Legal analysis of Regulation of Mobile Payment System under Rwandan Law

Thesis Submitted in Partial Fulfillment of academic Requirements for award of Masters Degree in Law

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DECLARATION

I, Jean Marie Vianney SIKUBWABO hereby declare that, this work entitled “Legal analysis of regulation of mobile payment system under Rwandan law” is original. It has never been presented elsewhere. Every part of it is a product of my own research and where other individual's work has been used, references have been provided. I declare that it will never be presented anywhere else, and all rights of it are reserved to me.

Jean Marie Vianney SIKUBWABO
DEDICATION

To Almighty GOD;
To my wife Claudine UMUKUNDWA;
To my beloved daughter Fleurise Chance INEZA;
To my family.
ACKNOWLEDGEMENTS

I owe a great many thanks to many people who helped and supported me during the writing of this thesis. I thank my supervisor Dr. George MWASONDOLA, and co-supervisor Lecturer René MUNYAMAHORO whose help, stimulating suggestions and encouragement helped me in all the time in the writing of this thesis. Without their patience, encouragement and constant guidance, I could not have completed this study. I wish to extend my heartfelt thanks to my wife Claudine UMUKUNDWA for her beyond measure patience and encouragement in my studies.

More particularly, I would like to express my sincere gratitude to the Founder of Kigali Independent University (ULK), administration, lecturers, and the rest of the staff for the facilities provided to me in my studies, without whom, furthering my postgraduate studies would have been a distant reality.

Last, but not least, I thank my family, work colleagues, classmates and friends for their support and encouragement to pursue my interests. I would like to also express my gratitude to all those who have not been mentioned in this thesis work but gave me the possibility to complete this thesis.

Jean Marie Vianney SIKUBWABO
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ABBREVIATIONS AND ACRONYMS

ACH: Automated Clearing House
AML: Anti-Money Laundering
Art.: Article
ATM: Automated Teller Machine
BNR: Banque Nationale du Rwanda
BPR: Banque Populaire du Rwanda
CCLIII: Civil Code Book III
CDD: customer due diligence; often used synonymously with KYC (know your customer)
CFT: combating the financing of terrorism
CPSS: Committee on Payments and Settlement System
DRC: Democratic Republic of Congo
EAC: East African Community
EDI: Electronic Data Interchange
EFT: Electronic Funds Transfer
e-money: electronic money; refers to the electronic alternative to cash.
Et al.: et alii (and others)
Etc.: et cetera (and so on)
EU: European Union
FATF: Financial Action Task Force
FIU: financial intelligence unit
GSMA: Groupe Speciale Mobile Association
HTTP: Hypertext Markup Language
ibid: Ibidem (in the same book, same author, and same page)
ICT: Information and Communication Technology
Id: Idem (in the same book, same author, different pages)
ID: Identity Card
IOSCO: International Organization of Securities Commissions.
IT: Information Technology
KYC: know your customer (refers to a set of due diligence measures taken by a financial institution to identify a customer and the motivations behind his or her financial activity. It is a key component of AML/CFT regimes).
KYC: Know Your Customer
M-banking: Mobile Banking
MF: Mobile Fund
MFS: Mobile Financial Service
ML/TF: money laundering/terrorist financing
ML: money laundering
MM: Mobile Money
MMS: multimedia messaging service
MMT: Mobile Money Transfer
MNO: Mobile Network Operator
MTN: Mobile Telecommunication Network
NO: Number
O.G.R.R: Official Gazette of Republic of Rwanda
P: Page
P2P: Person-to-Person
PCCA: Procédure Civile, Commerciale et Administrative
PIN: Personal Information Number
RDB: Rwanda Development Board
RURA: Rwanda Utilities Regulatory Agency
SACCO: Savings and Credit Cooperatives
SEPA: Single European Payment Area
SIM: Subscriber Identification Module
SME: Small and Medium Size Enterprise
SMS: short-message service; enables users to send text messages from mobile phones.
SMS: Short Message Service
Telecom: Telecommunications Company
TIGO: Transportable Integrated Geodetic Observatory
ULK: Université Libre de Kigali (Kigali Independent University)
UN: United Nations
UNCTAD: United Nations Conference on Trade and Development
UR: University of Rwanda
Abstract

The ever-expanding capabilities of mobile phones have made them increasingly powerful platforms for an impressively wide range of commercial and financial transactions. This study has investigated the situation of regulation of mobile payment in Rwanda. In that regard, it focused on challenges of implementation of the existing rules and regulations on electronic payments in Rwanda especially the mobile payment as a newly introduced payment system that is reaching a large number of banked and unbanked. Mobile phones have evolved from simple personal communication devices to become both platforms for commerce and indispensable “lifestyle infrastructure” that enhances productivity, facilitates financial transactions, and makes life more convenient and efficient.

This study also attempted to assess the effectiveness of the regulatory framework in place in Rwanda as well as its impact to the development of this technological advancement. Despite the progress made by the Rwandan lawmaker, questions still persist in line with protection of the most vulnerable users and consumers of this new payment methods while they have very limited knowledge of what should be their rights and obligations, effectiveness of regulation of payment activities exercised by the telecommunication companies, guarantee of protection to the consumers available in policies of the payment service providers, this study attempted to elaborate and propose mechanisms for remedy to these issues.

The study revealed also that the mobile payment system has the potential to reduce payment challenges for unbanked in Rwanda. However, more education of the public, improvement of the regulatory regime in place, and improvement of technology is needed to realize its full potential.
GENERAL INTRODUCTION

I. Background to the study

The use of technology in commercial activities in recent years in Rwanda has led to the emergence of various new supporting services in the marketplace. Among these services is the e-payment which enables payment done via the electronic medium and without involving any physical cash.

Electronic Payment is a financial exchange that takes place online between buyers and sellers. The content of this exchange is usually some form of digital financial instrument (such as mobile wallet, encrypted credit card numbers, electronic checks or digital cash) that is backed by a bank or an intermediary, or by a legal tender.\(^1\)

Rwanda is one of the countries where technological developments in the field of communications in recent years have expanded the methods of contract formation as well as payment methods to include new ones such as mobile and internet payment methods. The speedy and complex structure of electronic payment mechanisms make electronic payment transactions appear to be integrated transactions overall. In reality, advancement in technology and aggressive adoption of technology at micro or macro level of the economy is seen as one of the critical success factors to obtain an edge and sustain in the digital economy.\(^2\)

To this end, the Rwandan government adopted the Vision 2020 and put ICT and finance at the priority, EDPRS emphasizes the access to finance as a strategy, FSDP (Financial Sector

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Development Program)\textsuperscript{3} defines areas to be developed in payment systems, the Vision and strategy in payment systems as regulated by the National Bank of Rwanda.\textsuperscript{4}

However, in view of the importance of rapid transactions and payment initiatives, and the gaps in the current state of knowledge in the field, it is important to provide a knowledge base on mobile payment that can be employed to identify significant experiences, together with the models being deployed around the world, especially in developing countries like Rwanda. The biggest consequence is that developing countries like Rwanda, have to confront challenges of inadequate technology, and thus, this kind of transaction is related to different problems causing disputes between the users and dealers, and mostly it may depend on inefficiency of the regulatory system in place.\textsuperscript{5}

This study investigated the challenges of implementing and using mobile payment in line with the regulation in place; emphasis was put on regulation of m-payment service providers and protection of the consumers’ rights.

\textbf{II. Scope of the Study}

This study was limited on mobile payment system; a matter that lies in domain of company law. It attempted to give a description and analysis regarding how the provisions and features of the regulation n°07/2010 of 27/12/2010 of the National Bank of Rwanda on electronic fund transfers and electronic money transactions govern the mobile payment model.

This study attempted to conduct an analytical study on the situations of mobile payments made in Rwanda from 2010 (the date of promulgation of the regulation n° 07/2010 of 27/12/2010) to date. In the space, this study has been limited in Kigali city with a special attention to the identified rural areas of districts in Kigali city. For a comparative purpose, other regional and international rules and regulations, various studies and case laws have been explored.


\textsuperscript{4} Id., p. 9.

III. Statement of the problem

With adoption of mobile payment system, the majority of financial transactions are easily made between debtors and their creditors in Rwanda. The mobile telephone has functional capabilities for serving as a virtual bank, internet banking terminal, thereby making it strategic alternative for bridging the digital divide in Rwanda.

Rwanda is still at infancy stage in use of electronic payment systems, and mobile payment is the main focus in this study, the regulation of this system is new. It is to be realized in this regulation that the regulator concentrated on electronic payments in general without any focus on mobile payment method.

However, it is possible to realize that participants in the mobile payment system hardly understand their rights and liabilities, thereby acting on unequal terms especially when the legislator had not clarified any by leaving the situation in a vacuum. Many consumers are not knowledgeable of their rights related to refund policies, liabilities of customers, merchants and institutions, flow of data and mechanism for preventing and protecting cyber-crimes and thefts, conflicts resolution in the mobile payment services providers’ policies, etc.

Like all things that are new and burdened with visible challenges, mobile payment faces various challenges in Rwanda. There are many cases of services paid through the use of mobile phone while the payer has not received the service that they paid for, and refunds never made or made with very long delays, mobile money transfer without reaching the beneficiaries and not refund to the sender, cases of funds transferred to the wrong creditors, etc. It is also added the problem to know who the liable partner is: the transmitter, the operating institution or the intermediary, and the system of solving such disputes arising in this payment system especially the protection of consumers.

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6 The Regulation governing electronic fund transfers and electronic money transactions was promulgated in 2010 (Regulation no 07/2010 of 27/12/2010).
7 The regulation of National Bank of Rwanda does not contain provisions related to mobile payment system. It consists of a general regulation of electronic fund transfers and electronic money transactions.
Another challenge to examine is the increasing of regional integration whereby there will be cross-borders payments without mechanisms of cross-border conflicts resolution, lack of a developed regulatory regime at the regional level, lack of interoperability which risks in need of many mobile devices if the user wishes to transact with different mobile payment service providers.

Particularly, it is to be suspected that the obstacles to its adoption in Rwanda are not being investigated deeply to allow implementation strategies to be employed on the basis of reliable business models. So far, we did not identify any academic papers that may have studied the regulation of mobile payment system in Rwanda after entering into force of the regulation on electronic fund transfers and electronic money transactions.

With this observation, there are many interrogations in light with mobile payment system as a new drive adopted in the payment systems in Rwanda, but this study will be centered on the following:

1. How does the regulation in place protect the vulnerable consumers vis-à-vis the payment service providers in mobile payment system in Rwanda?

2. What are the measures to be adopted for improvement of regulation of mobile payment system in Rwanda?

IV. Hypotheses

Given that electronic cash constitutes a fundamentally new class of electronic payment instruments, considering the regulation in place and the situations of stakeholders in mobile payment system, the following hypothesis have been formulated:

1. The National Bank of Rwanda had put in place regulations governing respectively electronic fund transfers and electronic money transactions and regulation Payment Services Providers. However, these regulations accuse some lacunae and imperfections in light with regulation of telecommunication companies engaging in mobile payment activities, rights and liabilities of

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10 Up to date, m-payments are made on a limited scare, but the projection is to settle payments on the regional level. Among EAC member States, different telecommunication companies offer the mobile payment services; having these telecom companies interoperate will facilitate transactions, but the users will also need to know the liable partner in cases of infringements.
operators of mobile payments, protection of vulnerable consumers engaging in this payment system, and resolution of conflicts arising herein.

2. Preventive and regulatory measures including improvement of regulatory aspects at both local and regional levels in the matter of e-payment, educational mechanisms that would make the users of this payment system knowledgeable of their rights and obligations should be the measures to be adopted for the development and effectiveness of mobile payment system in Rwanda.

V. Research objectives

Generally, this thesis aims at analyzing how the regulation put in place renders the mobile payment system more effective and beneficial to the most vulnerable users. Therefore, the primordial objective of this thesis is to assess the effectiveness of the regulatory framework in place in line with mobile payment in Rwanda.

Particularly, the undertaking of this research aims at:

- elaborating the lacunae and imperfections of the current regulatory framework as well as its implementation by the operators;

- proving the necessity of promulgation of a law exclusively governing the mobile payment system in order to guarantee the business transactions without equivocal in Rwanda;

- re-enforcing the awareness of rights and obligations of interveners in mobile payment in order for them to make reasoned choices when deciding to transact via this payment system;

- proffering solutions to the identified lacunae and imperfections; these will serve as a guide for future regulations in order to cope with the hindrances of effectiveness of this payment system.

VI. The research methodology

Before making a deep description of research methodology used in writing this thesis, it is important to remind that a technique is what skill the researcher has to get for doing something while method is the way the researcher has to follow to do something. For one
method the researcher can use one technique or more; or he can apply one technique for more than one method.\textsuperscript{11} In order to verify the above mentioned hypotheses and achieve our objectives, different methods and techniques have been used:

- The legal dogmatic and comparative methods played an important role in examining existing local legal regimes and comparing them with international legislations through a descriptive and analytical discussion;

- With analytical method, the researcher has been able to use facts or information already available, and analyze these to make a critical evaluation of the material;

- Doctrinal method has served in exploring different writings including books, journals, articles, laws, case laws, etc;

- An inductive method has also played an important role in this study since from empirical observations; the researcher has been able to formulate generalizations;

- Through a deductive method, this research has generated hypotheses from particular theoretical frameworks and then tested these by observing reality.

The research techniques in this study have involved the use of open-ended questionnaires for payment organizations, banks and individuals in that process of payment, as well as informal discussions with agents in different departments in payment institutions.

\textbf{VII. Significance of the Study}

Since the entering into force of the regulation n° 07/2010 of 27/12/2010 of National Bank of Rwanda on electronic fund transfers and electronic money transactions, and implementation of this e-payment system in Rwanda, apart this above mentioned study by IFC, there have not been any due diligence academic works in this area from the dealers to the users.

This research is significant mostly due to the fact that mobile payment system is now gaining familiarity in Rwanda while effectiveness of its regulation is still questionable. This payment system is being implemented by both financial institutions and mobile services suppliers; such an empirical study plays a crucial role in diagnosing possible challenges and risks, regulatory lacunae, and guide in adopting adequate measures.

In addition to the main challenges highlighted in this work, exploration of available resources, analysis of data gathered on the field will focus on the understanding of challenges from the implementers of this payment system, as well as protection that consumers obtain from the regulatory framework in place.

**VIII. Structure of the Research**

This thesis was organized in three main chapters preceded by a general introduction. The first chapter of a conceptual framework and literature review on mobile payment system has defined key concepts on which this work is tailored and the theoretical aspects related to mobile payments. Chapter two was reserved on analysis of effectiveness of regulation of mobile payments in Rwanda. In this chapter, we analyzed the problems related to weakness of the regulatory framework in line with protection of consumers of m-payment as well as regulation of mobile payment activities exercised by the telecom companies. The last chapter proposed the measures to be adopted for improvement of regulation of mobile payment system in Rwanda.
CHAPTER I: CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW ON MOBILE PAYMENT

To determine the current state of effectiveness of regulation of mobile payment system in Rwanda, this research has conducted an extensive exploration and analysis of relevant resource books and articles published in a wide variety of books and journals of electronic payments since electronic payment is an interdisciplinary topic (in which mobile payment is included), local and international regulations in the area.

This chapter had provided an overview of existing literature on mobile payment system. It consists of conceptual framework that had strived to enhance the understanding of concepts and theory in light with mobile payment system. The section on literature review has made a scan of related studies with aim to highlight the gaps in line with regulation of mobile payment system in Rwanda.

I.1. Conceptual framework

The place of money as a value resource within the payment system of any economy makes the payment process an important aspect of people’s lives. Hence, while money in its old and new forms will always remain a key resource for facilitating payment and settlements of financial obligations\textsuperscript{12}, the forms of payments and settlements risk change to accommodate new forms of money and technologies.

Today, one can load airtime in the mobile phone, pay services (subscription on the channels of television, electricity, airtime, etc.), declare and pay taxes, register a business, debit an account, etc., via mobile phone. From the general aspect of electronic payment, this is defined as a form of financial exchange that takes place between the buyer and seller facilitated by means of electronic communication\textsuperscript{13}.


