[15]

Table 3 provides a summary of sample mobile money services across EAC organized into the above three groups.

1.1. M-transfers

As noted above, domestic m-transfers still dominate amongst the mobile money services across EAC. The bulk of these transactions occur between urban and rural areas, as migrants to urban areas send money back to the rural areas to support their extended families. In this case, mobile money replaces traditional informal methods like sending money with someone or by bus or taxi. Part of the success of mobile money is attributed to the lack of scale and reliability of informal methods.[16] For example, consider a scenario where a person needs to urgently send money back to his or her village. This previously required finding an individual that could be trusted, who was travelling to the relevant village and at the appropriate time (i.e. when the need arises). This individual should also know the recipients of the funds and be willing to pass by their home or link up with them to deliver the money. When considering that the person sending the money will most likely in any event use a mobile phone to call ahead to alert the relatives about the impending delivery and factoring in issues of reliability, security and speed; then mobile money seems glaringly straightforward.

[14] Kabir Kumar & Toru Mino (2011). "Five business case insights on mobile money," http://technology.cgap.org/2011/04/14/five-business-case-insights-on-mobile-money

[15] http://safaricom.co.ke/index.php?id=254

[16] Jack, William and Tavneet Suri, (2011). "Mobile Money: The Economics of M-PESA." NBER Working Paper Series, No.16721, www.nber.org/papers/w16721

Table 3. Categorisation of different Mobile Money services available in the East African Community

Category	Service	Platform offering service
M-transfers	Domestic money transfers	All mobile money platforms
	International money transfers from Western Union (currently money flows one way to EAC. MM users within EAC can not send out international transfers).	M-PESA Kenya MTN MobileMoney Uganda has a contract but the service is not yet operational
	International transfers across EAC	M-PESA Kenya between Uganda and Kenya (informal)
M-payments	Buy airtime (on-network)	All mobile money platforms
	Pay post-paid phone bills	All mobile money platforms
	Educational institutions (school fees)	M-PESA Kenya (Lipa Karo) MTN MobileMoney Uganda
	Financial institutions (loan repayments)	M-PESA Kenya
	Health service providers (charges)	M-PESA Kenya
	Utility providers (monthly bills for electricity, water, sewage, Pay TV)	All mobile money platforms
	Hotels (services)	M-PESA Kenya
	Churches and NGOs (contributions)	M-PESA Kenya M-PESA The United Republic of Tanzania MTN MobileMoney Uganda
	Businesses (customer to business i.e. payments)	M-PESA Kenya (Nunua na M-PESA) MTN MobileMoney Uganda Airtel Money across EAC
	Bulk payments (business to customer i.e. salaries)	M-PESA Kenya, M-PESA The United Republic of Tanzania MTN MobileMoney Uganda MTN MobileMoney Rwanda
	Mobile ticketing (buy tickets for events, hotels, airlines, etc)	M-PESA Kenya
M- financial services	Mobile Money wallet linked to Bank Account	M-PESA Kenya (M-Kesho) Orange Money (Iko Pesa) yuCash Kenya
	Mobile Money wallet linked to Bank card	Orange Money (Iko Pesa) M-PESA Kenya
	ATM cardless Mobile Money withdrawals (from mobile phone)	M-PESA Kenya Orange Money (Iko Pesa) Airtel Money Kenya yuCash Kenya
	ATM card Mobile Money withdrawals	M-PESA Kenya (Prepay VISA card) Orange Money (Debit card)
	Insurance (premiums)	M-PESA Kenya
	Micro loans and repayments	MTN MobileMoney Uganda M-PESA Kenya

Source: Operator websites and UNCTAD field interviews.

The extended family plays a prominent role in people's life in East Africa. These social networks are relied upon in times of need for communal sharing and care. Examples of such events include marriages and funerals. SMS now plays a prominent role in communicating such events and mobilising support across social networks. While donations used to be collected by hand, users are now exploring mobile money solutions to collect contributions. Churches and NGOs readily use mobile money to solicit for contributions as well. A prominent example is the recent use of mobile money by multiple entities to raise funds to support drought victims across East Africa dubbed “Kenyans for Kenya.”[17] Currently, there are no known applications that directly integrate a user’s mobile phone address book with mobile money to help coordinate SMS communication and mobile money donations.

1.2. M-payments

From m-transfers, MNOs have broadened mobile money services to include a range of m-payments. MNOs started out by targeting entities that receive recurrent payments from diverse customers like utility companies (e.g. power, water, sewage, Pay TV, etc.) and those that make bulk payments (e.g. salaries and school fees). Many of these services were launched as free promotional offers to help build the business-case and prove their utility to the consumer. For example, Safaricom clearly indicates that “It is FREE to pay your bill with M-PESA at the moment. Kindly note that this is an introductory offer valid only for a limited period,” for its Nunua na M-PESA (literally translated as Buy with M-PESA) service.[18]

Some service providers have stated that they can bear the cost for their customers remitting dues via mobile money because it affords them a cheaper avenue to collect dues from customers on a regular basis. Others, like the National Water and Sewerage Company in Uganda, have scrapped all of their cash collection centres and resorted to using banks and mobile money as the only ways for users to pay their dues.[19]

MNOs have also started cultivating merchants for m-payments, mainly targeting large entities with multiple outlets like supermarkets. For example, M-PESA is working with the Uchumi and Naivas supermarket chains in Kenya and MTN MobileMoney is working with Uchumi supermarkets in Uganda. Many small businesses cannot qualify for m-payments because they need to open a corporate account that requires them to be legally registered with a range of documents and a permanent physical address. Institutions in other sectors, such as education, health, tourism and insurance, are gradually waking up to the opportunities of using mobile money as another payment channel for their customers.

To date, the biggest m-payment beneficiaries are the MNOs themselves through the sale of airtime or credit directly to consumers. This avenue to sell airtime is helping them to make significant savings through bypassing the traditional distribution system of scratch cards. MNOs save by avoiding the need to print new cards and pay commission to dealers and their agents.[20] The margins of many small mobile sector enterprises that thrive on the distribution of airtime could come under increasing pressure as MNOs work to sell more airtime through this virtual channel.

1.3. M-financial services

While banks initially shunned mobile money, many have recognised the potential it has and some have even signed up as super agents for mobile money services. In Kenya and Uganda, it is now possible for mobile money users to withdraw money from some ATMs instead of visiting a mobile money agent. While this approach guarantees more liquidity, it only works in urban settings where ATMs are common. In addition, some banks have teamed up with MNOs to offer integrated m-financial service products like Iko Pesa[21] (Orange and Equity Bank) and M-Kesho[22] (Safaricom and Equity Bank) in Kenya.

With M-Kesho, the M-PESA account on the mobile phone (which contains the mobile money) is linked to an Equity bank account, allowing the user to move money between the two accounts. As a result, M-Kesho has an additional layer that results in higher transactional costs when a user is cashing-out money across the two accounts. Conversely, Iko Pesa is an actual Equity bank account directly accessible via a menu on the SIM, providing all the features that come along with a bank account plus the added benefit of a mobile phone access channel.[23] Iko Pesa permits higher transactional limits compared to M-Kesho and provides additional functionality not available via M-Kesho. Unique functionality available via Iko Pesa includes:

[17] http://www.kenyansforkenya.org

[18] http://safaricom.co.ke/index.php?id=264

[19] http://www.nwsc.co.ug/index03.php?id=69

[20] Kabir Kumar & Toru Mino (2011). “Five business case insights on mobile money,” http://technology.cgap.org/2011/04/14/five-business-case-insights-on-mobile-money

[21] money.orange.co.ke

[22] safaricom.co.ke/index.php?id=263

[23] www.equitybank.co.ke

(a) Depositing cash directly into an Equity Account;
(b) Transferring money directly to another Equity Account;
(c) Transferring money to a Bank Account in another Bank;
(d) Co-branded Debit card;
(e) Cheque book;
(f) Printed Bank statement.

In addition, M-Kesho only supports electronic transactions with no direct cash-in/out possibilities. For example, a user cannot directly transfer money to their M-Kesho account through the mobile money agent or bank cashier; rather transfers are via the M-PESA platform. Iko Pesa users, on the other hand, can make transactions via either Iko Pesa agents or Equity Bank cashiers.

Financial and insurance institutions have also begun to leverage mobile money as a vehicle for cost reduction and improved efficiency in providing their conventional services. Some micro-finance institutions (MFIs) are using mobile money as a lower cost and safer way to disburse loans and collect payments. Micro-insurance institutions are similarly beginning to use mobile money to collect premiums and pay reimbursements to their customers. Financial institutions that receive mobile money deposits could potentially generate more revenue through retention of such deposits. Examples of MFIs using mobile money in Kenya include Faulu[24], Kenya Woman's Finance Trust (KWFT)[25], Kenya Agency for Development of Enterprise and Technology (KADET)[26] and Musoni.[27] Tujijenge The United Republic of Tanzania[28] and Finance Trust[29] in Uganda are other major MFIs using mobile money networks. While some MFIs primarily use mobile money to collect loan repayments, Musoni was the first MFI in the world to rely exclusively on mobile money for both disbursements and collections (thus handles no cash). For this they were recognised with a Global Microfinance Achievement Award for the most innovative use of technology at the Microfinance Summit in Geneva in July 2011.[30]

[24] www.faulukenya.com
[25] www.kwft.org
[26] www.kadet.co.ke
[27] www.musoni.eu
[28] www.tujijengeafrika.org
[29] www.financetrust.co.ug
[30] www.microfinancesummit.com/Awards.html

The different mobile money platforms differentiate between registered and non-registered users for mobile money transactions. Registered users are subscribers of a given MNO (i.e. use that MNO's SIM card for other services like voice and SMS) that have also completed Know-Your-Customer (KYC) requirements for the mobile money offering of the particular MNO. Non-registered users may comprise both MNO subscribers who have not completed KYC requirements and subscribers of other MNOs. All mobile money platforms across EAC offer different service rates for registered and non-registered customers in a bid to attract and retain customers.

Strictly speaking, the full range of mobile money services is only available to registered users of a given MNO. To be able to perform any transaction, all MNOs require that a registered user first load money onto their mobile money account (or bank account for Iko Pesa) and then proceed to perform any type of transactions. As a result, non-registered users can only be recipients of mobile money transactions across all platforms.

With the exception of yuCash in Kenya, no other mobile money platform can register and support users who access and manage their mobile money wallet from a competing MNO's network. Conversely, yuCash will require a non-registered customer who receives money to first register and then withdraw from his or her own account. yuCash also offers some complementary features that other platforms do not currently support, including requesting money from another user (for instance, by sending electronic invoices), adding a short message to a payment, and inviting friends to join the service.[31]

2. Service fees

The mobile money agents represent a critical component of the mobile money ecosystem. They provide an interface through which users cash-in (convert cash into mobile money) or cash-out (convert mobile money into cash) allowing convertibility between mobile money and cash. In the beginning, both cash-in and cash-out transactions were associated with certain fees. However, with growing economies of scale and greater competition, all MNOs in EAC now offer cash-in services for free.

[31] yuCash product comparison and unique features, www.yu.co.ke/yucash

Table 4. MTN MobileMoney fees for M-transfers in Uganda (sending and receiving)

Amount UGX	Sending Money UGX		Withdrawing Money UGX	
	To registered User	To non-registered User	Registered User	Non-Registered User
5 000—30 000	800	1 600	700	0
30 001—60 000	800	2 000	1 000	0
60 001—125 000	800	3 700	1 600	0
125 001—250 000	800	7 200	3 000	0
250 001—500 000	800	10 000	5 000	0
500 001—1 000 000	800	19 000	9 000	0

Source: MTN Uganda Website, http://mtn.co.ug/MTN-Services/Mobile-Banking/MTN-MobileMoney-Rates.aspx.

Once users have mobile money in their wallet, they can perform a range of the transactions highlighted above. The range of possible transactions is growing. Other payment instruments like debit or credit cards in EAC are still the preserve of the well-off and individuals with bank accounts. M-transfers are still the dominant form of transaction and given the lack of viable alternatives, are priced at a premium. The smaller the amount transferred, the higher the total fee (sending + receiving) as a proportion of the amount transferred via mobile money. For example, consider the lowest threshold on MTN MobileMoney (see Table 4). To transfer U Sh 5,000, the total fee (sending + receiving) is U Sh 1,500, or 30 per cent of the transaction amount. For a transactional amount of U Sh 30,000 within the same threshold, the fee is similar, but then corresponds to only 5 per cent of the transaction amount.A similar scenario exists for M-PESA in Kenya (Table 5). Nevertheless, users are still willing to pay because there are no cheaper alternatives that will enable a user to send such small amounts of money while taking into account issues of reliability, security and speed associated with informal methods.

In addition, it is always more expensive to send money to a non-registered user than to a registered one. This holds true across all mobile money platforms in EAC (see Table 6 and Table 7). For registered users, the total m-transfer fee is split into a sending and a withdrawal component and shared between the sender and the receiver, making it appear cheaper to both parties. For m-transfers to non-registered users, the cost is borne entirely by the sender. The pricing mechanism seems set up to encourage registered users to make more transfers amongst themselves (and presumably find another reason to stay with the provider) as opposed to non-registered users. For some platforms (e.g. M-PESA), more money can be sent in a single transaction to registered than to non-registered users. Besides attracting non-registered users to join the platform, some argue that a sender may have some influence over the receiver and as such, MNOs

Table 5. Safaricom M-PESA fees for M-transfers in Kenya

Amount K SH	Sending Money K Sh		Withdrawing Money K Sh	
	To registered User	To non-registered User	Registered User	Non-Registered User
50—100	10	N/A	15	N/A
101—2 500	30	75	25	0
2 501—5 000	30	100	45	0
5 001—10 000	30	175	75	0
10 001—20 000	30	350	145	0
20 001—35 000	30	400	170	0
35 001—50 000	60	N/A	250	N/A
50 001—70 000	60	N/A	300	N/A

Source: Safaricom Website, http://safaricom.co.ke/index.php?id=1212.

Table 6. Cost comparison of sending M-transfers to registered and non-registered users across mobile money plaforms in Uganda

Mobile transfers U Sh	MTN MobileMoney		Airtel Money		UTL M-Sente	
	Registered User	Non-Registered User	Registered User	Non-Registered User	Registered User	Non-Registered User
Below 5 000			250	250	500	1 500
5 000—30 000	800	1 600	250	250	500	1 500
30 001—60 000	800	2 000	250	250	500	1 900
60 001—125 000	800	3 700	250	250	500	3 500
125 001—250 000	800	7 200	250	250	500	6 800
250 001—500 000	800	10 000	250	250	500	9 500
500 001—1 000 000	800	19 000	250	250	500	18 000
Above 1 000 000	N/A	N/A	N/A	N/A	N/A	N/A

Source: Company websites and brochures.

Table 7. Cost comparison of sending M-transfers to registered and non-registered users across mobile money platforms in Kenya

Sending money K Sh	M-PESA		Airtel Money		Yu Cash		Iko Pesa	
	Registered User	Non-Registered User	Registered User	Registered User	Registered User	Non-Registered User	Registered User	Non-Registered User
Below 50								
100—2 500	10	75	5	N/A	25		30	30
2 501—5 000	30	100	25	25	25		30	30
5 001—10 000	30	175	25	25	25		30	30
10 001—20 000	30	350	25	25	25		30	30
20 001—35 000	30	400	25	25	25		30	30
35 001—70 000	60	N/A	25	N/A	N/A	N/A	40	40
Above 70 000	N/A	N/A	N/A	N/A	N/A	N/A	50	50

Source: Company websites and brochures.

expect the sender to persuade the receiver to register resulting in lower transaction costs for both.[32]

For m-payments, fees are marginally lower compared to m-transfers (Table 8 and Table 9). MNOs appear to have priced m-payments to compete with banks that normally charge a flat fee to collect payments like school fees. For example, in Uganda, banks charge a flat fee of between 2,500-5,000 U Sh per payment transaction (irrespective of the amount). MTN MobileMoney has a variable cost structure that is slightly cheaper than that of banks. As a fraction of the payment value, MNO fees are higher for smaller transactions, but competition should help drive down these prices. In response, banks have started to offer free payments for some bills that are paid by many people (like utility payments) since they accrue value through other means, e.g., by managing the accounts for the utility service provider.[33]

Although average transaction values supported by mobile money platforms have decreased progressively,[34]

[32] Mas, I. and O. Morawczynski (2009). "Designing Mobile Money Services: Lessons from M-PESA." Innovations: Technology, Governance, Globalization 4(2): 77-91.

[33] UNCTAD field interviews in Uganda.

[34] Jack W., and Suri T. (2009). "Mobile Money: The Economics of M-PESA." Unpublished report that indicates the average M-PESA transaction size decreased by 30 per cent between March 2007 (K SH 3,300) and March 2009 (K SH 2,300)

Table 8. MTN MobileMoney fees for M-Payments in Uganda (services, utilities and bulk payments)

Min U Sh	Max U Sh	Fees U Sh	% cost/min	% cost/max
5 000	125 000	400	8.00	0.32
125 001	250 000	700	0.56	0.28
250 001	500 000	1 000	0.40	0.20
500 001	1 000 000	2 000	0.40	0.20

Source: MTN Uganda Website, http://mtn.co.ug/MTN-Services/Mobile-Banking/MTN-MobileMoney-Rates.aspx.

Table 9. Safaricom M-PESA fees for M-Payments, Kenya (services, utilities and bulk payments)

Min K SH	Max K SH	Fees K SH	% cost/min	% cost/max
100	1 000	20	20.00	2.00
1 001	2 499	30	3.00	1.20
2 500	4 999	50	2.00	1.00
5 000	9 999	75	1.50	0.75
10 000	19 999	100	1.00	0.50
20 000	35 000	150	0.75	0.43

Source: Safaricom Website, http://safaricom.co.ke/index.php?id=1212.

m-payments do not yet make sense for most *small non-mobile sector enterprises* across EAC. As the average transaction values have decreased, the total number of transactions has increased at a higher proportion explaining the consistent increase in overall volume of funds flowing through mobile money platforms. While this suggests growing use of small payments and greater adoption of mobile money, the average amounts that change hands amongst *small non-mobile sector enterprises* are still individually too small, even if the total amounts involved can grow big rather quickly. For mobile money to compete with cash for such face-to-face transactions, a significant reduction in costs associated with m-payments would be required. In the case of payments between parties that are geographically separated, however, mobile money currently allows a fast and convenient way to pay.

Table 10. Fees for Iko Pesa Bank Transactions

Transaction	Min K SH	Max K SH	Cost K SH
Cash deposit to Equity Account	100	35 000	Free
Transfer to Equity Account	100	35 000	30
	35 001	50 000	40
	50 001	100 000	50
Transfer to any Kenyan bank account	100	35 000	400
	35 001	50 000	450
	50 001	100 000	500
Transfer from My Equity Account to Iko Pesa	100	35 000	30
	35 001	50 000	40
	50 001	100 000	50

Source: Tariff guide on Orange Money website.[35]

[35] http://money.orange.co.ke

M-financial services supplement conventional cash-in and cash-out avenues with ATMs and Bank Cards, but these normally come with additional fees. For example, the Orange Money Debit card costs 400 K SH to apply for and a flat fee of 40 K SH is incurred for withdrawals up to 40,000 K SH. So, users could ostensibly transfer money from their wallets to their Equity Accounts and then withdraw it via the Debit Card to save. As banks recognize the growing competition from mobile money, they adapt their pricing strategies. For example, Barclays Bank has now scrapped all ATM charges at its bank branches across East Africa.[36]

From the point of view of small mobile sector enterprises, a number of implications do emerge:

(a) As MNOs bid to sell more airtime to users via mobile money as a way to cut costs, many small mobile sector enterprises that thrive on the sale of airtime are affected. Although the percentage of airtime sold via mobile money is still only a fraction of total airtime sold (20 per cent in the case of Safaricom in Kenya by its third year[37]), that percentage is growing quickly and so will the pressure on commissions offered to airtime sales agents.

