

**A review of the policy and regulatory environment of mobile banking in
Zimbabwe**

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Abstract

The dynamics in technology have ushered in innovative products such as mobile banking. It has been taken up by other economies such as Kenya, Philippines and others, each coming up with different results. The purpose of this qualitative research is to analyse and evaluate the impact of policy and regulation on the propagation of mobile banking generally but particularly in the Zimbabwe context. Findings of the research reveal a lack of articulate policy and regulation on m-banking, which has posed a challenge to the propagation of m-banking. While m-banking spans multiple domains, the research found that the respective stakeholders are currently working in isolation hence there is a need to work on co-jurisdiction. The outcome of the research shows there is currently no synergy in the awareness campaign drive and stakeholders are not willing to champion the drive. Other factors believed to contribute to the proliferation of m-banking have been identified as the restoration of customer confidence in the banking sector, a reduction of the cost of banking, a culture shift from a cash-centric economy to a non-cash culture and the addressing of intermittent electricity supply among others. The research also takes into consideration socio-economic factors that aid or hinder the rollout and effective uptake of the mobile banking service.

Declaration

I declare that this report is my own, unaided work. It is submitted in partial fulfilment of the requirements of the degree of Master of Management in the field of Information Communication Technologies – Policy and Regulation (MM-ICTPR) in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other university.

Felistas S.Tahwa

Dedication

For my family: "Cape Town" you are a pillar of strength, thank you for holding high the beacon to the end. Rufaro and Tafara, thank you for enduring lonely days for this to be a success.

To my mother Mrs T.R. Magama-Tahwa –You stood in the gap and believed in me even when the odds were against me. Your unwavering love and support is greatly cherished.

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List of Abbreviations

AfDB	African Development Bank
AML	Anti-money laundering
BAZ	Bankers Association of Zimbabwe
BIS	Bank of International Settlements
CBZ	Commercial Bank of Zimbabwe
CDD	Customer due diligence
CFT	Combating the finance of terror
CGAP	Consultative Group to Assist the Poor
FBC	First Banking Corporation
GCI	Global Competitiveness Index
GDP	Gross domestic product
ICT	Information and communication technologies
IMF	International Monetary Fund.
KYC	Know your customer
MOU	Memorandum of Understanding
MPS	Monetary policy statement
MNO	Mobile network operator
NPS	National Payment System
PIN	Personal Identification Number
POTRAZ	Postal and Telecommunications Regulatory Authority of Zimbabwe
RBZ	Reserve Bank of Zimbabwe
RTGS	Real-time Gross Payment System
SBP	State Bank of Pakistan
SIM	Subscriber Identity Module
SLA	Service Level Agreement
SMS	Short message service
Telco	Telecommunication operator
TV	Television

UTL	Uganda Telecoms
ZB	Zimbabwe Banking Corporation

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CHAPTER 1 Introduction and Background to Mobile Banking in Zimbabwe

1. Introduction

The advent of technology has altered way business is conducted. Innovative ideas centred around mobile telephony have been applied resulting in changes in the way society functions and thus affecting transacting behaviour according to Porteous (2006), Donner and Tellez (2008). Financial services like others have embraced technology and it is seen in the rollout of technology-based financial solutions. The notable development introduced solutions such as Mobile banking (m-banking) which has attracted a lot of attention raising hype both in academic research and the press in general.

Various scholars like Porteous and Wishart (2006), Mas and Radcliffe (2010) and others confirm that m-banking is a recent development that has taken the developing world to a higher level and presents potential expansion in the possible utilisation of financial services. In the press, reporters such as Biriwasha (2011), Kabweza (2012a) and many others comment on m-banking with an undertone of anticipation that it is a solution to Zimbabwe's economic challenges as it may be for most developing countries.

According to Porteous (2006) it is a solution to reach the previously excluded and in doing so, impacts the economies especially of the developing countries. For this to become a reality, there are basic necessities that have to be in place. Although Mas (2011) specifies the need of the existence of some form of network or infrastructure to which one can connect to in order to access financial services, a myriad of other factors also come into play.

Zimbabwe started rolling out m-banking late 2011 as reported by Biriwasha (2011) but to date seems not to have fully addressed challenges as was anticipated. The embrace seems not to be in the magnitude that was predicted and hence the need to ascertain the factors hindering propagation.

This research will investigate to what extent policy and regulation affects rollout and uptake of financial services such as m-banking in the developing world, but with particular reference to Zimbabwe. In so doing it will highlight the factors that contribute to a full scale rollout and those that influence uptake. To set the ball rolling it is necessary to get the background leading to the m-banking environment.

1.1 Background

Mobile telephony has been 'disruptive force' in fostering innovation. The expansion of mobile infrastructure globally is phenomenal. This is confirmed by Porteous (2006) when he highlights that generally there are more mobile phone users in comparison to bank account holders in developing countries. Authors have alluded to the fact that the utilisation of the continuously expanding mobile phone infrastructure presents a platform to deploy financial services to previously deprived population at an affordable price (Jenkins, 2008; Porteous, 2006; Alampay, 2010 & Ondiege, 2010).

The notable disparity in the users would therefore, be a ground for the possible expansion of the banking users thereby roping in the previously excluded or unbanked. "Various initiatives use mobile phones to provide financial services to 'the unbanked.'" (Donner & Tellez, 2008 p318) Among them is m-banking.

In line with global trends, one cannot help noticing the rapid expansion of mobile infrastructure networks in developing countries, Zimbabwe included and how the infrastructure utilisation has shifted to encompass m-banking.

Based on such assertions, we will investigate m-banking to ascertain the drivers that elevate it above conventional banking.

Having laid a background on m-banking let us now take a look at the various aspects that constitute it.

1.2 Elements of m-banking

Financial services have evolved over time as confirmed by academics as well as media reporters. While various definitions have been coined by numerous authors,

the evolution in the banking sector is made visible as changes occur and the use of technology is visible in day to day activities.

The development of technology has enabled customers to access financial services without visiting a financial institution, as Alampay points out that it is made possible through the use of mobile phones (2010, p6). Porteous concurs and elaborates that mobile banking consists of various elements and elaborates it as “financial transactions undertaken using mobile device such as a mobile phone or personal digital assistant in gaining access to banking services without physical contact with the bank” (2006, p3).

Authors have expounded on m-banking stating that as a tool it can be a model for ‘transformation or an additive’ (Porteous, 2006; Bångens & Söderberg 2008). As a ‘transformational model’, Porteous expounds that “transformational models are those in which the financial product linked to the use of the phone is targeted at the unbanked, who are largely low income people” (2006, p3). ITU (2011b, p7) concurs and states “transformational banking focuses largely on areas where there is moderate to high mobile phone penetration coupled with a low penetration of traditional banking institutions”. Based on the explanation given by the various scholars we see that this model does not necessarily make use of a bank, but uses the mobile phone. It therefore, is suitable for those who are not bank account holders but needing financial services.

This suggests that the unbanked populace are the target and it gives them the opportunity to have access financial services to the previously deprived. As a product it can be deployed by telecommunication operators (telcos) whose target market differs from the banks. In support of the assertion made by Alampay, (2010) and reiterated by Carr (2010) the availability of infrastructure allows anyone with a mobile phone to gain access to financial services. Zainudeen (2008) believes that the rapid diffusion of mobile phone networks covering a diverse spectrum of users gives an advantage in providing for a wider client base. Furthermore, this gives access to the unbanked low-income earners through services such as mobile money transfer (MMT) using mobile phones without the existence of a bank account.

The pervasiveness of mobile phone coverage provides access for those in remote areas where there is no presence of financial services furthermore it has wider outreach coverage than the conventional bank network; hence it can be a vehicle for increasing bank penetration (Porteous, 2007; Wishart, 2006 & GSMA, 2008). Several commentators note that those that previously did not have access or capacity to access financial services will be in a position to benefit from the use of mobile banking (Bångens & Söderberg, 2008 p7 & Ondiege, 2010 p2).

From the various commentators, we see that 'transformational' m-banking offers an opportunity for the previously excluded (unbanked) to gain access to formal financial services. As they do so, they add money that may have been in informal circulation back to the formal circulation and by so doing impact the economy in a positive way.

As an 'additive model', it is deployed to existing bank account holders as an additional channel to access their account according to Porteous (2007). He confirms that it may also be "an additional product that enables access to financial services" through a mobile phone or personal digital assistant (2006, p26). Mobile Marketing Association (MMA) (2009) commented that as an additional feature, it enables transaction access, such as bill payment, fund transfer and forwarding of security alerts without physical contact with the bank. Alampay also points out that the provision of m-banking through telcos is a form of value addition (2010, p3).

Based on the definition we see that an existing bank account is in place and can be accessed via the mobile platform. As Alampay (2010) confirmed, we may term it as a bonus for the banked who do not have to physically visit a bank to transact, but can still do so at their own convenience. The 'additive' model targets the already banked unlike the 'transformational' model that targets the unbanked.