\textsuperscript{13} Art. 2, par. 8 of Regulation n°07/2010 of 27/12/2010 of the national bank of Rwanda on electronic fund transfers and electronic money transactions defined “Electronic fund transfers system” as a wire transfer network, automated clearing house, or other communication system of a clearing house or other association of banks through which a payment order by a bank or other payment service provider may be transmitted to the institution to which the order
There are several payment markets that can be identified each using specific forms of money. “The business-to-consumer payment is used in commercial activities where the merchant is paid directly by the consumer for goods and services”.\textsuperscript{14} This type of payment is also called retail payment. The direct payment between two persons is called person-to-person payment.

“Commerce always involves a payer and a payee who exchange money for goods or services, and at least one financial institution which links “bits” to “money”. In most existing payment systems, the latter role is divided into two parts: an issuer (used by the payer) and an acquirer (used by the payee). Electronic payment from a payer to payee is implemented by a flow of real money from the payer via the issuer and acquirer to the payee\textsuperscript{15}.

Finally, the payment intervening between companies buying and those offering products and services is referred to as Business-to-Business payment. This thesis focused mainly on business-to-consumer (including banks, business companies, and mobile service providers), and person-to-person payments. In this chapter, we will evocate some general features of electronic payment system briefly, attention will be put on mobile payment, and then on the benefits and challenges.

\textbf{I.1.1. Conceptual and theoretical perspectives of electronic payments}

As explained earlier, there are no enough recently related studies on mobile payment system in Rwanda. Hence, there are no single or widely accepted theories that explain the regulation of electronic payment initiatives\textsuperscript{16}, more particularly, the mobile payments model.

For a better understanding of this work, given also considerable confusion with regard to the terms which are often used freely in the area of mobile payments, regardless of their original meanings, the wide use of these inaccurate definitions led us to establish an initial conceptual basis on which this work will be tailored. In order to understand the concept of mobile payment,


\textsuperscript{15} Asokan, N., Janson, P., et al. (2000). Electronic Payment Systems IBM, Research Division, Zurich Research Laboratory, pp. 1-16.

it is crucial to evocate the notions of electronic payment as a big set in which mobile payment is included.

I.1.1.1. Electronic payment system

Electronic payment systems work for a variety of aspects. Due to this nature, it is difficult to produce a widely or universal definition for it. The regulation governing electronic fund transfers in Rwanda does not define electronic payment system. However, it defines electronic funds transfers system as\(^\text{17}\):

“a wire transfer network, automated clearing house, or other communication system of a clearing house or other association of banks through which a payment order by a bank or other payment service provider may be transmitted to the institution to which the order is addressed.”

According to Humphrey \textit{et al.}\(^\text{18}\), electronic payment refers to cash and associated transactions implemented using electronic means. Typically, this involves the use of computer networks such as the Internet and digital stored value systems. The system allows bills to be paid directly from bank accounts, without being present at the bank, and without the need of writing and mailing checks.

Electronic payment can also be defined as “payment by direct credit, electronic transfer of credit card details, or some other electronic means, as opposed to payment by cheque and cash”\(^\text{19}\).

According to Kalakota and Whinston\(^\text{20}\), “electronic payment is a financial exchange that takes place online between the seller buyer and the seller. The content of this exchange is usually the form of digital financial instrument (such as encrypted credit card numbers, electronic checks, or digital cash) that is backed by a bank or an intermediary, or by a legal tender.”


I.1.1.2. Mobile transactions

This refers to transactions carried out through mobile technologies and devices. In addition to mobile payments, it includes every kind of mobile transaction offered by technology, whether it involves financial values or not. In that regard, mobile payments are payments for goods, services, and bills with a mobile device (such as a mobile phone, smart-phone, or personal digital assistant) by taking advantage of wireless and other communication technologies.

Today in Rwanda, one can check prices on different items and goods available in different markets through E-SOKO system, load airtime, pay for different services including water, electricity, subscription on channels of television, send money to another partner, just to name a few.

The Rwandan perspectives in the area of re-enforcing the mobile payment system is to introduce communicability between what is known as the mobile wallet (mobile account) and one’s bank account. In this development, the mobile money client will be able to withdraw or deposit money from or onto the mobile wallet and the bank account respectively. For instance one will be able to withdraw money from their mobile wallet using an ATM card or even to top up the wallet through their bank account.

There are several models of mobile payments that are currently employed worldwide; the following details were limited on mobile money and mobile banking as standard mobile payments used in Rwanda up today.

I.1.1.2.1. Mobile banking

Mobile banking can be understood as a set of mobile banking services, involving the use of portable devices connected to telecommunications networks that provide users with access to mobile payments, transactions and other banking and financial services linked to customer

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accounts, with or without the direct participation of traditional banking institutions. As far as the mobile businesses in Rwanda are concerned, it is important to notice that this concept can also be regarded as the banking channel through which the digital mobile services are provided by the institutions to their clients in their daily purchases and selling transactions.

I.1.1.2.2. Mobile money

Mobile money is mostly related to electronic money which is essentially digital and has attributes related to mobility and portability, and is equivalent to mobile-money or mobile-cash. It can be differentiated from other means of electronic payment (such as credit cards, debit cards, smart cards, etc.) because of its ability to replicate the essential attributes of traditional money, such as liquidity, acceptability and anonymity.

Mobile money payment is one of the ways that will enable Rwanda to achieve a comprehensive framework for e-payments that has been put in place, and driven by a visionary goal to enable a cashless society by 2017.

I.1.1.3. Difference between mobile money and mobile banking

With this consideration, it has to be noted that mobile money is distinct from mobile banking by the fact that mobile banking refers to the situation where a bank account holder is able to transact via commands from a mobile platform whilst mobile money account holders do not require a bank account.

I.1.2. How is mobile payment processed?

Typically, there are two main ways by which mobile payments are processed: proximity m-payments and remote m-payments. Proximity m-payments occur at the point of sale, where customers use a phone with built-in near field communication (NFC) technology to make a

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purchase at an NFC-equipped point of sale terminal (a POS Terminal). As noted by Vassiliou\textsuperscript{28}, customers can make proximity m-payments at either manned (e.g., checkout registers) or unmanned (e.g., vending machines) points of sale.

Remote m-payments do not require NFC technology or a POS Terminal. Rather, customers use phones equipped with either short messaging service (SMS), i.e., text messaging, or wireless application protocol (WAP) technology to make payments any time, any place to either other individuals or to businesses/merchants.\textsuperscript{29} On this note, it is important to remind that in Rwanda, remote mobile payment is the popular payment system with the use of mobile phone; proximity mobile payment has not been introduced yet.

\textbf{I.1.3. Mobile phone messaging as means of payments}

Several initiatives have emerged for initiating e-payments from mobile phones by using short messages (SMS). These have also been referred to as mobile payments.\textsuperscript{30} Vassiliou further indicates that most m-payments initiatives follow a simple model where the customer (payer) first identifies him/herself to the merchant by providing his/her phone number or by calling the merchant.\textsuperscript{31}

Telephone banking or tele-banking is a form of virtual banking that delivers financial services through telecommunication devices. Under this mechanism, the customer transacts business by dialing a touch-tone telephone connected to an automated system of the bank. This is normally done through Automated Voice Response (AVR) technology”.\textsuperscript{32}

\begin{flushleft}
\textsuperscript{31} Id., p. 132.
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Tele-banking has numerous benefits for end users. For the customers, it provides increased convenience, expanded access and significant time saving. Instead of going to the bank or visiting an ATM, retail banking serves the same purpose for customers to get the services at their offices or homes. This saves customers time and money, and gives more convenience for higher productivity. This system has been adopted by many banks in Rwanda, whereby one can send money to another person, pay invoices, pay various services (electricity, air time, subscription on Star times, DSTV, etc.).

I.1.4. Importance of introduction of electronic and mobile payments in transactions in Rwanda

In general, the electronic payment systems are more efficient than the traditional paper- or account-based payment systems owing to the lower transportation and storage costs (no significant costs for transport or insurance policies, only communication and storage space costs). The introduction of electronic payments in Rwanda is viewed to yield these significant benefits.

In comparison to cash or Check payments, the electronic payment system is faster, safer and generally more efficient than the manual check system. Electronic payment processing is automated, so human errors can greatly be minimized. Compared to checks, electronic payments instructions are safer because a few members of staff handle data entry and processing; data is secured by passwords and data encryption.

Electronic payments provide convenience, so consumers should believe in the convenience of electronic money, whether it means having to visit the ATM to obtain cash or not having to count out the cash at the point of transaction. This convenience benefits traders as well as banks, financial institutions, and the service provider institutions. For instance, when consumers swipe their own cards, use their mobile phones or computers at home and in their offices to pay for a

service, debit or credit an account, it lowers labor costs for these institutions. Electronic payment gives consumers an alternative to paying bills and debts by cash, cheque, money order, etc. Its main purpose is to reduce cash and cheque transactions.\textsuperscript{36}

We agree with Pariwat and Hataiseere\textsuperscript{37} when stating that, for the achievement of effective and efficient retail payment systems, the following considerations that shape the choice of payment method for consumers and businesses should be taken into account; the convenience, reliability and security of the payment method, the service quality, involving such features as the speed with which payment are processed; the level and structure of fees charged by financial institutions; taste and demographic; and technological advances which have improve the speed, convenience and flexibility of different payment systems.\textsuperscript{38}

I.1.4.1. Advantages of mobile payments for the payment service providers

This type of electronic payment provides advantages for both customers and the payment service providers. For the banks, mobile payments provide a unique opportunity to build customer loyalty, unlock cross-selling propositions and create a more efficient and effective interface for processing transactions.\textsuperscript{39} For the telecoms companies, mobile payments offers a viable path for moving further up the mobile value chain by providing payment and data services\textsuperscript{40}.

I.1.4.2. Advantages of mobile payment for traders and consumers

Digital money has significant benefits for financial institutions, banks and e-merchants. Digital Money is an electronic payment technology, which can provide anonymous flexible electronic payment, like paper cash, but with added security requirements needed for internet transactions.

For merchants, mobile payment solutions increase average transaction revenues, increases customer throughput and provides a more information-rich experience for loyalty and targeting propositions than other instrument. Mobile devices are increasingly being used during the whole shopping cycle – to compare prices, view product information, get store locations, and download coupons. Let it be concluded that merchants benefit because there is less cash and check handling in the system as they have access to a large pool of customers with guaranteed payment.

I.1.4.3. General challenges of mobile Payments

In the details above, we studied different concepts related to electronic and mobile payments as well as numerous benefits of electronic payments. Despite these benefits, this new system come with its own challenges even in the developed world. In Rwanda, many of these challenges are related to the newness of this system, lack of adequate and modern infrastructure including computer mobile network used for mobile phone (these will be discussed in depth in chapter II).

It has to be reminded that many amongst the Rwandan population neither have nor operate a bank account, although the majority of the "un-banked" are economically active in either the formal or informal sectors of the economy. National, regional or international set of laws, rules and other regulations are important requirements for the successful implementation of mobile payment schemes. In Rwanda, a regulation on electronic funds transfer has been put in place.

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42 See also, Oscar H., and Gandy, Jr. (1993). The panoptic sort: a political economy of personal information-critical studies in communication and in the cultural industries, West view, p. 7.
I.1.5. Evolution of mobile payment system in EAC region

In the early 2000s, mobile payment services became rapid payment mechanisms, hundreds of mobile payment services, including access to electronic payments and Internet banking, were introduced all over the world. Strikingly many of these efforts failed. For example, most, if not all, of the dozens of mobile payment services available in EU countries and listed in the e-PSO database in 2002 have been discontinued.44

Initially, fixed-line telephony billing systems were modified to charge mobile telephony. Later, mobile telephony billing systems were introduced, and used also to charge various mobile services when such services emerged.45

Rwanda has not made significant difference from other member states of East African Community in terms of mobile payment system. Considered as a whole regional integration, it is worth noticing that electronic payment system is a new initiative in the area of economic development in East African Community. Kenya, Rwanda, Tanzania and Uganda all have a mobile money model led by MNOs.

A study by IFC (2012) reveals that until recently, all four countries’ mobile money systems have operated only domestic transfers. International transfer from mobile phones has not been allowed although in Kenya, Tanzania and Uganda, international transfers from Western Union can be received in mobile money accounts. However, starting October 2012, M-PESA customers in Kenya are able to transfer money directly to 35 countries through the international remittance hub Home-Send, which connects M-PESA with 21 international money transfer platforms.47

In Rwanda, Tanzania, and Uganda, mobile money services are straightforward as are the regulations; in Kenya, a few more complex services have been developed. In Rwanda, Tanzania, and Uganda, MNOs’ mobile money services basically relate to storage and transfer of funds as

46 M-PESA in Kenya is taking the lead in terms of mobile payment in the region.
well as some basic bill-payment services (e.g. electricity, air time, subscription on television channels, etc.). Transfers are usually the largest individual transactions, and are an important benefit for the low-income and rural population.\textsuperscript{48}

In Kenya, the same services are offered, but some other services have evolved including payments into bank accounts, withdrawals from ATMs, small loans and via partnership with Equity Bank, access to an interest bearing deposit account (M-KESHO). Electronic payments especially Mobile payments in Rwanda are still operating on small operations of paying services such as water, electricity, airtime transferring money to a third person’s account or to the mobile banking user’s account, etc. Across the EAC, but in Kenya in particular, the success of mobile money has been widely attributed to the light touch approach to regulation.\textsuperscript{49} In Rwanda, a regulation has entered into force since December 2010.

I.2. Literature review on regulation of mobile payments

Every research project, no matter what methodology is being used, needs a literature review as a precursor to further study; a nexus to that which has been done before. To facilitate the development of better regulation of mobile payment services, this literature review will help to understand the lessons of this history by learning what previous studies have discovered about mobile payments and about the regulation of mobile payment services markets, as well as what issues have remained unanswered. The aim of this section is to summarize findings from past mobile payments research, and to suggest promising directions for future research.

There are a number of factors that highlight the significance and usefulness of this literature review. Firstly, the field has seen a poor number of publications in Rwanda, so, a thorough review of existing work is missing. Speaking of which, the lack of published literature reviews


impedes the progress in the field; review articles are critical to strengthening an area as a field of study.\textsuperscript{50}

Secondly, reviewing existing literature not only leads to a better understanding of the state of the research in the field, but it also discerns patterns in the development of the field itself. Finally, a synthesis of existing findings allows researchers not to repeat similar work, and discover important gaps. In other words, it closes areas where an excess of research already exists, and at the same time uncovers those areas where research is lacking.\textsuperscript{51}

Another contribution of this literature review is the proposed theoretical framework, around which the review is organized since the area is still lacking noticed studies in Rwanda. However, the lack of studies in this field in Rwanda shall not leave the researcher in a closed box. Therefore, as this study aims at guiding the Rwandan law-maker, a comparative study of existing findings at the international level will serve of a great importance.

\textbf{I.2.1. Framework for the literature review}

Webster and Watson recommend that the best reviews need to be conceptually structured, and based on a guiding theory.\textsuperscript{52} Our framework provides a guiding structure that allows us to effectively accumulate knowledge, and to interpret previous findings. Because the framework itself aims to explain relevant factors in the mobile payment systems, basing the literature review on the framework ensures that the review is comprehensive and holistic, and reveals research gaps that could otherwise be overlooked.\textsuperscript{53}

This framework will not only help to explain the existing body of knowledge on each factor of the framework, but, more importantly, it will also provide an overview of the mobile payment services market, illustrating how the various perspectives and research findings fit together as

\textsuperscript{50} See also S. Webster, R. Watson. (2002). \textit{Analyzing the past to prepare for the future: writing a literature review}, MIS Quarterly 26 (2), xiii–xxiii.
\textsuperscript{51} S. Webster, R. Watson. (2002), \textit{op. cit.}, p. 3.
\textsuperscript{52} Ib\textit{id}.
part of the big picture.\textsuperscript{54} This framework will also be used to classify past research, to analyze research findings of classified studies, and to propose meaningful mechanisms that future research for each factor shall base on.

\subsection*{I.2.1.1. Actors in mobile payment services market}

The prime actors in the mobile payment services market are mobile payment service providers and their customers. Various parties assuming these roles in the market include consumers, merchants, financial institutions and telecom operators. Additional parties, typically vendors of handsets, software, networks and other technologies may also be involved. The power and the interests of these parties impact how technologies and other resources are orchestrated into mobile payment services, and how these services are offered to and used by the market.