(b) Most mobile money platforms (with the exception of Airtel money) are set up in such a way that an agent does not determine nor collect commission at the point of transaction. Instead, it is deducted by the system from the user account and credited to the agent in arrears at a later date (usually at the end of the month). This affects the cash flow of small mobile sector businesses. Contrast this with selling airtime, where the agent recoups the investment and profit at point of sale.

For ***small non-mobile sector enterprises***, mobile money platforms afford a new channel for doing business with existing customers that can provide a number of advantages. Principal amongst these is the reduced handling of cash and mitigation of risks associated with the handling of cash. This is important given that the amounts of money that these businesses handle are still too small for formal banking to make sense. Savings in terms of cost and time when it comes to making or receiving payments would be another advantage. For example, it would be much easier for businesses to make or receive remote payments, reducing the need for travel. Tanzanian small businesses managed to double their sales (with the same working capital) by increasing the velocity of their money through paying providers with mobile money.[38]

Above all, mobile money provides a platform for innovation that can be leveraged by different third parties to provide useful services for small enterprises. From access to capital or credit through micro-finance to hedging risks with micro-insurance, from more efficient logistics to better inventory management and from better book-keeping methods to easier customer relationships management. The opportunities are boundless.

C. SALIENT FEATURES OF EAC MOBILE MONEY SERVICES DEPLOYMENT

This section explores some salient features of the mobile money platforms and services available in EAC. Special attention is given to the kinds of access channels used, security, registration and transaction limits, the role of the agent networks, and consumer awareness and support.

1. Access channels

Most mobile money platforms in EAC region offer users a menu item on their SIM. Through this menu, users can accomplish a range of transactions by issuing commands to the platform. Different platforms apply different methods to deliver these commands to the servers via a number of channels, which may include:

(a) SMS—Some platforms (e.g. EcoKash) support SMS commands sent to a short code. For example: *[PIN code] SEND [amount to send] [recipient phone number]* to short code 444 to send money to another user.

(b) USSD—Other platforms (e.g. M-PESA and Zpesa in The United Republic of Tanzania, M-Sente in Uganda) initiate a session between the mobile phone and the server during which

[36] Business Week, April 2011

[37] Kabir Kumar & Toru Mino (2011). "Five business case insights on mobile money," http://technology.cgap.org/2011/04/14/five-business-case-insights-on-mobile-money

[38] Bångens, L. and B. Söderberg (2011). "Mobile Money Transfers and usage among micro- and small businesses in The United Republic of Tanzania." http://www.southcliff.se/docs/SME%20and%20MMT%20usage%20in%20The United Republic of Tanzania%20(April%202011).pdf

Table 11. Access Channels offered by different Mobile Money Platforms across the East African Community, August 2011

Country	Operator	Mobile Money Platform	Access Channel(s)
Burundi	Econet Wireless	EcoKash	SMS
Kenya	Safaricom	M-PESA	SMS/STK
	Airtel Kenya	Airtel Money	SMS/STK
	Econet Wireless	Yu Cash	SMS, USSD/STK, USSD, Voice, WAP
	Orange Kenya	Orange Money	SMS/STK, USSD, WAP, Java app
Rwanda	MTN Rwanda	MTN Mobile Money	SMS/STK
	Tigo Rwanda Airtel Rwanda	Tigo Cash Airtel Money	USSD
United Republic of Tanzania	Vodacom	M-PESA	USSD/STK
	Airtel Tanzania	Airtel Money	SMS/STK
	Tigo Tanzania	Tigo Pesa	USSD
	Zantel	Z Pesa	USSD
Uganda	MTN Uganda	MTN MobileMoney	SMS/STK
	Airtel Uganda	Airtel Money	SMS/STK
	Uganda Telecom	M-Sente	USSD

Source: UNCTAD field interviews.

is guided through a series of steps to accomplish a transaction.

(c) SIM Toolkit (STK)—This approach is supported by most platforms (e.g. M-PESA, Orange Money in Kenya and MTN MobileMoney). STK helps break down the transaction into a series of logical steps that can be followed to accomplish the transaction. STK then re-assembles the different steps into a complex statement that is sent to the server via SMS as in the above example. Besides SMS, STK can also use USSD as a data carrier, but it is dependent on the STK implementation on the particular handset.

While SMS use is pervasive, a user has to recall the right keywords and sequence to accomplish a given transaction. This can be frustrating when users forget or mistype keywords or if they get the sequence wrong. That is where the STK approach has an advantage as it helps to break down a transaction into various steps to ensure that the user does not have to remember complex keywords or sequences. USSD is faster in that, unlike SMS, a user does not have to create a message. It is also more responsive in the sense that data are delivered and responses obtained in real-time. This makes USSD more appropriate for complex transactions (see Table 11).

Africa, only yuCash is compatible with a variety of different access channel ends—Voice, WAP (Internet), SMS, USSD as well as the commonly used STK. This makes yuCash the mobile money platform with the most versatile user interface. Recently, Orange Money has also added WAP and a Java App as access channels to the current STK and USSD for Iko Pesa, helping to broaden how users can interact with the service.[39]

2. Security

From a security perspective, if data sent via either USSD or SMS are not encrypted, a transaction is vulnerable to interception. Given that USSD is session-based and the server helps manage the steps, once a USSD session terminates, no data is left on the phone. Conversely, with STK, the SIM helps to manage the steps and creates an SMS sent to the server. SMS is transaction-based and SMS data are stored on the phone, creating vulnerability if the SMS is not deleted and the phone ends up in the wrong hands. All systems rely on the use of a Personal Identification Number (PIN) for transaction authentication.

[39] Orange press release, August 2nd 2011, http://www.orange-tkl.co.ke/index.php?option=com_content&view=article&id=224

Currently, there is no specific protection in the event that a user's mobile phone is stolen and used by fraudsters able to figure out the user PIN. Just like with ATM cards and banks, a user's best bet is to report a stolen mobile phone or SIM as soon as possible so that all mobile money transactions are blocked. However, MNOs generally do not provide sufficient advice on such issues. New registrants are not briefed or given a brochure that discusses how to handle such issues.[40] Instead, they have to figure out how to navigate such pitfalls if or when they occur. Although MNO websites typically have answers to frequently asked questions, an average mobile money user in EAC does not have ready access to the Internet. Agents ask users to call the general customer service line or visit an MNO service centre, where the queues are normally long. M-PESA in Kenya has set up a dedicated customer service line, asking users to call "234" for M-PESA related queries.

When using mobile money services, all transactions are tied to the SIM (and thereby the mobile phone number). Airtel Money in Kenya, the United Republic of Tanzania and Uganda supports the use of nicknames in the place of the mobile number so that customers are able to pay you by sending money to a nickname instead of a number. Besides privacy and security, nicknames can be similar to a business name, making them more memorable for customers, especially if they have to pay remotely.[41]

3. Registration and transaction limits

For someone to be able to use mobile money for the first time, they need to complete two processes—registration and account activation. MNOs need to register mobile money users to comply with Know Your Customer (KYC) requirements from financial regulators. A user needs to appear in person at an agent or MNO service centre to complete the registration process. This involves completing a form and presenting some type of identification to the agent, who then makes a copy of the ID document. Because there are no universal or national IDs across EAC, except in Kenya, MNOs have agreed with financial regulators to accept a range of ID documents for the registration process. Currently across EAC, MNOs can accept:

(a) A voter's card,
(b) A driver's license;
(c) A valid passport;
(d) A local village council letter or certificate;
(e) A company or employer issued ID;
(f) A Government issued ID;
(g) A tax certificate;
(h) A national ID (only available in Kenya).

Vodacom in the United Republic of Tanzania also permits reference identification, where a family member, employer or a friend with a permitted ID document can vouch for your identity during registration.[42]

After registration, the completed form and photocopy of the ID document are then forwarded from the agent's location to the MNO offices for processing. The processing ensures that an agent captured all necessary information and made a legible copy of the ID document. When this is completed, a user mobile money account is then activated on the mobile money platform, while their documentation is filed at the MNO for regulatory compliance.

Splitting the mobile money sign-up process into two steps creates a number of challenges that MNOs are struggling to resolve.[43] MNOs do not require users to register for other services like voice or data. Given the prevalence and success of prepaid services (which do/did not require registration), MNOs have had to motivate both users and agents to participate in the process. Sometimes this has entailed recruiting dedicated customer registration agents who also help educate users on how to use the service. The registration process still relies on a paper form across all mobile money platforms, except M-PESA in Kenya that has introduced phone-based registration allowing an agent to submit new user data more quickly.

Storage and transfer of forms and ID documents from an agent to the MNO can add a time-lag between when a user starts the registration process to the point when the account is activated and the user can start using the mobile money service. In the event of errors in a completed form, the form has to be sent back to the agent for corrections. In turn, they must get in touch with the user to rectify such errors

[40] During field trips, we registered for M-PESA and Airtel Money in Kenya, M-PESA and Airtel money in the United Republic of Tanzania as well as MTN Mobile Money and Airtel Money in Uganda. In no instance did we receive any accompanying documentation.

[41] Airtel Uganda, Airtel money are nicknames, www.africa.airtel.com/wps/wcm/connect/africaairtel/Ghana/Home/airtel_Money/FAQs/

[42] Reference identification for M-PESA in the United Republic of Tanzania vodacom.co.tz/vodacom-M-PESA/introduction

[43] Barriers to Customer Activation: A case study from MTN Uganda, http://mmublog.org/blog/barriers-to-customer-activation-a-case-study-from-mtn-uganda

where possible. This time lag can add between a few days to a few weeks to the whole process, resulting in the potential loss of customers for the mobile money platform.[44] Telecommunication regulators around East Africa are now also interested in SIM registration as a way to curb misuse of mobile phone networks and have passed this responsibility on to MNOs since mobile money KYC more than meets their need.[45]

From a small business' perspective and the low values involved in daily transactions, KYC does not seem critical from the onset but is compulsory. One option might be to give small businesses the opportunity to experience and try out mobile money without the hurdle of pre-registration. Then, as their trust in the system improves and their need to conduct larger transactions expands (and thereby change the status of their subscription/contract), they could be required to register. This would lower the bar to participation for small businesses.[46]

Certain thresholds that apply to transactions on different systems may also be restrictive for business operations and these may include:

(a) Minimum or maximum amounts that can be used in a single transaction;
(b) Maximum daily transaction value (either as a result of one or multiple transactions);
(c) Maximum monthly transaction value (either as a result of one or multiple transactions);
(d) Maximum mobile money account balance (amount user can keep in their mobile money wallet).

Most transaction thresholds have been approved by central banks at the behest of MNOs and were initially greatly influenced by M-PESA. Most MNOs now realise that their transaction limits are not conducive for business use and have started a dialogue with the central banks to have them reviewed. In Kenya and Uganda, new limits had already been approved, but were yet to be put into operation at the time of drafting this report. [47]

In their conventional voice and data business, MNOs already segment customers and target them with different products. This has yet to happen with mobile money, however. It is possible to imagine segments that would permit different transactional limits and have different KYC requirements. As limits increase, KYC requirements could also become more stringent.

4. Agent networks

Critical to the success of any mobile money service is the agent network (of people, ATMs, branches) that provides an interface through cash-in and cash-out functions. Many people cite the extensive agent network that is visible at almost every street corner in Nairobi as one of many reasons behind M-PESA's success.[48] As at the end of March 2012, M-PESA's network in Kenya stood at almost 37,000 agents servicing a base of close to 15 million registered users.[49] Compare this to MTN MobileMoney's network in Uganda of some 3,000 agents serving about 1.6 million registered users at about the same time.[50] The ratio of agents to customers tends to remain constant across the two implementations as the MNOs seek to grow their agent network in tandem with new customers to avoid diminishing agent incentives and causing dropouts.

For aspiring small mobile sector enterprises, a prospective mobile money agent needs as a minimum 1) a legally registered business that should have been operational in the last six months, 2) a permanent physical address as well as 3) some cash to invest as float.[51] Such stringent requirements limit participation of many small businesses that could have otherwise benefited from such an opportunity. For most mobile

[44] In one of the interviews with someone from an MNO during the field trip, it was indicated that the lag between initial customer registration and actual activation can be anywhere from 1 to 50 days at this particular MNO.

[45] Davidson, Neil and Paul Leishman (2010). "Building, Incentivising and Managing a Network of Mobile Money Agents: A Handbook for Mobile Network Operators." Mobile Money for the Unbanked (London, UK: GSM Association)

[46] Barriers to Customer Activation: A case study from MTN Uganda, http://mmublog.org/blog/barriers-to-customer-activation-a-case-study-from-mtn-uganda

[47] Field interviews in Kenya and Uganda. MTN has operationalized the new rates and they feature in the Uganda Country Profile at the end of the document

[48] Morawczynski, O. (2009). "Examining the Usage and Impact of Transformational M-Banking in Kenya. Internationalization, Design and Global Development." N. Aykin, Springer Berlin / Heidelberg. 5623: 495-504.

[49] http://www.businessdailyafrica.com/Corporate+News/M+Pesa+drives+innovation+five+years+after+launch+/-/539550/1371628/-/n5wti3/-/

[50] www.bou.or.ug/export/sites/default/bou/bou-downloads/research/BouWorkingPapers/2011/All/Status_of_Mobile_Money_Services_in_Uganda_-_An_Exploratory_Study_BOUWP0811.pdf

[51] http://www.safaricom.co.ke/fileadmin/M-PESA/Documents/M-PESA_AGENT_REQUIREMENTS_-_for_external_use.pdf

money platforms, with the exception of Airtel money, agent commissions are paid in arrears, usually on a monthly basis and via the mobile money platform as opposed to after every transaction and in cash (as in Airtel money's model). For a number of reasons, most MNOs prefer paying agents their commission in one lump sum at the end of the month using the mobile money platform. Agents are likely to value a bigger lump sum compared to many frequent but smaller payments. Moreover, agents are more likely to convert the commission into float, thereby improving the liquidity of the individual agent as well as of the platform as a whole.[52] All of this has implications for the cash flow of a small mobile sector enterprise.

Poor liquidity of agents is one of the biggest challenges faced by mobile money platforms in East Africa. Users frequently complain that when they visit an agent to cash-out, agents many times have no or an insufficient amount of cash to meet their transaction requirement.[53] The challenge partly stems from the fact that it is difficult to predict when users will come and the volumes of transactions they will need to perform. As agent networks grow, so does the liquidity problem. To address the challenge, some MNOs have turned to "Master agents" or aggregators to help manage the liquidity of a number of agents under them. This system is akin to the airtime distribution model as well as working with banks and other institutions that normally have extra cash to dispense like petrol stations and supermarkets. The catch is that this tends to introduce more costs and complicates the structure of commissions. [54]

Paradoxically, for mobile money platforms to become profitable more quickly, they need to increase the number of "electronic-only" transactions as quickly as possible.[55] MNOs are busy creating relationships with institutions and merchants that extend their ecosystems and offer users more opportunities to use their mobile money directly.[56] If successful, this would mean that users have more options to receive (cash-in money directly into their wallets, for example, if one's salary is paid via mobile money) and spend their mobile money. At the same time, this might imply less need for cash-in or cash-out, making the agent network that was so critical to achieving mass scale redundant. While this is probably a long way off, it underscores the need for small mobile sector enterprises to be able to adapt and explore other opportunities as mobile money ecosystems evolve.

5. Consumer awareness and support

In EAC, awareness and trust of MNO brands are excellent thanks to extensive marketing efforts and a good service delivery record related to conventional MNO services, particularly voice. As such, when many MNOs launched mobile money, it made sense to associate their efforts with the MNO brand, even in a situation like Orange Money, where the financial partner (Equity Bank) plays the more prominent role.

Mobile money support has also benefited from the fact that users already know how to use a mobile phone and have prior experience loading airtime through different channels (e.g. voice, SMS, USSD, etc.). Many times, a user asks a friend or family member for guidance on how to use a particular function. It is not clear whether this also extends to mobile money, as people tend to be more sensitive with money. In fact, shared ownership and use of mobile phones have been credited with improving access especially in rural areas. It remains to be seen what this portends for the continued growth of mobile money. Will people share their phones less as more subscribe for mobile money services? Conversely, what would it mean for mobile money when a mobile identity is tied to the individual as opposed to the device?[57]

Common user complaints include reports of agents running out of cash, sending money to the wrong number (wrong transfers), network downtime that interrupts the functioning of mobile money platforms and cases of fraud. Wrong transfers are dealt with differently on various mobile money platforms. Some will reverse the transaction, but only if the funds have not yet been withdrawn by the wrong recipient. Most MNOs encourage the sender to get in touch with the wrong recipient directly and try to sort it out. In cases where funds have been withdrawn or both sender and

[52] Davidson, Neil and Paul Leishman (2010). "Building, Incentivising and Managing a Network of Mobile Money Agents: A Handbook for Mobile Network Operators." Mobile Money for the Unbanked (London, UK: GSM Association)

[53] Ndiwalana, A., Morawczynski O., & Popov O. (2010). Mobile Money Use in Uganda: A Preliminary Study. M4D 2010

[54] Field interviews. Examples in the press www.iamtn.org/news/safaricom-changes-method-recruiting-M-PESA-agents and www.mobilemoneylive.org/articles/ecobank-becomes-M-PESA-super-agent/3248

[55] Kabir Kumar & Toru Mino (2011). "Five business case insights on mobile money," http://technology.cgap.org/2011/04/14/five-business-case-insights-on-mobile-money

[56] Rwanda, The New Times, (June 2011), www.newtimes.co.rw/index.php?issue=14670&article=42639.

[57] Movirtu is using the cloud to tie a mobile identity to individuals rather than devices, http://www.movirtu.com

receiver are unable to resolve the issue, the sender is typically advised to contact the police.[58] Cyber crime is a growing problem across EAC thanks to improving Internet connectivity and not much imagination is needed to see the potential risks inherent in mobile money.[59]

MNOs provide hotlines that can be used to report issues or complaints, especially related to wrong transfers. But the course of action becomes less clear if the user has a problem with the MNO and the parties fail to resolve their differences. Conventionally, the communications regulator has made it clear that customers can file complaints related to voice and data service issues. When it comes to mobile money issues, however, it is not clear whether these should be referred to the communications or the financial regulator across EAC. In Kenya, the new draft electronic retail transfers and E-money regulation from the Central Bank of Kenya provides a comprehensive customer care and consumer redress process. But the regulation is still ambiguous with regard to when and how a consumer can escalate a complaint beyond the MNO to the Central Bank.[60] Moreover, in the case of international mobile money transfers, it is not clear in what country's jurisdiction a complaint should be filed—in the sender or recipient country. This underscores the need for harmonization and collaboration at EAC level in regulating mobile money.