According to Alampay (2010) a further distinction of m-banking models is categorisation based on institutional roles. This was further expounded into five categories based on how partnerships are forged in the provision of m-banking, namely 'telcos going solo', 'banks going solo', 'exclusive partnership between bank

and telco', 'bank-telecom open partnership and open federation model' (Goswami & Raghavendran, 2009). Based on Alampay's classification, a 'bank-led' model is one that is championed and led by a financial institution while the 'telco-led' model refers to one championed by a telco and its main target market is any mobile phone user who is unbanked (2010). In a different view Porteous also presented four models and categorically stated that the role played by the parties involved are the determinants of model classification (2006, p4).

Goswami and Raghavendran's five categories confirm Alampay's categorisation based on institutional roles and further suggest that the type of licence determines the model of m-banking.

Based on the various commentators, what is clear is that there are various models available for exploitation and each carrying varying requirements for successful take-off. It also suggests that despite whatever form of partnership parties get into, the basis is who is leading the service provision and who ultimately carries the responsibility for the transaction.

To determine the role of each player in a partnership, Porteous poses four questions deemed essential and these are:

- 1. Who is legally responsible for the deposit?*
- 2. Whose brand is most exposed to the public?*
- 3. Where can cash be accessed?*
- 4. Who carries the payment instruction? (2006, p28)*

The following table drawn by Porteous in response to the above questions provides a summary of the various business models and lists the varying roles carried by various parties. While there are multiple models defined, we will adopt Porteous model because it adequately encompasses all models and provides answers to the critical questions that influence model choice. It therefore, clarifies that there are various m-banking models that can be driven by different stakeholders and also provides existing examples. Table 1 summarises Porteous' proposition.

Table 1: Classification of emerging m-banking models

Model →	1	2	3	4
Model Name	'Pure 'bank driven	Joint venture	Non-bank led	Non-bank driven
a)Who holds the Account/deposits?	Bank	Bank	Bank	Telco/non-bank
b) Whose brand is dominant?	Bank	Joint- non-bank Or telco	Usually non-bank or telco dominant	Telco/non-bank
c) Where can cash be accessed?	Bank	Bank	Bank + Alternative agent network	Telco network + other
d)Who carries the payment instruction?	Any telco (sometimes with 3rd party payment gateway)	Usually specific to one telco	May be one or any	Specific to offering telco
Current Examples	Many additive models e.g. FNB	MTN Mobile Money, Smart	M-PESA, Wizzit	Globe; Celpay

Source: Porteous (2006, p28-29)

Based on the above summation, a new dimension is brought forth which alludes that the order and mode of transaction has a bearing on the model type. Boer and de Boer (2010) confirm that variations in business models have promoted partnerships. The various roles played in the different models provide a picture of the dominant player, while Porteous provides an insight to the interesting fact that "...as one moves across the spectrum of models to the right, the bank becomes less important to the model even though bank accounts are involved" (2006, p28). What is depicted is that only the 'bank-led model' needs a bank as it offers an 'additive model' while all other models do not necessarily need a bank and hence are 'transformational' 'transformational model' in m-banking.

In the above models, one may almost conclude that m-banking has more benefits than disadvantages. Authors such as Wishart (2006) and GSMA (2008) place emphasis of the advantages and this is also confirmed by Alampay (2010) that "... mobile banking and mobile money can help increase banking penetration, develop customer loyalty, reduce operational costs, meet government service obligations, etc." (Alampay, 2010 p4).

After understanding the various models, we need to ascertain the environment in which they function. There is a need for us to ascertain the environment necessary for m-banking to rollout. A 'conducive environment' is critical and will be discussed further at a later stage.

Meanwhile, as we can see partnerships involve various players who may not fall under the same jurisdiction. This suggests that different sectors are involved in the process. To get detail, let us now look into the domain overlap.

1.2.1 Domain overlap

Porteous confirms that

The field of m-payments and m-banking is not only new and fast evolving but also sits at the overlap of several regulatory domains—those of banking, telco and payment system supervisors, and anti-money laundering agencies. The overlap substantially raises the risk of coordination failure, where legislation or regulatory approaches are inconsistent or contradictory (Porteous, 2006, p5)

In his assertion, Porteous states that m-banking straddles multiple domains that are individually regulated. Similarly Omwansa (2009) confirms the overlap and suggests the need for a structured approach to enable functionality. Thus suggesting the inter-link is inevitable and has to be managed lest it causes a breakdown in the flow of m-banking. Porteous (2006) warns of a possible impediment should inconsistencies in legislation or regulatory approach arise and terms it as 'risk of coordination failure'. He explains that if the domain overlap is not adequately addressed it increases the

risk of failure in the coordination of the various stakeholders and it impacts negatively on m-banking.

However, to overcome such, Porteous suggests the collaboration of “policy makers, regulators and industry players in the [defining] of obstacles and calibration of proportionate responses to risk at appropriate times” (2006, p5). Omwansa (2009) acknowledges that the ecosystem spans across multiple domains and concurs with Porteous that, regulators and policy makers would be best at driving for a unified goal of providing m-banking service through collaboration.

We get to appreciate the complexity of m-banking and what clearly comes up is the explicit need for coordinating the different domains to promote a seamless flow of activity in m-banking. One may raise a question on how best to approach the coordination without infringing the other party’s jurisdiction. We also grasp that teamwork is essential as it harnesses focus towards achieving delivery of m-banking. However, challenges affecting the smooth flow of m-banking do emerge and thus prompt us to look into them. Let us now explore issues that arise in the collaboration of stakeholders.

1.2.2 Co-jurisdiction

While acknowledging that convergence is essential for providing m-banking, ITU (2011b, p13) confirms that it has brought about a new regulatory regime which fosters co-ordination and co-operation of various regulatory authorities. This suggests that the old regulations do not adequately cover convergence which has created the need for the clear definition of roles by the various players who fall under various jurisdictions. ITU states,

Cooperation between regulators will be a necessary tool for the development of a coordinated approach to the oversight of m-banking. (2011b, p13)

As ITU confirms, this will allow the various regulators’ competences to be utilised in the provision of m-banking, thus each benefiting from the other’s expertise. However, there challenge lies in the demarcation of a jurisdiction as the finance and telecommunication regulators both have a major role to play.

Goswami and Raghavendran (2009) confirm that the convergence of the 'two giants' (telecommunication sector and finance sector) poses challenges and brings with it a steep learning curve as the two work together in the provision of m-banking.

Based on the assertions we can identify with the commentators because as they rightfully state the convergence of dissimilar sectors requires particular attention and extra care because of the diverse nature of their individual core business. If indecorously handled, we can assimilate the outcome to resemble that of mixing oil and water.

Over and above the issue of co-jurisdiction, another dimension on the operatives of m-banking arises and this is on licensing.

1.2.3 Who does what?

Porteous (2006) singles out the need to address licensing issues pertaining to the stakeholders in m-banking. Similarly ITU (2011b, p12) confirms the need to reconsider licences, given that mobile network operators (MNOs) core business hinges on the provision of a mobile platform and infrastructure and banks are covered mainly for financial services. Both Porteous and ITU agree that the synergy in providing m-banking services calls for the licensing structures in place to be re-visited. Furthermore, Merritt (2010, p6) describes the role of key players and explicates that they complement each other, as a weakness in one is a strength in another. However, if not adequately addressed a complication may arise as was the case in Kenya where banks raised a concern to the financial services regulator that mobile operators are unfairly competing against them (Comninou, Esselaar, Ndiwalana & Stork, 2008). Banks believed that Safaricom as a licensed MNO was carrying out what is deemed a bank function in the provision of M-Pesa hence raising an outcry.

What emerges is that through licensing that clearly stipulates the activities that the bearer is permitted to perform, confusion will be removed and clarity will enable the smooth flow of m-banking. This is also confirmed in the proceedings surrounding the Kenya case. However, Alampay (2010) raises an interesting observation which

mitigates such complications and indirectly advocates for partnership as opposed to competing between the sectors.

Alampay states that when there is clarity,

In models where there are telecom and banks working together, the regulatory overlaps are easier to address, as often the financial partner covers the banking regulations, and the telecommunication company simply addresses the telco regulations. (2010, p25)

We also see that while licences provide clarity of roles, synergies augment the opportunity of providing m-banking with fewer hassles than when attempting to be licensed for service provision as a solo player.

Having addressed the issue of licensing; let us now tackle the aspect of interoperability as it is needed where multiple players provide different products.

1.2.4 Interoperability

M-banking has raised much hype such that service providers have realised the opportunity presented, thus vying to provide it resulting in various flavour of the product being offered within the same context. However, uptake of m-banking by the general populace can only be achieved when there is a level of certainty and confidence in the economy as Dias and McKee (2010) assert. They confirm the need for security and stability in the system can be an attraction for users to join in multitudes.

Due to the numerous flavours on offer, we see that a need arises for them to have a point of unification. This raises the need for interoperability. Porteous (2006, p42) suggests the establishment of common standards to enable interoperability, pointing out that its existence provides greater customer utility and thus impacts scale. This is confirmed by Vaitilingham *et al* (1998, p28) who believe that interoperability of services may only be achieved through the employment of protocol and standards that allow the seamless overlap of dissimilar sectors take place. Porteous (2006) supports this notion and goes on to encourage official bodies to promote

interoperability and for regulatory bodies to play a more active role in ensuring standards and protocol are adhered to thereby ensuring interoperability.