Moreover, mobile payment services compete for the attention of customers and other parties against physical and electronic payment services.\textsuperscript{55} Mobile payment services are a natural choice to pay for mobile services. Yet, to succeed, mobile payment services may have to offer added value and be available for other relevant payment environments as well.

\subsection*{I.2.1.2. The payment service providers in a competitive market}

The competitive factors strategy model studied by Porter, describes both the key role of a mobile payment service provider, and other market factors. The model applies insights from industrial organization theory to analyze the competitive environment on the level of business units\textsuperscript{56}, and relates the average profitability of the participants in an industry to competitive forces.\textsuperscript{57}

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In addition to the competitive forces within the mobile payments services markets, given also the main focus of this research, other factors are believed to impact these markets as well, for example, technology and standards, regulatory activities and legislation, established purchase and payment habits, or national economy infrastructures.\(^{58}\)

I.2.1.3. Application of contingency theory in mobile payment regulation

If we regard a mobile payment services market as the unit of analysis (organization), these other factors become contingency factors, which influence the performance of the unit but are beyond the influence and control of that unit, as mobile payment system is a newly introduced payment system in Rwanda, and its regulatory framework is still at its infancy stage.

In that regard, many unforeseen events may happen, this work had played a preventive role of these events. Contingency theory therefore is also well suited to classify mobile payments research and to capture the environmental factors which are characteristic to the mobile payment services markets.

In the context of mobile payment system, staying focused on the main objectives of this research, it is natural to stress on regulation, jurisdiction and standardization factors too because financial services and telecommunication are among the most regulated industries, and the use of standards is characteristic to telecommunication.

I.2.1.4. Review of the findings of related studies and publications in the area of mobile payment system

Mobile Payment Services Market and Providers, Merchant Power, Legal/Regulatory and Standards, as well as New E-Payments have each been the focus of just a few studies in developing world\(^{59}\). Some articles have studied many factors simultaneously, which may be important to discover how the factors influence each other. The present section will go through


these studies and will try to elaborate gaps related to regulation of mobile payment systems, as well as possible directions for improvement of this area.

Rwanda is one of the countries in the developing world where new electronic payment systems are being introduced at an increasing rate. By predictions, the researcher assumes that this trend will continue for foreseeable future. Early research by IFC Mobile Money Scoping undertook a series of six mobile financial services (MFS) market scoping studies across Sub-Saharan Africa to identify two countries in which it will provide broad and deep support to accelerate the uptake of branchless banking services. Rwanda was one of the six countries in which the study was conducted. A similar study by Ignacio Mas and Dan Radcliffe concerned Mobile Payments in Kenya (M-PESA).

These two studies concluded that information technology has appreciable positive effects on bank productivity; cashiers’ work, banking transaction, bank patronage, bank’s services delivery, and customers’ services. Margarete Biallas, had conducted an extensive survey of the mobile payments overview and provided a brief perspective on regulations, financial infrastructure, payment services provider snapshot, and mobile financial service implementation. This study aimed at identifying efforts and developments of the country in order to partner with the country for the progress of mobile payments.

The study by IFC on mobile payment in Rwanda focused on several factors mentioned above, but not on any in details, which called for a new categorization of multiple categories. It also presented market overviews, summarizing the state of mobile payments, its challenges or potentials. However, these potentials and challenges were limited to infrastructure and factors that can make the system operational. If the system is not effectively operational, it may pose some risks to the users who need protection from the regulatory regime. This aspect had not been analyzed in that study by IFC.

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I.2.2. A comparative study of the factors influencing the mobile payment development in Rwanda

Mobile payment research is expected to compare the characteristics of various social, regulatory, and cultural environments, and to examine which characteristics affect the development and success of mobile payment system. Unfortunately, we did not identify enough academic papers that would have investigated the development of mobile payment system and its regulation in Rwanda.

In other different countries, relevant research reports and studies within related fields (other payment services or wireless communication) have identified specific social and cultural issues that may be important to mobile payment studies. These include distinguishable payment cultures in various countries, industry strengths, electronic banking readiness of consumers, strong mobile phone inclination of certain nations; cultural similarity and adoption timing; demographics and lifestyle characteristics, or cultural differences in developed and developing countries.

Since we found very limited studies on mobile payment system in Rwanda that would have addressed such issues, it is especially important for the current and future research to study how these factors and especially effective regulation can influence the development of mobile payments system.

I.2.2.1. The role of improved legal, regulatory, and standardization environments in mobile payment systems in Rwanda

Improvement of legal, regulatory and standardization environment deals with evolving jurisdiction, regulations and other norms with requirements to comply. These contingency items

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may trigger needs for new or enhanced payment services, and drive or hinder the development of mobile payments. Mobile payments research on this factor is expected to examine the impact of regulation, legislation and standardization on the development and success of mobile payment services markets in Rwanda.

Cross-border mobile transactions can be complex due to a complicated web of law and regulations in the region. Previous studies on the regulation of international mobile payment services suggest that unifying regulation and legal frameworks (we can consider the example of EU directives in the European Commission) may reduce complexity and support the development of international mobile payment services. Karnouskos and Vilmos present the Secure Mobile Payment Service (SEMOPS) initiative as an example of an international mobile payment project that aims at responding to the challenges presented to an international mobile payment service.

The process of standardization for mobile payments has been another focus of the prior mobile payment research. The cited studies identify various organizations that aim at standardizing and developing mobile payment services but also note that none of these organizations has a dominant role in standardization and that there are differences in the requirements and in the preferences they set for standards.

Some studies which have looked at the mobile payment services market from the point of view of multiple actors have discussed the standardization of mobile payments and emphasized the need for a technological and organizational consensus between the players in the industry.

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71 Ibid.
The current research on regulation of mobile of mobile payment system in Rwanda provides an informative description on the complexities and problems surrounding these topics. Yet, there are no good solutions to solve these legislation and standardization issues. Therefore, the current and future research will focus on how much and kind of legislations needed to support mobile payment system in Rwanda, and also at the regional level.

I.2.2.2. Regulatory bodies having the authority to regulate mobile payment system locally and internationally

Previous studies have emphasized the need to unify laws and regulations to facilitate the developments of international mobile payment services. It may be complicated, however, to determine the responsibilities and division of work between the national and international legislative bodies.\(^75\)

So far, there are no unified regulatory bodies of mobile payment systems at the international level; mobile payment markets are still regulate and monitored by local laws.\(^76\)

Future research should therefore address this question and examine the most optimal mechanisms and bodies for regulating international mobile payment services.

I.2.2.3. Power of Consumers and service providers in mobile payment system in Rwanda

The truth is that the payment service providers will be able to keep control over the payment process and mobile network operators will create the new channel by providing mobile network infrastructure.\(^77\) We expected to find research on mobile payment services industry competition and on the capabilities or lack of capabilities of various players.


Considering the lack of vigilant studies in the field of regulation of mobile payment system in Rwanda, we have emphasized that the regulation of mobile payment in place in Rwanda had focused more on the Business-To-Consumer (B2C) and C2C scenarios, while B2B mobile commerce may also need mobile payment services. By mentioning this deficiency in the literature, we hope that future researchers will open new paths of research addressing the mobile payment issues related to B2B services and the Rwandan legislator will take account of this in order to empower the consumers in this payment system.

I.2.3. Gaps in Rwandan governmental institutions to cooperate for a better implementation of the existing mobile payment regulations

In Rwanda, there are different institutions in charge of implementation of regulations of electronic payments, improvement of which should be profitable to the most vulnerable citizens. To this end, there should be effective mechanisms of handling conflicts associated with electronic and mobile payments\(^78\), establish clear rules regulating market competition because once it is left in vacuum, it is highly detrimental to the consumers.

As it will be discussed in depth in chapter four, implementation and follow up system of mobile payments remains unclear since it lies under responsibilities of two distinct institutions, namely BNR and RURA. This causes consequences to the consumers of this payment system because it is confusingly to them about how to preserve their rights and interests once they are breached.

I.2.3.1. Failure of National Bank of Rwanda to set out clear mechanisms of implementation of regulation governing electronic payments

By overseeing payment systems, the National Bank of Rwanda helps to maintain systematic stability and reduce risk in order to maintain public confidence in payment and settlement system. The National Bank of Rwanda has the duty to supervise and regulate payment systems, the last one is to supervise and regulate the activities of financial institutions notably banks\(^79\),


\(^{79}\) see art. 6, para. 3 of the Law n° 55/2007 of 30/11/2007 governing the Central Bank of Rwanda.
micro-finance institutions, insurance companies, collective placement companies and pension funds institutions.

First and foremost, it is worth noticing that the Central Bank’s directives shall be orders or prohibitions of acting in a certain manner designed for one or more private individuals or legal entities. The Bank’s regulations, directives and decisions shall be respected by the concerned.80

The National Bank of Rwanda has done notable work of establishing requirements for granting a license; these include capital requirements81, strategies for prevention of money laundering and financing terrorism82, evidence that RURA (Rwanda Utilities Regulatory Agency) certified the technology infrastructure for Payment Service Provider operating their network83, but, it should put in place the regulation and requirement for using the mobile payment system. In addition, the Central Bank should also require to the payment service providers, effective mechanisms of how the consumers will be protected.

I.2.3.2. Failure of RURA in enforcement of regulations of electronic payments in place in Rwanda

The law regulating the functions of RURA states that the public utilities that will be under supervision of RURA include telecommunications, information technology, broadcasting and converging electronic technologies including the internet and any other audio-visual information and communication technology.84 In this regard, RURA must fully understand the needs of service providers and users regarding the efficient interoperability of all national networks and utility service delivery systems.85

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80 See article 56, para. 5 of Law no 55/2007 of 30/11/2007 governing the Central Bank of Rwanda.
81 See art. 7, Law no 03/2010 of 26/02/2010 concerning the payment system, O.G.R.R no 9 of 01/03/2010.
82 See art. 4 (9), Regulation no 06/2012 of 21/06/2012 of the National Bank of Rwanda governing Payment Services Providers, O.G.R.R no 29bis of 16/07/2012.
83 See art. 4 (13) Regulation no 06/2012 of 21/06/2012.
84 See art. 2, law no 39/2001 of 13th September 2001 establishing the Rwandan Utility Regulatory with the mission to regulate certain public utilities.
85 Interoperability is provided for by article 21 of Regulation no 06/2012 of 21/06/2012 of the National Bank of Rwanda governing Payment Services Providers.
In that regard, the Regulatory Authority may investigate at any time the quality of service measurement; reporting and recording procedures of a Licensee. In so doing, the Regulatory Authority may exercise its powers of monitoring and enforcement of obligations.\textsuperscript{86}

As it will be detailed in chapter four, mechanisms for conflicts resolution that arise between payment service providers and consumers are still questionable. Thus, RURA and BNR will need to ensure that all stakeholders take responsibility for consumer protection and provide for the timely resolution of consumer complaints and disputes. Depending on the circumstances, RURA may act as adjudicator, mediator or arbitrator in disputes that arise between payment service providers, consumers and other stakeholders.

1.2.3.3. Weakness of telecom companies to comply with obligations specified in license

The liability of telecom companies shall apply to creation, publication and dissemination of electronic messages on the network, use of such electronic messages in a way that is contrary to the law is a breach of contractual obligations.\textsuperscript{87} However, the communication network service shall continue to fulfill contractual obligations, and obligations specified in the license for provision of communication network service granted by the Controller.

Even if the law n° 18/2010 of 12/05/2010 is relating to the electronic transaction, signature and electronic signature, the Rwandan legislation still has gaps in putting in place the law regulating electronic transactions including mobile payments. As there are many specified laws for a precise matter, considering also that the issue of mobile payment service is getting more complicated, there should be a specific law on mobile payment system with more focus on the protection of consumers of this service.

1.2.3.4. Challenges related to security payments

Mobile payment uses technological devices that pose various risks including security risks. The security challenges that this payment system poses are related to authentication and non-

\textsuperscript{86} RURA: Regulations for Quality of Service of cellular mobile and fixed networks services, Article 8: Investigation of the quality of service.

repudiation, integrity and privacy. In this regard, it has to be noted that security breaches could occur at the level of the consumer, the merchant or the issuer, and could involve attempts to steal consumer or merchant devices, to create fraudulent devices or messages that are accepted as genuine, to alter data stored on or contained in messages transmitted between devices, or to alter the software functions of a product. Security attacks would most likely be for financial gain, but could also aim to disrupt the system.\textsuperscript{88}

Additionally, Loretta J. Mester\textsuperscript{89} considers that security breaches essentially fall into three categories: breaches with serious criminal intent (e.g. fraud, theft of commercially sensitive or financial information), breaches by “casual hackers” (e.g. defacement of web sites or “denial of service” - causing web sites to crash), and flaws in systems design and/or set up leading to security breaches (e.g. genuine users seeing / being able to transact on other users’ accounts). All of these threats have potentially serious financial, legal and reputational implications (these will be analyzed deeply in chapter II and III).

More importantly in Rwanda, technology is gradually developing with new crimes that the country has never regulated. Therefore, it is worth mentioning that the more technology improves, the more crime committed in this sector which are considered as the cyber crime will improve. To prevent these crimes, the government should put more emphasis in elaborating specific laws especially for the mobile payment system as it is increasing very fast in our country.

\section*{1.2.3.5. Challenges related to infrastructure in mobile payment}

First and foremost, we agree with Olivier Hance and Suzan Dionne Balz when stating that “for electronic payments to be successful there is a need to have reliable and cost effective infrastructure that can be accessed by majority of the population”.\textsuperscript{90}

\begin{multicols}{2}
\textsuperscript{88} Furash & Company. (1994). \textit{Banking’s Role in Tomorrow's Payment System}, Overview 1, p. 29.
\end{multicols}
On this consideration, it has to be pointed out that the first focus should be the communication infrastructure, banking activities and operations that need to be automated. A network that links banks and other financial institutions for clearing and payment confirmation is a pre-requisite for mobile payment systems.

However, one can realize that in developing world and in Rwanda in particular, mobile networks and internet are not easily accessible. “Poor communication infrastructure is one of the reasons that hinder the e-payment system in Africa”.  

I.2.3.6. Challenges related to the regulatory framework

Differing national views of the nature of electronic money (and what it means to issue electronic money) have produced fundamentally different approaches to regulation. To some states, electronic money is the electronic equivalent of a national currency and, therefore, should be issued only by the state, through its central bank or designees. Widespread use of a "virtual currency" would raise issues of money supply as well as stability of the currency.

To others, “electronic money” may be only one piece of the service of moving value from one owner to another. That service may be composed of a number of steps, some of which could be carried out by banks or non-banks who bring efficiencies to the process. Under this view, the goals of regulation would be to ensure the safety and soundness of the entire payment system, consumer protection and other fundamental social policies.

Issues include determining the location of virtual services and appropriate jurisdiction among government agencies (e.g., banking vs. telecom), as well as with respect to courts. Transparency of financials is paramount. For services with a cross-border aspect, international harmonization, such as adoption of treaties or conventions, may come into play.

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91 Alan L. Tyree, op. cit. p. 140.
I.2.3.7. Anticipated effects of e-money on monetary policy

There are different views on adoption of cashless system in line with the monetary policy. According to Walter Wriston\textsuperscript{94}, digital currency carried on smart cards was “the revolution that’s waiting in the woods” and a “technology … on the verge of exploding”. The predicted explosion has yet to happen. Many monetary economists\textsuperscript{95} foresee that the demand for central bank money will not only drastically fall, but also probably disappear altogether, over a foreseeable horizon.

The report of BIS\textsuperscript{96} postulates that e-money innovations “have the potentials to challenge the predominant role of cash for making small-value payments” by impression of their greater convenience, but worries that therefore “they also raise a number of policy issues for central banks because of the possible implications for central bank’s revenues and monetary policy and because of central banks' general interest in payment systems.”\textsuperscript{97}

This chapter on conceptual framework and literature review reviewed an extensive amount of existing mobile payment studies, proposed a conceptual framework with focus on the theory of contingency, at the same time, it analyzed possible gaps outlined in the studies related to the regulation of mobile payment in Rwanda, and a roadmap for future research has been designed.