D. REGULATION AND POLICY

1. Introduction

Mobile money transactions present regulatory challenges to ensure maximum development benefits. First, mobile money traverses previously distinct and independent areas of regulation (most notably, the telecommunications and financial banking sectors) and often involves multiple ministries and Government agencies, thus adding to the complexity of oversight needed. Secondly, there is a lot of dynamism with disparate, changing technologies and business models as MNOs and other parties explore emerging opportunities with the potential to change the financial landscape. Thirdly, there is limited policy experience in other countries and regions to draw on when drafting relevant laws and regulations. As in most other developing countries, national regulations have not kept pace with developments in the field. It is therefore imperative that regional and national authorities identify and address the gaps and potential overlaps between their existing regulatory tools and mobile money infrastructures.

This section examines two tiers of analysis relevant to EAC mobile money regulation. It first outlines the different legal and regulatory areas that impact mobile money. Secondly, it discusses selected issues that arise in mobile money operations within EAC. As mobile money markets are still relatively underdeveloped from a regulatory perspective, the discussion presented is not intended to be an authoritative guide to addressing all regulatory concerns. Rather, it strives to identify important areas, and to offer a starting point for further analysis as national and regional regulators progress in developing the mobile money regulatory frameworks in EAC.

2. Legal and regulatory areas of relevance to Mobile Money

Mobile money has partitioned conventional financial services into a number of complementary functions:[61]

(a) Exchange between different forms of money (cash and mobile money in this particular case);
(b) Storage of money for safe-keeping (resulting e-float is stored in mobile wallet, while equivalent cash is kept elsewhere);
(c) Transfer of money between different parties;
(d) Investment of the resulting net balance between deposits and withdrawals.

Each function has a number of components, with different inherent risks that regulators need to take into account in order to better regulate the mobile money

[58] What to do in case of a wrong transfer. Africa Airtel Money: http://africa.airtel.com, MTN: http:www.mtn.com Vodacom Tanzania: http://www.vodacom.co.tz/vodacom-M-PESA/faq, Safaricom: http://www.safaricom.co.ke/index.php?id=368

[59] East African Business Week, (July 2011) "Kenya mobile money under security threat." www.busiweek.com/index.php?option=com_content&view=article&id=1454:kenya-mobile-money-under-security-threat&catid=106:kenya&Itemid=1366

[60] Central Bank of Kenya, Draft electronic retail transfers and E-money regulations http://www.centralbank.go.ke/downloads/nps/Electronic%20%20Retail%20and%20E-regulations.pdf

[61] Dittus, Peter and Klein, Michael. (2011) "On Harnessing the Potential of Financial Inclusion." BIS Working Paper No. 347, Settlements, Bank for International | Klein, Michael and Mayer, Colin. (2011) "Mobile Banking and Financial Inclusion: The Regulatory Lessons." Working Paper No. 166, Frankfurt School of Finance & Management.

Table 12. Constituent financial functions of a mobile money service

Function	Components
Exchange between cash and mobile money	Who can issue mobile money? Appointing and managing agents Anti-Money Laundering (AML)/Combating the Financing of Terrorism(CFT) Transparency Exchange rates
Storage of both mobile money and cash	Consumer protection Access control Privacy issues Platform integrity
Transfer of money between different parties	Platform integrity Privacy issues Transaction limits Competition Cross-border transfers
Investment of net balances	Diversification of investments Eligibility of banks Safety of deposits Interest earned

Source: Adapted from Klein, Michael and Mayer, Colin. (2011) "Mobile Banking and Financial Inclusion: The Regulatory Lessons." Working Paper No. 166, Frankfurt School of Finance & Management.

sector as a whole. These components encompass several different regulatory areas, as summarised and explained below.

At the broadest level, national frameworks in areas such as regulatory transparency and dispute settlement will undoubtedly affect each stage of the mobile money process. Regional harmonization through intra-EAC regulatory expansion is another key issue that will also have an impact on the mobile money industry. Developments in these areas are essential to ensure an adequate legal response to challenges and opportunities raised by the increasing adoption of ICTs, including in the mobile money sector. Advancing regulatory harmonization within the region as well as across sectors is particularly important, given that the current EAC regulatory framework is somewhat disjointed. For instance, with regard to consumer protection laws and regulations, there are no multi-sectoral consumer regulations or mandated regulators across the region. At present, central banks are expected to regulate the financial sector in the interest of consumers, while the telecommunications regulators have the corresponding role in the communications sector.

As can be seen from Table 12, there are a variety of specialised regulatory areas and specific concerns that may also have a potential impact on mobile money markets and transactions. The regulatory areas of e-commerce, consumer protection, privacy and data protection, telecommunications, financial regulation and competition law are discussed below. Selected specific issues related to mobile money are discussed in more detail in section 3.

2.1. E-Commerce legislation

Electronic commerce (e-commerce) refers to the purchase or sale of physical or virtual goods or services through electronic transaction and payment systems. Such transactions may be conducted through the Internet or via wireless networks such as those used in mobile phone technology. The scope of e-commerce laws and regulations is potentially wide, and includes among other things e-transactions and e-payments, consumer protection stretching to rules regarding cross-border dispute settlements. Mobile money transactions, which involve the electronic transfer of funds and electronic payment for vendor goods and services as well as related processes,[62] fall within this scope. Mobile money developments are thus affected by applicable legal frameworks for e-commerce (cyberlaws).

On a regional level, the area of cyberlaws is one in which EAC has taken significant steps towards regional regulatory harmonization. In 2006, EAC recognized the creation of a regional enabling legal and regulatory environment as a critical factor for the effective implementation of e-Government and e-commerce strategies at national and regional levels. Under its

[62] E.g., utility bills, as in the case of Uganda

Table 13. Status of e-commerce legislation in EAC

	eContracting/ administration & evidence	Data privacy	Consumer protection	Copyright	Domain name mechanisms	Internet & mobile payment systems	Cyber crime & cyber-security	Content control
Burundi	Pending	Pending	Pending	✓ (2005 Act)	Not reported	No regulations	✓ (2009 Act & Bill)	Pending
Kenya	✓ (2009 Act)	No regulations	✓ (2010 Regulations & proposed Bill)	✓ (2009 Act)	Not reported	No regulations	✓ (2009 Act)	✓ (2010 Regulations)
Rwanda	✓ (2010 Act)	No regulations	✓ (2010 Act)	✓ (2009 Act)	Pending	No regulations	✓ (2010 Law)	✓ (2010 Law)
United Republic of Tanzania	No regulations	Partial under 2010 Law	No regulations	✓ (1999 Act)	No regulations	No regulations	No regulations	Partial under 2010 Law
Uganda	✓ (2011 Act)	Partial	✓ (2011 Act)	✓ (2006 Act)	Pending	No regulations	✓ (2011 Act)	✓ (2011 Act)

Source: UNCTAD forthcoming study on cyber-legislation in EAC.

mandate to offer technical assistance to developing countries in the area of legal and regulatory reform related to ICT, UNCTAD has since then been assisting EAC in building a harmonized framework for cyberlaws across the five Partner States. As a result, EAC Legal Framework for Cyber Laws Phase I – covering electronic transactions, electronic signatures and authentication, cyber crime as well as data protection and privacy – was adopted in 2010 by the EAC Council of Ministers on Transport, Communications, and Meteorology. It is currently being implemented at national level. Phase II of the Framework, which is expected to be examined and adopted in 2012, covers intellectual property rights, competition, e-taxation and information security.

Nationally, the implementation of e-commerce legislation is not uniform across EAC. However, all Partner States do recognize that their implementation of such laws will have an impact on the development of mobile money within the region. A forthcoming UNCTAD study will present a detailed assessment of the status of cyber-legislation in EAC.[63]

2.2. Consumer protection

Consumer protection laws belong to different legislative areas such as competition, telecommunications and banking, and cover a range of specific processes like protection against fraud and the transparent flow of information.

Within EAC, central banks cover some aspects related to the protection of financial sector consumers, while telecommunications regulators oversee some consumer protection aspects related to communication. However, there is currently no comprehensive multi-sectoral consumer protection legislation or mandated authority in any of the EAC countries. For mobile money, central banks in EAC have varying minimum requirements that mobile money platforms need to meet in this respect before they receive clearance to operate. While these requirements are not in the public domain, they include keeping up-to-date records of mobile money accounts opened, the identity of account holders, and the transactions in which they engage. The bank partners are liable to the central banks for these records and perform periodic audits at the MNO to ensure compliance.[64]

The Central Bank of Kenya has taken a leaf from the telecommunications regulators' book and reserved the right to publish comparative information across competing providers that may include their fees and quality of service (clause 12c) as a way to protect consumers. Additionally, the Central Bank of Kenya Draft Regulation for the Provision of Electronic Retail Transfers (clause 10) requires that mobile money providers also engaged in other business must "ring fence" mobile money depositor cash by keeping it in separate accounts from those of its other operations. Central banks in the United Republic of Tanzania and Uganda

[63] Forthcoming UNCTAD study on Cyber-legislation in the EAC

[64] Interview with George Sije, Bank of Tanzania

have also adopted this approach and now require that MNOs maintain bank accounts distinct from those of the MNO's other operations.[65] In the case of M-PESA, there is an independent trust to oversee these accounts and protect customer deposits from Safaricom creditors in the event of a bankruptcy. Holding funds in a separate account may not offer full protection if the account is still in the MNO's name.[66]

The Central Bank of Kenya Draft Regulation for the Provision of Electronic Retail Transfers and Draft E-Money Regulation may thus provide inspiration for other regulators across EAC on how to make explicit consumer protection requirements that need to be met. Defining these explicitly makes it easier for consumers to assert their rights as opposed to enshrining them in a letter of "no objection" that is not in the public domain.

2.3. Privacy and data protection

Privacy and data protection concerns are distinct issues that arise in e-commerce transactions. They are linked to consumer protection policies within e-commerce and telecommunications, as well as certain practices in financial regulation.

In the case of mobile money transfers between different parties, privacy is of great concern. For an M-payments scenario, data may include payer and payee IDs, their geographic location, time of day, purchased items and their value and transaction value.[67] Imagine a business that can link its back-end systems to a mobile money system to capture such transactional data. This could also be used to manage business inventory more efficiently, indicating when to replenish stock and so on.[68] All mobile money platforms do not currently support this kind of direct integration. In addition, transfers create a data trail that could be used for various purposes—good and bad.

There is currently no legislation in EAC that clearly defines who can get access to a mobile money trail, and how, when or under what conditions such access may be obtained. Micro-Finance Institutions (MFIs), for example, could benefit from such data and ultimately put it to good use to expand the range of savings and loan offerings available to small businesses. Some of these offerings could themselves be based on systems around mobile money. In this context, simple and transparent mechanisms are needed through which users can authorize an entity to access this kind of information. Proper data protection laws need to integrate mobile money data or other information emanating from electronic money transfers and ensure that such data are not used for undesirable activities in the framework of general legislation on data retention and privacy.

In addition, the privacy regulations that apply to banks in respect of customer financial records do not extend to MNOs. While MNOs report having instituted internal controls to minimize unauthorized access to consumer information, consumers simply have to trust the MNO to ensure that these are observed. Currently, the licensing requirements for communication services mandate MNOs to provide access to user phone records in response to a legal court order, but this does not explicitly cover mobile money records. As a result, who can access an individual's mobile money records, when and for what purpose is not clear.

In Kenya, the Draft Regulation for the Provision of Electronic Retail Transfers attempts to address the issue of privacy by mandating a provider to maintain confidentiality of all consumer information (clause 12.4). A provider is allowed to share any consumer information only with the consumers or their authorised agent (authorized in writing), the Central Bank, in the public interest or in response to formal legal requests.

2.4. Telecommunications

Broadly defined, telecommunications regulation covers radio and television broadcasting, as well as the more distinct forms of communication through fixed line telephony, mobile telephony, and the Internet. Telecommunication users have an interest in fair network access and transparent disclosure of costs and fees. Regulators and industry endeavour to maintain an efficient system that serves the public needs while still allowing for economic growth. EAC mobile money

[65] Interview with George Sije, The United Republic of Tanzania and Junior Kwebiiha, Uganda

[66] Dittus, Peter and Klein, Michael. (2011) "On Harnessing the Potential of Financial Inclusion." BIS Working Paper No. 347, Settlements, Bank for International | Klein, Michael and Mayer, Colin. (2011) "Mobile Banking and Financial Inclusion: The Regulatory Lessons." Working Paper No. 166, Frankfurt School of Finance & Management.

[67] When payments become more mobilemoneyexchange.wordpress.com/2011/06/01/smart-money-series-when-payments-become-more.

[68] http://afrinnovator.com/blog/2010/09/16/virtual-city-scoops-1million-for-best-mobile-technology-innovation-in-nokia-competition

Table 14. National telecommunications regulatory authorities in EAC

Country	Telecommunications Authority
Burundi	Agence de Régulation et de Controle des Télécommunications
Kenya	Communications Commission of Kenya (CCK)
Rwanda	Regulatory Agency for Public Utility Services of Rwanda (RURA)
United Republic of Tanzania	Tanzanian Communication Regulatory Authority (TCRA)
Uganda	Uganda Communications Commission

transactions are conducted through mobile telephony and associated networks, and are therefore affected by the governing telecommunications regulatory regime.

There are currently no regional telecommunications regulations in EAC. However, national telecommunication authorities are operational in all EAC countries.

Some international guidelines on telecommunication services do exist, and may serve as useful starting points as EAC further develops regulatory frameworks in the mobile money and telecommunications sectors. For example, the World Trade Organization, of which all EAC countries are Members, has served as a development forum for the General Agreement on Trade in Services (GATS) Annex on Telecommunications (Annex),[69] as well as the 1998 WTO Telecommunication Services Reference Paper (Reference Paper).[70]

The Annex and Reference Paper both identify important aspects of telecommunications regulation that are worth considering in relation to mobile money. These include transparency in licensing procedures, interoperability/ interconnection between telecommunication networks, resource allocation (e.g., with regard to frequencies, numbers, and rights of way), and competitive safeguards. Another important concept identified in the Annex is the need for technical cooperation at international, regional, and sub-regional levels.

The issue of interoperability in relation to telecommunication networks is highly relevant in the context of mobile money. Mobile money platforms are still walled gardens—where customers can exchange mobile money only within a particular network, with each operator keeping others at bay. Currently, none of the mobile money platforms within EAC interface or directly work with another platform. For example, a user of MTN Uganda's MobileMoney cannot send money that directly ends up in the mobile money wallet of an Airtel Uganda user.

Rudimentary interoperability does exist through cash on all platforms or via bank accounts in M-Kesho or Iko Pesa, and a registered user could theoretically send mobile money to another user on a different network, who receives an SMS and can draw cash at an agent and in turn load it onto their phone using a different agent.[71] Such a process, however, is cumbersome and costly in terms of fees. Therefore, a fundamental question for the central banks is whether such fees cannot pay for mobile money interoperability. There is, after all, a surcharge for voice interoperability across networks. Mobile money interoperability could potentially be structured along similar lines.

2.5. Financial Regulation

Financial regulation in general aims to maintain the integrity of the financial system through oversight, reporting, and enforcement mechanisms. Specific goals of such regulation include the prevention of market manipulation and investor fraud, provider competence assurance, consumer protection, and maintaining investor confidence in the financial system as a whole. The expansion of mobile money has revealed a number of gaps in specific functions such as who may be authorised to issue e-money, appoint agents, perform Know Your Customer (KYC) measures or take deposits within a given country. Four regulatory issues are discussed below: the issuing of mobile money, transaction limits (both of these currently fall under the primary oversight of central banks), agency banking, and anti-money laundering (AML).

[69] Full text available at: http://www.wto.org/english/tratop_e/serv_e/12-tel_e.htm (last accessed on February 23, 2012)

[70] Full text available at: http://www.wto.org/english/tratop_e/serv_e/telecom_e/tel23_e.htm (last accessed on February 23, 2012)

[71] Dittus, Peter and Klein, Michael. (2011) "On Harnessing the Potential of Financial Inclusion." BIS Working Paper No. 347, Settlements, Bank for International | Klein, Michael and Mayer, Colin. (2011) "Mobile Banking and Financial Inclusion: The Regulatory Lessons." Working Paper No. 166, Frankfurt School of Finance & Management.

2.5.1 Authorizing vendors to deal with mobile money

While money exchanges can happen at different levels of formality (e.g., through banks and foreign exchange bureaux at the formal end to money changers and coin exchangers at the informal end), issuing of new forms of money is the purview of banks and financial institutions. Central banks issue and manage national currency (cash), and banks and financial institutions are licensed by the central banks to issue and manage different forms of e-money.

There are few regulations in effect that can help define the qualifying criteria to be an e-money (or mobile money) issuer or payment service provider outside of conventionally licensed banks or financial institutions. At present, mobile money across EAC is managed by MNOs which typically started their mobile money platforms following a simple letter of "no objection" from the central bank. Although MNOs are not licensed banks and thus do not fall under the direct authority of central banks, they are required to partner with an established bank. The partner bank's activities are already regulated under existing legislation. The bank holds the actual cash deposits against which mobile money is issued. Thus, this arrangement extends existing financial regulation to mobile money by proxy. However, current regulations do not grant the central banks an explicit mandate over non-bank or financial institutions that deal in e-money.

In this regard, Kenya's Draft E-Money Regulation provides a start that the rest of EAC may wish to consider. It explicitly bans entities other than licensed banks or financial institutions from issuing e-money without approval from the Central Bank. The draft legislation goes on to stipulate basic requirements that an e-money issuer has to meet, including capital requirements (clause 5). Interestingly, the legislation also permits licensed banks to license small e-money issuers (clause 6) with lower capital requirements and account thresholds. This creates scope for innovation and competition, although to-date there are no licensed small e-money issuers with operational services on the Kenyan market.

2.5.2 Transaction limits

Transaction limits across EAC, which specify how much a customer can cash-in, cash-out, or transfer using mobile money, have been set at the behest of MNOs who applied for permission from central banks to perform mobile money transfers. Currently, a review by the central banks is on-going to revise the transaction limits and make them more conducive for business within Kenya, the United Republic of Tanzania and Uganda. In Kenya's case, new limits have already been approved, but have not yet been put into operation.[72] In the United Republic of Tanzania, regulators have pegged the highest amount a user may transfer using mobile money to the largest amount a user may withdraw from an ATM.[73] The discussion on transaction limits is still taking place at national levels as opposed to creating uniformity across EAC.[74]

Agent liquidity management is a partly related challenge facing mobile money in EAC. Although this is not strictly a regulatory concern, regulatory implementations may have an impact on the issue. Mobile money users complain that agents usually have insufficient cash to meet their transaction requirements.[75] The challenge partly stems from the fact that an agent must visit an MNO service centre or a branch of a partner bank to purchase e-value. This is inconvenient in terms of time since it is difficult to predict when users will come and the volumes of transactions they will need to perform or in terms of distance in most rural areas. M-PESA in Kenya has adopted an agent model, where a super-agent (or master-agent) acts as an intermediary or wholesaler of e-value to sub-agents under them for cash. Managing the liquidity of sub-agents might also involve extending them e-value on credit, as part of the function of the super-agent. The new Kenyan Draft Regulation for the Provision of Electronic Retail Transfers acknowledges this existing practice by providing for wholesale cash merchants to serve regular cash merchants (section 7.5). MTN MobileMoney in Uganda and M-PESA in the United Republic of Tanzania have also adopted a similar model for their mobile money platforms.