Based on the above explanation, we are made aware that interoperability is an integral part for the rollout of m-banking. We also gain insight that for rollout to happen there is a need for set standards and protocol to be adhered to.

Having touched on various aspects pertaining to the rollout and uptake of m-banking, it is necessary to now assess how they fit in with the economy.

1.3 Ideal environment: Mobile banking and the economy

In general, any given scenario needs a solid foundation to increase the odds of success. As such an environment that encourages and provides a suitable establishment ground in any economy is a requirement for m-banking to work. Porteous refers to this as a “conductive environment” and defines it as,

....the set of conditions which promote a sustainable trajectory of market development. Of particular interest here, are the environments in which widespread access is likely, or in other words, in which transformational models are more likely to succeed (2006, p4 & p11).

This ultimately suggests that a blend of inter-linking issues have to be considered in order for an m-banking model to successfully take off.

The research will tackle issues relating to the policy and regulatory environment which Porteous reiterates and urges the need to assess “whether the policy and regulatory soil is fertile enough to enable the start-up and development of m-banking models with transformational potential” (2006, p44). This poses the question, what is considered a ‘conductive environment?’

ITU points out that the term conducive environment is subjective, “but could be defined as being characterised by openness to new m-money and m-banking models and a degree of certainty in regulatory frameworks or guidance regarding new approaches” (2011b p18). The openness relates to whether new entrants are not

restricted and whether the legal and regulatory framework which will foster a level of confidence that the regulations will not abruptly change thus discouraging players. According to Porteous (2006) there is a need for certainty and openness as a lack will discourage investors. However, Porteous draws attention that the norm usually is where there is a high degree of openness (very relaxed regulation) there is also high levels of uncertainty. Likewise where there is certainty, there tends to be restriction.

Porteous (2009) argues it is a challenge to rate conduciveness of regulatory framework on a consistent basis. This supports the notion pointed out by ITU (2011b) that it is subjective.

In view of this fact, we are enlightened on the fact that for m-banking to take off, there is a need for certainty and openness of the existing framework. We also see that there is a need to balance the two for a favourable outcome and that the magnitude differs from one context to the next, hence it is subjective.

Let us now have an overview of various economies that have embraced m-banking with good success or failure as they will be the basis of ascertaining what a conducive environment for success consists of.

Porteous elaborates that “enabling environment is one that allows, and may even encourage, the introduction and development of new business models that meet a defined public policy objective” and states that the key to achieving this is through a high level of certainty and openness (2009, p77). A success story lies in Kenya which was a first in pioneering M-Pesa through Safaricom. A pilot project having and been initiated in 2005, the product offering of M-Pesa rolled out in 2007 (Porteous 2006, p26). This is confirmed by various other scholars like Donner and Tellez (2008), Mas and Radcliffe (2010), Omwansa (2009) and many more.

According to Alampay and Bala (2009) in Philippines as provided m-money was available in 2001 through a product called Smart Money with an estimated user base of three million. Although Philippines may have been a success, its rollout was nowhere near Kenya’s M-Pesa quantum leap which saw nearly two million registered users within a year of its inception (Donner & Tellez, 2008). Porteous (2006)

attributes the rapid rollout in Kenya to the 'friendly regulatory environment' which gave room for experiments. Mas and Radcliff (2010) refer to it as a 'supportive regulatory environment'. Omwansa (2009) placed emphasis on the need for a 'conducive environment' and elaborates that regulation is a critical success factor for the successful rollout of m-banking.

Now that we appreciate how the body of knowledge describes the m-banking environment, Let us now take a look m-banking in different contexts: - in developed, as well as developing countries.

1.3.1 Developed countries

Although m-banking is used in developed economies, Porteous (2006, p24) believes its uptake was hampered by the already trusted alternatives such as internet banking and use of point of sale cards and cites United States of America (USA) and Europe as examples. Dahlberg, Mallat, Ondrus and Zmijewska, (2007) confirm Porteous' belief and further state that It is marginally used in Switzerland where the traditional payment system is still preferred and in Finland where the culture still favours the card based payment system. Ultimately m-banking in these contexts is 'an additive' as it provides an additional means of transacting and is mainly targeted at existing bank account holders as defined by Porteous (2006). There is little or no 'transformational' value as the traditional banking system is visibly in existence and m-banking is just another way of accessing an existing account (ITU, 2011 p4).

1.3.2 Developing countries: Africa

Ondiege (2010) comments on the magnitude of the unbanked compared to the banked and assert that a visible gap exists in Africa. He elaborates, "it is this gap in the financial services market that is creating a unique niche for mobile phone banking to develop on the continent, enabling a growing number of people to access financial services for the first time" (2010, p2). As suggested by McKinsey and Company (2009), more than half of Africa's adult population does not hold a bank account, but in that population, most have access to a mobile phone. This suggests that there is

potential for those unbanked yet possessing a mobile phone to be converted to the banked through the mobile phone.

From the various commentators we see that the mobile phone is a tool that is transforming lives by enabling the unbanked to be banked. We also appreciate that the far reaching network coverage has removed geographic barriers and has enabled the most remote areas to be serviced and such coverage provides a platform for financial services be delivered.

Examples of successful m-banking projects are Kenya, South Africa, Indonesia and India (Alexandre, Mas & Radcliffe 2010, p1). Zambia offered a mobile payment service in 2002 established by Celpay Holding and later transferred to South Africa's First Rand Banking Group in 2005 (Porteous, 2006 p26).

In 2009 Uganda launched MTN MobileMoney and Zap offered by Zain in July 2009 and Uganda Telecom (UTL) offered M-Sente in March 2010 (Ndiwalana, Morawczynski, & Popov, n.d).

Other pioneers in m-banking include Banco Postal (Brazil), FINO (India), GCash (the Philippines), M-PESA (Tanzania), Smart Money (the Philippines), and WING (Cambodia), (McKay & Pickens, 2010 p3).

From all these examples we see that m-banking has been embraced by various countries though with varying results. While it is a fairly recent development we see from the number of countries that have initiated rollout that the service providers see benefits stated by the various commentators and believe that m-banking will enable financial services to be available to remote areas and to the unbanked.

Generally, the uptake of m-banking in Africa is on an upward trend as more people become aware of its availability and advantages thereby reducing the gap of the unbanked. Ondiege points out "given the successful stories in Kenya and South Africa, m-banking services are likely to reduce by more than half the number of the

unbanked African population” (2010, p12). This suggests that the greater use of m-banking in Africa is through its transformational mode.

While South Africa and Kenya are widely commended, their deemed success has not been repeatable in other contexts. The fact resonates that apart from the service itself, uptake is affected by geographic location, economic stability and customer financial literacy (Camner & Sjoblom, 2010). What worked in Kenya when duplicated elsewhere may not necessarily yield the same results. As Dermish, Kneiding, Leishman and Mas (2011) states,

the success of one particular mobile money service, M-PESA in Kenya, has inspired many practitioners, but the true test lies in the ability of other markets to translate the success of M-PESA into their own context and enable an environment that promotes expansive and sustainable retail financial services (2011, p3)

Having had an overview of m-banking in other economies, it is necessary to now set the scene in order to tackle the Zimbabwe context. The following section lays the background scene in Zimbabwe.

1.4 Background: Mobile banking in the context of Zimbabwe

Zimbabwe has gone through a myriad of changes in its economy and this is mainly visible in the change of currency and transaction behaviour among others. As a country, it is not in isolation from the world and continues to trade and interact. Within Zimbabwe, changes in the technology and financial services sector are seen in mobile phone penetration as well as the recent deployment of m-banking. The policy and regulatory framework has also evolved to encompass the changes and that is visible the change of statutory documents in line with Alampay (2010, p16) assertion on addressing policy and regulatory issues as tools and control measures though he targetted other contexts, the same can be applicable to Zimbabwe.

However, according to Biriwisha, (2011) the introduction of m-banking in Zimbabwe is a recent development though it has been in existence for a lot longer. One cannot help wondering why it took time for Zimbabwe to embrace m-banking when it has been successfully used in other contexts like Kenya and South Africa. According to a

2011 survey, only 38% of Zimbabwe's are formally serviced thus revealing that the majority is unbanked (FinMark, 2012). If m-banking is believed to be the solution to reach the unbanked as stated by various academics the likes of Mas (2011), Porteous (2006) and others, and also having been proved a success in other contexts, why did Zimbabwe not join the bandwagon earlier? The Zimbabwe's unbanked also contribute to what Mas (2011) refers to as 'untapped mass-market'. If this be the case, why is it that not all financial service providers or telcos offer m-banking and if available why does it look like people are not readily eager to use it?

According to Chimhowu (2009) the period of economic slump may have affected information communication technologies (ICTs) development negatively as the populace were focused on satisfying basic needs. He suggests that could have been a contributing factor to the late adoption of m-banking (2009, p103). When Zimbabwe eventually rolled out m-banking the process was marred by obscurity which characterised user apathy leaving one to speculate on the factors that contributed to this. It is with this brief synopsis that one is compelled to conduct a review of the m-banking environment in Zimbabwe with inclination towards policy and regulation to initially understand the tools and measures in place that impact on m-banking. This will test Mas (2011) assertion on policy and regulatory environments in other contexts.