\textsuperscript{95} Cronin, David, and Kevin Dowd. 2001. “Does Monetary Policy Have a Future?,” Cato Journal 21 (Fall), pp. 227-244.


\textsuperscript{97} See also King, Mervyn. (1999). Challenges for Monetary Policy: New and Old, in New Challenges for Monetary Policy (Kansas City: Federal Reserve Bank of Kansas City), pp. 11-57.
CHAPTER II: ANALYSIS OF EFFECTIVENESS OF REGULATION OF MOBILE PAYMENTS IN RWANDA

This chapter has critically analyzed the effectiveness of regulation of mobile payment system in Rwanda. Therefore, following the literature review and a description of the research methodology, this chapter concentrated on a critical study of the problematic related to the regulation of mobile payment system, it explored the lacunae and imperfections as identified by data collected from fields. The chapter then presented hindrances to the effectiveness of mobile payment, which is an important aspect to gain in order to formulate the conclusions and recommendations.

Beforehand, it is worth reminding that as the participants in mobile payment system have different interests, they may face conflicts each other that require legal solutions. Especially regulating rights and liabilities of participants in this sphere, interconnection between the payment service providers, availing the regulatory regime at the regional level, are important aspects that have been addressed in this chapter.

II.1. Problems related to the regulation of rights and liabilities of operators of mobile payments and protection of customers

There is a variety of consumer (and business) protection concerns, though these may vary based on social expectations. General concerns include the relative obligations of the counterparties, banks, and mobile service providers, which should be clearly set forth in contracts, system rules, or regulations.\textsuperscript{98} Notable among these obligations are loss allocation, as well as the establishment and maintenance of other appropriate protections against fraud, user error, delays and system error or loss.

II.1.1. Liabilities of financial institutions for the loss incurred by customers in mobile payment transactions

The provisions of regulation in place in Rwanda oblige the financial institutions to execute the payment order made by the sender in a reasonable time.\textsuperscript{99} It provided that the defaulting institution, either receiving or beneficiary, will be liable. However, this regulation in place is not specific on liability of the financial institution in case of non-compliance with this provision. In this regard, it can be seen that the provision is a simple declaration of obligations of financial institutions without any binding force.

Considering the point that mobile financial transactions are concluded in a non-facing and automated manner, given also that it is almost impossible for customers to prove intention or negligence of the payment service provider, and the point that payment service providers determine the authentication procedures they have prepared to implement, it would be desirable to make financial institutions bear all the risk of an unauthorized mobile financial transactions and loss caused by long delays in executing the transaction, except that financial institutions prove intention or gross negligence of customers.\textsuperscript{100}

In the case \textit{Judd v Citibank}\textsuperscript{101}, though Citibank (the defendant) produced computer printouts documenting the withdrawals in issue, which printouts were explained (translated) by the bank's witness, the branch manager, by saying funds were withdrawn at a "cash machine" by either plaintiff or someone authorized by her to do so, judgment was awarded to plaintiff in the amount of $800 plus interest and disbursements, because the plaintiff had proven not having withdrawn the funds, she testified and produced a letter from her employer to the effect that she was at work on both occasions and could not have made the said withdrawals.

\textsuperscript{99} Art. 3 on the “execution” provides that payment transfer to beneficiary’s account shall not exceed 72 hours following the time of receipt by the receiving institution.
\textsuperscript{100} Article 9 of the regulation n° 07/2010 bind the banks to provide procedures for acknowledging loss or theft by the customers, but it does not clarify liabilities of the institutions in this matter.
\textsuperscript{101} Dorothy Judd (Plaintiff) v Citibank (Defendant), Civil Court of the City of New York, Queens County, November 3, 1980, 107 Misc.2d 526 (1980).
II.1.2. To what extent are the mobile network operators liable for the loss incurred by customers in mobile payments in Rwanda?

As mobile financial transactions are concluded through mobile network installed by mobile network operator, in case of transaction errors arising in the course of electronically transmitting or processing the conclusion of a transaction, there may be cases where not financial institution but mobile network operator shall be liable for the loss.  

However, in reality, it is almost impossible for customers to clarify whether error was caused by financial institution or mobile network operator. It would be desirable to make financial institution compensate customer for damage caused by transaction errors arising in the course of electronically transmitting or processing the conclusion of a transaction, and then allow financial institution to exercise right of indemnify over the mobile network operator by proving the intention or negligence of the mobile network operator.

II.1.3. Effects of lack of interoperability between operators of mobile payment service providers to the consumers

Until now in Rwanda, especially for mobile money users, e-money can be transferred between users of the same network, which does not bring particular newness to the payment methods. Important concern in this section resides in thinking of ways by which the electronic payment institutions can be interoperable with capacity to prevent issues resulting from lack of interoperability.

102 The regulation n° 07/2010 of BNR is silent on this aspect of liabilities of network providers for the loss incurred by the customers. See also 260 CCLIII par 3.

II.1.3.1. Possible problems caused by interoperability of mobile payment service providers

Interoperability may complicate settlement of complaints and fraud issues, as it may prove difficult to identify the responsible network. Prompt settlement of complaints is important in establishing the credibility of a network and depends on clear responsibility. In the current (closed) system, there is only one network that can be responsible in the case of a complaint, and MNOs have strong incentives to deal with these. Thus, in a system with interoperability, disputes relating to cross-network transfers may be challenging to deal with.

In other countries, bill payment services like utilities are already available from MNO’s – so MNOs are already able to provide a form of bank interoperability to businesses. Businesses can also set up their own mobile money accounts to receive payments, without the need for interoperability with banking.

II.1.3.2. Interoperability is not considered as a binding obligation to the payment service providers in Rwanda

Interoperability between payment providers refers to the ability of participants to make payments across systems. There are two types of interoperability that are relevant here – interoperability between Mobile Network Operators (MNO) payment systems (e.g. payments from a MTN Mobile Money user to a TIGO Cash user), and interoperability between MNO payment systems and the banks (e.g. transfers from a Bank of Kigali account to an MTN Mobile Money account). While the latter has already developed in several countries (e.g. M-PESA in Kenya, Airtel in

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104 There is no provision on interoperability between the payment service providers in the current regulation governing electronic fund transfers and electronic money transactions in Rwanda. The regulation of BNR on payment service providers obliges interoperability between the payment service providers (art. 21).
India), none of them has been achieved in Rwanda, though it is provided in the regulation governing Payment Services Providers.\(^{108}\)

One good step made so far in Rwanda the interconnection through mVisa. I&M Bank & BK and UOB are interoperable through mVisa. Airtel and I&M Bank are interconnected to provide card less services more others are in pipeline to interconnect.\(^{109}\) The regulations from the BNR state “Contracts with exclusivity are not permitted by this regulation unless they are authorized by the Central Bank”;\(^{110}\) (non-exclusivity has been regulated by the BNR since the beginning of mobile payment systems in Rwanda).

In an interconnected environment, a customer affiliated with one operator’s mobile money service would have the ability to send money electronically to the wallet of a customer affiliated with another operator’s service. It is seen that achieving this level of cooperation can be challenging: not only can it involve gaining agreement between competitors, but it must also comply with relevant competition regulations.

**II.1.3.3. The way forward for implementation of interconnection between payment service providers in Rwanda**

In Rwanda today, most mobile payments services are closed-loop systems whereby one customer cannot send a payment to a customer in another system, even within one country. Kenya is a good leading example on interconnection between mobile payment service providers. For example: G-Cash has bilateral agreements with several other systems. Western Union links to M-PESA; BICS’ Home Send is a hub that includes communication protocol as well as FX conversion; India’s IMPS is multi-bank by design and underpinned by the country’s ACH.\(^{111}\)

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\(^{108}\) Art. 4 for Application for a license, 6 (c) obliges the applicant to explain how the system is interoperable with other existing electronic payment systems. See art. 4, Regulation n°06/2012 of 21/06/2012 of the National Bank of Rwanda governing payment services providers, O.G.R.R n° 29bis of 16/07/2012.

\(^{109}\) Respondent: the National Bank of Rwanda, department of payment

\(^{110}\) Interview with John Bosco SEBABI, D.G. Operations, BNR on November 1, 2013. Article 4 of regulation n° 05/2010 on application for a license, para. d) (i) provides that “description of policies and/or procedures of the system, including: the criteria established for direct and indirect participation into the system, to be safe and non discriminatory”. See regulation n°05/2010, of 27/12/2010 of the national bank of Rwanda relating to the licensing criteria of operating payment and securities settlement systems, O.G.R.R n° special 30/12/2010.

The National Bank of Rwanda had partnered with Visa Rwanda Ltd\textsuperscript{112} to meet this end. In the return, Visa Rwanda Ltd has developed Mobile Visa (m Visa), products that allow mobile banking service interoperability.

\textbf{II.1.3.4. Implementation of interconnection between payment service providers for promotion of customers’ interests}

An important note is that on the side of customers, competition is seen as a good advantage by which they get better services on low costs. In terms of interconnection of mobile payment service providers, customers can, at low cost, affiliate with multiple mobile money services. The proponents of banning agent exclusivity generally appeal to increasing competition in a mature market.\textsuperscript{113}

In the developed world, most mobile accounts are post-paid, so affiliating with multiple networks implies a doubling of monthly costs. For this reason, it is uncommon for customers to affiliate with more than one mobile network at a time. In most of the developing world, the situation is different.

Since opening a new pre-paid mobile account is very inexpensive, and cost is tied directly to consumption, customers routinely maintain connections with multiple mobile operators, behavior which is often referred to as “multi-SIMing”\textsuperscript{114}. In this way, they can avail themselves of promotions that different mobile operators offer, and select the account that offers them the best rates or coverage depending on their requirements for each call.\textsuperscript{115}

In addition, in many cases, operators make it possible for registered mobile payment customers to send money to customers who have not registered for this system (indeed, in most cases, they need not even have a phone): when they initiate the transfer, they are issued a secret code which

\textsuperscript{112} Visa is a global payments technology company that connects consumers, businesses, financial institutions and governments in more than 200 countries and territories to fast, secure and reliable digital currency.


\textsuperscript{114} A June 2010 survey indicated that 43% of mobile money users in Uganda were multi-siming, while the proliferation of dual-, tri-, and even quad-SIM phones around the world provides anecdotal evidence for the trend.

they can convey to the recipient and which can be used to collect the transfer at an agent.116 We call this transaction type an off-net transfer. End-to-end, off-net transfers are usually more expensive than on-net transfers.

These capabilities are important, because they mean that customers are not restricted to transacting only with customers affiliated with their own network—or indeed any network at all. This is the case for mobile banking by which a customer of Banque Populaire du Rwanda may send money to a third person who does not necessarily have an account in any bank; the later can withdraw money via “easy cash system”. For the mobile payment service providers, it can be widely understood that doing so has the potential to deter investment.117

Mandating interconnectivity would presumably be undertaken to promote customers’ interests. The regulation of BNR provides that “Financial institutions and Mobile Network Operators shall be interconnected to offer services to virtually all banked and unbanked customers in order to achieve interoperability and to substantially increase the financial services outreach to the unbanked communities”118. This is a simple declaration of obligation because the financial institutions and Mobile Network Operators in Rwanda provide payment services independently.

II.1.3.5. Payment service providers take advantage of weakness of regulatory framework to create indirect restrictions

When looking at the reality of things, one can realize indirect exclusivity in electronic money transfers between operators who are on different networks. Mobile operators intentionally create significant financial incentives for the senders and recipients of transfers to affiliate with the same mobile payment network. As an example, for an average-size transfer, MTN Uganda charges $1.44 for an off-net transfer and $0.31 for an on-net transfer. Transactional partners with any degree of price sensitivity who transact more than once will find it most economical to pay

116 This system known as “easy cash” has so far been popular in Banque Populaire du Rwanda. It is a way by which the mobile banking user can send money to a third person without necessarily being a customer in any bank—there is a need on a registered mobile device.
118 See art. 21, para. 2, Regulation n° 06/2012 of BNR.
the upfront cost of registering for a new SIM and wallet in order to take advantage of lower per-
transaction costs.\footnote{Neil, D., and Leishman, \textit{op. cit.}, p. 26.}

II.1.4. Limited awareness of consumers in mobile payment services of their right and liabilities

It is important to notice that key information on consumer rights and potential liabilities associated with online and mobile payments is not always provided to consumers in a clear, timely, and transparent manner. Moreover, it is often not clear which of the entities involved in a payment transaction should be providing information to consumers, what type of information they should provide, and when, during the payment process, they should be doing so.

In order to solve this issue, information on delivery times, any rights of withdrawal and available dispute resolution and redress mechanisms (including online and alternative dispute resolution programs) should be provided to consumers prior to making a payment. In the event of problems with a transaction, clear information on whom to contact, and how, should also be available to consumers, by phone, for example, or through a link to a website accessible through the merchant’s e-commerce platform.\footnote{Mark Flaming, \textit{et al.}, (2011), \textit{Consumer Protection Diagnostic Study Kenya}, available at: http://www.fsd.kenya.org/pdf-documents/11-02-22-Consumer-diagnostic-study-pdf/, accessed on 16/06/ 2014.}

The regulation of National Bank of Rwanda requires a bank or other payment service provider to inform the customer for any malfunction of equipment through notices at ATM, POS or other electronic terminals, notice at its branches or any other mode it deems suitable.\footnote{Art. 10, para. 2 (a, b, and c)), Regulation n° 07/2010 of BNR} However, this article is still silent about notification to be done in relation to mobile payment transactions. Instead, the regulation governing the payment services providers obliges applicants for a license to produce signed document describing the contingency and disaster recovery plans for electronic payment facilities and event scenario/problem management plan/program to resolve or
address problems, such as complaints, errors and intrusions and the availability of back-up facilities.\textsuperscript{122}

**I.1.5. Lack of services of deposit and withdrawal of money in mobile payment system in Rwanda**

When launching the Airtel money, it was expected that Airtel Cash was going to introduce communicability between what is known as the mobile wallet (mobile account) and one’s bank account, by which the Airtel cash client will be able to withdraw or deposit money from or onto the mobile wallet and the bank account respectively.\textsuperscript{123}

For instance, with this target of Airtel, one will be able to withdraw money from their mobile wallet using an ATM card or even to top up the wallet through their bank account. Also it makes possible the transfer of money from one’s mobile account to any bank account.\textsuperscript{124} Until the date of this research, we have not found any services of deposit and withdrawal of money through mobile payments.

In Kenya for example, based on SMS technology, M-PESA lets users make mobile payment transactions including cash deposits and withdrawals at designated outlets; and loan receipts or repayments. In this system, cash deposits are converted into a commodity called “e-float” that is denominated in the same units as the domestic currency.\textsuperscript{125} Agents facilitate the conversion of cash to e-float and vice versa. M-PESA users can then use their mobile phone to transfer money to another mobile phone user, regardless of the recipient’s mobile operator.

\textsuperscript{122} See art. 4, (8), law n° 06/2012 21/06/2012 of the National Bank of Rwanda governing payment services providers.


\textsuperscript{124} Mr. MASEKA in an interview with the Independent, website pre- cited.

II.1.6. The problematic of protection of consumers engaging in mobile payment system in Rwanda

By analyzing the Rwandan regulation in place, it is still questionable about the protection of consumers as parties standing on unequal power in mobile payment transactions. The lack of understanding resides in the fact that the different bodies (banks, MNOs and agents) whose operations are often overseen by different regulatory bodies also operate under different sets of regulations. Consumers are therefore unclear over what redress rights they have which entity to turn to if there is a payment-related problem.

In this regard, awareness makes it pertinent for organizations and regulators to emphasize customer protection especially with the new type of customer being reached innovatively. On a simple example, the regulation stipulates that “the payment orders sent by the sender or on his behalf are final and irrevocable. The sender shall not revoke a payment order once it has been received by the receiving institution, unless otherwise provided by agreement”. In consideration of this article, it is simple to conclude that the legislator has put the consumer in a closed box with total impossibilities to revoke any undue payment, such as payment order sent to the wrong receiver.

Rwanda does not make any difference on this issue that has become general in many countries. It clearly seen that most countries do not provide consumers with many legally binding rights to remedies and redress in case of defective or undelivered mobile content products. In the United Kingdom, the question as to whether mobile payments, which allow the consumer to spend up to a certain amount and pay later, may be regarded not as a payment service, but as a credit agreement, is being considered. If the latter solution was favored, consumers may benefit

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126 Banks and financial institutions, and MNOs are regulated by the National Bank of Rwanda for their financial and payments services, MNOs are regulated by RURA for their communication services. However, the payment agents are bound by contracts between them and the telecommunication companies.