MNOs may be encouraged by regulators to monitor more proactively and forecast the cash requirements

[72] In the new Kenyan draft E-Money regulation, a mobile money account cannot exceed a single transactional limit of 75,000 or an aggregate monthly limit of 1,000,000 Shillings. The CBK is open to approving higher limits for specific categories of mobile money accounts.

[73] This was mentioned George Sije during an interview in The United Republic of Tanzania.

[74] It is of interest to note, however, regional uniformity may be encouraged by the fact that consumer cash limits on mobile money deposits, withdrawals, and transfers in different parts of EAC are greatly influenced by the existing M-PESA model.

[75] Ndiwalana, A., Morawczynski O., & Popov O. (2010). "Mobile Money Use in Uganda: A Preliminary Study." M4D 2010.

of users and hence their agent network to ensure that users can convert mobile money into cash within a convenient time-frame and distance of their operations. Currently, MNO service centres are the only "agents of last resort" available in two common scenarios—during liquidity problems and periods of network failure. These centres are still few, however, and are located primarily in major urban areas.

2.5.3 Agency banking

Banks in Kenya have lobbied for agency banking legislation to extend their reach without necessarily investing in expensive branches that are now in place.[76] Banks can now recruit either cash merchants (similar to mobile money agents) or bank agents. Some banks in Kenya have complained that the current legislation explicitly indicates that bank agents cannot be exclusive (section 6.1.1. of agency banking guidelines), while regulations on cash merchants are silent on this issue and MNOs still pursue exclusive agents. Under such laws, banks would need to invest more resources in branding and the training of agents, and might not be willing to invest sufficient resources to create an agency network if their competitors can easily access it.[77] At the same time, such regulatory dichotomy may be justified, because banking agents can provide a full array of bank services whereas cash merchants cannot. Irrespective, this is an issue that needs attention from central banks. The United Republic of Tanzania, Uganda, Rwanda and Burundi are currently reviewing their legal frameworks to determine what they need to change to accommodate agency banking. Both categories—cash merchants and bank agents— are likely to be small businesses and were not covered by financial regulations before the advent of mobile money in EAC.

2.5.4 AML/CFT

'Money laundering' refers to the methods through which illegally sourced funds are hidden and re-processed before being re-introduced into the financial system. The laundering process aims to make it difficult for authorities to trace the movement and proceeds of illegal funds and connect them to the original criminal activity. AML regulations serve to combat such conversion of illegal monies, and to play an important role in national, regional, and international security and crime prevention frameworks. There is a direct connection between AML and Counter-Financing of Terrorism (CFT), since laundered funds are often linked with terrorist organisations and activities. Regulations that affect one area therefore often influence the other as well.

Money laundering is most commonly associated with financial and banking sector activity. Since mobile money is increasingly used as a form of money transfer and is linked to finance and banking as well as the non-financial telecommunications sector, it poses a risk that AML regulations must address. At the same time, regulators in countries where strong AML frameworks do not yet exist and where a significant percentage of the population lack access to traditional banking services should bear in mind that overregulation may inhibit the growth and associated benefits of mobile money. As mobile money ventures grow more prominent in such economies, it is important for regulatory authorities to identify a middle ground that appropriately balances risk-mitigation with industry growth.

AML regulation has two main aims: First, to prevent money laundering activities; and secondly, to have an adequate enforcement mechanism in place should such activities be detected.[78] Prevention is promoted through due diligence and reporting requirements on the part of industry and supervision and sanctions from regulators. Enforcement is achieved through a system that establishes the legal basis for what actions satisfy the threshold for investigation into money laundering and why this is a crime, how to investigate such actions, how to prosecute such actions, as well as how affected funds will be treated post-investigation, prosecution and conviction.

No comprehensive AML regulatory framework exists at EAC regional level, and national regulation on monitoring the proceeds of crime and AML is at different stages of implementation. Kenya, Rwanda and The United Republic of Tanzania[79] have formal regulations

[76] Central Bank of Kenya, bank supervision, legislations, agency banking guidelines http://www.centralbank.go.ke/financialsystem/banks/Legislation.aspx

[77] Klein, Michael and Mayer, Colin. (2011) "Mobile Banking and Financial Inclusion: The Regulatory Lessons." Working Paper No. 166, Frankfurt School of Finance & Management.

[78] A useful resource that provides a thorough explanation of these processes is "Chasing Dirty Money: The Fight Against Money Laundering", P. Reuter and E. Truman (2004), available at:

[79] The United Republic of Tanzania, Ministry of Finance and Economic Affairs, Financial Intelligence Unit www.mof.go.tz/mofdocs/FIU/index.html

in place. Burundi and Uganda[80] have issued guidelines, but still lack formal legislation.

AML requirements often take the form of due diligence/KYC procedures and documentation/audit trails. For an MNO to receive central bank clearance for cash-in/out transactions, it has to address AML and CFT regulations. Normally these take the form of KYC procedures performed during customer registration or during cash-in/out transactions. From a regulatory perspective, uniform and risk-commensurate KYC procedures should be mandatory for all MNO customer registration activity. Agents responsible for performing these functions therefore also need to be regulated. In Kenya, bank agents are currently regulated and plans are underway to cover mobile money agents, although the regulations are still in draft form. This might be because they trade with their own cash and property (agent location), presenting no risk to others or because the MNO or bank partner is ultimately liable for their actions.

Audit trails in the form of receipts and other customer transaction documents and electronic records (not necessarily shared with customers) are also required for AML/CFT purposes. While there are no uniform requirements that cover the retention and access of such materials, Kenya's Draft E-Money regulation, which stipulates both the need for a documented audit trail and that MNOs should retain records for a period of seven years, provides a good example that the rest of EAC may be able to emulate.

Another aspect of AML regulation with regard to mobile money concerns who should be liable for agent actions/misconduct. At present, there is no uniform system of liability that covers the actions of mobile money agents in EAC. Kenya has addressed this gap through the Kenyan Draft E-money Regulation and Draft Regulation for the Provision of Electronic Retail Transfers. The latter covers agents (or cash merchants as they are referred to) in relation to mobile money. Cash merchants are agents that provide only cash-in and cash-out services as opposed to other services like enrolling customers, accepting deposits and providing withdrawals in the case of bank agents or offer other services like credit extension or insurance services.[81] Under this regulation, MNOs will be required to submit cash merchant details to the Central Bank, train them to perform their job effectively and keep records about the nature of their transactions.

In essence, under this draft regulation, MNOs are accountable for the actions of their appointed cash merchants performed within the scope of the agency agreement. This represents a huge step forward for regulators, considering that in the past, Safaricom expressly disavowed any liability for M-PESA agent activities in Kenya. With the new regulations, this is no longer a legal option. Given the critical role played by agents/cash merchants in mobile money, other EAC countries should ascertain how best to address the same issues arising from their agency activity.

2.6. Competition law

Competition law is aimed at the preservation and promotion of free market competition and consumer welfare protection in regulated industries. In order to achieve these goals, competition law generally prohibits anticompetitive agreements and the abuse of dominance by monopolistic businesses, and restricts anti-competitive practices such as predatory pricing, price discrimination, tie-in-sales, and bundling. Competition law also has an impact on mergers and acquisitions, as well as unreasonable restraints on competition. National competition laws generally do not extend beyond State borders, although extraterritorial jurisdiction may sometimes apply. With regard to mobile money markets, competition laws are relevant to the service costs to consumers, as well as allowable business practices and market structures under which mobile money operators must function.[82]

At EAC level, the East African Legislative Assembly (EALA) has enacted an East African Community Competition Act (2006), with provisions for a regional EAC Competition Authority. Generally, however, competition regulation in certain sectors is handled by sector specific regulators, either solely or with shared jurisdiction with competition agencies. Depending on each case, the move is towards signing of memorandums of understanding (MoUs) between the regulators in order to avoid possible conflicts.

Currently, the telecommunications regulators handle interconnection issues among telecommunication service providers while the central banks deals

[80] Monitor Newspaper article (June 17, 2011), Bankers worried over passing of Anti-Money Laundering Bill, www.monitor.co.ug/Business/-/688322/1183926/-/3vu14i/-/

[81] Central Bank of Kenya, Draft electronic retail transfers and E-money regulations http://www.centralbank.go.ke/downloads/nps/Electronic%20%20Retail%20and%20E-regulations.pdf.

[82] This is of particular relevance in the telecommunications/mobile phone industry, as competition has not historically been an assured feature of this market.

with financial service providers. Historically in EAC (and other parts of the world), access to participate in the communications industry has been restricted to a few players with an aim to create a viable market that can attract the necessary investment. This is not normally the case in the financial sector. So, the number of licenses issued by the communications regulator compared to the central bank in any EAC country is typically much smaller. For example, in Uganda, there were only 6 licensed MNOs, but as many as 23 licensed commercial banks at the end of March 2011.[83] Thus, the perception of competition in the two sectors is different. While MNOs are working with partner banks, they are dominating mobile money within walled gardens at the moment and it is not clear how regulators across the two sectors will respond to competition issues given the convergence between their sectors fostered by mobile money. In addition, independent competition regulators to ensure non-competitive conduct across different sectors are a relatively new phenomenon in EAC. Even when independent competition regulators are in place, they still need to develop the capacity to monitor, investigate, control and prevent uncompetitive conduct, while determining how best to work with existing regulators in other pertinent sectors.

Within EAC, Kenya has the oldest Competition Law, know as the Restrictive Trade Practices, Monopolies and Price Control (RTPMPC) Act Chapter 504 Laws of Kenya, dated 1988. The Law was administered by the Monopolies and Prices Commission, which was a Department of the Ministry of Finance and the Restrictive Trade Practices Tribunal. The RTPMPC Act Chapter 504 was revised in 2011 as the Competition Act 2009. The new law covers promotion of competition, consumer protection, establishes an independent competition authority and a competition tribunal to enforce it. The Competition Act 2009 was made operational though Kenya Gazette Supplement Notice No. 59, Legal Notice No. 73 on 1 August 2011. [84] The United Republic of Tanzania also has a competition law in place: the Fair Trading Act, 2003.[85] Burundi enacted a Competition Act in March 2010 and is in the process of establishing the responsible institution,[86] while Rwanda and Uganda are at different stages of enacting their own competition regulations.

3. Selected issues

The operation of mobile money raises several specific issues for consumers and regulators. While this study does not provide an exhaustive list of such concerns, some issues are explored below.

It should be noted that EAC strongly espouses regulatory amalgamation, as is shown by Articles 126 and 47 of the Common Market Protocol, which call for the harmonization of national legal frameworks. Although there has been some progress towards this goal,[87] the previous discussion shows how current regulations in EAC are still somewhat fragmented across different regulatory areas. As EAC Partners continue to advance towards regional harmonization, it is important to bear in mind that EAC strongly supports the sovereignty of its Partner countries. Thus, EAC countries should emphasize collaborative efforts and information sharing whereby EAC as a whole can develop in line with intra-regional best practices. Harmonization of regulatory frameworks can touch upon all aspects of regulation, and is therefore an important concept to bear in mind as various issues are explored.

3.1. Convergence of different regulatory areas

As mobile money markets evolve, the previously distinct regulatory sectors of telecommunications and finance will continue to intersect, thus changing the regulatory landscape and potentially raising new issues for regulators to address. For example, jurisdictional and dispute resolution questions may arise. When mobile money disputes arise either on a consumer or industry level, which sector and corresponding regulatory agency will have jurisdiction over the claim or dispute, and how will dispute resolution procedures be determined? Additionally, as mobile money services extend across borders, national jurisdictional issues may also arise.

[83] See http://www.bou.or.ug/export/sites/default/bou/bou-downloads/financial_institutions/2011/COMMERCIAL_BANKS_IN_UGANDA_as_at_31_Mar_2011.pdf

[84] See http://www.cak.go.ke

[85] See http://www.competition.or.tz and Tribunal The United Republic of Tanzania's Fair Competitions Tribunal website, http://www.fct.or.tz

[86] See Law No. 1/06 of 25 March 2010 regarding the Legal Regime on Competition (Burundi Official Gazette, No. 3 bis/2010, p. 873. www.iflr1000.com/LegislationGuide/373/Let-the-competition-begin.html.

[87] EAC legal framework for Cyberlaws is a good example of such a progressive step.

3.2. User security issues

Mobile money markets give rise to a number of vulnerabilities that affect end-users. Users are faced with issues pertaining to account safety and authentication, the need for documentation and platform integrity issues.

3.2.1 Authentication

To use mobile money, consumers are given an opportunity to define a 4-character Personal Identification Number (PIN) to authorise different transactions. The PIN and an identification document form the basis for authentication during cash-out. Because the SIM card and PIN are all that is required for other transactions, there is no protection when a consumer loses his/her mobile phone to fraudsters able to figure out their PIN. MNOs across EAC provide advice and hotlines for consumers to report a stolen mobile phone, encouraging them to report such incidents as soon as possible so that all mobile money transactions are blocked. Mobile phones have a unique International Mobile Equipment Identity (IMEI) number that could be used as part of the authentication process, but it is of limited value in the case of a stolen or lost phone.

3.2.2 Documentation needs

When exchanging between cash and mobile money at an agent's location, it is important for mobile money users to get some proof of their transactions. Currently, the documentation of records across mobile money platforms is mostly electronic; SMS is the primary mode of communication to update consumers about the state of their account, and to confirm cash-in/out transactions. For a user, potential delays in SMS transmissions can be a basis for anxiety about mobile money, and can thus affect customer confidence. To address this issue, larger agents like Simba Telecom in Uganda (MTN MobileMoney) now complement confirmatory SMS with a hard-copy paper receipt as an additional proof of transaction details. While this practice may add overhead costs to the system, it provides a tangible record to the customer and boosts user confidence in mobile money. A benefit to the agents themselves is that this paper trail may make it easier for them to satisfy potential future regulatory reporting and audit requirements. Hence, agents and operators may find the adoption of such a documentation system worthwhile.

3.2.3 Platform integrity

The mobile money environment is susceptible to different types of frauds and security threats. Fraud cases were recently reported in Uganda. [88] Procedures need to be adopted to ensure the integrity of the mobile money platform to effectively keep consumers' mobile money safe. With the exception of Iko Pesa in Kenya, systems for mobile money platforms in EAC reside with the MNOs. Such monetary records tend to be much more sensitive than communication records and, as such, MNOs need to institute appropriate documentation procedures and access control methods across their platforms.

M-transfers—where mobile money is transferred from one user to another, without an accompanying exchange of goods or services—are still the dominant application across all mobile money platforms in EAC. A challenge is to ensure platform integrity so that agents and consumers can safely perform transactions without fear of fraud. Integrity covers the people (employed across the mobile money chain), the systems as well as the data. Technology can play a critical role in ensuring integrity, and this is where regulatory collaboration between central banks and communications regulators in EAC becomes paramount. While central banks are conversant with financial regulation, communications regulators are more conversant with the underlying technologies and how they can be leveraged to provide safer mobile money services. Mechanisms to detect and severely punish fraud by customers, agents or other parties across the network (like MNO or bank employees) should be mandated and periodically audited by central banks.

3.3. Handling deposits

3.3.1 Investment of net balances

As noted earlier in this study, MNOs are required by central banks to keep the net deposits of their mobile money platforms with partner banks. Consequently, they are not directly vulnerable to the risks associated with investing such money. Currently, there are no specific regulations across EAC stipulating how big a mobile money platform can grow, essentially opening up a number of questions. Could mobile money deposits grow too large and put customer funds at risk because of the risk of partner bank failure? What

[88] http://www.monitor.co.ug/News/National/-/688334/1366032/-/axbbi8z/-/index.html

kinds of investments should a partner bank make to minimise the exposure of mobile money deposits? Is conventional deposit insurance sufficient to cover such large accounts? What should happen to the interest generated by such deposits if any?[89]

3.3.2 Diversification of deposits across banks

There are no specific regulations stipulating how big mobile money deposits in one partner bank need to be before an MNO has to diversify deposits across multiple banks. However, Central Banks in Kenya and The United Republic of Tanzania have already granted MNOs permission to work with multiple banks. While deposits from mobile money are still relatively small within EAC (with the exception of M-PESA in Kenya), Central banks should begin to think about and possibly harmonise criteria that can help guide them in diversifying mobile money deposits across multiple banks. The Central Bank of Kenya has reserved the right to mandate an e-money issuer to diversify its deposits across more than one bank in the draft E-Money regulation (clause 8). In addition, diversification could also be extended to the kind of investments that partner banks can make with such deposits as a way to minimise risk, given the high number of mobile money users that could potentially be affected by poor investments.

Although diversification is meant to spread the risk across banks, reducing their individual exposure, it also means that the MNO has to maintain multiple bank relationships. In the United Republic of Tanzania, diversification has been used as a mechanism to spur competition amongst banks since MNOs had to seek for approval for new mobile money products through partner banks. There have been cases of partner banks delaying implementation of proposals perceived as competition to existing bank products. Perhaps, this is an indication that central banks need to work out a way to directly license MNOs as opposed to working through licensed banks and financial institutions. [90]

[89] Tarazi, M. and P. Breloff (2010). "Nonbank E-Money Issuers: Regulatory Approaches to Protecting Customer Funds." Focus Note 63. Washington, D.C., CGAP.

[90] Field interviews in The United Republic of Tanzania

3.3.3 Safety of deposits

Anecdotal evidence suggests that some users have started to rely on mobile money as a savings vehicle.[91] Although the concept of saving can mean different things, in this case it relates to the length of time that users keep e-money in their mobile money wallet. Credence of this can also be found in the Central Bank's of Kenya ongoing study to understand the amounts that users keep in their M-PESA account and the duration.[92] While this alludes to the potential of mobile money as a vehicle to build a better savings culture amongst the poor, it also raises several issues. Should there be a requirement that the MNO/bank partner insure these savings deposits?

The reputation risks for partner banks arising from mismanagement of mobile money platforms or the collapse of an MNO are limited due to the fact that all mobile money platforms are branded and associated primarily with the MNO. Conversely, mismanagement at partner banks or bank failures could adversely affect the reputation of an MNO that fails to meet its obligations. Deposits from mobile money far exceed deposit amounts covered by conventional deposit insurance across EAC. The challenge is that such an account is an aggregation of many small deposits and would in the event of bank failure affect a large number of people, influencing perception and confidence in the national financial system. Central banks should therefore put in place measures to minimise the potential impact of the collapse of a mobile money platform on the national payments system arising from failures on the part of an MNO or partner bank.

3.3.4 Handling of interest on deposits

Mobile money deposits were not initially expected to generate much interest based on the dynamic nature of transactions and the small amounts involved. In the case of M-PESA, however, deposits have grown to

[91] Morawczynski, O. and M. Pickens (2009). "Poor People Using Mobile Financial Services: Observations on Customer Usage and Impact from M-PESA." CGAP Brief CGAP and Jack W., and Suri T. (2011). "Mobile Money: The Economics of M-PESA." NBER Working Paper Series, No.16721, www.nber.org/papers/w16721.

[92] AFI Case study: Enabling mobile money transfer: the Central Bank of Kenya's treatment of M-PESA, http://www.afi-global.org/services/publications/en/enabling-mobile-money-transfer-central-bank-kenya%E2%80%99s-treatment-M-PESA

generate interest to the tune of US dollars 7.5 million.[93] The Central Bank of Kenya initially required that Safaricom donate accrued interest to charity and later explored ways of using it to reduce the cost of services to users of M-PESA. In its Draft E-money regulation, the Central Bank has given e-money issuers the discretion to use resulting interest as they deem fit. In the rest of EAC, there are currently no clear guidelines from regulators as to what MNOs can do with the accrued interest derived from such deposits.