Having had a brief overview of m-banking in Zimbabwe, let us take a further step and look at the economy.

1.4.1 Zimbabwean economy

Zimbabwe is located on the southern part of the African continent. With a population of 12.5 million in 2009, (AfDB, 2011 p192) the key economic statistics were:

Table 2: Economic statistics of Zimbabwe in 2009

GDP	USD4.4billion
GDP per capita	USD 374.8 per annum
GCI (Global Competitiveness Index)	133 out of 134

Source: AfDB, (2011 p192)

The Zimbabwean economy consists mainly of agriculture, mining and services. In the services sector, there was a negative impact on the provision of financial services during the economic slump with stakeholders losing confidence as the economy presented instability as suggested by Kramarenko, Engstrom, Verdier, Fernandez, Oppers, Hughes,...Coats (2010). They also allude that investor confidence went down due to political instability and this inevitably had an adverse effect on the financial services sector.

Although financial services were negatively affected, the ICT sector thrived according to Frost and Sullivan, (2011) who presented the following statistics on teledensity as proof.

Table 3: Tele-density 2000-2010

Year	Mobile	Fixed Network	Internet users per 100 people
2000	266,441	238,956	0.4
2005	699,000	328,000	8.02
2006	849,186	335,561	9.79
2007	1,225,564	344,502	10.85
2008	1,333,000	345,000	13.9
2009	4,151,000	385,000	14.0
2010	5,600,000	386,000	14.2

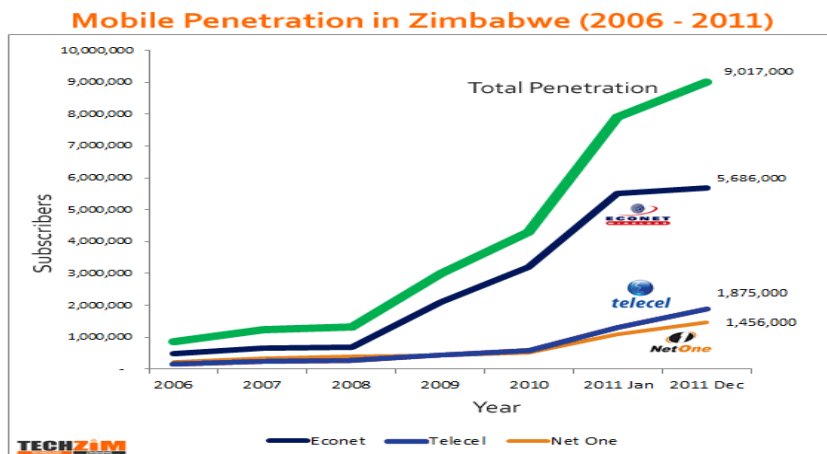
Source: Frost & Sullivan, (2011)

The above shows a trend of progress in the uptake of ICTs in the economic recovery process which started in 2009. Frost and Sullivan recorded that subscribers trebled during the period 2009-2010. This denotes significant growth.

Mobile telephony services are provided by three mobile operators, namely Econet, Netone and Telecel, two licensed fixed line operators namely Telone and Teleaccess - licence has been suspended pending litigation, (Kabweza, 2010) and several ISPs.

According to POTRAZ (2010) the market share for the mobile telephony is at Econet 70%, Netone 10% and Telecel 20%. With the mobile phone usage in 2010 estimated at 5.6 million people, up from 1,3 million in 2009 (POTRAZ, 2010) one can see the trend of increase in adoption of mobile phones and a general increase in teledensity as depicted by the following graph – figure 1.

Figure 1: Mobile Penetration in Zimbabwe 2006-2011



Source: Techzim, (2012a)

Based on the statistics in table 3, backed by the mobile penetration graph in figure 1, we see that mobile phone penetration was not negatively affected by the challenges in the economy. The trends are characteristic to developments in other contexts where penetration is described by commentators as explosive.

Having looked briefly on the Zimbabwe economy with a bias towards the developments in information communication technologies (ICTs) let us have an overview of the financial services sector.

1.4.2 Financial services in Zimbabwe

Chimhowu (2009) believes that while there is a positive growth in mobile phone uptake, the instability in the economy had adverse effects on financial services. He goes on to allude that the banking population went down during the hyperinflation period 1998-2008 and banks are currently on a drive to increase customer

confidence and re-establish market shares. The following table summarises the banking sector in Zimbabwe.

Table 4: Financial sector institutions in Zimbabwe

Institution Category	Total Licensed
Commercial Banks	17
Merchant Banks	4
Savings Bank	1
Building Societies	4
Micro-Finance Houses	157

Source: RBZ (2012)

Table 4 above provides a snapshot of developments in the financial sector. However, as Moyo (nd) and Interfin (2011) both confirm that the confidence in the sector was eroded during the hyperinflation period bringing down the banking population. This is also confirmed in the media which states “many people in the country have lost faith in banks after the 2008 economic meltdown that saw deposits vanish following the collapse of the local currency” (Herald, 2012). This confirms Dias and Mckee (2010) observation on customer confidence. The erratic changes in policy and regulatory issues crafted to move with the dynamic hyperinflationary economy could have worsened the financial services sector according to Kramarenko *et al* (2010).

Given the magnitude of the number of licensed institutions, only a few have rolled out mobile banking as reported in the media (Kabweza 2012b & Biriwasha 2011). Techzim reported that financial institutions that offered m-banking products were First Banking Corporation (FBC) launched a mobile money product, Mobile Moola in September 2011, while CABS launched Textacash; Tetrad with eMali, Kingdom launched Cellcard (2010 & 2011). It further reported that mobile operators also launched promoting collaboration with financial institutions, Econet launched Ecocash, Netone launched OneWallet and Telecel offered CellCard in partnership with Kingdom (Techzim 2010 & 2011). Of the financial institutions, FBC, CABS and Kingdom already offered internet banking (RBZ, 2012). One would come to a possible conclusion that the introduction of mobile banking products by the various

institutions is a move in the positive direction and a means of offering variety to the intended customers and aiding financial inclusion for the previously excluded. The following table is a summary of the various products currently on offer and the institutions offering them:-

Figure 2: Mobile banking products in Zimbabwe

Econet EcoCash	CABS Textacash	Tetrad eMali	NetOne OneWallet	Kingdom CellCard
				

Source: Techzim, (2011)

With a total of 26 licensed banks and 157 micro-finance houses, a few banks offer Internet banking, and only five started a drive to implement mobile banking services late 2011, as confirmed in figure 2 and by Biriwasha (2011) and Kabweza (2011). The late response to the phenomenon of mobile banking brings into question what the hindering factors are.

There was a decade economic slump (1998-2008) characterised by hyperinflation which adversely affected the Zimbabwe dollar. With the illicit operation of parallel foreign currency exchange in informal banking transactions, the banking populace was adversely affected as there was an abrupt overnight switch over from the local currency to United States dollars (Moyo, nd.) Those that were Zimbabwe dollar trillionaires woke up with nothing. A spate of banks going under followed the economic instability and propelled policy makers and regulators to re-enforce policy and regulations to ensure the trend does not continue (RBZ, 2012) This had a damaging effect on the financial sector as shown by the decline in banking statistics (Kramarenko *et al* 2010, & Interfin, 2011). The official change of currency to a multi-currency system brought in the use of South African Rand, Botswana Pula and United States Dollars in 2009. The United States dollar predominantly used as the base currency, saw the financial transactions in Zimbabwe predominantly being cash based although ATM are used, plastic money (credit card system) is yet to be introduced just like was the case in Kenya before the introduction of m-banking in

2007 (Omwansa, 2009). This has had an adverse effect on the economy as the money tends to circulate outside formal financial institutions.

Given the state of the financial sector, it suggests that a range of issues may have contributed to the decline, among them the re-enforced policies and regulations may have been too strict thereby resulting negatively on the banks and contributing to the weakening and loss of client base in the banking sector. Strict banking policy which was intended for the protection of the customer may have had adverse effect and ultimately stifled the chance of customers opting to embrace banking. The use of technology in gaining client confidence and in so doing provide a reliable service would be an issue m-banking may effectively address as Porteous suggests that it is a means to bank the unbanked (2007, p6). The use of mobile banking may aid in improving acceptance of the banking system, as Porteous suggests that unbanked clientele may have an opportunity to re-gain access to formal financial services through the transformation value of mobile banking (2007, p3). While Porteous was referring to a different context, if the same be applicable to Zimbabwe it may be an avenue to improving transacting security and re-building lost trust in the Zimbabwe financial services.

The introduction of mobile banking technologies will not on their own create this environment, as Alampay highlights, attention will need to be given to the major policy and regulatory issues pertaining to the banking and financial services sector such as regulating against risk, while taking into account the need for interoperability and universal access (2010, p16). Given the fact that interconnection and interoperability is a major requisite for service provision in mobile banking, one may be drawn to conclude that there is a need to address possible requirements for concurrent jurisdiction or co-jurisdiction between the two sector regulators, one for the banking sector, RBZ and the other for the electronic communications sector, POTRAZ. An overview of key policy and regulatory issues and the regulatory structures in Zimbabwe follows.