127 See art. 5. This article contradicts with art. 7 on “erroneous payment orders” given that the later exempt the solvens (sender) for liability of payment to the wrong accipiens, the greater amount than that intended or duplicate payment. Once the sender discovers all these scenarios, this regulation should give possibilities of revocation to the solvens in order to protect his rights.

from the chargeback protections offered by the country’s *Consumer Credit Act 1974*\(^{129}\), as well as from the anti-fraud protections.

**II.1.6.1. Protection of customers in case of unauthorized mobile payments**\(^{130}\)

In many countries where e-payments, especially mobile payments have gradually evolved, strictly regulate unauthorized mobile payments. Rwanda is at a good starting point of regulating unauthorized electronic funds transfers, but there is still a wide room for improvement in relation to refunds and revocability of any payment made without attention or authorization of the payer\(^{131}\).

In the United States, for example, under the *Fair Credit Billing Act* (FCBA), consumer liability for lost or stolen credit cards is very limited. In a case where only the consumer’s credit card number has been used without any authorization, zero liability applies.\(^{132}\) The settlement requires the company to credit a consumer’s bill or immediately investigate a consumer’s report that the calls were made after the phone was lost or stolen.

In the European Union (as well as in Iceland, Liechtenstein, and Norway), in accordance with the *Payment Services Directive*, consumers are entitled to an immediate refund for unauthorized charges or billing errors.\(^{133}\) It should be noted, however, that the PSD introduces a balance between consumers and merchants’ liability.

Under this Payment Services Directive, consumers are not held liable only if they notify the trader as soon as possible or within 13 months of the fraudulent transaction. In France, under the Monetary and Financial Code, a cardholder is not held liable for a payment which has been made without his authorization, at a distance, and without any physical usage of the card. As a result,

\(^{129}\) Consumer Credit Act, 1974

\(^{130}\) See also *McEvans v Citibank*, 96 Misc.2d 142, and *Ognibene v Citibank*, 112 Misc.2d 219. In this case, bank customers who were tricked into permitting others to use their bank cards were granted recovery. So, the court concluded that plaintiff was the victim of a scam which defendant has been aware of for some time.

\(^{131}\) See also art. 5, para.1 of the Regulation of BNR


\(^{133}\) (EC, 2007)
the issuer is liable to compensate the mobile phone holder for any loss caused by unauthorized use.\textsuperscript{134}

In Rwanda, banks and financial services are obliged to provide for effective means by which customers can notify loss, theft, misuse, unauthorized use of cards, written acknowledging receipt of notifications that enables the customers to verify that he has made a notification and when such notification was made.\textsuperscript{135} However, delays in notifications make the customer liable for the actual loss which occurred\textsuperscript{136}, except when that portion of the loss exceeds the daily transaction of the card or an amount of funds standing in the customer’s account.\textsuperscript{137}

\subsection*{II.1.6.2. Cases of non delivery, late delivery, and non-refunds}

Problems related to non-delivery, late delivery, non-conforming and faulty products have been linked to payments through government regulation and/or by payment providers, particularly in the area of dispute resolution in many countries.\textsuperscript{138} In Korea, both credit and debit cardholders can refuse payment if goods are not delivered. In Rwanda, the situation is controversial because the mobile user pays for the service first, by the use of his mobile device.

In the European Union, under the Directive on Consumer Rights, where a trader has failed to fulfill his obligations to deliver a product, a consumer is entitled to a refund by the merchant of any sums paid within seven days from the due date of delivery.\textsuperscript{139} In Rwanda, there are many cases of services paid via mobile devices while they are not obtained, long delays in transferring funds to the beneficiary, transfer of funds greater or lesser than that ordered by the sender, etc.

There is a high contradiction between the consumers and payment service providers in line with claims related to m-payment: eight out of ten interviewed customers responded that they experienced cases of non-reception of funds while the operation was successfully done by the

\textsuperscript{134} OECD, 2007c, op. cit., p. 27.
137 Regulation Regulation no 07/2010 of 27/12/2010 of BNR, art. 14, para.1, (a) and (b), and art. 15
138 (Consumer Focus, 2009).
sender, four respondents stated that free call line had never given positive response to their claim, six respondents stated that it took more than two weeks to pursue their claims. However, it is surprising to see that there are no complaints addressed to the MNO, nor appealed to BNR or courts.

The regulation in place requires the payment services providers to inform the customers that they have right to appeal to BNR in case if they are not satisfied with the outcome of his complaint. However, under BNR, there is no particular procedure for handling the third party complaints by BNR. In practice, if any case could be lodged before BNR, it analyses the case and requests the payment service providers to resolve the complaint. Simply, this clarifies that consumers are not aware of the procedure for claims and redress, and again, the power to settle any disputes is conferred to the payment service providers.

In the case Porter v Citibank, the plaintiff had proven that “... he had tried to withdraw money with no success. On two occasions this was done, no money was received, and yet his account was charged”, the court ruled in favor of the plaintiff. In Japan, for example, Rakuten, the country’s leading online commerce platform, introduced mandatory escrow payment services (Rakuten Anshin Kessai Service, for which there is a charge) for all C2C transactions to address issues of merchandise non-delivery. Interestingly, under this system, payment is not released to the seller until the buyer actually receives the purchased item.

II.1.6.3. Quid of fraudulent or negligent behaviors of agents of mobile payment service providers having caused undue payment?

Fraudulent or negligent conducts of officers or agents of financial institutions, merchants who are linked to the cards or other communication system and mobile operators, are the

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circumstances where customer is not liable.\textsuperscript{143} Regardless of the payment context, there is general agreement that protection against fraud is a shared responsibility between payment providers and merchants.\textsuperscript{144} The latter should in particular ensure that their e-commerce systems are adequate, transparent, and safe.

Some countries have already taken measures in this regard, implementing regulations, for example, that limit consumer liability in the case of fraud. Obviously the provider can seek redress against the agent, but the customer should be able to file a complaint with the provider, who should be responsible for ensuring data privacy and security.

Thus, providers’ liability for the acts of their agents is a fundamental principle for outsourcing in financial services.\textsuperscript{145} With a specific focus on the agents’ actions related to delivery of mobile payments, ensuring that mobile network providers are liable does not create unlimited liability and should not create unreasonable burdens on providers.\textsuperscript{146}

On a critical note, it has to be noticed that MNOs do not publicize the recourse options for lodging complaints against their agents with the same clarity or ubiquity as the pricing structure or customer service channels. For example, SAFARICOM claims to intervene on customers’ behalf in complaints against agents; nevertheless because their relationship with their agents is not a legal one, they are only liable to a certain point and not when there are instances of agent fraud or loss of funds.\textsuperscript{147}

\begin{itemize}
\item \textsuperscript{143} Art. 15 of regulation no 07/2010 of BNR on electronic fund transfers and electronic money transactions, O.G.R.R. n° special of 30/2012/2010.
\item \textsuperscript{144} BIS Papers n° 62 Financial Sector Regulation For Growth, Equity And Stability. Proceedings of a conference organized by the BIS and CAFRAL in Mumbai, 15–16 November 2011, Monetary and Economic Department January 2012.
\item \textsuperscript{146} See also Kennison v. Daire, High Court of Australia [1986] HCA 4; (1986) 160 CLR 129, February 20, 1986.
\item \textsuperscript{147} Lyman, T., Pickens, M. \textit{et al.} (2008). \textit{Regulating Transformational Branchless Banking: Mobile Phones and Other Technology to Increase Access to Finance}, Focus Note 43, Washington DC: CGAP.
\end{itemize}
II.1.6.4. How does the regulation in place govern the burden of proof for consumers’ claims?

Evidence is an essential element in the case ruling, and it is the demonstration of the truth. This means that the evidence will be necessary in order to show the truth in the case ruling. The other case is that the burden of proof shall be for the plaintiff who has claimed for his/her rights (actori incumbit probatio).

This being said, every plaintiff must prove a claim. Failure to obtain proof, the defendant wins the case. Likewise, a party who alleges that he/she has been discharged from an obligation that has been established must prove that the obligation no longer exists (reus in expiendo fit actor). Failure to do so, the other party wins the case.

In a civil case, the plaintiff has the burden of proving the facts and claims asserted in the complaint. If the respondent, or defendant, files a counterclaim, the respondent will have the burden of proving that claim. When a party has the burden of proof the party must present, through testimony and exhibits, enough evidence to support the claim.

In mobile payments, sometimes, the sender receives an SMS that shows that the transactions have been completed. However, the big concern remains on how the sender of electronic money may have access to these document while complains occurred.

The regulation of BNR requires the payment service providers to provide effective and convenient means by which customers can notify loss, misuse, theft, or unauthorized use and breach of security code. They are also required to provide procedures for acknowledging notifications, and give facilities to the customers to verify whether the notification was received.

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149 See art. 9, law no 21/2012 of 14/06/2012 relating to the civil, commercial, labour and administrative procedure, O.G.R.R no 29 of 16/07/2012.
150 In a questionnaire addressed to MTN, Question 1 “How does MTN investigate alleged errors, notify consumers of the results, and, when appropriate, rectify the errors?”, MTN responded: “ Normally it takes us one day to investigate any issue escalated by the customer we can notify then through calls or by email or by visiting them.”
151 See art. 9, Law no 07/2010 of BNR on notification of loss, theft or unauthorized use.
II.1.6.5. Lack of fixed physical address of MNO Agents as a challenge to the burden of proof for the consumers

In this section, it has to be reminded that many MNOs Agents do not have the fixed and registered places where consumers found them for access of data information kept in operating systems. Moreover, they are considered to be unknown relating to their status in the commerce.

Relating to the ambiguous workers (agents) of the companies in performing their duties, the Rwandan legislator should elaborate the rules to be followed in order to protect the vulnerable citizens against the loss as the payment service providers and consumers are on unequal power in the production of evidences.

II.1.6.6. Effects of anonymity on burden of proof for claims arising in mobile payments

In order to understand how the burden of proof is challenged in electronic and mobile payments whereby the user stays anonymous in his transactions, it is important to consider the case Dorothy Judd v Citibank.\textsuperscript{152} In this case, Judd (plaintiff) was issued a “citicard”, at the time of validation of this card; the customer had chosen a "personal identification code" which was known only to the customer.

The issue in this case is whether the testimonies and letter produced by Judd from her employer to the effect that she was at work on both occasions and could not have made the said withdrawals is enough to act as evidence of non-withdrawal of the claimed funds. In this regard, as testified by the bank branch manager, only the customer knew this number — not only was it known only to the customer, but it was impossible for anyone to retrieve it from the computer, including employees of the bank.

Referring to US Code, tit 12, § 2403, the court judged in favor of the plaintiff and decided the following:

\textsuperscript{152} Dorothy Judd v Citibank, civil court of the City of New York, Queens County, 107 Misc.2d 526 (1980), November 3, 1980.
“An EFT account holder should have no liability for an unauthorized use of his account unless the depository institution can prove, without benefit of inference or presumption, that the account holder's negligence substantially contributed to the unauthorized use and that the depository institution exercised reasonable care to prevent the loss. Negligence in this instance should be limited to writing the PIN on the card, keeping the PIN with the card, or voluntarily permitting the account accessing devices, such as the PIN and the card, to come into the possession of a person who makes or causes to be made an unauthorized use.”

II.1.6.7. Impact of different regulatory bodies of m-payment on consumer protection in Rwanda

Before hand, it is important to notice that the inherent problem in Rwanda in the matter of mobile payment is that there is a lack of coherence in consumer protection and market oversight. These transactions are driven by different legal duties and powers of individual regulators such as RURA and the National Bank of Rwanda. Having two regulatory regimes for what is often from the consumer’s perspective a single product or service can result in different rights and a divergence in protection for personal and small business.153

As discussed in the details above, mobile payment users may not fully understand which regulations apply to a payment transaction and how these may differ depending on the possibilities to resolve any issues arising between them. The lack of understanding results from the fact that a number of financial and non-financial institutions may be involved in a given payment transaction, including banks and alternative payment providers, such as MNOs, and other non-bank institutions operating on the internet.154 As seen above, their operations are often overseen by different regulatory bodies, which operate under different sets of regulations.


Consumers may therefore find it difficult to determine: what redress rights they have (relating to correction of orders, returns, exchanges or refunds), which entity to turn to if there is a payment-related problem, and which regulatory body to appeal to if a problem cannot be resolved with a merchant directly.\textsuperscript{155}

**II.1.6.8. Protection of consumers in cross-border m-payments**

The situation discussed above on the aspect of consumers’ protection is even more complex when transactions are cross-border. Consumers engaging in online and mobile commerce do not benefit from the same level of protection when using different payment mechanisms within jurisdictions\textsuperscript{156}, which can complicate obtaining redress when a problem arises. In addition, protection regimes differ from country-to-country, which could discourage cross-border transactions.

By considering the example of Kenya where e-money services first emerged and have the deepest level of penetration, it is easy to realize that Kenya has a very unusual regulatory structure.\textsuperscript{157} While mobile phone companies are licensed and supervised by the Communications Commission of Kenya, mobile payment services are within the mandate of the CBK.\textsuperscript{158} Both Uganda and Tanzania take a different approach to regulation. In both countries, e-money licenses are awarded by the central bank (Bank of Uganda and Bank of Tanzania), and are only given to commercial banks and not to mobile phone companies.

To be more specific, in each country mobile phone companies (such as MTN in Uganda and Vodacom in Tanzania) manage the network of agents and provide customer services, but are


partnered with commercial banks; which are regulated by the central bank. In Burundi, the mobile money service ECONET is run in partnership with the national postal service, and is regulated by the central bank. In Rwanda, mobile phone companies provide also the mobile money services, while they are regulated by a different authority.

Therefore, strengthening education and awareness is seen as helping in this regard. Beyond this, it is important to establish a minimum level of consumer protection across the EAC member States that would apply no matter regulatory framework is being used within a jurisdiction. The minimum level of protection could be established by laws and regulations or be less formal.

Until now in Rwanda, individuals who need to transfer money across the world use means like international money remittance companies, long distance buses or bank transfers. In order to solve this issue, the National Bank of Rwanda (BNR), the regulator of the financial sector and payments services needs to work on cross border mobile money payment to supplement existing channels.

II.1.6.9. Lack of international customer protection benchmark in mobile payment system

UNCITRAL adopted its Model Law on International Credit Transfer (MLICT) in 1992 in response to two main changes: the increasing of electronic means in payment orders, and the shift from a prevalence of debit transfers to a prevalence of the credit transfers. The MLICT is compatible with paper-based payment orders, but was actually designed with particular reference to “high speed electronic credit transfers”.

In its article 1(2), MLICT specifies that “this law applies to other entities that as an ordinary part of their business engage in executing payment orders in the same manner as it applies to banks”.

160 Operating mobile money services in Rwanda include MTN mobile money, Airtel money, and Tigo cash.
161 Telecommunication companies in Rwanda are regulated by RURA in their communication services, and they are at the same time regulated by the National Bank of Rwanda in their payment activities.
162 John Bosco S., Director of Payment Systems at the BNR, in an interview with the Independent, Sunday 7 February 2013.
Legislation based on the MLICT would therefore cover mobile payments affected through a mobile network operator. On this subject, it is important to notice that the MLICT does not exclude payments to consumers from its scope of application, but, at the same time, does not deal with consumer protection, an issue that may give rise to challenges.\textsuperscript{165}

\textbf{II.1.7. Impact of lack of harmonized regulatory regime on mobile payments in EAC}

The EAC region has made huge gains in intra-regional trade and increased movement of workers and families among member states since 2005 but the lack of a convenient and safe way to make and receive payments has remained an impediment.

On this, it is added consumer protection issues where disputes resolution will need strong guidelines as cross-border service involves the institutions which are not supervised by the central bank of one member state and it complicates the oversight of cross-border schemes.\textsuperscript{166}

Speaking of which, different security protocols and business models of stakeholders may contribute to the delay of the implementation of cross-border mobile money platforms.