Conversely, should MNOs be required to pay interest on mobile money deposits? The Kenyan Draft E-money regulation explicitly forbids mobile money platforms paying interest or “other monetary incentives or rewards” to account holders, clearly stipulating that mobile money is not a savings or other investment vehicle. M-Kesho and Iko-Pesa circumvent this requirement by allowing for the transfer of mobile money from the mobile phone wallet into an actual bank account, thus providing the possibility of earning interest.

Currently, none of the mobile money platforms across EAC pays any interest directly irrespective of the period a user keeps mobile money in their wallet. Meanwhile, given the transitory nature of the transfers, mandating that interest earned on deposits in the partner bank go back to users could be complicated. An MNO/Bank partner would need to compute how much goes to each user based on complex parameters that take into account the amounts and how long they stayed in a user’s wallet. How would this apply to users of M-Kesho, for example, that rely on the mobile money platform to transfer money to their bank accounts?

A regulatory middle ground may be to allow MNOs the discretion to use interest earned, but only towards aspects that improve their mobile money platform as a whole. For example, an MNO could use such interest to better insure deposits on the trust accounts in partner banks or apply it towards subsidising the cost of using their platform. Another dimension relates to third-party applications that might run on top of the mobile money platform. For example, if a user wanted to loan money to others via the mobile money platform, would it be legal for them to collect the loan amount plus interest via the mobile money platform?[94]

[93] Klein, Michael and Mayer, Colin. (2011) “Mobile Banking and Financial Inclusion: The Regulatory Lessons.” Working Paper No. 166, Frankfurt School of Finance & Management.

[94] Tilman, E. and M. Tarazi (2011). “Putting the Banking in Branchless Banking: Regulation and the Case for Interest-Bearing and Insured E-money Savings Accounts.” In W. E. Forum, Mobile Financial Services Development Report 2011. New York, NY, World Economic Forum: 37-42.

3.4. Cross-border transfers

Individuals who trade across the region use means like long distance buses or foreign exchange bureaux to pay for goods that are later sent back by bus. Other traders forward money to their destination to avoid travelling with cash for security reasons. Currently, some M-PESA agents perform informal cross-border mobile money transfers between Uganda and Kenya. Additionally, Western Union has already integrated its system with a number of mobile money platforms in EAC to permit international remittances to be converted and credited directly into a user’s mobile money account. The movement is currently one-way, that is from Western Union into mobile money and not vice versa. This service is currently operational on M-PESA in Kenya and soon also on MTN MobileMoney in Uganda.[95] That such transfers are already happening is indicative of a need, and there is little doubt that cross-border mobile money transfers could help to promote regional trade within EAC.

An important concern is that informal transfer systems such as those facilitated by M-PESA agents are not sanctioned by either regulators or MNOs. They could therefore be considered illegal ways to bypass national foreign exchange regimes. With increasing mobile money use, regulators will need explicitly to prohibit or permit such cross-border transfers. If allowed, regulators must then determine how best to ensure interoperability between systems at an international level, track foreign exchange conversions and document foreign exchange flow so as to deter illegal activity.

Foreign currency control regulation itself is currently not harmonised across EAC. Foreign exchange repatriations are permitted in all countries except Burundi, but under a variety of conditions. For example, to repatriate more than U Sh 50 million in Uganda, a tax clearance certificate from the Uganda Revenue Authority is needed. [96]In Kenya, banks must report foreign currency transactions above US dollars 10,000. [97]Although the amounts involved in mobile money are still very small compared to those that attract scrutiny across EAC, as such cross-border transfers increase, regional coordination becomes ever more important. Well-executed, cross-border transfers across EAC

[95] MTN, Western Union in money transfer deal www.newvision.co.ug/D/8/13/737901

[96] http://www.deloitte.com/assets/Dcom-Global/Local%20Assets/Documents/Tax/Taxation%20and%20Investment%20Guides/2012/dttl_tax_highlight_2012_Uganda.pdf

[97] http://www.centralbank.go.ke/downloads/acts_regulations/foreignexchangeguidelines.pdf

could provide a significant benefit for regional trade and remittances by lowering transaction costs.

E. CONCLUSIONS AND RECOMMENDATIONS

While central banks are generally equipped to address risks present within retail payments systems in EAC, mobile money presents a new set of regulatory challenges. Mobile money involves players that traditionally have not fallen within the purview of central banks. For example, should MNOs be directly licensed to issue mobile money? How should the agents, which are so critical for mobile money take-off and sometimes perform functions like customer registration for KYC, be regulated? Studies documenting risks across the mobile money chain have started to emerge.[98] But they do recognise the nascent nature, dynamism in the development of new business models as well as the uniqueness of various environments and how all of these could influence emerging mobile money platforms in EAC. EAC is a hotbed of mobile money activity. Moreover, regulators in this region have few other countries to turn to for prior art around the world. This further compounds the challenge of effectively regulating and protecting consumers, without stifling innovation.

In this final section, a number of regulatory issues and potential policy actions are discussed. The issues relate to consumer protection, registration and transaction limits, agent networks, interoperability, taxation as well as collaboration between regulators both within and across EAC countries. While these themes are not exhaustive, they encompass common areas that need attention to help foster adoption and use of mobile money especially among small businesses across EAC.

As noted in an UNCTAD report on the state of play of cyber legislation in EAC: "despite the colossal sums of money involved in mobile money transfers, there is no legal framework governing these transactions. The mobile network operators have no obligation to report or disclose information on mobile money services to the Bank of Uganda as the financial regulator or to the Uganda Communications Commission as the telecommunications regulator."[99]

1. Consumer protection

From interviews in the field, consumers are not sure who to approach if and when they have complaints related to mobile money, especially when they involve the MNO. This may be a reflection of countries focusing on attracting investment and providing an open ground for innovation. Regulators need to start paying more attention to consumer-related issues and define some standards to which MNOs/partner banks need to adhere so as to ensure higher consumer satisfaction. Potential areas of action include:

(a) Regulators in conjunction with MNOs/partner banks providing mobile money services should define some service quality metrics (akin to what they have done for voice services) that can be tracked over time to ensure improvements. Performance across these metrics should be periodically disseminated to the public for reasons of transparency and accountability.

(b) MNOs/partner banks should be required to set up dedicated customer support centres and systems. Currently, these are embedded within support systems for other conventional services like voice and these are already deluged with users complaining about issues with these other services.

(c) MNOs and their agents should be required to display their various mobile money services and related charges visibly at each of their locations. Other terms and conditions related to services should also be readily accessible by consumers.

(d) Use of mobile money creates lots of data and a trail that can be followed. This can be used for both good and bad objectives. It is therefore important to specify who can have access to this information, when and how? How can a user authorise access to his/her own data stream? Such questions should be addressed within the general framework of privacy and data retention laws within EAC.

(e) Mobile money opens a set of risks that did not exist before, especially for poor people. Examples include the loss of a mobile phone with mobile money, identity theft and fraud, etc.

[98] Kenya School of Monetary Studies, USAID, Booz Allen Hamilton. (2010). "Mobile Financial Services Risk Matrix." Washington, D.C.: USAID | Dittus, Peter and Klein, Michael. (2011) "On Harnessing the Potential of Financial Inclusion." BIS Working Paper No. 347, Settlements, Bank for International | IFC Mobile Money Toolkit, Tool 10.10. Mobile Money Risk Scorecard at www.ifc.org/ifcext/gfm.nsf/Content/MobileMoneyToolkits2

[99] Forthcoming UNCTAD study on Cyber-legislation in the EAC

What kind of knowledge do users need in this new environment? What measures are needed to protect consumers and enhance their trust in mobile money?

The Central Bank of Kenya (CBK) has sought to address many of these issues in the new draft Regulation for the Provision of Electronic Retail Transfers and Draft E-Money Regulation. In the rest of EAC, there is no draft legislation that tries to address the above issues with regard to mobile money.

In addition, the CBK has enshrined its right to publicly publish consumer information comparing different performance metrics like tariffs, quality of service, etc. across different mobile money platforms in the new regulations. While they have not yet done this to date, it is a step in the right direction that may serve as inspiration for other central banks across EAC. Communications regulators across EAC periodically do this to spur competition and educate consumers for communication services.

2. Registration and transaction limits

Registration before being able to use any mobile money services is still a barrier for adoption across EAC, primarily because it has been a retroactive step—MNOs had already issued the bulk of their SIMs before they launched mobile money platforms. While the need for KYC is well articulated, the challenge to put together the necessary documentation and dedicate the time to visit an MNO or their agents is still perceived to be a considerable hurdle, especially for those that would just like to experiment with the service. At the agent, a user has to complete a registration form, which can be an intimidating step for poor people. M-PESA in Kenya has now automated the registration process so that an agent can complete it via mobile phone with no paperwork.

A user can present a range of documents, as identification for registration across EAC, a welcome flexibility. But this also points to the need to craft national IDs across the different countries. The lack of a nationally accepted form of ID implies that registration is a two-step process. The completed form and ID photocopy from the agent's location need to be forwarded to the MNO offices for processing, after which a mobile money account is activated. This delay can add frustration to the registration process. With the exception of Kenya, EAC is still struggling to come up with an acceptable form of national identification. However, there are discussions at EAC level seeking to enable national IDs to be accepted across the region.

Regulators may explore avenues to provide an opportunity for more individuals and small businesses to experience mobile money without the hurdle of pre-registration. Then, as the amounts they transact increase, they can be required to register. This can lower the bar to participating for micro enterprises and individuals. Certain limits that apply to transactions on different systems may also be restrictive for business operations.

Eliminating the need to handle cash and its associated risks is one of the benefits of mobile money for small businesses. At the same time, the current transaction limits or thresholds are rather restrictive, especially for traders in small businesses. Current limits were set by the central banks at the request of the MNOs and were conceived primarily to address m-transfers between family members rather than commercial transactions. Most MNOs now recognize that transaction limits are not conducive to business and have started a dialogue with the central banks to have them reviewed. In Kenya and Uganda, the dialogue has already resulted in the approval of new limits, but these are yet to come into operation.[100]

Another aspect relates to SIM-registration, promoted by communication regulators across EAC as a way to curb crime.[101] While there is no data to backup this claim, even those that brought in SIM registration in Burundi, Kenya and the United Republic of Tanzania, have yet to disconnect users that do not comply with the directives. Anecdotally, discussions with private sector representatives in both Kenya and the United Republic of Tanzania point to pressure from MNOs as well as fear by Government of losing tax revenue as possible reasons why unregistered SIMs have not been disconnected.[102]

SIM registration can be a double-edged sword for small businesses. On the one hand, not much is known about how it will affect businesses participating in the mobile ecosystem and thriving around selling new SIMs and related services. It is unlikely that

[100] Informed by MNOs and confirmed in discussions with Central Bank representatives during field trips in June 2011

[101] East African Business News, 5th June 2011. "EA regulators push for SIM registration to curb crime." http://www.busiweek.com/index.php?option=com_content&view=article&id=1122:ea-regulators-push-for-sim-registration-to-curb-crime&catid=107:rwanda&Itemid=1367

[102] Discussions with private sector people during field trips in June 2011.

insistence on SIM registration will wipe out these micro enterprises since they form a vital part of the distribution network of an MNO. On the other hand, it could be seen as a small step towards formality for individuals and *small non-mobile sector enterprises* that were previously unregistered. The registration and rich data generated from the individual or small business transactions in the right institutional hands could play a role in helping to figure out how to support small businesses. Conversely, various institutions may misuse such data and safeguards need to be put in place to ensure its integrity.

Customer segmentation that is already used in communication services could be extended to mobile money, especially for small businesses. Small businesses could be allowed to experiment and test mobile money using small transaction amounts without the need for prior registration. As their transaction amounts grow, registration would become necessary and KYC would become more stringent as the amounts grew larger. To avoid confusion, various transaction levels would need to be well communicated in advance, while registration could be promoted through the provision of add-on services (like training in business skills, records keeping, etc.) from the MNO or other entities that support private sector development.

3. Agent networks

Agents are critical for any mobile money platform. Key functions include registering new users through KYC procedures as well as providing convertibility for users through cash-in or cash-out services. With the exception of Kenya, where the Central Bank has now issued draft regulation for the provision of e-retail transfers and e-money issuance,[103] the relationship between an MNO/partner bank and their agents is not under the purview of regulators. Meanwhile, agents are the interface through which users interact, shaping perceptions about the mobile money service. As mobile money becomes more important as a payment channel within EAC, agents will start to influence user perceptions about national payments systems in general. Thus, managing this relationship by looking at how agents are recruited, trained and managed is important for regulators.

The CBK has opted to allow MNOs to recruit agents who meet a defined basic standard, but they have to be registered and can be inspected by the CBK on demand, providing some level of oversight. There does not seem to be a strong justification for agent exclusivity. Instead, allowing agents to work for multiple MNOs can help enhance competition amongst both agents and MNOs. In this way, agents could also help in providing interoperability across different systems.

To perform KYC procedures effectively, agents need to be trained. Currently, all MNOs across EAC hire third-party companies to train agents and their employees in the necessary skills using different curricula. Employee turnover amongst agents is also reportedly high given the lack of formal contracts between agents and their employees, while training is not always ongoing.[104] One possibility would be for central banks in EAC to devise some basic requirements for an agent-training curriculum that is applied across mobile money platforms to ensure uniformity.

4. Interoperability

In their infancy, mobile money platforms across EAC are predominantly used for m-transfers between known parties. In this case, it is reasonable to accept mobile-money platforms restricted to users of a particular MNO because the parties can agree beforehand to operate on a given network belonging to a particular MNO. As mobile money matures towards m-payments and m-financial services, improved interoperability becomes increasingly critical. A small business that wants to adopt mobile money as a means to receive payments may face a dilemma. Should it choose to serve a particular mobile money platform (for example the most dominant in the country) or multiple options? The first choice might alienate some customers who do not belong to a particular network, while the second is much more costly to afford and manage. Even if the Point of Sale terminal were a basic mobile phone, then the enterprises would need multiple phones and mobile money accounts, fragmenting their cash across different systems. This might make sense for institutional clients like monopoly utility providers or others with a big customer base, but not for a small business.

[103] Central Bank of Kenya, Draft electronic retail transfers and E-money regulations http://www.centralbank.go.ke/downloads/nps/Electronic%20Retail%20and%20E-regulations.pdf.

[104] Mentioned by agents in Uganda and The United Republic of Tanzania as well as MTN MobileMoney representative in Uganda during interviews in June 2011.

MNOs (especially the dominant players) are resisting moves towards mobile money interoperability as their own platforms are a good way to reduce churn (or the percentage of customers they lose every month) in a competitive environment. A common line of argument is that interoperability would provide an unfair advantage to their competitors since they would access their technology and branch network. A counter-argument would be that this is already happening for voice interoperability across networks. In voice traffic, a competitor is not granted free access to an airtime agent network (which is rarely exclusive), but the principle is that an originating network (along with calling user) pays a surcharge—an interconnection fee, to the termination network. As central banks grapple with how and when to mandate interoperability at national level, one challenge is to determine what interoperability is worth to the nation as a whole and what it is worth for one MNO to interoperate with another. A possible challenge for both the central bank and the communications regulator is how to nurture and guide the development of an interoperable local mobile money ecosystem that discourages the walled garden mentality without creating barriers to innovation and/or new entries.[105] Currently, UNCTAD is not aware of any two interoperable mobile money platforms anywhere in the world.

A discussion about mobile money interoperability is already underway in Kenya. A Government task force set up by the Prime Minister to look into telecommunications sector issues has recommended that MNOs should work closely together to create a seamless interoperable system in Kenya. In addition, the draft electronic retail transfers and E-money regulation from the Central Bank of Kenya that came into force in early 2011 stipulates (clause 9.1) that any "Payment service providers shall utilise open systems capable of becoming interoperable with other payment systems in the country and internationally."

There are other issues at the national level, including how to integrate a developed mobile money ecosystem into the national payments system. At a regional level, the issue of interoperability is also relevant as shown by the informal transfers happening across borders. An added complication is to deal with foreign exchange conversions if mobile money across borders is formalized in EAC. As EAC is at the forefront of the mobile money revolution, there are not many examples in existence to learn from. Rather, countries in this region – four of which are least developed countries – face the challenge of charting a course by trying out new things in ways that do not erode current achievements and at the same time create maximum development opportunities. As a regional block aspiring to achieve more integration, EAC countries should continue their work towards adopting harmonized legislation on payments, including electronic and mobile payments.

[105] Ndiwalana, A. and O. Popov (2008). Mobile Payments: A Comparison between Philippine and Ugandan Contexts. IST-Africa 2008. P. Cunningham and M. Cunningham. Namibia, IIMC.

5. Government and taxation

Governments in EAC are the biggest disbursers of money through paying salaries to civil servants as well as pensions. Given the limited reach of financial institutions, especially in the rural areas, Governments can greatly improve their services by adopting mobile money to disburse such funds on a regular basis. Conversely, Governments also receive money from citizens. Adding a mobile money channel can help increase convenience for users to pay taxes and Government fees, resulting in a more efficient revenue collection for the Government. In addition, the ability to reach a large portion of the low-income population through their mobile phones and connect them to the formal economy allows for the delivery of more efficient social policies like emergency payments for disasters, relief efforts for epidemics, health threats, etc. All of this would further enhance the adoption of mobile money across the region.

Even as Governments in EAC yearn for greater tax revenues, they should continue to refrain from taxing mobile money transactions for now. For example, the Ugandan Government taxes on prepaid mobile voice services stand at 30 per cent (18 per cent VAT and 12 per cent excise duty), and in Kenya at 26 per cent (16 per cent VAT and 10 per cent excise duty). Imposing taxes on mobile money services could be counterproductive because these would be passed directly on to consumers. The result would be higher prices and reduced transaction volumes. The core group of people that mobile money is lauded for providing a channel to serve—the poor—could flee since they are more sensitive to price changes. This would increase the risk that mobile money reverts to serving those that already have alternative options in accessing financial services.

6. Regulator collaboration

The need to collaborate between the two regulators—communications and financial—is becoming increasingly critical; while one is an expert at the financial aspects of mobile money, the other better understands the facilitating technology. Currently, individual contacts do exist amongst the two types of regulators in all EAC countries. In the case of the United Republic of Tanzania, there are also formal institutional links between the two.[106] As mobile money grows bigger and draws in more sectors, as it becomes an important channel for effecting payments and other types of financial services, new regulators will have to join the fold. Gaming or betting commissions, insurance regulators, content regulators, etc., will all have a role to play.

As countries in EAC aspire to and move towards integration, there is an element of regulatory collaboration through EAC secretariat and other regional entities, like the East African Communications Organisation (EACO), which brings together the communications regulators. Through these bodies, regulators tend to look at issues from a regional perspective and strive to create compatible regulation to support both national and regional goals. While Central banks across EAC have worked on a number of regional projects like the Real Time Gross Settlements (RTGS) system, and others that are in the pipeline, mobile money is not yet on the table. Dialogue is largely happening at a national level with Kenya often leading the way owing to the success of M-PESA and the fact that they have somewhat longer experience than the other EAC countries.