1.4.3 Policy and Regulation - Mobile Communications and Banking

Radical changes to the financial sector have been implemented as a result of the 9/11 terrorist attack on the USA in 2001. The crafting of laws aimed at safeguarding against a repeat attack was done and the laws were adopted as standard the world over. The need to track money movement and who was involved in the movement by financial institutions in order to combat financing terrorism propelled the anti-money laundering (AML) and combating the financing of terror (CFT) laws to be enforced.

Customer due diligence (CDD) procedures were adopted and enforced through know your customer (KYC) regulation to enable correct customer identification and was set as a global standard to be followed by financial institutions in countries that deal with finance institutions of the west (Porteous, 2009 p78). The KYC requires new applicants to provide proof of identity as well as proof of residence which Porteous (2006) affirms are regarded as key in enforcing anti-money laundering/ combating the finance of terror (AML/CFT) regulations. The practice is proving difficult in developing countries where the unbanked may not satisfy all the KYC requirements and to circumvent the challenge, Porteous (2006) proposes a relaxation on KYC and a risk based approach on CDD to enable users the opportunity to access financial service.

This was confirmed in a survey report by FinMark where Maya Makanjee's analysis was that

Zimbabwe financial services sector's requirements for opening an account are too stringent. For instance, there is the issue of demanding proof of residence, in which we noted that 77 percent of the population do not have, [and] reducing these requirements can help bring more people into the banking sector (FinMark, 2012 p1).

The finance sector in Zimbabwe is regulated by the central bank - Reserve Bank of Zimbabwe (RBZ) which enforces the adherence to global standards such as the endorsed CDD procedures.

Zimbabwe has a regulatory authority Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) which regulates ICTs under which mobile communication is covered. Given that there are three mobile operators, it may suggest that the sector may have gone through some form of privatisation and liberalisation which has led to the opening up of the market to allow multiple service providers. The state of regulatory reform in the telecommunication sector has a bearing on how it will integrate with that of the banking sector as the two sectors are important in the delivery of mobile banking (Jenkins, 2008, Porteous 2006 and ITU 2011b).

The key regulatory events in the mobile communications sector have been the awarding of licences to Econet and Telecel, managed competition in terms of limitations placed on Econet, local ownership requirements and types of licences with respect to voice and data (Kabweza, 2010, Republic of Zimbabwe, 2001).

The financial sector is regulated by the central bank, the Reserve Bank of Zimbabwe (RBZ), through statutory instruments and banking regulations (RBZ 1999, & 2012). However, with structures in place there seems to be lacking proper co-ordination to harness for the efficient diffusion and delivery of mobile banking services this is evidenced by developments reported in the media (Herald, 2013c). With this in mind, one is propelled to investigate where the problem emanates from.

In attempting to get an answer, this study aims to explore the effect of policy and regulation on the rollout and uptake of m-banking with particular interest in the Zimbabwe context. It will focus on policy and regulation surrounding the provision of m-banking and in so doing come up with what could be the main catalyst to a successful diffusion or the possible hindrances thereof.

1.5 The perceived challenge in Zimbabwe

The problem to be investigated in the study is to evaluate the cause of what appears to be a sluggish rollout and uptake of m-banking and why it is surrounded by uncertainty and ascertaining the extent to which policy and regulation for mobile communications has impacted on mobile banking. Against the background of a

decade of economic slump 1998-2008, Zimbabwe has embraced mobile technology, but has not exploited it to the extent to which this technology can facilitate economic activity. Existing policy and regulation may or may not allow for the maximum utilisation of the available resources and infrastructure. This is seen in the increased mobile phone usage but not in m-banking.

Authors have demonstrated that positive outcome has been achieved through enabling policy and regulation in the various sectors contributing to the mobile ecosystem in various contexts (Porteous, 2006 & Ondiege, 2010). Advancement of the financial services sector would be a positive contribution to the recovery of the Zimbabwe economy as suggested by Moyo (nd) and Dube, Njanike, Manomano and Chiriseri (2011). Significant growth in the delivery of financial services for the low-income earner is slowly being made possible through the use of mobile technology as seen in developments through the deployment of m-banking (Kabweza, 2012a). However, the possibility of slow development of the policy and regulatory framework, and the lack of convergence in the different sectors that contribute to the mobile banking ecosystem, could present a challenge. This is evident in the numerous suggestive media reports and confirmed by the regulators (Herald, 2013c). As Porteous (2006) suggests, 'transformative' results can be achieved through the use of enabling policies and regulatory frameworks. Therefore, a closer review of the policy and regulation with respect to mobile communications in Zimbabwe is to be conducted with the intention of drawing conclusions relevant to the mobile banking environment.

1.6 Why this research?

The purpose of research is to establish the key elements of the policy and regulatory environment of mobile communications in Zimbabwe and to evaluate their effects on m-banking. Although they are so many, this research will focus on the policy and regulatory issues surrounding the mobile communication and banking sector in the provision of m-banking.

This study aims to ascertain the magnitude to which policy and regulation is applicable for m-banking proliferation as Porteous (2009) suggests that in other

contexts, a conducive, enabling regulatory environment is essential and when applied, has an effect on enabling the possible delivery of m-banking services. However, media commentators and authors have reported on the lack of drive in the proliferation of technology innovation in Zimbabwe, (Dube et al 2011) which prompts investigation and evaluation of the cause of slow diffusion in m-banking. Scholarly articles on successful m-banking models of other developing countries such as Kenya and South Africa are available and these analyse and report on a myriad of challenges with varying outcome.

The evaluation will take these models into account with a focus on the Zimbabwe context and will identify the gaps on the ground and endeavour to identify the cause of what appears to be sluggish rollout of m-banking with a view of recommendations on bridging the gap and in so doing bring the sectors up to speed in embracing m-banking.

Finally the research will focus on other factors such as consumer awareness and financial literacy that may be contributing to the slow m-banking uptake. This will give a full coverage of what really is aiding the slow rollout and uptake of m-banking.

A clear oversight will be gained in researching m-banking in other developing countries in general, but with a particular interest on Zimbabwe. Aspects which contribute or hinder the uptake of m-banking will be identified with a keen interest on the policy and regulatory environment. The research will evaluate whether current policy and regulation is aiding or abating m-banking diffusion. Through an overview of the m-banking ecosystem and influencing drivers, the research will assess the effect and impact of the current policy and regulation on the propagation of m-banking.

The research will be conducted in the following structure:

1. An introduction and background, defining the m-banking environment and outlining the Zimbabwe context. The issues affecting m-banking will be discussed in general then focus will be drawn to Zimbabwe in particular. A problem and purpose statement will also be stated.

2. A review of the literature written on the topic.

A review of various pieces of work on m-banking by different scholars will be conducted to shed light on what the body of knowledge has on the subject.

3. The question to be applied to research and the methodology employed to investigate the question.

The main question and sub-questions will be stated in chapter 3. The research technique, tools and methodology used to get answers to the sub-questions which ultimately answer the main question are discussed in detail.

4. Findings of the research conducted

The research findings are reported in chapter 4. These are the feedback of the field work conducted.

5. A critical analysis of the research findings

An analysis of the research findings reported in chapter 4 will be assessed and linked back to the literature reviewed in chapter 2.

6. Concluding remarks including areas for further research

Conclusions will be drawn based on the analysis made in chapter 5 and areas for future research will be identified.

In order to satisfy the above structure, let us begin with getting into what has been written on m-banking paying particular attention to the areas of policy and regulatory framework. Reviewing what academics have written will provide insight on what the policy and regulatory environment entail. Such knowledge will enable us to address the problem in the Zimbabwe context and by so doing help in fulfilling the purpose of this research study. Let us now go to Chapter 2 – literature review.

CHAPTER 2 Literature Review: Mobile Banking Ecosystem

In light of the issues raised in chapter 1, the following section seeks to search and highlight what prior research by various authors has to contribute to the body of knowledge in mobile banking. The need to increase user uptake of m-banking has brought about a shift in focus by various scholars and has led to them dwelling more on issues pertaining to the creation of an enabling environment (Porteous, 2006 & 2009; Mas & Radcliff, 2010; Heyes & Mas, 2010). This suggests that an ideal environment is the basic foundation for the rollout of a robust system. Authors are more focused on how regulators and policy makers can aid m-banking diffusion and increase user uptake through mobile network operators (MNOs) and banks (Donner & Tellez, 2008).

The literature review will cover the various aspects that constitute m-banking with particular focus on issues pertaining to policy and regulations as they affect m-banking propagation.

It is important for us to have a clear understanding of what the academics and media commentators have said about m-banking rollout and uptake. In order to do so, let us delve into the various definitions by different authors.