In reality, the interoperability is an urgent matter for EAC as a lot of trade is done within the region involving money movement. The implementation of the interoperability will help to increase security of funds but at the same time trade level within the region. To this end, for BNR, the urgent need that the EAC should address in terms of payment systems is to ensure interoperability among financial institutions in the region which also includes payment systems like mobile money. Meanwhile, the East African Payment System (EAPS) has been implemented to facilitate the development of cross-border payments within EAC region but this also is only still possible at central bank level.\textsuperscript{167}

EAC should learn from other regional integrations. Examples of cross-border cooperation include\textsuperscript{168}: Directo a Mexico, which is an international funds transfer service between the United States and Mexico, the West African Economic and Monetary Union (UEMOA), which consolidates the market and tries to establish a common currency across several countries, the Southern African Development Community (SADC), which is a model for financial market integration; and SEPA.\textsuperscript{169} This sort of heterogeneity in regulatory environment is needed to be eliminated in the run-up toward the East African Monetary Union.

Major changes were witnessed by the implementation of the Rwanda Integrated Payment Processing System (RIPPS). RIPPS has been put in place to reduce time lag in payments and notably to mitigate systemic risk in the financial system of Rwanda. RIPPS goes even beyond borders to facilitate trade in the East African and the COMESA regions. It has been upgraded to enable linkage to Regional cross border Payment Systems, the East Africa Payment Systems (EAPS) and the COMESA Regional Payments and Settlement System (REPSS).\textsuperscript{170}

II.1.7.1. Regulation of charges in cross-border mobile payment

Developments such as the free movement of labor in the bloc increase the need for simplified financial communication between the countries and mobile money platforms. However, in EAC, if one wants to send money to another person in any of the EAC member states, one has to contact a mobile money agent, and hand over the money plus a commission of at least 15\% of the sum on small transactions.\textsuperscript{171} It is a long and expensive process of money transfer.

Telecommunication companies in Rwanda are ready to roll of more convenient and cheaper cross-border mobile money platforms but the absence of a regulatory framework is delaying their roll out.\textsuperscript{172} Up today, Airtel operates in all the East African member states except Burundi.


\textsuperscript{169} The SEPA (Single Euro Payments Area) Regulation (EC 260/2012) was adopted in 2012.

\textsuperscript{170} See Matthew RWAHIGI, website pre- cited.

\textsuperscript{171} Matthew RWAHIGI, website pre- cited.

\textsuperscript{172} Clain M., the project manager of Airtel Rwanda, in an interview with the Independent, 17 February 2013.
It has to be noticed that Regulations for cross-border mobile money operations would require legislations on good practices, transaction protection, and financial malpractices like money laundering. To sum up this section, it is worth noticing that in addition to regulatory policy focusing on the structure of the market and its infrastructure, the mobile payment instruments require adequate protection of users.

In particular, in addition to transparency requirements, know-your-customer (KYC) guidelines, and observance of Anti-Money Laundering (AML) regulation, the protection of users’ funds and their traceability are a must, as well as protection from any risk arising from the use of electronic means and the intermediation of non-financial agents. Indeed, once service providers are duly regulated under a risk-based approach and a playing field is ensured in the market to guarantee competition and competitiveness, all other needs for protection can be addressed under a general understanding of consumer protection and an adequate consideration of the role of agents.

II.1.7.2. Impact of EAC monetary union on mobile payment system as a newly introduced payment system in Rwanda

A further and more difficult problem arises in considering how to regulate e-money services that cross national borders. The EAC Common Market protocol of 2009 calls for the free movement of service providers among EAC countries. It is however important to wander whether this provision applies to telecommunications services, although it would certainly seem that as the EAC moves toward economic integration, it will be desirable for such services to be mobile across borders. In this regard, we can conclude that if mobile phone services do cross borders, it is not hard to imagine that mobile money services will do so as well.

Of course, the existence of separate currencies in the period before full monetary integration would make the construction of such a system complex, and would introduce new regulatory issues, and would certainly tax the ability of national regulators to cooperate. This would be all the more difficult if regulatory structures continued to be a differentiated across countries as they would...
currently are. This is another reason why it would be useful to harmonize the form of regulation of e-money in EAC.

II.2. Effectiveness of mechanisms for disputes resolution in mobile payments available under Rwandan laws

Effective dispute resolution, minimally at the level of establishing sufficient trust in the system to encourage its use, is an integral part of any successful payment system (at least any system for which alternatives is available). An independent and trusted judiciary and/or arbitration-type process may be called for, especially when considering integration into global markets. UNCITRAL Convention on the Use of Electronic Communications in International Contracts\textsuperscript{174} and UNCITRAL Model Law on Electronic Commerce\textsuperscript{175} are the most important international instruments covering those issues.

II.2.1. Alternatives for disputes resolution between merchants and consumers in mobile payment system

Whenever there are disputes between merchant and customer with respect to the receipt, nature or quality of the good or service purchased, where payment intermediary is only indirectly involved, there is a serious interrogation about resolution of these disputes since the customer does not directly interact with the merchant. In this context, some payment providers have implemented measures to resolve online disputes related to the receipt, nature or quality of goods.\textsuperscript{176} Some countries require such measures through their legal regimes, while in other countries including Rwanda, these initiatives are quietly absent.

II.2.3. Regulation of insolvency of mobile payment service providers under Rwandan electronic payments regulations

Honestly, mobile payment system is still at the infancy phase. Thus, MNOs generally lack experience in financial services and payments risk and the regulatory and legal governance of payment systems. As observed by Bourreau and Verdier,177 MNOs offer mobile money to consumers through the use of agent networks in absence of a bank partnership; they also provide the clearing and settlement for the prepaid airtime on the mobile handset.178

Mobile money deposits are already operationally ring-fenced from the MNOs’ accounts in Rwanda – the regulation requires that they are held in aggregate trust accounts in commercial banks. However, a legal framework to protect these deposits from the MNO (particularly in the case of bankruptcy) is not yet in place in Rwanda and would be desirable.

In Rwanda again, the granting of a license to an applicant not being an Institution Supervised by the Central Bank shall be conditional upon delivering of evidence of an insurance policy covering 100,000,000 Frw for an applicant wishing to provide remittance services and 200,000,000 Frw for an applicant wishing to provide any other payment service; as security for the funds channeled through the system.179 In the case where deposits exceed the total deposit insurance, then there may be an issue as to who would repay depositors in the case of a bank failure.

II.2.4. Lack of prudential rules imposed on banks and other financial institutions by the regulation of BNR

In mobile payments, MNOs collect funds in exchange for electronically stored value, without being subject to the full range of prudential rules imposed on banks. Also, there may be models

178 Id., p. 21.
179 See art.9, para. 5, Regulation n° 06/2012 0f BNR. See also, art. 4, (i),(c), and art. 6, para. of regulation n°05/2010 of 27/12/2010 of the National Bank of Rwanda relating to the licensing criteria of operating payment and securities settlement systems.
where even if client funds sit in a bank account, they receive a different regulatory treatment than those applicable to bank deposits.\textsuperscript{180}

Taking the example of Kenya, Funds collected by SAFARICOM for M-PESA, which customers increasingly use as a short-term savings mechanism, are deposited in pooled trust accounts at several commercial banks, for the benefit of the customers. In the event of insolvency however, there is no mechanism in place for customers to claim trust assets.\textsuperscript{181}

This therefore leaves the consumer with no recourse if the said company becomes insolvent. Therefore, we consider that this brings forth regulatory challenges in that client assets are left unsecured due to the lack of an effective regulatory framework. Protecting consumer funds are measures aimed at ensuring funds are available to meet customer demands for cashing out electronic value.

\textbf{II.2.5. Regulation of settlement of disputes in mobile payments with cross-border effects in Rwanda}

For payments having cross-border effects, the situation becomes more challenging, even making it difficult for consumers to know whom to turn to when problems arise. This can result in delays in consumers having problems resolved in a satisfactory manner, and, in some cases, failures to obtain redress as consumers may find it difficult to contact sellers directly, and opportunities for face-to-face discussions may not be possible.

When problems regarding the purchase of goods or services, or the payment itself arise, consumers need to know who to contact in order to resolve issues in a cost effective manner. One of the challenges is to design processes which are viable when low-value products are involved. Another is to have mechanisms in place to deal effectively with transactions involving cross-border trade.

\textsuperscript{180} Morawczynski, O. (2009). Exploring the usage and impact of transformational m-banking, mimeo, pp. 21-22.
In Europe, this system has gradually evolved. In 2001, the European Commission launched FIN-
NET\(^{182}\), a financial dispute resolution network of national out-of-court complaint schemes in the
European Economic Area countries (the European Union Member States plus Iceland, 
Liechtenstein and Norway) that are responsible for handling disputes between consumers and 
financial services providers (including banks, insurance companies, and investment firms).

This system is a good lesson that EAC member states should take since they are striving to 
develop their payment systems. The schemes developed in European Economic Area co-operate 
to provide consumers with easy access to out-of-court complaint procedures in cross-border 
cases. In the event a consumer in one country has a dispute with a financial services provider in 
another country, FIN-NET members will put the consumer in touch with the relevant out-of 
court complaint scheme and provide the necessary information about it.\(^{183}\)

However, it is possible to realize that many consumers are not well informed about available 
dispute resolution schemes, and the potential role of payment providers, particularly in the 
mobile payments area\(^{184}\). In Rwanda, as it has been mentioned above, the situation becomes worse 
because consumers are completely unaware of disputes mechanisms that are provided for them (if there 
are any).

II.2.6. Jurisdictional issues in mobile payments disputes resolution with cross-border 
effects

Beforehand, it is important to remind that many contracts and other forms of legally binding 
agreements include a jurisdiction or arbitration clause specifying the parties’ choice of venue for 
any litigation (called a forum selection clause). Then, choice of law clause may specify which 
laws the court or tribunal should apply to each aspect of the dispute. This matches the 
substantive policy of freedom of contract.

\(^{182}\) OECD. (2013). Revised Recommendation of the Council concerning Guidelines governing the Protection of 
Privacy and Transborder Flows of Personal Data, OECD, Paris, 2013, available at: 

\(^{183}\) OECD. (2013). website pre-cited.

\(^{184}\) OECD. (2009a). Consumer Education, Policy Recommendations of the Committee on Consumer Policy, 
In this regard, it can be deduced that when a case comes before a court and all the main features of the case are local, the court will apply the *lex fori*, the prevailing municipal law, to decide the case. But if there are "foreign" elements to the case, the forum court may be obliged under the conflict of laws system to consider whether the forum court has jurisdiction to hear the case\footnote{Starr Printing Co. v. Air Jamaica, 45 F.Supp.2d. 625 (1999 U.S. Dist.). See also Oceanic Sun Line Special Shipping Co Inc v Fay (1988)165 CLR 197; 79 ALR 9. In this case, the court tested the *DOCTRINE OF FORUM NON CONVENIENS* - the forum is inconvenient; the ends of justice would be best served by trial in another forum; the controversy may be more suitably tried elsewhere.} or apply *lex loci contractus* is one of the possible choice of law rules applied to cases testing the validity of a contract.

In many mobile payment cases however, the *locus contractus* is difficult to determine, for example if the contract was concluded at sea or on a moving train, or if the details of the contract signing were not well documented.\footnote{See Lorenzen.(1919). *Conflict of Laws Relating to Bills and Notes*, pp. 111-119.} In this case, it is recommended to have a strong system of online cross-border disputes resolution. Normally the country in which the defendant lives is the country with jurisdiction to process the case. In any regional integration, people who normally live in a particular Member State must, whatever their nationality, be sued in the courts of that Member State.\footnote{Dicey and Morris. (2000). *The Conflict of Laws* (13th edition) (edited by Albert V. Dicey, C.G.J. Morse, McClean, Adrian Briggs, Jonathan Hill, & Lawrence Collins). London: Sweet& Maxwell 2000, pp. 87-91.}

In Europe, if a dispute is against a person or business in a different Member State, the claimant has to find out which Member State’s courts have jurisdiction to deal with the case. Jurisdiction in cross border cases is governed by EU Council Regulation (EC) no 44/2001\footnote{Consider European Council Regulation (EC) no 44/2001 of 22 December 2000 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, Official Journal L 012 , 16/01/2001 P.} on jurisdiction, and the recognition and enforcement of judgments in civil and commercial matters (otherwise known as the Brussels Regulation).

As observed in this research, the regulatory framework of mobile payments in Rwanda is still at an infancy stage, thus putting consumers and users of mobile payments on their own risks when it comes to determining the source of a problem and following up with the company concerned, many consumers are unaware of the regulations in place. In addition, Mobile Network Operators work separately; which, apart from complicating access to this modern payment model by
requiring the possession of many SIM cards, it is also quite possible that none of the companies would be willing to take responsibility for addressing a complaint or rectifying the situation when an issue arises.

CHAPTER III: MEASURES TO BE ADOPTED FOR EFFECTIVE REGULATION OF MOBILE PAYMENT SYSTEM IN RWANDA

The details above discussed the lacunae and imperfections of regulation of electronic payments including mobile payment system in Rwanda in comparison with developed mobile payments in other countries. This last elaborated the measures to be adopted as solutions to be above mentioned problems in order to improve the potentials of the Rwandan regulatory system in dematerializing electronic and mobile payments. Mainly, these consist of preventive and regulatory measures.

III.1. Preventive measures

The telecommunication industry in most countries is regulated on the basis of a public utility, whereas the banking sector is regulated on the basis of safety and soundness and capital adequacy. The telecom industry in most countries lacks experience in financial services and there are possible business risks associated with this expanded role. Furthermore, the regulatory infrastructures for mobile carriers in many countries are in nascent stages of development with respect to mobile financial services. This section will focus on important measures to be adopted in order to prevent these risks.

III.1.1. Measures for prevention of possible risks of interoperability between m-payment service providers in EAC region

Theory and practice suggest that interoperability for mobile money should be approached carefully. Requiring interoperability while the Rwandan mobile money market is in its infancy,

with the lowest penetration and highest fees in the EAC, involves significant risks. If well-orchestrated this could benefit the market; but adequate lead-time, support from industry players, and the right structure will be crucial to success. We can simply deduce that, if these conditions are not met, Rwanda will run a chance of repeating the mistakes of other countries, with higher fees and slow growth.

To the extent that agents are shared among MNOs, there may be complications relating to liability in the case of fraud or misconduct, since the monitoring of the agent is no longer the responsibility of just one party. There may be a need for guidelines and perhaps arbitration for dispute resolution. While this does not seem to be a big issue at present (perhaps due to the very low level of agent sharing), it may yet emerge as one in future.

By harmonizing the regulatory framework under EAC, there will be a need to ensure that redress is possible where Regulation has been incorrectly applied, Member States should establish adequate and effective complaint and redress procedures for settling any dispute between the payment service users and the payment service providers.

It is also essential to ensure that the competent authorities and out-of-court complaint and redress bodies, within the Community, actively cooperate for the smooth and timely resolution of cross-border disputes. It should be possible for such cooperation to take the form of an exchange of information regarding the law or legal practice in their jurisdictions, or a transfer or takeover of complaint and redress procedures if appropriate.

III.1.2. Educational measures of the risks associated with mobile payments to the customers

Mobile payment service providers and other regulated entities should take measures of improving customer due diligence, particularly for higher risk dealings with particular customers

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192 See also, art. 11 of the Regulation (EC), n° 924/2009 of the European Parliament and of the Council of 16 September 2009 on cross-border payments in the Community.
and cross-border correspondent banking and other relationships. In this regard, MNOs should take measures for the risks of money laundering or terrorist financing by taking into account the nature and level of understanding of their customers and agents.

These educational mechanisms will help the customers, not only to be aware of their rights and liabilities, but also to make informed choices. It is important here to remind that it is also often difficult for consumers to know what protections they have when purchasing products from another country. Some governments have alerted consumers about the potential differences in the protections that may be attached to, respectively, domestic and cross-border online purchases.

It is worth noticing that consumers’ capacity to protect themselves from payment fraud and related security threats should not be overestimated. More may need to be done to ensure that education is being provided to consumers and that such education is understood and acted on.

There are, however, some weaknesses related to the effectiveness of awareness and education initiatives. Consumers, and, in particular, children and other vulnerable or disadvantaged consumers, oftentimes do not know how to stay safe online, despite numerous consumer education and awareness campaigns.