EAC Governments have shown strong determination to advance on cyberlaw reforms, given in particular the increasing use of mobile phones within and across countries for business and financial transactions. EAC Task Force on Cyberlaws was formed in 2007 with the support of UNCTAD with the objective to harmonize cyberlaws and regulations across the five countries to take into account the potential of both e-commerce and m-commerce. The assistance of UNCTAD has helped EAC to prepare guidelines on electronic transactions, electronic signatures and authentication, data protection and privacy, consumer protection, and computer crime.[107] EAC Task Force could possibly contribute to further work on harmonization in the area of mobile money services.

[106] According to separate briefings by representatives from BoT and TCRA during field trip in June 2011

[107] The Framework for Cyberlaws was adopted by EAC Sectoral Council of Ministers on Transport, Communications, and Meteorology in 2010. The EAC Task Force has endorsed a second Framework dealing with Intellectual property rights, competition, taxation and information security to be presented at the next session EAC Sectoral Council of Ministers on Transport, Communications, and Meteorology in 2012

ANNEX: Mobile Money Country Profiles

A. BURUNDI

This profile summarises important details about mobile money in Burundi. The first section presents legislation that has the potential to impact on mobile money operations within the country. The second section provides comparative details on current mobile money platforms operating in Burundi including key institutions, services, costs, etc.

1. Relevant legislation

1.1 Financial regulation

Some of the pertinent financial legislation that influences the operations of mobile money within Burundi includes:

(a) The Bank of the Republic of Burundi (BRB),[108] the central bank has a number of statues that define its mandate and guide its activities. These include Law no. 1/01 (enacted January, 1976) later amended by Law no. 1/36 (enacted July 1993), Law no. 1/016 (enacted September, 2004) and Law no. 1/34 (enacted December, 2008).

(b) The Banking Act, Law no. 1/017 (enacted October, 2003) that relates to the regulation of banks and financial institutions within the financial sector in Burundi.

(c) Law no. 1/07 (enacted March, 2006) defines procedures of how to deal with issues of bankruptcy in Burundi.

(d) Law no. 1/02 (enacted February, 2008) addresses issues of AML/CFT by mandating banks and other financial institutions to report suspicious transactions.

1.2. Other regulation

There is other regulation with the potential to influence the conduct of mobile money operations within Burundi. Examples include:

(a) The Multi-Sectoral Competition Law, Law no. 1 / 06 (enacted March, 2010)—relates to issues of competition within Burundi. The regulation stipulates the appointment of a Competitions Commission that has not yet been put in place.[109]

(b) Commercial Regulation Law no. 1/045 (enacted July 1993) relating to the conduct of commerce, amended by Law no. 1/07 (enacted April, 2010).

(c) Law no. 1/05 (enacted April, 2009), which amends the Criminal Code.

2. Players

Five MNOs have been licensed by Agence de Régulation et de Contrôle des Télécommunications (ARCT), the telecommunications regulator to operate within Burundi. They include LEO (formerly U-Com Burundi),[110] Africell,[111] Econet,[112] Onatel and Smart Mobile. Of these, only one—Econet – has so far launched a mobile money platform, the details of which are summarised in Table 15.

Table 15. Overview of mobile money players in Burundi

Overview	Econet EcoKash
Mobile operator	Econet Wireless Burundi
MNO website	www.econet.bi
Bank partners: Deposits	National Post Office
Bank website	
Launch date	March 2009
Service delivery	SMS
Subscribers (June 2011)	29 000
Agents (June 2011)	88

Source: Email interview with Econet Wireless staff and Econet website.

3. Services

Like in other countries within EAC, m-transfers are the predominant service on the EcoKash mobile money platform, with monthly transfer amounts of up to US dollar 400,000. EcoKash has started to expand into other service areas as indicated in Table 16.

108 www.brb-bi.net

109 www.iflr1000.com/LegislationGuide/373/Let-the-competition-begin.html

110 U-Com Burundi, www.leo.bi

111 www.africell.bi

112 www.econet.bi

Table 16. Overview of different mobile money services available in Burundi

Mobile transactions	Econet EcoKash
M-transfers	• Domestic transfers up to maximum of 1,000,000 for both non-registered and registered users
M-payments	• Buy airtime (on-network) • Pay postpay phone bills • REGIDESO (electricity and water bills) • Multichoice Burundi (Satellite TV bills)
M-financial services	

Source: Email interview with Econet Wireless staff and Econet website.

4. Costs

Different costs are associated with separate aspects of mobile money transactions. EcoKash cash-in transactions are free (Table 17), while cash-out transactions attract different costs depending on whether the user is registered or not (Table 18).

Table 17. Mobile money cash-in costs in Burundi

Loading money (cash-in) F Bu	Econet EcoKash
1—1 000 000	Free
Above 1 000 000	N/A

Source: Email interview with Econet Wireless staff and Econet website.

Table 18. Mobile Money Cash-out costs in Burundi

Withdrawing Money (cash-out) F Bu	Econet EcoKash	
	Registered User	Non-Registered User
1—5 000	250	Free
5 001—15 000	350	Free
15 001—25 000	500	Free
25 001—50 000	1 000	Free
50 001—75 000	2 000	Free
75 001—100 000	2 500	Free
100 001—250 000	3 000	Free
250 001—500 000	3 500	Free
500 001—1 000 000	5 000	Free
Above 1 000 000	N/A	N/A

Source: Email interview with Econet Wireless staff and Econet website.

M-transfers between non-registered consumers on Econet are more expensive compared to those of registered EcoKash customers (Table 19). Complementary transactions are free (Table 20), although there are transaction limits that apply (Table 21).

Table 19. Mobile money m-transfer costs in Burundi

Mobile Transfers BIF	Econet EcoKash	
	Registered User	Non-Registered User
1—5 000	250	600
5 001—15 000	350	800
15 001—25 000	500	1 100
25 001—50 000	1 000	2 100
50 001—75 000	2 000	4 100
75 001—100 000	2 500	5 100
100 001—250 000	3 000	6 100
250 001—500 000	3 500	7 100
500 001—1 000 000	5 000	10 100
Above 1 000 000	N/A	N/A

Source: Email interview with Econet Wireless staff and Econet website.

Table 20. Other mobile money transaction costs in Burundi

Other Costs	Econet EcoKash
Buying airtime/top-up[113]	Free
Registration	Free
PIN change	Free
Balance check	Free
Mini-Statement or transaction reports	Free

Source: Email interview with Econet Wireless staff and Econet website.

Table 21. Mobile money thresholds/limits in Burundi

Thresholds BIF	Econet EcoKash
Maximum account balance	N/A
Maximum daily transaction value	1 000 000
Maximum monthly transaction value	N/A
Maximum transaction value	1 000 000
Minimum transaction value	N/A

Source: Email interview with Econet Wireless staff and Econet website.

[113] Currently the maximum airtime a user can buy is F Bu 500,000.

B. KENYA

This profile summarises important details about mobile money in Kenya. The first section presents legislation that has the potential to impact on mobile money operations within the country. The second section provides comparative details between current mobile money platforms operating in Kenya including key institutions, services, costs, etc.

1. Relevant legislation

1.1 Financial regulation

Some of the pertinent financial legislation that influences the operations of Mobile Money within Kenya includes:

(a) Central Bank of Kenya Act (enacted 1966, amended through 2009)[114]—created the Central Bank of Kenya and defines its mandate.
(b) Banking Act (enacted 1991, amended through 2010)[115]—regulates the activities of banking institutions within the financial sector in Kenya.
(c) Microfinance Act (enacted 2006)[116] and other related legislation[117,118]—regulates the provision of microfinance services within Kenya.
(d) Proceeds of Crime and Anti-Money Laundering Act (enacted 2009)[119]—influences AML/CFT issues in the financial section within Kenya.
(e) Various Prudential Guidelines issued by the Central Bank of Kenya.[120]
(f) Various Risk Management Guidelines issued by the Central Bank of Kenya.[121]
(g) Guidelines on Agent Banking (2010)[122]—provides for the appointment of agents to extend banking services within Kenya.
(h) Draft Electronic Retail Transfers Regulation and Draft E-Money Regulation (stake holder consultations were organised and comments to the draft are now being integrated)[123]—regulate electronic money issuance and exchange, as well as its transfer between different parties within Kenya.

1.2. Other legislation

There is other regulation with the potential to influence the conduct of mobile money operations within Kenya. Examples include:

(a) The Kenya Information and Communications Act (1998)—provides the mandate of CCK and a framework to regulate the information, communications, media and broadcasting subsectors.
(b) The Kenya Communications (Amendment) Bill 2008 contains basic provisions on electronic transactions and electronic signatures.
(c) A range of Kenyan information and communications regulations made by the Minister in charge of Information and Communications in tandem with the CCK to regulate various aspects of the communications sector that include consumer protection, competition, tariffs, numbering, interconnection, quality of service etc.
(d) The Kenyan Competitions Act (2009)[124]— has some elements of consumer protection and provides for the creation of an autonomous Competition Authority to replace the Monopolies and Prices Commission.
(e) The Kenyan Insurance Act (1984) which governs the insurance industry and created Insurance Regulatory Authority (IRA).[125]

2. Players

The Communications Commission of Kenya (CCK)[126] has licensed four MNOs for operations in Kenya and

[114] www.kenyalaw.org/Downloads/Acts/Banking%20Act.pdf
[115] www.centralbank.go.ke/downloads/acts_regulations/BankingAct_jan2011.pdf
[116] www.centralbank.go.ke/downloads/bsd/MFI/MicrofinanceAct.pdf
[117] www.centralbank.go.ke/downloads/bsd/MFI/Microfinance%20_Categorization%20of%20the%20Deposit-Taking%20Microfinance%20Institutions_%20Regulations%202008.pdf
[118] www.centralbank.go.ke/downloads/bsd/MFI/Microfinance%20_Deposit-Taking%20Microfinance%20Institutions_%20Regulations%202008.pdf
[119] www.kenyalaw.org/kenyalaw/klr_app/view_cap.php?CapID=659
[120] www.centralbank.go.ke/downloads/acts_regulations/prudential_guidelines_2006.pdf
[121] www.centralbank.go.ke/downloads/acts_regulations/RiskManagementGuideline2005.pdf
[122] www.centralbank.go.ke/downloads/bsd/GUIDELINE%20ON%20AGENT%20BANKING-CBK%20PG%2015.pdf
[123] www.centralbank.go.ke/downloads/nps/Electronic%20%20Retail%20and%20E-regulations.pdf
[124] www.kenyalaw.org/Downloads/Bills/2009/200903.pdf
[125] Kenya's Insurance Regulatory Authority, www.ira.go.ke
[126] www.cck.go.ke

Table 22. Overview of mobile money players in Kenya

Overview Mobile operator	M-PESA Safaricom	Airtel Money Airtel Kenya	Yu Cash Essar Telecom	Iko Pesa Orange Kenya
MNO website	www.safaricom.co.ke	africa.airtel.com/Kenya	www.yu.co.ke	www.orange.co.ke
Bank partners: Deposits	• Commercial Bank of Africa • Standard Chartered Kenya • CFC Stanbic • Equity Bank Kenya	• Citigroup	Equity Bank Kenya	Equity Bank Kenya
Bank websites	www.cba.co.ke www.standardchartered.com/ke www.stanbicbank.co.ke	www.citibank.com/east-africa/kenya	www.equitybank.co.ke	www.equitybank.co.ke
Bank partners: Services	• Kenya Commercial Bank • Co-operative Bank of Kenya • CFC Stanbic • Equity Bank Kenya	• Housing Finance • Postal Corporation of Kenya • Standard Chartered Bank Kenya, • Co-operative Bank of Kenya	• Equity Bank Kenya	• Equity Bank Kenya
Launch date	March 2007	February 2009	December 2009	November 2010
Service delivery	STK	STK	SMS, STK, USSD, Voice, WAP	STK, USSD, WAP, Java app
Subscribers (2011)	14 000 000 (April)[132]	3 200 000 (July)		
Agents (2011)	27 988 (April)			

Source: Interviews and various online resources (see footnotes).

they all have mobile money platforms. They include Safaricom,[127] who had a head start with M-PESA in 2007, followed by Airtel Kenya (formerly Zain)[128] with Airtel Money and Essar telecom[129] with YuCash in 2009 and finally Orange Kenya (Telekom Kenya)[130] with Iko Pesa in 2010. The mobile money market in Kenya is most vibrant across EAC as shown by the large user base, the bulk of which belongs to M-PESA. At a recent re-launch of Airtel Money, the CBK governor indicated that there are 17.8 million registered users of mobile money, who make 1.1 million daily transactions through which they transfer over K Sh 3.1 billion.[131] Comparative details are summarised in Table 22.

[127] Safaricom website, www.safaricom.co.ke

[128] Airtel Kenya website, http://www.africa.airtel.com/wps/wcm/connect/africaairtel/Kenya/

[129] Essar website, www.yu.co.ke

[130] Orange Kenya website, www.orange.co.ke

[131] CBK Governor's remarks during the relaunch of Airtel Money (August 10th 2011) www.centralbank.go.ke/downloads/speeches/2011/Governor's%20remarks%20at%20Launch%20of%20Airtel%20Money%20Transfer%20Service.pdf

3. Services

There is a wide range of mobile money services available to consumers in Kenya. Domestic m-transfers between consumers still predominate, but consumers can also receive international m-transfers via Western Union from around the world. Consumers can also make or receive m-payments to/from a wider range of entities that include businesses, utility providers, Government agencies, and non-governmental organisations. M-financial services enable consumers to link their mobile money wallets to bank accounts to perform a variety of functions. Examples of services available on the different mobile money platforms in Kenya are shown in Table 23.

4. Costs

Different costs are associated with converting cash into mobile money (cash-in) and vice versa (cash-out). Cash-in transactions are free (Table 24), while cash-out transactions attract different costs depending on

[132] www.safaricom.co.ke/fileadmin/M-PESA/Documents/statistics/M-PESA_Statistics_-_2.pdf

Table 23. Overview of different mobile money services available in Kenya

Type	M-PESA	Airtel Money	Yu Cash	Iko Pesa
M-transfers	• Domestic transfers up to maximum of 35,000 for unregistered (off-net) and 70,000 for registered (on-net) users • International transfers with Western Union	• Domestic transfers up to maximum of 35,000 to unregistered (off-net) and 70,000 to registered (no-net) users • Transfers from phone to any bank account	• Domestic transfers up to maximum of 35,000 to both unregistered (off-net) and registered (on-net) users • Only mobile money platform that registers users on other networks	• Domestic transfers up to maximum of 100,000 to both unregistered (off-net) and registered (on-net) users • Transfers from phone to any bank account
M-payments	• Buy airtime (on-network) • Pay postpay phone bills • Educational institutions (school fees) • Financial institutions (loan repayments) • Higher Educational Loans Board (Repay student loans) • Health service providers (charges) • Utility providers (monthly bills) • Hotels (services) • Insurance (premiums) • Churches and NGOs (contri-butions) • Businesses (customer to business i.e. payments) • Bulk payments (business to customer i.e. salaries) • Mobile ticketing	• Buy airtime (on-network) • Pay postpay phone bills • Kenya Power and Lighting Company Limited (Power bills) • Nairobi Water & Sewage Company (water bills) • Multichoice Kenya (Satellite TV bills) • Kenya Airways (tickets) • Higher Educational Loans Board (Repay student loans) • Businesses (customer to business i.e. payments) • Bulk payments (business to customer i.e. salaries)	• Buy airtime (on-network)	• Buy airtime (on-network) • Pay postpay phone bills • Payments by debit card that enable a whole range of transactions • Kenya Power and Light-ing Company Limited (Power bills) • Nairobi Water & Sewage Company (water bills) • Multichoice Kenya (Satellite TV bills) • Higher Educational Loans Board (Repay student loans) • Businesses (customer to business i.e. payments) • Bulk payments (busi-ness to customer i.e. salaries)
M-financial services	• ATM cardless withdrawal of mobile money (Pesapoint, Equity bank and Diamond Trust Bank ATMs)[133] • Prepay Visa debit card[134] • M-Kesho[135] (move money between M-PESA and Equity bank account, micro-sav-ings, credit and insurance)	• ATM cardless withdrawal of mobile money (Pesapoint ATMs) • Mobile banking services for customers of Standard Chartered Bank Kenya, Housing Finance, Co-operative Bank of Kenya	• ATM cardless with-drawal of mobile money (Equity Bank ATMs) • Transfer funds from and to Equity bank account[136]	• ATM cardless with-drawal of mobile money (Equity Bank ATMs) • ATM withdrawal by debit card • Directly integrated with Equity bank account, supports whole range of normal bank transac-tions

Source: Interviews and operator websites.

whether the user is registered or not on a given network (Table 25).

Costs for m-transfers vary between registered and non-registered (Table 26). Notice that on M-PESA and Airtel Money, it is possible to send more money (maximum K Sh 70,000) to a registered user than to a non-registered one (maximum K Sh 35,000) in a single transaction as well as in smaller amounts (K Sh 50—100) (see Table 25 and Table 26).

Also Iko Pesa permits a higher transaction amount (K Sh 100,000) for a single transaction compared to the other platforms (K Sh 70,000). This might be related to its integration with a bank account that requires more stringent KYC oversight than conventional mobile money registration.

[133] http://www.safaricom.co.ke/index.php?id=267

[134] M-PESA PrePay Safari card http://www.safaricom.co.ke/index.php?id=1229 is a VISA card from Safaricom in collaboration with I&M Bank http://www.imbank.com

[135] www.safaricom.co.ke/index.php?id=263

[136] yuCash – Equity Bank linked account, http://www.yu.co.ke/media/yuCash-EquityLinked.pdf

[137] Safaricom M-PESA tariffs, www.safaricom.co.ke/index.php?id=255

[138] Airtel Money tariffs, africa.airtel.com/kenya/tariffs-and-charges-1550

[139] money.orange.co.ke/forms/Orange_Money_Tariff_Guide.pdf

Table 24. Comparison of mobile money cash-in costs in Kenya

Loading money (cash-in) K Sh	M-PESA[137]	Airtel Money[138]	Yu Cash	Iko Pesa[139]
50—70 000	Free	Free	Free	Free
70 001—100 000	N/A	N/A	N/A	Free
Above 100 000	N/A	N/A	N/A	N/A

Source: Operator websites and brochures.

Table 25. Comparison of mobile money cash-out costs in Kenya

Withdrawing (cash out)	M-PESA		Airtel Money		Yu Cash		Iko Pesa	
	Registered User	Non-Registered User	In-network	Outside network	Registered User	Non-Registered User	Registered User	Non-Registered User
Below 50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
50—100	15	N/A	15	15	N/A	N/A	N/A	N/A
101—2 500	25	0	25	25	20	40	25	0
2 501—5 000	45	0	45	45	40	60	45	0
5 001—10 000	75	0	75	75	65	125	75	0
10 001—20 000	145	0	145	145	130	275	145	0
20 001—35 000	170	0	170	170	150	325	170	0
35 001—50 000	250	N/A	250	N/A	N/A	N/A	195	0
50 001—70 000	300	N/A	300	N/A	N/A	N/A	225	0
70 001—100 000	N/A	N/A	N/A	N/A	N/A	N/A	225	0
Above 100 000	N/A	N/A	N/A	N/A	N/A	N/A	225	N/A

Source: Operator websites and brochures. Airtel money in Kenya differs from its counterparts in Uganda and the United Republic of Tanzania in the sense that a registered user can send mobile money to other networks within Kenya. In Uganda and the United Republic of Tanzania, mobile money can only be sent within the Airtel networks.