2.1 What is m-banking

Various definitions surround m-banking. Boyd and Jacob define it as “a broad range of financial activities that consumers engage in or access using their mobile phones” (2007, p6). Donner and Tellez state that,

The terms m-banking, m-payments, m-transfers, m-payments, and m-finance refer collectively to a set of applications that enable people to use their mobile telephones to manipulate their bank accounts, store value in an account linked to their handsets, transfer funds, or even access credit or insurance products. (2008 p319)

Another definition coined by Alampay is:

The provision of retail and small value banking products and services through electronic channels. These include deposit taking, lending, account management, the provision of financial advice, electronic bill payment and the provision of other electronic payment products and services such as electronic money, (2010, p6).

As we can see from the above definitions, there are various definitions by numerous authors, but what unites them is the use of a mobile device to carry out transactions. What also emerges is a confirmation of the evolution of banking shifting from the traditional banking culture to a modern mobile banking one in line with technology changes. One may draw a suggestive conclusion that this is an introduction of a new era in transacting which differs from traditional banking where there is a need for physical contact with a bank. This being the case a further look into what makes up m-banking should shed light and understanding on benefits that can be exploited by those offering the service as well as those using it.

Scholars such as Donner and Tellez (2008), Mas and Radcliffe (2010), Dahlberg et al (2007), Porteous and Wishart (2006) and others argue that proliferation of m-banking is affected by various factors which are country specific and differ according to the different countries. They go on to state that although differences occur, the basis of m-banking diffusion hinges on structures of financial services markets which may propel or inhibit the development of m-banking services. Donner and Tellez (2008) and Porteous (2009) argue that there is no universal m-banking solution and variations are determined by purposes and structures which vary based on context.

Hurdles are also encountered as stated by Mas and Radcliffe (2010) that rapid m-banking rollout is subjected to what they termed 'adverse network effects', 'chicken-and-egg trap' and trust issues. They refer to 'adverse network effects' tallying the value of joining a network to the number of the people already on it. This would be a result of having few people joining the network and would enjoy fewer benefits as most of their counterparts will not be able to transact with them as they will not be part of the network. In 'chicken-and-egg trap', Mas and Radcliffe refer to the need to attract customers and agents simultaneously and reiterate that failure to do so will result in customers not taking up service citing lack of access to a convenient agent.

Trust in the system is essential as it enables users to be confident that whatever transactions they do will sail through without mishaps and thus will adopt in greater numbers. Lack of trust on the other hand will result in resistance in adoption. On trust as a multifaceted concept, Donner and Tellez (2008) defined it on a broad scope covering various angles which include trust in self, trust in system, trust in institutions and trust in sender/receiver. They believe that users need to trust themselves to be capable to use m-banking with ease and hence be able to confidently transact. While self-trust is essential, one cannot help thinking of whether the platform and channel used are reliable enough for transactions to yield favourable results. Donner and Tellez (2008, p324) confirm that there is a need for “trust of the channels used by institutions for cash in/cash out transactions and trust of the parties transacting”. Mas and Radcliffe (2010) also believe that trust is fundamental in the embrace of m-banking.

Given the emphasis placed on trust and its effect on uptake of m-banking, it suggests that adequate attention is needed to address trust issues. Failure to do so will result in users keeping away from the system as the human being is naturally risk averse. However, we see that trust is a fundamental building block which directly impacts the propagation of m-banking. Trust builds on the much needed confidence in the system and hence encourages users to adopt which ultimately results in diffusion at a larger scale making trust a pivotal point.

2.2 Laying the ground

However, for m-banking to take off, there is a need for a basic framework to be in place. As confirmed by Mas (2011) when he indicated there is the need of an existing network or infrastructure to which one connects in order to gain access to financial services. Authors such Jenkins (2008), Porteous (2006), Alampay (2010) and Ondiege (2010) confirm that the exponential growth of mobile infrastructure is providing a wider coverage which can be exploited by m-banking service providers to reach the previously deprived population at an affordable price. We see that Mas assertion on network/infrastructure availability is essential and its expansion is providing wider coverage for the provision of m-banking as confirmed by Jenkins

(2008), Porteous (2006), Alampay (2010) and Ondiege (2010). We may be drawn to conclude that the infrastructure expansion is pivotal for the propagation of m-banking and allows a wider coverage which will inevitably reach the previously excluded.

Porteous (2006) suggests that generally there are more mobile phone users in comparison to bank account holders in developing countries. The disparity in the users would therefore, be a ground for the possible expansion of the banking users thereby including the previously excluded or unbanked. Based on Porteous' suggestion, we are drawn to believe that the exponential growth of mobile phone users is higher than that of bank account holders and as a result shows that financial services are not available to many as much as mobile services are available.

In 1999, Birch also reiterates that the utilisation of mobile phones enabled banks to have a wider coverage of customers and provision of service at an affordable price. When he argues that the ubiquitous availability of mobile infrastructure in low-income earning economies provides a solution that promotes growth through the provision of services anywhere and at any time (Birch, 1999). In a different forum, Ondiege suggested that "new technology based financial services such as m-banking, and the use of smartcards, have the potential to substantially increase peoples access to finance" (2010, p2). Based on the two authors' assertions, we see that the use of ubiquitous mobile infrastructure is providing a platform for service delivery to aid financial inclusion to the previously deprived. This confirms the notion that network ubiquity is the basis through which services can be channelled to all irrespective to geographic location thereby allowing equal access.

Porteous also confirms that "these changes [in technology] hold the prospect of accelerating access to financial services on the back of the mobile infrastructure" (2006, p3). In a previous study, Porteous investigates "the extent to which the expansion of mobile telephony is likely to lead to the expansion of access to appropriate financial services in developing countries" (2006, p3). When we evaluate the various authors' suggestions, what reverberates is that harnessing infrastructure already in place enables reaching out to a wider coverage at less cost than setting up totally new infrastructure.

Porteous further suggests that “countries where network coverage and usage is growing strongly are more likely to develop widespread m-banking applications” (2006, p44). Alampay concurs and goes further to state that “rapid diffusion of the mobile phone network and its diffusion to a diverse set of clients that excites people about its potential, especially for undertaking financial transactions with respect to remittances”(2010, p4).

Based on the points raised by the various academics, we can confirm that the existence of a mobile infrastructure is a pre-requisite for the deployment of m-banking. Furthermore the rapid expansion is presenting an opportunity to reach out to the previously excluded through widening the coverage. This being the case, one is prompted to investigate and come up with a possible position on why success is visible for some economies while for others adverse results are attained.

Having established that m-banking thrives on various factors which include a mobile network infrastructure, we now look at the various elements that constitute an m-banking framework.

An m-banking framework is characterised by various stakeholders who unite in service provision, hence forming an ecosystem. An ecosystem implies that there is constant interaction between stakeholders and the environment in which they exist. Let us now look at the m-banking ecosystem.

2.2.1 M-banking ecosystem

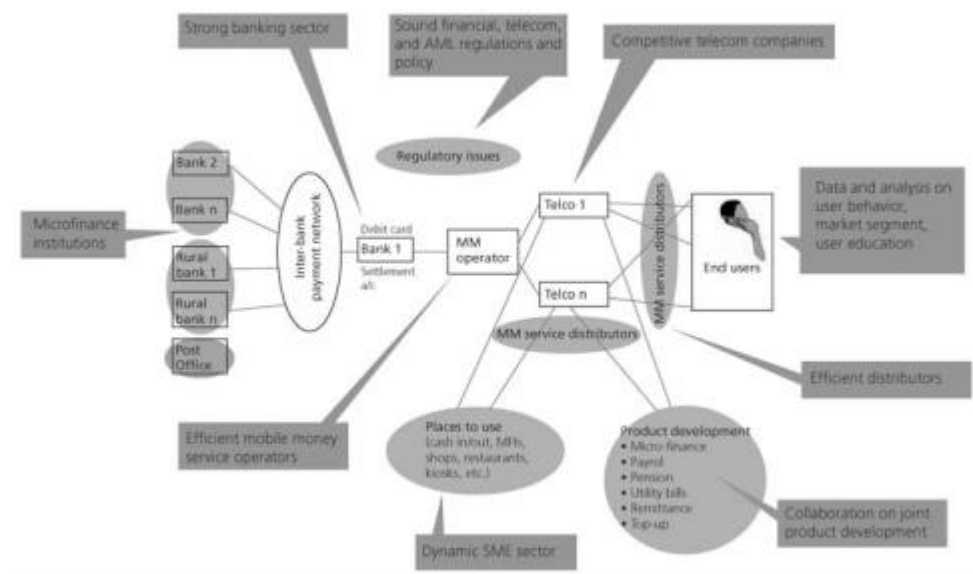
The provision of m-banking is a complex matter and requires multiple players to interlink with each other and with the environment with the aim of achieving a common goal such as providing m-banking. Jenkins (2008) describes an ecosystem generally as the interaction of a community of elements with their environment. Jenkins also asserts that the co-ordination of different sectors is needed in order to have a viable mobile banking ecosystem (2008, p7). Dolan (2009), specifically points out that the development of a robust ecosystem propels the uptake of m-banking.

When we consider the various ecosystem characteristics described by the various academics, we see that there is an interlinking relationship. Such intricate relationships also need to be management to enable fluency in transacting leading to an effective ecosystem function.