III.1.3. Availability of measures of risk assessment by mobile payment service providers

Mobile payments are an area of new technologies where financial institutions (and perhaps other entities developing such new mobile payments) must take appropriate measures to analyze, manage, and mitigate risks regarding money laundering and terrorist financing risks.

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194 See OECD, 1999, Section IV, C.

195 EC, 2008, p. 27.

Thus, the financial institutions as well as the MNOs are required to “identify and assess the money laundering or terrorist financing risks that may arise in relation to the development of new products and new business practices, including the new delivery mechanisms, and the use of new or developing technologies for both new and pre-existing products.”197

In that regard, mobile payment service providers should conduct an anti-money laundering/counter terrorist financing risk assessment prior to the launch of new products, business practices, or the use of new or developing technologies. The major focus of the Rwandan legislator should therefore be how mobile payment service providers are monitored in line with available assessment of risks associated with foreign correspondent banking, pre-paid cards and mobile banking, cash-intensive businesses, remote deposit capture, private banking, and other higher risk products, services, customers or geographies.198

The regulation of BNR requires applicants for a license to produce Proof of ability to comply with all applicable Anti-Money Laundering and Combating of Financing of Terrorism (AML/CFT) laws, standards and measures, it also requires the applicant to produce an evidence that RURA (Rwanda Utilities Regulatory Agency) certified the technology infrastructure for Payment Service Provider operating their network.199

III.1.4. Measures for prevention of money laundering and terrorism financing under the Rwandan mobile payments regulatory framework

There are many concerns about risks of money laundering and terrorist financing that may be associated with new payments methods including online and mobile payments.200 Money launderers and terrorist financiers can attempt to gain access to a mobile banking account by stealing a mobile phone with inadequate security features, or by attempting to hack transactions as they occur via a wireless network, or by tricking customers to disclose their financial account

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197 FATF RECOMMENDATIONS, supra note 62, at 17.
199 See art. 4 (9-13), Regulation n° 06/2012 of BNR.
information via “mishing” attacks or fake bank apps. As telecom firms engage in financial services across shared networks in cross-border jurisdictions, the benefits of mobile payments, ubiquity, and rapid settlement may also increase the risk of money laundering in mobile transfer services.

With potential gaps in regulatory oversight in Rwanda and across EAC, mobile payment actors may find it possible to evade detection and use multiple mobile phones and accounts to finance terrorism. Since mobile technology-enabled payments do not require the face-to-face interaction that takes place with traditional banking, a more opaque and anonymous experience is created that may permit the opportunity for criminal activity. This is increasingly important as mobile retail payments can occur rapidly and in cross-border environments.

Anecdotally, we can find that there is limited expertise in identifying electronic payments crime in the communication systems among the EAC member states, therefore, the potential for abuse should be considered. It is therefore required to have a service-based risk analysis by regulators to determine new approaches to the oversight of money laundering risk. Money-laundering and terrorism-financing mitigation programs require service providers to institute a meaningful KYC process that is trusted by all parties to the mobile payment transaction.

Rwanda is at a good stage in preventing and penalizing money laundering and terrorism financing crimes. In this regard, the new Penal Code provides for measures of penalizing the

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204 For the Inter-state partnership for prevention of crime of money laundering and financing terrorism among EAC member states, Rwanda has applied for membership in ESAAMLG and procedures for that application are underway (FIU-Rwanda National Police).
crimes of money laundering and terrorism financing\textsuperscript{205}, and an Anti-money laundering law\textsuperscript{206} was enacted in 2009.

As mobile commerce advances, it will be necessary for mobile payment service providers to establish integrated systems of internal controls that respond quickly to suspicious activities. The risk of anonymity in mobile payments may require the mobile payment service providers to establish new authentication technologies such as voice recognition and fingerprinting to verify identification and to employ appropriate know-your-customer programs, particularly at vulnerable points of a transaction when cash withdrawals may be conducted.\textsuperscript{207}

III.1.4.1. Developing Customers Due Diligence measures for prevention of money laundering and terrorism financing

In this perspective of customers due diligence, it must be understood that three core notions of “identification”, “verification” and “monitoring”\textsuperscript{208} have to be taken into consideration and are intended to reinforce each other so that the financial institution builds knowledge of the customer that is crucial from an AML/CFT perspective.

Under the FATF Standards, financial institutions must perform due diligence in order to identify their clients and ascertain relevant information pertinent to doing financial business with them. Therefore, customer due diligence policy objectives are to ensure that financial institutions can effectively identify, verify and monitor their customers and the financial transactions in which they engage, in accordance to the risks of money laundering and terrorism financing that they pose.

\textsuperscript{205} See art. 523, and art. 652-659 of the Rwandan Penal Code, Organic Law n° 01/2012/OL of 02/05/2012 instituting the penal code, \textit{Official Gazette} n° Special of 14 June 2012.

\textsuperscript{206} Law n° 47/2008 of 09/09/2008 is on prevention and penalizing the crime of money laundering and financing terrorism and the Presidential Order n°27/01 of 30/05/2011, determines the organization, functioning and mission of the financial investigation unit, which is under Rwanda National Police.


Some of the measures that businesses and financial institutions have to take into consideration include the following:\textsuperscript{209}

a) Identifying the customer and verifying that customer’s identity using reliable, independent source documents, data or information;

b) Identifying the beneficial owner, and taking reasonable measures to verify the identity of the beneficial owner such that the financial institution is satisfied that it knows who the beneficial owner is. For legal persons and arrangements this should include financial institutions taking reasonable measures to understand the ownership and control structure of the customer;

c) Obtaining information on the purpose and intended nature of the business relationship;

d) Conducting ongoing due diligence on the business relationship and scrutiny of transactions undertaken throughout the course of that relationship to ensure that the transactions being conducted are consistent with the institution’s knowledge of the customer, their business and risk profile, including, where necessary, the source of funds.

Let it be stressed that banks should make reasonable efforts to determine the true identity of all customers requesting the institution’s services. Therefore, it should be a bank’s explicit policy that significant business transactions are not conducted with customers who fail to provide evidence of their identity.\textsuperscript{210}

In order to happen, banks should ensure that business is conducted in conformity with high ethical standards and that banks should adhere to laws and regulations pertaining to financial transactions.\textsuperscript{211} Here, banks should not offer services or provide active assistance in transactions where the bank has good reason to believe they are associated with money laundering.

More importantly, banks should cooperate fully with national law enforcement authorities to the extent permitted by local laws or regulations relating to customer confidentiality. No support or


assistance should be provided to customers seeking to deceive law enforcement authorities through altered, incomplete or misleading information. Where a bank has a reasonable presumption that funds on deposit are from criminal activity or that transactions entered into are for a criminal purpose, the bank should take appropriate measures, including denial of assistance, severing of the customer relationship, and closing or freezing the account.\textsuperscript{212}

The main issue remains for mobile money transfers done between consumers themselves without capacity to verify identity of the receiver. This situation becomes more complex when it is cross-border mobile payments because countries have different policies of registration and supervision of mobile phone holders.

III.1.4.2. Improvement of requirements for eligibility of agents as measure of money laundering and terrorism financing

In the matter of electronic money transaction, an agent is any person who provides money or value transfer service under the direction of or by contract with a legally registered or licensed remitter (for example, licensees, franchisees, concessionaires).\textsuperscript{213} Many countries permit a wide range of individuals and legal entities to be agents for financial institutions. Other countries limit a list of eligible agents on the basis of a legal form.

For example, India permits a wide variety of eligible agents, such as certain non-profits, post offices, retired teachers, and most recently, for-profit companies, including mobile network operators. Kenya requires agents to be for-profit actors and disallows non-profit entities. Brazil permits any legal entity to act as an agent, but prevents individuals from doing so.\textsuperscript{214}

It seems essential for countries that have different regulatory concerns to balance agent eligibility requirements (that are essential from an AML/CFT perspective) with the financial inclusion objective. This question may also require some discussion and consultation with the financial


sector (in some countries the list of eligible agents may be very extensive but underused by the financial actors that may be reluctant to engage agents). It must also be emphasized that retailers are not necessarily agents of the banking institution.\textsuperscript{215}

The principle of ultimate liability of the financial institution for agents” compliance with the AML/CFT requirements seems almost universal although the extent of liability may differ from one country to another.

\textbf{III.1.4.3. Making the principal financial institutions liable for acts of their agents in the matter of money laundering and terrorism financing}

The fact that agents act as an extension of the principal financial institution means that the processes and documentation, notably for AML/CFT purposes, are those of the principal financial institution. The main role and duties and how agents have to perform those duties will be determined by the principal financial institution.\textsuperscript{216} In that context, it is essential that these duties are clearly specified in the agency agreement in terms of which the retailer is appointed as an agent of the principal financial institution.

It seems that in practice, the contracts between the principal financial institution and their agents vary considerably across countries and markets but common clauses seem generally to include the duty to perform specified AML/CFT checks, record-keeping and reporting obligations.\textsuperscript{217} In determining the AML/CFT role and duties of the agents, it is crucial to take into account the potential practical limitations faced by retailers (often small shops). Retailers generally have a partial knowledge of the transactions conducted by the customer (\textit{i.e.}, the transaction conducted in their respective shops). AML/CFT duties of the agents and the principal financial institution should be seen as complementary and inclusive.

As indicated above, the FATF requires financial institutions to have appropriate systems and controls to monitor the transactions of each client, and report to the financial intelligence unit

\textsuperscript{215} Id. p. 70.
any transaction or activity that could be suspected to be related to money laundering or terrorism financing crimes. This monitoring requirement may require some adjustments in principal-agent scenarios although the models developed in countries under review seem very similar.

In Mexico for instance, according to AML/CFT legal framework, financial entities are required to establish systems and mechanisms that allow them to receive online all transactions made through an agent, in the same way as those carried out in banking offices. The operations carried out by the agent must be monitored by the financial entities and reported to the FIU in case of suspicion.218

In addition, financial entities must have automated systems that allow them to develop, among other things, the functions of detecting and monitoring transactions carried out by client and must have the purpose of detecting possible unjustified deviations in their transactional profile in order for the Communication and Control Committee (conformed by high ranking employees of the financial entities)219 to analyze them and if considered, report them to the FIU.

III.1.4.4. Improvement of technology for prevention of money laundering and terrorism financing

Mobile payments are an area of new technologies where financial institutions (and perhaps other entities developing such new mobile payments) must take appropriate measures to analyze, manage, and mitigate risks regarding money laundering and terrorist financing risks.220

The mobile payment service providers are required to undertake a risk assessment prior to the launch of new products or business practices, or the use of new or developing technologies. Thus, the financial institutions as well as the MNOs are required to “identify and assess the money laundering or terrorist financing risks that may arise in relation to the development of

219 ibid.
new products and new business practices, including the new delivery mechanisms, and the use of new or developing technologies for both new and pre-existing products.”

In that regard, mobile payment service providers should conduct an anti-money laundering/counter terrorist financing risk assessment prior to the launch of new products, business practices, or the use of new or developing technologies. The major focus of the Rwandan legislator should therefore be how mobile payment service providers are monitored in line with available assessment of risk associated with foreign correspondent banking, pre-paid cards and mobile banking, cash-intensive businesses, remote deposit capture, private banking, and other higher risk products, services, customers or geographies.

The regulation of BNR requires applicants for a license to produce Proof of ability to comply with all applicable Anti- Money Laundering and Combating of Financing of Terrorism (AML/CFT) laws, standards and measures, it also requires the applicant to produce an evidence that RURA (Rwanda Utilities Regulatory Agency) certified the technology infrastructure for Payment Service Provider operating their network.

III.1.4.5. Measures of inter-institutions cooperation in the mobile payment services

Considering the example of India, one of the most promising signs of India’s leadership in mobile payments comes from the high level of cooperation within the industry itself. On both the banking and the telecoms sides, one can see players come together and put aside their competitive differences in order to develop common standards and approaches to mobile payments.

For a comparative purpose, let us consider the example of India in the matter of inter-institutions cooperation in mobile payment. In India, all stakeholders – banks, telecoms operators, technology providers, regulators and government organizations – have created the Mobile Payments Forum of India (MPFI), and are collaborating to address the market needs.

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221 FATF RECOMMENDATIONS, supra note 62, at 17.
223 See art. 4 (9-13), Regulation n° 06/2012 of BNR.
And while this may seem like a portent for a deep division between the telecom carriers and the banks, the reality is that both are working closely with the Reserve Bank of India (the banking regulator) and the Telecoms regulator to ensure that the industry is moving towards a level of standardization and interoperability that should allow the development of an open and interconnected mobile payment ecosystem across the country.\textsuperscript{224}

**III.1.4.5.1. Cooperation with FIU-Rwanda National Police for prevention of money laundering and financing of terrorism**

In order to prevent Money Laundering and Financing Terrorism, Rwanda National Police is enacting regulations aiming at preventing, detecting, fighting and eradicating the crime.\textsuperscript{225} More importantly, the following mechanisms have been put in place:\textsuperscript{226} Formation of FIU, nomination of money laundering reporting Officers in each commercial bank, formation of fraud forum. In addition, the following documents were drafted aiming for money laundering and financing terrorism prevention waiting for approval:

a. Directive on cross border cash declaration,
b. Directive on suspicious transaction for reporting entities,
c. Directive on identification of customers
d. Directive on Record keeping for reporting entities.
e. Directive on Casinos and other Gaming halls
f. Suspicious transaction report form, this was approved and issued to all banks.
i. Various trainings were conducted for capacity building of FIU staff for effective performance.


\textsuperscript{226} Respondent: department of Financial Investigation Unity in Rwanda National Police.
III.1.4.5.2. Establishing a strong cooperation between public and private sectors for effective anti-money laundering measures

Building up an appropriate and balanced AML/CFT regime based on domestic circumstances requires extensive coordination among competent authorities and between public authorities and the private sector. Effective information exchange between the public and private sectors will form an integral part of a country's strategy for combating money laundering and terrorist financing while promoting financial inclusion.

To be productive, information exchange between the public and private sector should be accompanied by appropriate exchanges among public authorities.\textsuperscript{227} FIUs, supervisors and law enforcement agencies should be able to share information and feedback on results and identified vulnerabilities, so that consistent and meaningful inputs can be provided to the private sector.\textsuperscript{228}

III.1.5. Possible solutions to the consumers in cases of mobile payments errors

As mobile financial transactions are concluded through mobile network installed by mobile network operator, in case of transaction errors arising in the course of electronically transmitting or processing the conclusion of a transaction, there may be cases where not financial institution but mobile network operator shall be liable for the loss.\textsuperscript{229}

However, in reality, it’s almost impossible for customers to clarify whether error was caused by financial institution or mobile network operator. It would be desirable to make financial institution compensate customer for damage caused by transaction errors arising in the course of electronically transmitting or processing the conclusion of a transaction, and then allow financial


\textsuperscript{229} Timothy R. McTaggart & David W. Freese, (2010), Mobile Banking: What Banks Need to Know When Outsourcing Their Platforms, 3 BLOOMBERG L. REP. – BANKING & FIN., no. 11, p. 18.
institution to exercise right of indemnify over the mobile network operator by proving the intention or negligence of the mobile network operator.\textsuperscript{230}

Given that mobile payment systems are at the infancy stage in Rwanda, they have not reached the level of direct mobile billing services. In order to prevent possible risks related to direct mobile billing services, it is important to think of possible preventive measures and regulate the liabilities of operators in this system.\textsuperscript{231}

Therefore, considering deep involvement of issuer of mobile electronic money and mobile network operator or payment gateway of direct mobile billing service that are not financial institution, it would be desirable to categorize them as mobile financial business operator and impose them the same liability of financial institution in case of unauthorized transaction.\textsuperscript{232}

\textbf{III.1.6. Measures of protection of minors engaging in mobile payments for effective protection of consumers}

Children are actively engaged in purchasing products online and through their mobile devices without always appreciating the associated risks, and despite the fact that in most countries they do not have the legal right to enter into commercial transactions.\textsuperscript{233} One way to protect them is to ensure that their age and identity is verified online prior to making a purchase. Research indicates that this is rarely done, with one report pointing out that 76\% of purchases made using mobile devices do not require any age verification step.\textsuperscript{234} Even where such steps are included, unlike face-to-face transactions, it can be relatively easy for children to pose as adults online.