Table 26. Comparison of mobile money m-transfer costs in Kenya

Sending money K Sh	M-PESA		Airtel Money		Yu Cash		Iko Pesa	
	Registered User	Non-Registered User	In-network	Outside network	Registered User	Non-Registered User	Registered User	Non-Registered User
Below 50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
50—100	10	N/A	5	N/A	N/A	N/A	N/A	N/A
101—2 500	30	75	25	25	0		30	70
2 501—5 000	30	100	25	25	0		30	90
5 001—10 000	30	175	25	25	0		30	155
10 001—20 000	30	350	25	25	0		30	305
20 001—35 000	30	400	25	25	0		30	170
35 001—50 000	60	N/A	25	N/A	N/A	N/A	40	390
50 001—70 000	60	N/A	25	N/A	N/A	N/A	50	450
70 001—100 000	N/A	N/A	N/A	N/A	N/A	N/A	50	450
Above 100 000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: Operator websites and brochures.

Table 27. Comparison of mobile money M-payment costs in Kenya

Amount K Sh	M-PESA	Iko Pesa
100—1 000	20	M-payment transactions on Iko Pesa can range between 100—10,000 K Sh and cost between 0—30 K Sh depending on the arrangements between Orange and the recipient organisation.
1 001—2 499	30	
2 500—4 999	50	
5 000—9 999	75	
10 000—19 999	100	
20 000—35 000	150	

Source: Safaricom[141] and Orange Money[142] websites.

Table 28. Comparison of ATM withdrawal costs by registered mobile money users in Kenya

ATM Withdrawal K Sh	M-PESA	Airtel Money	Iko Pesa
100—2 500	30	40	40
2 501—5 000	60	55	60
5 001—10 000	100	85	100
10 000—20 000	175	175	175
20 000—40 000	N/A	N/A	175
Above 40 000	N/A	N/A	N/A

Source: Safaricom M-PESA[141], Airtel Money[142] and Orange Money[143] websites.

Table 29. Iko Pesa m-financial services costs

Transaction	Min K Sh	Max K Sh	Cost K Sh
Cash deposit to Equity Account	100	35 000	Free
Transfer to Equity Account	100	35 000	30
	35 001	50 000	40
	50 001	100 000	50
Transfer to any bank account	100	35 000	400
	35 001	50 000	450
	50 001	100 000	500
Transfer from My Equity Account to Iko Pesa	100	35 000	30
	35 001	50 000	40
	50 001	100 000	50

Source: Tariff guide on Orange Money website.[145]

Costs for m-payments are comparable to those of m-transfers to registered users, but much less when compared to making m-transfers to non-registered users (see Table 27). M-financial services like ATM withdrawals (see Table 28) or bank account transfers (see Table 29) also attract extra charges.

A wide range of complementary transactions like checking balances or changing PINs is available at a fee in Kenya (Table 30). Different transaction thresholds/limits do apply to mobile money services on the different platforms (see Table 31).

140 safaricom.co.ke/index.php?id=1212
141 money.orange.co.ke/forms/Orange_Money_Tariff_Guide.pdf
142 safaricom.co.ke/index.php?id=1212
143 http://www.africa.airtel.com/wps/wcm/connect/africaairtel/Kenya
144 money.orange.co.ke/forms/Orange_Money_Tariff_Guide.pdf
145 http://money.orange.co.ke

Table 30. Comparison of other mobile money transaction costs in Kenya

Other costs	M-PESA	Airtel Money	Yu Cash	Iko Pesa
Buying airtime/top-up[146]	Free	Free	Free	Free
PIN change	20	20	2	Free
Nickname change[147]	N/A	20	N/A	N/A
Balance check	1	1	1	5
Mini-statement or transaction reports	Free	20	5	5
Request money	N/A	N/A	Free	N/A
Invite friend	N/A	N/A	Free	Free
Update menu			Free	
Online Virtual Pay Card Number (VCN)[148]	N/A	50	N/A	N/A
Debit card application	N/A	N/A	N/A	400

Source: Operator websites and brochures.

Table 31. Comparison of mobile money thresholds/limits in Kenya

Thresholds	M-PESA	Airtel Money	Yu Cash	Iko Pesa
Maximum account balance	100 000	100 000	50 000	N/A
Maximum daily transaction value	140 000	70 000	75 000	100 000
Maximum transaction value[149]	35 000/70 000	35 000/70 000	35 000	100 000
Minimum transaction value	50	50	100	100

Source: Operator websites and brochures.

C. RWANDA

This profile summarises important details about mobile money in Rwanda. The first section captures legislation that has the potential to impact on mobile money operations within the country. The second section provides comparative details between current mobile money platforms operating in Rwanda including key institutions, services, costs, etc.

1. Relevant legislation

1.1 Financial regulation

Some of the pertinent financial legislation that influences the operations of mobile money within Rwanda includes:

(a) Law no. 55 (enacted November, 2007)[150]——governs the mandate of the National Bank of Rwanda (BNR), the Central Bank that oversees the financial sector in Rwanda.

(b) Law no. 7 (enacted April, 2008)[151]——defines the organisation of the banking sector and explicitly prohibits any entity engaging in banking activities without prior licensing by BNR.

(c) Law no. 40 (enacted August, 2008)[152]——regulates the activities of micro finance institutions within Rwanda.

[146] Currently maximum airtime a user can buy is 10,000 across all networks

[147] Use of nicknames can help one protect the privacy on their phone number yet still receive mobile money. Seems to be available only on Airtel

[148] Online virtual pay card is similar to one-time use credit card number for use to make online payments

[149] Maximum transaction values vary depending on whether you are dealing with registered (higher) or non-registered customers (lower) in case of M-PESA or in-network (higher) or out-network (lower) in case of Airtel money

[150] www.bnr.rw/docs/publicnotices/Law%2055-2007.pdf

[151] www.bnr.rw/docs/publicnotices/LAWN0072008%20.pdf

[152] www.bnr.rw/docs/publicnotices/Microfinance_Regulation.pdf

Table 32. Overview of mobile money players in Rwanda

Overview	MTN MobileMoney	Tigo Cash
Mobile operator	MTN Rwanda	Tigo Rwanda
MNO website	www.mtn.co.rw	www.tigo.co.rw
Bank partners: Deposits	Commercial Bank of Rwanda (BCR)[157]	Commercial Bank of Rwanda (BCR)
Bank website	www.bcr.co.rw	www.bcr.co.rw
Launch date	February 2010	May 2011
Service delivery	STK	USSD
Subscribers (August 2011)	300 000	9 127
Agents (August 2011)	480[156]	270

Source: Interviews and Various online resources (see foot notes).

Table 33. Overview of different mobile money services available in Rwanda

Mobile Transactions	MTN MobileMoney	Tigo Cash
M-transfers	• Domestic transfers up to maximum of 500,000 for both unregistered and registered (on-net) users	• Domestic transfers up to maximum of 500,000 for both unregistered and registered (on-net) users
M-payments	• Buy airtime (on-network) • Pay postpay phone bills • Utility providers (monthly bills) • Retail (customer to business i.e. payments) • Bulk payments (business to customer i.e. salaries)	• Buy airtime (on-network) • Pay postpay phone bills • Utility providers (monthly bills) • Retail (customer to business i.e. payments) • Bulk payments (business to customer i.e. salaries)
M-financial services		

Source: Interviews and operator websites.

(d) The AML/CFT Law no. 47 (enacted 2008)[153]—provides for the establishment of a Financial Investigation Unit (FIU), to which the BNR, banks and other financial institutions report suspicious transactions.

(e) Regulation no. 03 (enacted April, 2011)[154]—stipulates pecuniary sanctions for licensed banks that violate regulations, instructions and decisions of the BNR.

(f) Regulation no. 04 (enacted April, 2011)[155]—defines a minimum set of requirements that banks in Rwanda need to meet to ensure effective business continuity practices.

1.2. Other legislation

Legislation with the potential to influence the conduct of mobile money operations within Rwanda include:

(a) Law no. 18/2010 (enacted May, 2010) that relates to electronic messages, electronic signatures and electronic transactions within Rwanda.

(b) REGULATION N°003/ICT/RURA/2011 (09/08/2011) governing certification authorities.

(c) Rwanda is working on a multi-sectoral competition and consumer protection law that is currently in draft form and before parliament. The new law is being prepared under the auspices of the Ministry of Trade and Industry[158] and will repeal older regulation that is currently used to enforce competition policy across different sectors like Law no. 41/63 (enacted February, 1950). It will also provide coherent consumer protection mechanisms that span different

[153] www.bnr.rw/docs/publicnotices/LawNo472008.pdf

[154] www.bnr.rw/docs/publicnotices/Regulation%20No%2003%20%202011%20on%20pecuniary%20sanctions%20applicable%20%20to%20banks.pdf

[155] www.bnr.rw/docs/publicnotices/Regulation%20No%20%2004%202011%20on%20Business%20Continuity%20%20Management.pdf

[156] www.bcr.co.rw

[157] www.newtimes.co.rw/index.php?issue=14715&article=44099

[158] Rwanda's Ministry of Trade and Industry website, www.minicom.gov.rw

Table 34. Comparison of mobile money cash-out costs in Rwanda

Withdrawing money (cash-out) RF	MTN MobileMoney	
	Registered User	Non-Registered User
Below 1 500	N/A	N/A
1 500—5 000	250	Free
5 001—10 000	275	Free
10 001—20 000	300	Free
20 001—40 000	600	Free
40 001—75 000	1 000	Free
75 001—150 000	2 000	Free
150 001—300 000	3 000	Free
300 001—500 000	5 000	Free
Above 500 000	N/A	N/A

Source: Interviews and operator websites. The information for Tigo Cash was not provided.

sectors as opposed to the sector-led efforts under the auspices of different regulators

(d) Rwanda also prepared an ICT Bill that is under parliamentary review.

2. Players

Rwanda now has two MNOs in operation—MTN Rwanda[159] and Tigo Rwanda[160], after Rwanda Utilities Regulatory Agency (RURA) revoked Rwandatel's license[161] in April 2011 for non-compliance with its licensing obligations. Both MNOs have mobile money platforms with MTN having launched earlier than Tigo. More details are summarised in Table 32. Rwanda has licensed Airtel Rwanda as the third operator, but they do not yet offer mobile money services.[162]

3. Services

While m-transfers between consumers are the most predominant service available to mobile money users in Rwanda, other services are beginning to emerge. These are highlighted in Table 33.

[159] MTN Rwanda, www.mtn.co.rw

[160] Tigo Rwanda, www.tigo.co.rw

[161] Rwandatel, www.rwandatel.rw

[162] Airtel Rwanda was licensed in September 2011, http://www.bharti.com/wps/wcm/connect/BhartiPortal/bharti/home/media_centre/press_releases/fy2011-2012/bharti+airtel+award+license+to+operate+2g+and+3g+mobile+services+in+rwanda

4. Costs

Different costs are associated with separate aspects of mobile money transactions. Cash-in transactions are free (Table 35), while cash-out transactions attract different costs depending on whether the recipient is registered or not (Table 34).

Table 35. Comparison of mobile money cash-in costs in Rwanda

Loading money (cash-in) RF	MTN MobileMoney
Below 1 500	N/A
1 500—500 000	Free
Above 500 000	N/A

Source: Interviews and operator websites. The information for Tigo Cash was not provided.

M-transfers between consumers are also more expensive for non-registered customers (Table 36). Complimentary transactions like checking balance or changing PIN attract no fees, but purchase of a new SIM card during registration has a cost (Table 37). A range of transaction limits does apply to mobile money services on the different platforms (see Table 38).

Table 36. Comparison of mobile money person-to-person transfer costs in Rwanda

Mobile transfers RF	MTN MobileMoney	
	Registered User	Non-Registered User
Below 1500		
1 500—5 000	250	600
5 001—10 000	250	700
10 001—20 000	250	750
20 001—40 000	250	1 000
40 001—75 000	250	2 000
75 001—150 000	250	3 000
150 001—300 000	250	4 000
300 001—500 000	250	6 000
Above 500 000	N/A	N/A

Source: Interviews and operator websites. The information for Tigo Cash was not provided.

Table 37. Comparison of other mobile money transaction costs in Rwanda

Other costs	MTN MobileMoney	Tigo Cash
Buying airtime/top-up[163]	Free	Free
Registration[164]	500	
PIN change	Free	
Balance check	Free	
Mini-statement or transaction reports	Free	
Request money	N/A	
Invite friend	N/A	

Source: Interviews and operator websites.

Table 38. Comparison of mobile money thresholds/limits in Rwanda

Thresholds RF	MTN MobileMoney
Maximum account balance	N/A
Maximum daily transaction value	1 000 000
Maximum monthly transaction value	3 000 000
Maximum transaction value	500 000
Minimum transaction value	N/A

Source: Interviews and operator websites. The information for Tigo Cash was not provided.

[163] Currently maximum airtime a user can buy is RF 500,000 across all networks

[164] Applicable if a user has to upgrade an older SIM to at least 128K

D. UNITED REPUBLIC OF TANZANIA

This profile summarises important details about mobile money in the United Republic of Tanzania. The first section presents legislation that has the potential to impact on mobile money operations within the country. The second section provides comparative details between current mobile money platforms operating in the United Republic of Tanzania including key institutions, services, costs, etc.

1. Relevant legislation

1.1 Financial regulation

Some of the pertinent financial legislation that influences the operations of Mobile Money within Uganda includes:

(a) The Bank of Tanzania Act (BoT) (enacted 2006,[165] repealing the act of 1995,[166] which in turn repealed the act of 1965)——created the Bank of Tanzania and defines its principal functions.

(b) The Banking and Financial Institutions Act (enacted 2006)[167]——provides the legal framework for undertaking licensed banking operations within the United Republic of Tanzania.

(c) The Finance Act (enacted 2006)[168]——through this legislation the Government regularly makes changes to the tax regime and amends different financial or tax laws.

(d) The Anti-Money Laundering Act, CAP 423 (2006)[169]——helps address AML/CFT issues and established the Financial Intelligence Unit (FIU)[170] in the Ministry of Finance and Economic Affairs as a unit mandated with enforcement.

(e) There are a number of guidelines from BoT that are relevant to mobile money including the National Payment Systems Guidelines for retail payments, Rules and Regulations for Retail payments and the Guidelines for introducing electronic payments.[171]

1.2. Other regulation

There is other regulation with the potential to influence the conduct of mobile money operations within The United Republic of Tanzania. Examples include:

(a) The United Republic of Tanzania Communications Regulatory Authority (TCRA) Act no. 12 (2003) that established and provides the mandate of the communications regulator.[172]

(b) The Fair Competition Act (2003) is meant to foster competition in different sectors, while at the same time protecting consumers. As part of the Act, the Tanzanian Government has set up the Fair Competition Commission (FCC)—to administer the law and the Fair Competition Tribunal (FCT)—to provide a judicial forum where appeals of various commission decisions can be made.

(c) The United Republic of Tanzania Evidence Act, CAP 6 (2002) influences the treatment of electronic documents as evidence in Tanzanian courts.

(d) The Electronic and Postal Communications Act, 2010 (Act No. 3/10).

2. Players

The United Republic of Tanzania has 12 licensed mobile operators by the Tanzania Communications Regulatory Authority (TCRA).[173] Of these, only seven are currently operational—Vodacom Tanzania, Airtel Tanzania, Tigo Tanzania, Zantel, Benson Informatics, Sasatel and TTCL Mobile. Amongst the seven operational MNOs, only four have so far launched mobile money platforms and they include Vodacom (M-PESA),[174] Airtel (Airtel Money),[175] Tigo (Tigo Pesa)[176] and Zantel (Z Pesa).[177] Comparative details across the different platforms are summarised in Table 39.

[165] www.bot-tz.org/AboutBOT/BOTAct2006.pdf

[166] www.bot-tz.org/AboutBOT/BOTAct1995.asp

[167] www.bot-tz.org/BankingSupervision/BAFIA2006.pdf

[168] www.bot-tz.org/BankingSupervision/BAFIA2006.pdf

[169] The United Republic of Tanzania's Anti Money Laundering Act www.assetrecovery.org/kc/resources/org.apache.wicket.Application/repo?nid=0abf7600-360c-11dd-b137-bf69fb10ee0d

[170] Financial Intelligence Unit, www.mof.go.tz/mofdocs/FIU/index.html

[171] www.bot-tz.org/PaymentSystem/publications.asp

[172] TCRA Act, www.tcra.go.tz/policy/Tanzania%20Communications%20Regulatory%20Act-2003.pdf

[173] The United Republic of Tanzania Communications Regulatory Authority (TCRA), www.tcra.go.tz

[174] Vodacom Tanzania website, www.vodacom.co.tz

[175] Airtel Tanzania website, www.africa.airtel.com/wps/wcm/connect/africaairtel/Tanzania/

[176] Tigo Tanzania website, www.tigo.co.tz

[177] Zantel website, www.zantel.co.tz

Table 39. Overview of mobile money players in The United Republic of Tanzania

Overview	M-PESA	Airtel Money	Tigo Pesa	Z Pesa
Mobile operator	Vodacom	Airtel Tanzania	Tigo	Zantel
Bank partners: Deposits	National Bank of Commerce CRDB National Microfinance Bank	CitiBank Tanzania Postal Bank CRDB	National Bank of Commerce National Microfinance Bank	FBME Bank
Bank partners: Services	Bank of Africa			
Launch date	April 2008	February 2009	September 2010	2008, though not officially launched
Service delivery	USSD	STK	USSD	USSD

Source: Interviews and operator websites.

Table 40. Overview of different mobile money services available in the United Republic of Tanzania

Types	M-PESA	Airtel Money	Tigo Pesa	Z Pesa
M-transfers	• Domestic transfers up to maximum of 35,000 for unregistered (off-net) and 70,000 for registered (on-net) users • International transfers with Western Union	• Domestic transfers up to maximum of 500,000 to both unregistered and registered users • Transfers from phone to any bank account	• Domestic transfers up to maximum of 35,000 to both unregistered (off-net) and registered (on-net) users • Only mobile money platform that registers users on other networks	• Domestic transfers up to maximum of 100,000 to both unregistered (off-net) and registered (on-net) users • Transfers from phone to any bank account
M-payments	• Buy airtime (on-network) • Pay postpay phone bills • Government Employees Pension Fund (savings) • Sports Clubs (contributions) • Insurance (premiums) • Multichoice Tanzania (Satellite TV bills)	• Buy airtime (on-network) • Pay postpay phone bills	• Buy airtime (on-network)	• Buy airtime (on-network) • Pay postpay phone bills
M-financial services	• ATM withdrawal by phone	• ATM withdrawal by phone		• ATM withdrawal by phone

Source: Interviews and operator websites.

3. Services

Domestic m-transfers are still the most predominant type of service available to mobile money users in the United Republic of Tanzania. Other types of services are emerging and they are summarised in Table 40.

4. Costs

Different costs are associated with converting cash into mobile money (cash-in) and vice versa (cash-out). Airtel Money in the United Republic of Tanzania (and Uganda) is still an anomaly amongst all the mobile money platforms across EAC in two ways–—– they charge for cash-in transactions and do not permit mobile money to be sent to consumers on other networks in the United Republic of Tanzania (Table 41). Cash-out transactions are free for non-registered consumers across the rest of the networks, while registered consumers pay a fee (Table 25). This can be explained by the fact that it costs more to send money to non-registered consumers compared to registered ones (Table 43), implying that senders bear the cost of sending to non-registered receivers.