The specification of the various players in the ecosystem is of importance. Carr (2010, p9) lists “stakeholders [as]: consumers, merchants, mobile network operators, mobile device manufacturers, financial institutions and banks, government, software and technology providers.” He asserts that each of the stated stakeholders drives towards the achievement of individual goals that may conflict with other players. Carr’s ecosystem model incorporates manufacturers and technology providers as main contributors for the provision of m-banking and this differ from Jenkins (2008) model which incorporates regulatory issues and places emphasis on analysing user behaviour and education. However, both Carr (2010) and Jenkins (2008) models have basic elements of an m-banking ecosystem in common such as consumers, merchants, mobile network operators, financial institutions and banks. In support of Jenkins’ (2008) suggestion, what resounds is that although the ecosystem is complex, there is a need to harness the various stakeholders in order to achieve a common goal of delivering the m-banking service.

Given the interwoven nature of the ecosystem it would suffice to note that there is a lot of overlapping in the various domains. Although various specifications on the m-banking ecosystem have been made, this research will adapt to the model defined by Jenkins (2008) as it provides a more comprehensive view of the various stakeholders and has clarity of the roles played by each party. It also provides what appears to be a holistic view of the elements in a robust m-banking system. This is presented in figure 3 below.

Figure 3: Idealised mobile banking ecosystem



Source: Jenkins (2008, p10)

In figure 3 above the stakeholders play various roles in the provision of m-banking. These roles include microfinance institutions and banks which provide a platform for transacting and moving money through interbank networking thereby forming a strong banking sector. Mobile money service operators provide services through mobile service providers who in turn provide a vast communication network that is accessed by end users.

As Jenkins (2008) illustrates, mobile money operators and telcos have teamed up to provide a service and therefore, suggests that the synergy between various players has allowed innovation and promotes the provision of m-banking. Although Jenkins' model lightly refers to regulatory issues, a different suggestion was made by Merritt (2010) who suggests that regulators need to be included in the ecosystem citing that they are a necessity in the creation of an enabling environment and the protection of both the consumer and the financial system. In line with Merritt's suggestion, one cannot help noticing the pivotal role of the regulator, considering that security and stability are crucial in any system function. In the Kenya M-Pesa scenario, commentators acknowledged that the role of the regulator played an immense role for success to be achieved (Porteous 2007, Ondiege 2010, Omwansa 2009, Mas

2011 & others). This gives us an indication of how vital the regulator is for the well-being of m-banking.

One could validate Jenkins' model because it shows the relevant elements needed for m-banking to take place. It clearly illustrates the need for synergy in the provision of a platform for m-banking service provision. While the ecosystem is defined issues arise surrounding its functionality. In support of Merritt's suggestion, one can confirm that the need to ensure system security, stability and integrity requires policy and regulations to be in place. We now move on examine the impact such regulations have on uptake.

2.3 How does regulation impact uptake?

Commentators such as Donner and Tellez (2008) have placed emphasis on how policy makers have high expectations that the unbanked populace will be catered for in the widespread use of m-banking. However, for such expectations to become a reality there is a need to strike a balance in the provision of m-banking and that of an enabling regulatory environment as Porteous (2006) argues. Scholars such as Mas and Radcliffe (2010), Omwansa (2009) and Porteous (2006) suggest that the fast growth of m-banking in Kenya was due to a friendly regulatory environment. They believe that the relaxed regulation on the initial rollout of M-Pesa allowed Safaricom to experiment with various business models for delivering the service resulting in selecting the most appropriate model hence the success. ITU (2011b) adds that M-Pesa's early uptake was a result of the flexible openness of the regulatory framework. It is believed to be an environment in which there were relaxed regulations which allowed room to experiment on various models of m-banking. While this contributed to the early adoption in Kenya, it may not be a practical approach in another context which may have structures and dynamics that are different from those in Kenya and as such may also not allow room for the flexibility allowed in the M-Pesa initial phase.

Mas and Radcliffe (2010) refer to the Kenya success as aided by a supportive regulator who allowed Safaricom the freedom to experiment and design a product that would suit the market. The regulator needed confidence that the product was

robust and in turn allowed Safaricom the liberty to operate M-Pesa as a payment system without restrictions from the banking law. Questions arise on how supportive regulators can be without compromising their position.

However, given that m-banking spans across various domains regulated by different regulators and is subject to co-ordination risk, there seems to be a confirmation that the finance regulator is the pivotal player for the success of m-banking. However, Porteous acknowledges that there are at least two regulators and warns that the m-banking space is in need of further development as “lack of coordination among regulators remains one of the biggest obstacles to progress” (2009, p8). We see that the presence of at least two regulators still presents challenges on co-jurisdiction and it is an area that currently proves challenging in the provision of m-banking.

Although there are at least two regulators in m-banking service provision (i.e. telco and finance), ITU (2011b) places the onus on the financial regulator and points out that its flexibility is what determines whether or not m-banking succeeds in any context. This suggests that financial regulation is the primary basis for the provision of m-banking. It also suggests that the laws governing the finance sector form the basis for the regulations that govern m-banking.

However, while finance regulations are primary, there is a need for the appropriate regulations to be in place as a stimulant to the rollout of m-banking. Based on the comments made by academics on the Kenya regulatory framework, what sticks out is that the finance regulator facilitated the propagation of M-Pesa through the use of appropriate regulations which allowed Safaricom an opportunity to rollout m-banking. We gain an understanding that appropriate regulation is fundamental for the success of m-banking. Porteous (2009) suggests that inappropriate regulation constrains the development of m-banking in any context.

ITU (2011b) cites the Pakistan case where in 2008 the State Bank of Pakistan (SBP) as the finance regulator allowed only bank-based models for m-banking. SBP argued that it would make banks responsible and accountable for all transactions and by so doing; they believed the rollout would be well received by the populace as they have

confidence built over time in the existing established and regulated banks rather than other models. This confirms that the finance regulator plays a pivotal role in determining regulations and business models which can stimulate or hinder the rollout of m-banking.

In the Bangladesh case, according to (ITU, 2011b p6) in 2009 the majority adult population had no access to formal finance services and the situation only improved when the regulator modified banking regulations to allow banks to offer m-banking services. We see that through the intervention of the regulator and changes in regulations, banks were allowed to provide a service that could reach out to the previously excluded as a result the unbanked adults could make a choice either to remain unbanked or take up the new service on offer. We see that the power to stimulate rollout of m-banking lies with the regulator and as such suggests that the role of the regulator is imperative. This is yet another example of what regulation is capable of addressing.

As a result of changes due to events such as the terrorism attack on USA, the regulation environment has focussed on ways to curb the risk of a repeat terrorism attack. The measures put in place include imposition of strict measures on the movement of money as a means to guard against money laundering and financing terrorism and has promoted strict regulation to be upheld (Johnston & Nedelescu, 2005).

Several commentators have stressed the importance of a conducive, enabling environment in which to set up a vibrant m-banking ecosystem (Porteous, 2006 & Omwansa, 2009). This suggests that positive results are synonymous with a conducive environment that encourages the uptake and usage of mobile banking services. The magnitude of openness in the regulatory framework will promote the effective rollout of m-banking and as a result give room for growth (Porteous, 2006 p15). What comes out is that when there is openness in regulations, service providers are able to work with clarity concentrating their focus on the core business rather than looking into regulatory issues. ITU (2011b) further states that there is a need for policy makers, regulators and legislators to work on policy that encourages

the proliferation of m-banking services through implementation of more significant changes designed to create an enabling environment for m-banking services. It is with this basis that we then endeavour to find out what constitutes success. We take a step in doing so in the following section.

2.4 What is Success?

A regulatory environment that allows for effective deployment of suitable m-banking models with minimal disruptions can be termed as being successful. Such an environment is characterised by m-banking accessibility, efficiency and availability while adjusts accordingly to facilitate a smooth flow of m-banking and allow for propagation and uptake to reach critical masses. Such an environment is described by Porteous (2006), Mas and Radcliffe (2010) many others.

Success in any context may be achieved based on rolling out an m-banking model which fits in with the country's needs in response to the various country specific factors according ITU (2011b). However, ITU further identify the need for flexibility to allow policy makers, regulators and service providers the opportunity to craft a working m-banking solution for their unique context influenced by factors specific to their country. ITU further points out that rollout restrictions are due to existing regulation which may impede any form m-banking (2011b, p3). From the above we see that success is measured and defined by various complex factors.

This confirms the point raised by Dermish *et al* (2011), when they stated that a successful model in one context such as M-Pesa in Kenya may not be successfully replicated elsewhere as there are unique factors that will affect the outcome in that context. Donner and Tellez (2008) and CGAP (2009) concur and state that it is not a case of a single mould fitting all but various factors come into play thereby presenting each case as unique to a context.

ITU(2011), Donner and Tellez (2008) and others suggest that navigation of the various regulatory requirements is a necessity in meeting with success in m-banking rollout based on the varying institutional arrangements. Porteous (2009) concurs and further places emphasis on a ratings methodology based not only on qualitative

information across countries. This suggests that there are other factors that also contribute to the success of m-banking and are country specific. Such factors can be identified through business surveys conducted by various organisations such as the World Bank's annual Doing Business Surveys which takes into cogniscence various aspects pertaining to a country's business environment. As the service spans across multiple domains, finance, telecommunication and competition regulations have to all be considered and balanced to ensure that their services comply with all relevant laws and regulations.