It should be noted, however, that age verification tools may not provide the only way to effectively protect children in online and mobile payments. Instead, there should be the shared


\textsuperscript{234} Consumer Focus, 2009, p. 47
responsibility between parents, e-commerce, and mobile service providers and payment organizations, in educating and raising awareness among children about the potential risks associated with online and mobile purchases and ways to protect themselves against those threats.235

III.2. Regulatory measures

As discussed in details above, the main challenges are related to regulatory frameworks, which involve both legal rules and their relationship to private sector measures. In addition, a number of parties, including financial institutions and non-financial institutions are involved in e-commerce payment transactions with consumers. The rules governing their operations, which cover the telecommunications, competition, and financial services regulations areas, as well as consumer protection (specific to ecommerce and/or payments) may differ.

The regulatory environment governing mobile payments is still at the infancy stage in Rwanda given that electronic payment system is new and still evolving. It is crucial to promulgate specific legislation that applies to online and/or mobile payments, while others apply to general consumer protection, telecommunications, or financial regulation.

III.2.1. Improving the role of National Bank of Rwanda in conflicts resolution between customers and mobile payment service providers

Generally, the central bank assesses the adequacy of the scheme’s structure and steps in only if the scheme owner is not doing its job. The central bank has explicit legislative authority over the stability, as well as the competition and efficiency, of the payments system.236 In that regard, the central bank’s main objective has been to introduce contestability into all phases of payments, from provision of stored value to clearing and settlement.237

Therefore, the Nation Bank of Rwanda should aim at establishing a regime in which nonbanks can have a role, hoping to stimulate competition and improve payment efficiency. As far as the customers’ protection is evocated in this study, we find that it is not enough for National Bank of Rwanda to have established a declarative responsibility of services providers to produce details of the customer protection measures, including consumer recourse mechanisms and consumer awareness program when applying for a payment license\textsuperscript{238}; it should however have provided for means of recourse when the payment services providers are unable to settle the disputes.

**III.2.2. Improvement of role of COMESA clearing house to promote cross-border mobile payments across the region**

The COMESA was established to improve the efficiency of clearing operations and complement the services of commercial banks as well as facilitate monetary and fiscal policy harmonization within the region.\textsuperscript{239} Given the limited amount of convertible currencies in the region, the COMESA Clearing House was to promote cross-border payment and settlement through the Regional Payments and Settlement System by allowing businesses to invoice their exports in national currencies as against the scarce convertible currencies like the United States dollars.\textsuperscript{240}

However, up to date, COMESA has not recorded much achievement in promoting the payment systems of the member countries and clearing activities were suspended due to the disparate policies and infrastructure of member countries.

**III.2.3. Regulatory measures of insolvency of m-payment service providers for the security of deposits of funds of the public**

While the regular prudential regulation of the bank does provide one line of defense here, a more direct solution would be to require MNOs to maintain deposit insurance up to the total value of all deposits. Alternatively, the BNR could place restrictions on what these deposits can be

\textsuperscript{238} See art. 4 (10), Regulation no 06/2012 of BNR, Law pre-cited.
invested in by the bank (e.g. government debt) that is tied to the aggregate deposit. The BNR could also require MNOs to split their deposits across multiple banks to diversify bank risk.

Such measures typically include also restrictions on the use of such funds, requirements that such funds be placed in their entirety in bank accounts or government debt and that there should be a diversification of floats across several financial institutions. In this regard, the regulation in place should require that the funds backing the mobile money stored value are protected from institutional risks, such as claims made by creditors in cases of issuer bankruptcy.

### III.2.4. Developing online disputes settlement measures for effective cross-border m-payments

As Internet usage continues to expand, interest has grown in designing efficient mechanisms for resolving online shopping and payment disputes. More traditional mechanisms, such as litigation, can be time consuming and expensive for consumers. Online dispute resolution schemes are increasingly being explored by stakeholders as a means for resolving disputes in many countries.

Defined as “a means of dispute settlement whether through conciliation or arbitration, which implies the use of online technologies to facilitate the resolution of disputes between parties,” online mediation can provide substantial savings when compared with traditional litigation.

As concluded at an international conference hosted by the United Nations Commission on

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International Trade Law (UNCITRAL) on 29-30 March 2010, in a cross-border context, online mediation tailored to small value transactions may be in fact the only cost-effective option for consumers.\textsuperscript{244}

Part II, Section III, A i) and iii) of the \textit{E-Commerce Guidelines} requires businesses to provide consumers with accurate, clear and easily accessible information about themselves (including their geographic locations) and ways to resolve disputes. Such information and redress mechanisms are necessary to help strengthen consumer confidence in cross-border transactions\textsuperscript{245}, as also provided for in the \textit{Consumer Dispute Resolution and Redress Recommendation} which calls on member countries to enhance the effectiveness of consumer remedies in cross-border disputes.

\section*{III.2.5. The necessity of the Rwandan legislator to be vigilant for the challenges related to online disputes settlement mechanisms}

While recognizing the benefits that online disputes resolution may bring to consumers, consumer organizations indicate a number of challenges associated with such procedures. These include a lack of direct interpersonal contact that may limit consumer ability to explain their problem to a merchant; and a required degree of consumer knowledge and familiarity with sophisticated web technology that may be an obstacle for many consumers.\textsuperscript{246}

This situation becomes worse in countries like Rwanda and other EAC member states where the majority of the mobile payment users are not knowledgeable of technological means and where technology is still developing. Based on these conclusions, UNCITRAL launched work on the development of a legal standard online dispute resolution related to cross-border e-commerce transactions.\textsuperscript{247} In Rwanda, all the financial institutions and mobile operators have the free call

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{244} (UNCITRAL, 2010\textsuperscript{a}).
\item \textsuperscript{247} The work was held in December 2010 (UNCITRAL, 2010\textsuperscript{b}). Draft procedural rules were discussed at the Working Group III’s meetings held in May and November 2011 (UNCITRAL, 2011).
\end{itemize}
\end{footnotesize}
centers by which customers can present their claims. However, rare solutions have been given through these phone calls disputes resolution mechanism.\textsuperscript{248}

III.2.6. The use of connecting factors in cross-border mobile payments disputes settlement

In many of the transactions, the parties use a standard purchase order, sales contract, or other agreement - the same documents are used when the other party is in exporting countries. However, there are some important differences between domestic and cross-border purchase or sale transactions that warrant a special look at international contracts\textsuperscript{249}, and especially when a contract consists of online or mobile payment.

Many contracts and other forms of legally binding agreement include a jurisdiction or arbitration clause specifying the parties' choice of venue for any litigation (called a forum selection clause).\textsuperscript{250} Then, choice of law clause may specify which laws the court or tribunal should apply to each aspect of the dispute. This matches the substantive policy of freedom of contract. Generally, the court will apply the law chosen by the contracting parties in solving their disputes; otherwise, the court will apply the connecting factors.\textsuperscript{251}

The court facing this issue will choose among these connecting factors in settling the disputes. Hence, it will either apply the law of the forum (\textit{lex fori}) to all procedural matters (including, self-evidently, the choice of law rules), or \textit{lex loci} for substance matters. \textit{Lex loci} includes the law of the place where a transaction physically takes place or of the occurrence that gave rise to the litigation (\textit{lex loci actus}), the law of the place where the contract was made (the \textit{lex contractus}), and the law of the place where the contract was intended to be performed (the \textit{lex loci solutionis}).\textsuperscript{252}

\textsuperscript{248} Eight out ten interviewed customers, which is 80\%, revealed that the free phone calls have never been successful to their claims. The infringed customer has to wait until the problem is solved, and in many cases, there is no respondent on the free call line.


\textsuperscript{251} Ibid.

III.2.7. Harmonization of regulations governing the Mobile Payment Service Providers in East African Community

EAC is inspired by the European Community in the matter of regional integration and harmonization of legislations. The difference in the payment methods across countries has been identified as one of the barriers slowing the growth of cross-border e-commerce. As regards mobile payments in Europe, a lack of open standards for interoperability between card issuers and mobile network operators has been identified by the European Payments Council (EPC) as a major barrier to successful commercial deployments.253

In European Community, efforts are underway to expand the scope of electronic payment schemes, through the development of global standards. An International Council of Payment Network Operators (ICPNO) has been established to build the framework and establish the rules and standards for joining the global payment networks. As far as the EAC is concerned on harmonization of regulations governing mobile payments among its member states, key issues such as technology, international settlement, legal compliance, security, communications, fee structures and exchange rate mechanisms have to be prior examined.

In so doing, the policy maker and the regulator could help providers to assess the particular risks and costs of interoperability at the platform, distribution, and customer level. The policy maker could also help to ensure that interoperability is not removing healthy competition that drives financial inclusion (e.g. investments in distribution if third party sharing is implemented in an immature market).254 Among the EAC member states however, it is difficult to predict for certain whether interoperability would actually lower costs and expand customer choice – the mobile money industry is still too new.

253 European Payments Council (EPC), 2010a, p. 52.
With this consideration, EAC is advised not to rush because the risk of moving too early (or in the wrong way) poses two major risks to the industry as a whole.\(^{255}\) These include compliance costs may increase, making the business case more challenging for providers, and again, implementing the technical side of interoperability can be complex and distract the operator from focusing on the basics of the service\(^{256}\), such as building the distribution network and educating customers. The timing and cost-effectiveness of any regulatory intervention must be appraised carefully, and market-led solutions should always be the preferred option.\(^{257}\)

Therefore, within the EAC integration, legislators should ensure that consumers are informed about potential security and privacy challenges they may face in m-commerce and the available measures which can be used to limit the risks. They should also encourage the development of security precautions and built in security features.\(^{258}\) Mobile payment operators should be encouraged to implement data security policies and measures to prevent unauthorized transactions and data breaches.

### III.2.8. The East African Payment System (EAPS) as a solution to cross-border e-payments

The East African Payment System (EAPS) was launched on November 25, 2013 and links the Real Time Gross Settlement Systems (RTGSs) of the EAC member States.\(^{259}\) It is also an initiative of the EAC Central Banks operating in three countries: Tanzania, Kenya, and Uganda while Rwanda and Burundi are expected to join later.

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As explained by Louis Kasende\textsuperscript{260}, EAPS is a multi-currency system in which payments are effected using any of the currency of the EAC partner States. In the aspect of cross-border payments, it is expected to make cross-border payments easier, facilitate safe and efficient transfer of monetary value within the region, and will be vital in promoting regional trade, as well as promoting economic integration.

GENERAL CONCLUSION

The expansion of digital technologies has dramatically changed the way in which electronic communication services are delivered to and accessed by consumers. Mobile phones today perform more like handheld computers. Mobile phones now are poised to function as payment devices, allowing users to pay for goods and services and transfer funds. This not only promotes competition of a wide variety of services and applications that was not possible before, but consequently requires new regulatory frameworks to tackle issues previously managed in the separate and distinct domains of broadcasting, telecommunication and online services.

Mobile banking and payment services have grown rapidly in recent years. They have the potential to offer benefits for some consumers in vulnerable circumstances, but only if the services are designed in an effective way. Mobile phone services can also offer ways of carrying out online transactions for some who are not otherwise on the internet. However, a number of significant barriers need to be addressed if mobile payment services are to be of benefit to all consumers. Furthermore, the developments raise questions about the effectiveness of regulation and implications for consumer protection.

Rwanda has joined other East African countries in the dynamic mobile payment industry. The low income and rural population can benefit substantially from the expansion of this payment system especially for unbanked. The BNR has done an excellent job in regulating the market so far, but the way in which it manages the more complex issues of regulation emerging, most particularly those relating to interoperability, will be important for the development of the industry.

Regulation of mobile payment, a new technology-based, capital-intensive product is complicated; ineffective regulation can be a big hindrance to the development of this new payment system. At the same time, there are regulatory issues pertaining to consumer protection and risk, especially given the association of e-money with the financial system. Regulation of mobile payment needs to strike a delicate balance between allowing space for investment and innovation to flourish and concern for competition, financial risks and consumer protection.
In many cases, consumers, merchants and other parties involved in transactions may not fully understand what legal framework applies to a particular transaction, what the responsibilities are for the parties in the case of fraud or security problems, or what types of dispute resolution mechanisms or redress rights may be available to consumers in the event of a problem.

Other issues include general consumer issues, such as unauthorized payment charges, non delivery, late delivery and non conformity of products, as well as dispute resolution and redress. Closely related are also issues concerning consumer information, empowerment, and education. On this list of issues studied in regulation of mobile payment systems, it is important to add the technical payments issues that are related to transactions. These include security-related issues, such as digital identity management.

If the barriers can be overcome, mobile payment services could offer benefits to a number of consumers in vulnerable circumstances, including a convenient way to make payments without having to carry cash. This research has described and analyzed the various resources, strategies and tools that regulators need to improve for the enforcement of national laws, rules and regulations governing mobile payment systems.

In this research, we explored the estate of regulation of mobile payments in Rwanda, with focus on protection of vulnerable people-customers of this electronic payment system. We elaborated the weaknesses of the regulatory framework in place in Rwanda in comparison with other international and regulations in countries where this payment model has been developed.

It has been clarified in this research that the opportunity of making payments by mobile phone appears to be gaining traction with the Rwandan consumers and businesses. Stakeholders in the traditional payments model like banks, payment brands and merchants, along with new entrants like Mobile Payment Service Providers, Mobile Network Operators all are beginning to adopt m-payment business models. Since the Rwandan mobile payment market is still in its nascent stage, the Rwandan regulators have not explained clearly how existing laws and regulations apply.

While current regulations are adequate to cover many existing and developing mobile payments offerings, regulators are aware that there may be a need for additional legislative and rulemaking
measures to address any gaps in regulatory coverage. These include providing for means of recourse to the customers when the payment services providers are unable to settle the disputes.

Based on the above conclusions, the following recommendations have been formulated for improvement in the regulation of mobile payment system in Rwanda:

1. In Rwanda, mobile payment is a simple aspect under the Regulation of National Bank of Rwanda on electronic fund transfers and electronic money transactions without clear definition. It is therefore recommended to promulgate a law on mobile payment system with more focus on protection of the most vulnerable consumers;

2. Telecommunication companies in Rwanda are engaging in banking activities by receiving the funds of the public and operating in payments and transfers of electronic money. In that consideration, they should be bound by the requirements imposed to the banks and other financial institutions; these include the prudential rules, and risk assessment mechanisms;

2. It is therefore recommended to the Rwandan regulators to ensure that the consumer implications of developments in mobile phone payment services are fully addressed in regulatory and consumer protection policy and processes, and that they take full account of the interests of consumers in vulnerable circumstances;

3. Developments in mobile payment services present challenges for regulations because this is a new payment model in Rwanda with challenges that cannot be easily anticipated. Thus, Regulators and consumer protection bodies must monitor patterns of emerging problems, liaise with each other, and be prepared to act quickly once issues have been identified in order to update the rules and regulations;

4. Policy-makers in Rwanda need to grasp the opportunities offered by the numerous national and international reviews and changes taking place, which have implications for mobile payment services in order to avoid any equivocal related to this payment system. Consumers should be informed about the different levels of protection offered by issuers and regulation in place;
5. Given that all the telecommunication companies are offering the mobile payment services, it is crucial for the regulator to make interoperability a mandatory inter-companies partnership for an effective mobile payment system;

6. In order to ensure effective protection of the vulnerable consumers of mobile payments, the Rwandan legislator should avail possibilities for recourse to the consumers once they are infringed by the payment service providers. So far, disputes resolution and any recourse by the customers are still under the power of the payment service providers. Thus, RURA should act as an adjudicator or arbitrator in disputes arising between payment service providers, consumers and stakeholders.

Without assuming to be exhaustive in this research, we have brought our intellectual contribution; minimal may it be, to the doctrinal arsenal in the matter of mobile payments. Mobile payment system is a new and gradually evolving area in Rwanda; we have opened doors for the future researchers in this area. We therefore encourage exploring other aspects of regulation of this new electronic payment model that we have not been able to cover in our research.

The Rwandan legislator, in enacting the new rules and drafting model disclosures, should be mindful of both the unique concerns as well as consumer benefits presented by mobile payments, and seek to formulate rules that protect consumers while also fostering innovation in this emerging industry.
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