Table 41. Comparison of mobile money cash-in costs in the United Republic of Tanzania

Loading money (cash-in) T Sh	M-PESA	Airtel Money	Tigo Pesa	Z Pesa
1—20 000	Free	200	Free	
20 001—100 000	Free	500	Free	
100 001—500 000	Free	1 000	Free	
Above 500 000	N/A	N/A	N/A	N/A

Source: Interviews and operator websites.

Table 42. Comparison of mobile money cash-out costs in the United Republic of Tanzania

Withdrawing (cash out) T Sh	M-PESA		Airtel Money		Tigo Pesa	
	Registered User	Non-Registered User	Registered User	Non-Registered User	Registered User	Non-Registered User
Below 1 000						
1 000—4 999	500	Free	500	500	400	Free
5 000—9 999	500	Free	500	500	500	Free
10 000—19 999	1 000	Free	500	500	800	Free
20 000—49 999	1 000	Free	1 000	1 000	1 000	Free
50 000—99 999	1 500	Free	1 000	1 000	1 400	Free
100 000—199 999	2 000	Free	2 000	2 000	1 800	Free
200 000—299 999	3 000	Free	2 000	2 000	3 000	Free
300 000—399 999	4 000	Free	2 000	2 000	4 000	Free
400 000—500 000	5 000	Free	2 000	2 000	5 000	Free
500 001-1 000 000	N/A	Free	N/A	N/A	N/A	N/A
Above 1 000 000	N/A	N/A	N/A	N/A	N/A	N/A

Source: Interviews and operator websites. Airtel money in the United Republic of Tanzania does not permit Airtel users to send mobile money to other networks. So non-registered users in this case must also be part of the Airtel network, but not other networks. The information for Z Pesa was not provided.

On the whole, M-PESA permits a higher transaction limit (T Sh 1,000,000) compared to the other mobile money platforms (T Sh 500,000) (Table 43). In addition, a registered sender on M-PESA can send more money in one transaction (T Sh 1,000,000) to a non-registered receiver (TSH 500,000), yet they would have to break this into two transactions when sending to a registered receiver. The move seems designed to make more money off registered users by forcing them to break big transactions to other registered users into two seemingly cheaper transactions.

Complementary mobile money transactions like checking a balance or changing a PIN do attract fees in the United Republic of Tanzania (Table 44). Different transaction thresholds/limits do apply to mobile money services on the different platforms (see Table 45).

Table 43. Comparison of mobile money person-to-person transfer costs in the United Republic of Tanzania

Mobile transfers T Sh	M-PESA		Airtel Money		Tigo Pesa	
	Registered User	Non-Registered User	Registered User	Non-Registered User	Registered User	Non-Registered User
Below 1 000						
1 000—4 999	200	700	150	150	200	600
5 000—9 999	200	700	150	150	200	700
10 000—19 999	200	1 200	150	150	200	1 000
20 000—49 999	200	1 200	150	150	200	1 200
50 000—99 999	200	1 700	150	150	200	1 600
100 000—199 999	200	2 200	150	150	200	2 000
200 000—299 999	200	3 200	150	150	200	3 200
300 000—399 999	200	4 200	150	150	200	4 200
400 000—500 000	200	5 200	150	150	200	5 200
500 001—1 000 000	N/A	5 200	N/A	N/A	N/A	N/A
Above 1 000 000	N/A	N/A	N/A	N/A	N/A	N/A

Source: Interviews and operator websites. The information for Z Pesa was not provided.

Table 44. Comparison of other mobile money transaction costs in the United Republic of Tanzania

Other costs	M-PESA	Airtel Money	Tigo Pesa
Buy airtime/top-up	Free	Free	Free
Transfer to bank account	N/A	1,000	N/A
PIN change	50	50	20
Nickname change[178]	N/A	20	N/A
Balance check	50	Free	20
Mini-statement or transaction reports	N/A	50	50
Request money	N/A	N/A	N/A
Invite friend	N/A	N/A	N/A

Source: Interviews and operator websites. The information for Z Pesa was not provided.

Table 45. Comparison of mobile money thresholds/limits in the United Republic of Tanzania

Thresholds	M-PESA	Airtel Money	Tigo Pesa
Maximum account balance	500 000	500 000	500 000
Maximum daily transaction value	500 000	500 000	500 000
Maximum transaction value	500 000	500 000	500 000
Maximum daily no. of transactions	N/A	50	N/A
Minimum transaction value	1 000	50	1 000

Source: Interviews and operator websites. The information for Z Pesa was not provided.

[178] Use of nicknames can help one protect the privacy on their phone number yet still receive mobile money. Seems to be available only on Airtel

E. UGANDA

This profile summarises important details about mobile money in Uganda. The first section captures legislation that has the potential to impact on mobile money operations within the country. The second section provides comparative details between current mobile money platforms operating in Uganda including key institutions, services, costs, etc.

1. Relevant legislation

1.1 Financial legislation

Some of the pertinent financial legislation that influences the operations of Mobile Money within Uganda includes:

(a) The Bank of Uganda Act (enacted 1969, amended through 2000) — created the Bank of Uganda, the financial regulator and defines its mandate.
(b) The Financial Institutions Act (enacted 2004)[179]—provides the regulatory framework for the financial sector in Uganda.
(c) Financial Institutions Licensing Regulations[180] and other related regulations[181],[182] (enacted 2005)—that guide the licensing and operation of financial institutions within Uganda.
(d) The Micro Finance Deposit-Taking Institutions Act (enacted 2003)[183] and the Microfinance Deposit-Taking Institutions Regulations (enacted 2004)[184] — regulate the provision of microfinance services within Uganda
(e) The Foreign Exchange Act (2004)[185]— guides the exchange of foreign currencies, international payments and transfers of foreign exchange within Uganda.
(f) The Foreign Exchange (Forex Bureaux and Money Remitters) Regulations (2006)[186]—specifies licensing conditions and guides activities of entities licensed as Forex bureaux or money remittance businesses.
(g) The Draft Anti-Money Laundering Bill is yet to be passed by the Parliament of Uganda.[187] However, AML regulations and an Anti-Terrorism Act (2002) criminalise the financing of terrorism and associated money laundering and help address AML/CFT issues in Uganda.

1.2. Other legislation

Legislation with the potential to influence the conduct of mobile money operations in Uganda includes:

(a) The Uganda Communications Act (1997)[188]—provides a legal framework for the communications sector in Uganda. It established the Uganda Communications Commission (UCC), the sector regulator and defines their mandate;
(b) Electronic Signatures Act, 2010;
(c) Electronic Transactions Act, 2010.

2. Players

There are currently six operational MNOs licensed by the UCC in Uganda. They include Airtel Uganda,[189] MTN Uganda,[190] Orange Uganda,[191] Uganda Telecom Ltd (UTL),[192] Warid Telecom,[193] and Suretelcom Uganda.[194] Amongst these, four have operational mobile money platforms. Table 46 provides an overview of

[179] www.bou.or.ug/export/sites/default/bou/bou-downloads/acts/supervision_acts_regulations/FI_Act/FIAct2004.pdf
[180] www.bou.or.ug/export/sites/default/bou/bou-downloads/acts/supervision_acts_regulations/FI_Regulations/FI_LicenseRegulations2005.pdf
[181] www.bou.or.ug/export/sites/default/bou/bou-downloads/acts/supervision_acts_regulations/FI_Regulations/FI_OwnershipControlRegulatns2005.pdf
[182] www.bou.or.ug/export/sites/default/bou/bou-downloads/acts/supervision_acts_regulations/FI_Regulations/FI_CapitalAdequacyRegulatns2005.pdf
[183] www.bou.or.ug/export/sites/default/bou/bou-downloads/acts/supervision_acts_regulations/MDI_Acts/MDIAct2003.pdf
[184] www.bou.or.ug/export/sites/default/bou/bou-downloads/acts/supervision_acts_regulations/MDI_Regulations/MDIRegulatns2004.pdf
[185] Uganda Foreign Exchange Act, www.bou.or.ug/export/sites/default/bou/bou-downloads/acts/supervision_acts_regulations/FX_Acts/FXAct2004.pdf
[186] www.bou.or.ug/export/sites/default/bou/bou-downloads/acts/supervision_acts_regulations/FX_Regulations/FXRegulatns2006.pdf
[187] Monitor Newspaper article (June 17, 2011), Bankers worried over passing of Anti-Money Laundering Bill, www.monitor.co.ug/Business/-/688322/1183926/-/3vu14i/-/
[188] http://www.itu.int/ITU-D/treg/Legislation/Uganda/Billamend27.pdf
[189] Airtel Uganda, www.africa.airtel.com/uganda
[190] MTN Uganda, www.mtn.co.ug
[191] Orange Uganda, www.orange.ug
[192] Uganda Telecom, www.utl.co.ug
[193] Warid Telecom, www.waridtel.co.ug
[194] Suretelcom, www.suretelcom.co.ug

Table 46. Overview of mobile money players in Uganda

Overview	MTN MobileMoney	Airtel Money	UTL M-Sente
Mobile operator	MTN Uganda	Airtel Uganda	Uganda Telecom
MNO website	www.mtn.co.ug	africa.airtel.com/uganda	www.utl.co.ug
Bank partners: Deposits	Stanbic Uganda	Standard Chartered	DFCU Bank
Bank website	www.stanbicbank.co.ug	www.standardchartered.com/ug/en	www.dfcugroup.com
Bank partners: Services	Post Bank Uganda United Bank for Africa		
Launch date	March 2009	June 2009	March 2010
Service delivery	STK	STK	USSD
Subscribers (May 2011)[195]	1 900 000	135 000	60 000
Agents (May 2011)	2 000		

Source: Interviews and operator websites. Note the recently launched WaridPesa is not included in the comparison.

MTN MobileMoney, Airtel Money and UTL's M-Sente. WaridPesa was recently launched in December 2011 and is only getting off the ground.[195]

3. Services

In Uganda, mobile money services have diversified beyond m-transfers into m-transfers and m-financial services with MTN MobileMoney leading the way. Consumers can now make payments to utility providers, educational institutions, financial institutions, etc. The different services on offer to consumers are summarised in Table 47.

MTN MobileMoney recently activated new transaction limits approved by the Bank of Uganda and a registered user can undertake a transaction as large as U Sh 4,000,000 (Table 51), which is currently the highest

Table 47. Overview of different mobile money services available in Uganda

Types	MTN MobileMoney	Airtel Money	UTL M-Sente
M-transfers	• Domestic transfers up to maximum of 1,000,000 for both unregistered (off-net) and registered (on-net) users	• Domestic transfers up to maximum of 35,000 to unregistered (off-net) and 70,000 to registered (on-net) users • Transfers from a user's phone to any bank account	• Domestic transfers up to maximum of 35,000 to both unregistered (off-net) and registered (on-net) users • Only MM platform that registers users on other networks
M-payments	• Buy airtime (on-network) • Pay postpay phone bills • Educational institutions (school fees) • Multichoice Uganda and StarTv (Satellite TV bills) • National Water & Sewage Corporation (water bills) • Online payments • Financial institutions (loan disbursements and repayments) • Businesses (customer to business i.e. payments) • Bulk payments (business to customer i.e. salaries)	• Buy airtime (on-network) • Pay postpay phone bills • Multichoice Uganda (Satellite TV bills) • Businesses (customer to business i.e. payments) • Bulk payments (business to customer i.e. salaries) • Online payments	• Buy airtime (on-network) • Educational institutions (school fees) • National Water & Sewage Corporation (water bills) • Online payments
M-financial services	• Mobile banking services for customers of Post Bank Uganda	• ATM withdrawal by phone	• Transfer funds from and to a user's Equity bank account

Source: Interviews and operator websites.

[195] Field interviews with staff from different MNOs (May 2011). Please note these are self reported numbers

Table 48. Comparison of mobile money cash-in costs in Uganda

Loading money (cash-in) U Sh	MTN MobileMoney	Airtel Money	UTL M-Sente
Below 5000	N/A	250	N/A
5 000—30 000	Free	200	Free
30 001—60 000	Free	300	Free
60 001—125 000	Free	400	Free
125 001—250 000	Free	500	Free
250 001—500 000	Free	1 000	Free
500 001—1 000 000	Free	2 000	Free
Above 1 000 000	N/A	N/A	N/A

Source: Interviews and operator websites. Please note that Airtel Money rates are only recommendations and can be altered by the agent who directly collects them, while the other rates are fixed and system deducted.

Table 49. Comparison of mobile money cash-out costs in Uganda

Withdrawing money (cash-out) U Sh	MTN MobileMoney		Airtel Money		UTL M-Sente	
	Registered User	Non-Registered User	Registered User	Non-Registered User	Registered User	Non-Registered User
Below 5 000	N/A	N/A	250	250	600	Free
5 000—30 000	700	Free	1 000	1 000	600	Free
30 001—60 000	1 000	Free	1 200	1 200	800	Free
60 001—125 000	1 600	Free	1 600	1 600	1 500	Free
125 001—250 000	3 000	Free	2 500	2 500	2 800	Free
250 001—500 000	5 000	Free	3 000	3 000	4 800	Free
500 001—1 000 000	9 000	Free	5 000	5 000	8 600	Free
Above 1 000 000	N/A	N/A	N/A	N/A	N/A	N/A

Source: Interviews and operator websites. Airtel money in Uganda does not permit Airtel users to send mobile money to other networks. Thus non-registered users in this case must also be part of the Airtel network, but not other networks.

Table 50. Comparison of mobile money person-to-person transfer costs in Uganda

Mobile transfers U Sh	MTN MobileMoney		Airtel Money		UTL M-Sente	
	Registered User	Non-Registered User	Registered User	Non-Registered User	Registered User	Non-Registered User
Below 5 000			250	250	500	1 500
5 000—30 000	800	1 600	250	250	500	1 500
30 001—60 000	800	2 000	250	250	500	1 900
60 001—125 000	800	3 700	250	250	500	3 500
125 001—250 000	800	7 200	250	250	500	6 800
250 001—500 000	800	10 000	250	250	500	9 500
500 001—1 000 000	800	19 000	250	250	500	18 000
Above 1 000 000	N/A	N/A	N/A	N/A	N/A	N/A

Source: Interviews and operator websites.

Table 51. New MTN mobile money transaction thresholds and costs in Uganda

Transaction	Transaction thresholds	Charges UGX	
		Registered User	Non-Registered User
Cash-in	500—4 000 000	Free	N/A
M-transfers between consumers	500—5 000	400	800
	5 000—30 000	800	1 600
	30 001—60 000	800	2 000
	60 001—125 000	800	3 700
	125 001—250000	800	7 200
	250 001—500 000	800	10 000
	500 001—1 000 000	800	19 000
	1 000 001—2 000 000	800	36 000
	2 000 001—4 000 000	800	64 000
	Above 4 000 000	N/A	N/A
Cash-out	500—5 000	300	Free
	5 000—30 000	700	Free
	30 001—60 000	1 000	Free
	60 001—125 000	1 600	Free
	125 001—250 000	3 000	Free
	250 001—500 000	5 000	Free
	500 001—1 000 000	9 000	Free
	1 000 001—2 000 000	17 200	Free
	2 000 001—4 000 000	31 200	Free
	Above 4 000 000	N/A	N/A

Source: Operator brochure for new rates.

amount available to a mobile money user in EAC. On the other hand, Airtel Money in Uganda does not permit mobile money to be sent to consumers on other networks in Uganda. This is a similar scenario to Airtel Tanzania, but not Airtel Kenya, where such transactions are permitted.

4. Costs

Cash-in transactions are free on all platforms except Airtel Money (Table 48), while cash-out transactions differ for registered and non-registered users (Table 49). Transaction costs are automatically deducted by the system as part of the transaction for MTN MobileMoney and M-Sente, while the agent for Airtel Money directly collects them. This latitude allows the Airtel Money agent to alter rates depending on demand and supply, as permitted by Airtel.[196]

MTN MobileMoney in Uganda has recently activated new transaction thresholds approved by the Bank of Uganda, permitting registered users to use as much as U Sh 4,000,000 in a single transaction. At the lower end, the platform permits transactions as low as U Sh 5,000 (Table 51).

[196] www.africa.airtel.com/wps/wcm/connect/africaairtel/Uganda/AirtelMoney/get_airtel_money/tariff/

Table 52. Comparison of other mobile money transaction costs in Uganda

Other costs	MTN MobileMoney	Airtel Money	UTL M-Sente
Buying airtime/top-up	Free	Free	Free
PIN change	Free	Free	Free
Nickname change[197]	N/A	Free	N/A
Balance check	Free	Free	Free
Mini-statement or transaction reports	Free	Free	N/A
Request money	N/A	N/A	N/A
Invite friend	N/A	N/A	N/A

Source: Interviews and operator websites.

Table 53. Comparison of mobile money thresholds/limits in Uganda

Thresholds	MTN MobileMoney	Airtel Money	UTL M-Sente
Maximum account balance	5 000 000	N/A	2 000 000
Maximum daily transaction value	5 000 000	1 000 000	2 000 000
Maximum daily no. of transactions[198]	Unlimited	Unlimited	Unlimited
Maximum transaction value	4 000 000	1 000 000	1 000 000
Minimum transaction value	500	1	1

Source: Interviews and operator websites.

[197] Use of nicknames can help one protect the privacy on their phone number yet still receive mobile money. Currently available only on Airtel Money

[198] Use of nicknames can help one protect the privacy on their phone number yet still receive mobile money. Currently available only on Airtel Money

LIST OF INTERVIEWEES

Name	Position	Organisation
Christine Mugimba	Head, Research and Development Unit	Uganda Communications Commission
Pamela Kadama	Service Development Specialist	Uganda Communications Commission
Deborah Makanga		Bank of Uganda
Junior Kwebiiha	National Sales Manager, Public Access & MobileMoney	MTN Uganda
Angela Kenyonza	Head, Airtel Money	Airtel Uganda
Max Rukundo	Marketing Manager, Mass Market	Orange Uganda
Paul Bagyenda	Director	Digital Solutions Limited
Gerald Begumisa	Managing Director	Yo! Uganda Limited
Dennis Ruharo	General Manager	Dmark Mobile
George Sije	Legal Counsel, Directorate of National Payment Systems	Bank of The United Republic of Tanzania
Richard Kayombo	Deputy Director (Consumer Affairs)	The United Republic of Tanzania Communications Regulatory Authority
Chris Statham	Microfinance and BDS consultant	Private Sector
Dr. Bitange Ndemo	Permanent Secretary	Ministry of Information and Communication, Kenya
Stephen N. Mwaura	Head, National Payments System	Central Bank of Kenya
George Muga	Manager	Airtel Kenya
Matt Krueger	M-Banking Research Project Manager	Equity Bank Limited
Timothy Mbugua Njihia	CEO Member Founding Chairman	Symbiotic Safaricom Innovations Board Mobile Monday Kenya
Tim Waema	Professor working in area of mobile money research	University of Nairobi
Tonny Omwansa	Mobile money researcher, Writing a book on M-PESA to be launched at GSMA Summit 2012	University of Nairobi
Albert Kinuma	Head, MTN Mobile Money and Village Phone	MTN Rwanda
Cyrille Nibigira	General Manager, Business Development	Econet Wireless Burundi

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