Alampay confirms that indeed there is a need to strike a balance to come up with a mix that aids success in m-banking services. He states:

The challenge is striking the right balance where regulation does not hinder useful innovation and experimentation and permit branchless banking to expand and thrive, in other words introduce 'proportionate' regulatory policies.
(Alampay, 2010 p3)

What then remains is how to determine the right balance in regulatory policies as a further warning is given by Alampay that a challenge emanates in the determination of what is viewed as the right balance as this may be subjective. This clearly shows there is complexity on determining what the right mix is as there are multiple factors contributing to the success or failure in m-banking rollout and uptake.

2.4.1 What does multi-domain entail?

As m-banking spans multiple domains it would suffice to venture into what prior research has reported. Multiple stakeholders contribute to the m-banking ecosystem and thus focus on these by various authors such as Dolan (2009), Jenkins (2008) and Carr (2010) as a result in there may be conflicting interests due to a variation in expectations that arise. Regulations governing the various bodies differ and these would need some form of coordination. As regulatory overlap exist there is a need for policy to be in place as Porteous suggests that policies are employed to provide regulation of the services and are of paramount importance in harnessing direction for the various stakeholders thereby fostering order and co-ordination (2006 p4). However, Porteous (2006) warns against the risk of coordination failure as there is a

greater chance that legislation or regulatory approaches are inconsistent or contradictory.

The convergence of finance and telco sectors in providing m-banking means the two overlap into each other's jurisdictions and hence requires the coordination of the regulators in co-jurisdiction. Both sector regulators have stipulated regulations that affect service providers concurrently hence the need for co-jurisdiction. Regulatory bodies for mobile services and financial services would have a co-jurisdiction mandate in the provision of a solid m-banking sector as suggested by Porteous (2006). He further alludes to the fact that lack of jurisdiction clarity may result in legitimate transactions being stifled. Omwansa (2009) also highlights the need for harmonisation in the policy and regulation governing the involved stakeholders.

However, for the smooth integration of the various stakeholders to take place, there need for a level of certainty and openness in the policy and regulatory framework as Porteous confirms (2006, p4). Jenkins believes that in an environment characterised by certainty and openness, there is a smooth integration in providing a service by the various stakeholders in m-banking ecosystem (2008 p8).

Jenkins (2008) goes on to argue for the need of synergy between banks and MNOs in the provision of innovative products in m-banking thereby emphasizing that such is needed for a seamless robust mobile banking system to exist. Porteous (2006) notes that through such synergies banks can offer m-banking as an additional function to existing account holders. He cites this as a common offering in developing countries and mentions the Kingdom Bank and Telecel partnership in providing Cellcard in Zimbabwe among other developing countries (2006, p26). Based on the above arguments, we see that while m-banking overlaps into various domains, partnerships formed within the setup can facilitate the rollout of innovative products.

Furthermore, for effective synergy to be in place, other issues such as the issue of licensing in the overlapping sectors becomes a major concern. It is therefore, imperative for one to pay particular attention to such as it has a direct bearing on the progress of any m-banking environment.

2.4.2 Licensing

Prior to the advent of m-banking, licensing for the various stakeholders was independent of other sectors. Mobile operators were licensed to provide communication services only while banks were solely authorised only for financial transacting services. The introduction of m-banking brought the need for convergence between the telecommunication and finance sectors which is not adequately addressed by existing regulation (ITU 2011b, p9). The question posed by Porteous (2009, p36) is “how does the role of telcos in m-banking affect licensing requirements?” This then gives rise to complications in m-banking as the need to provide a service entails an overlap on activities hence the need to look into the detail pertaining to the different licence issues.

While MNO licences allow only for communication, banks need to be able to utilize the MNO platform for the delivery of m-banking though MNOs are generally not licensed to carry out financial transactions in most jurisdictions. Authors such as Alampay (2010), Alexandre *et al* (2010) advocate for partnerships between MNOs and banks as their licensing structures would adequately complement each other and cater for the provision of m-banking without compromising customer protection. Such was adopted in the case of SMART money in the Philippines (Alampay, 2010 p9). In a report KPMG (2007) stressed the need for a review of licences as a possible need for dual licensing may exist, though clarity is required as to what extent or how the two different sectors (finance and telco) can be merged without compromising the much needed customer security. From the various commentators we get to appreciate that licenses define what is permissible for each license holder. We also find that instead of a service provider going through an onerous licencing procedure to obtain another license to cover m-banking, forming a partnership is an easier route to allow rollout.

ITU (2011a) cites the Bangladesh experience where non-banks can only provide m-banking after obtaining a licence from the finance regulator and goes on to elaborate the need for the finance regulator to play a pivotal role in the determination of the type of licence required for the provision of such a service and to determine whether

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separate licences will be needed for m-banking. This then requires the collaboration and cooperation of the two sectors as recent developments have seen MNOs playing an integral part transmitting and storage of funds (ITU 2011b, p11).

While emphasis is placed on the role of the finance regulator, it is imperative to address the licensing issues for the telecommunications regulator as it has a direct bearing on the m-banking service provision. ITU (2011a) highlights that the lack of efficiency and speed in the review or awarding of licences may be a blockage for the propagation of m-banking as new players may view it as a cumbersome procedure and hence it becomes a limiting barrier.

The issue of appropriate licensing for the provision of m-banking as a service which overlaps multiple domains brings forth the need to specify how the overlap will be managed. What also comes out clearly is that the regulators' determination of licensing is pivotal in ensuring that only the appropriately licensed service providers deliver m-banking. However, speed in reviewing licenses is of importance as a lack of which becomes a hindrance for new players.

Having tackled the issue of licensing, we now take a look at co-jurisdiction as the different regulatory bodies do have an input in enabling a smooth service provision.

2.4.3 Co-jurisdiction

Authors such as Goswami and Raghavendren (2009), Dahlberg et al (2007) and others confirm that challenges are encountered in bringing together two dissimilar sectors in order to come up with positive results; however, ITU (2011b) argues that the provision of m-banking is a platform for the regulators to address the much needed cooperation and coordination of stakeholders in the provision of m-banking.

Dahlberg et al (2007) suggests that changes in legal and regulatory framework to deal with the evolving jurisdiction may drive or hinder development in m-banking. Inevitably, challenges emanate from different sector operations which do not articulate m-banking operations hence the need for policy speaking to the operational issues of m-banking (Goswami & Raghavendren, 2009). Goswami and Raghavendren (2009) acknowledge that the two main sectors in m-banking are

dissimilar but place emphasis on the necessity of bringing them together for m-banking to succeed.

To address the co-jurisdiction need, ITU (2011b) suggests the constant interaction between the regulatory bodies through joint commissions to enable constant update of current and emerging issues in line with developments in m-banking. Porteous (2006, p30) concurs and stresses that a lack of such a forum would result in a high risk of coordination failure. In 2009, Porteous re-iterates that the lack of clear leadership and policy is a major drawback that may result in coordination failure. Through defining the tasks at hand and who will be responsible for what, authors affirm that coordination and cooperation are key in achieving success (ITU, 2011b, Dahlberg et al 2007). However, Porteous cites “Lack of coordination among regulators remains one of the biggest obstacles to progress” (2009, p78). Porteous also suggests that m-banking cuts across various regulatory turf and as such may be subject to ‘co-ordination failure risk’ (Porteous, 2006 & 2009). We get to appreciate that there is a need for coordination between regulators and a lack of which inevitably has negative results. We also see that although it is a necessity, coordination still poses a challenge to m-banking rollout in various contexts. We see that m-banking involves multiple players that are normally governed under different jurisdictions and thus requires a close interaction between the different regulatory bodies. What also comes out strongly is that in the event that there is no proper co-ordination, the chances of failure are high and as such need to be curtailed through establishing a common co-ordination ground.

Having addressed issues pertaining to the provision of service, it is necessary to delve into issues pertaining to the end user, and understand the drivers of customer adoption. Porteous and Wishart (2006, p6) cite this as imperative in succeeding as it results in targeted efforts. Given the complex nature of the various stakeholders, there is a necessity to ensure that the interests of the customer are adequately covered and this includes protection issues.

2.4.4 Is the customer protected?

Previous studies as reported by Dahlberg et al (2007) highlight the main security concerns of customers as confidentiality and encryption. Alampay (2010, p25) also confirms that without assurance that security is adequately covered, uptake of m-banking is negatively affected. Dias and McKee (2010, p3) believe that without security and protection measures, loss is almost certain and they advocate for measures that eliminate loss as a safeguard for the customer. Comninou et al (2008, p13) point out that policy makers and regulators need to ensure that deployed systems not only promote economic growth but also ensure customers are adequately protected.

Porteous (2006) believes policy makers are faced with a daunting task on whether to adopt security policies that recognise the use of personal identification numbers (PIN) as e-signatures and acknowledging that it carries the same weight as that of a physical signature. Without legislation that confirms authenticity of transactions authorised through the use of PIN numbers we realise that transactions can be legally challenged leaving the customer at risk.

However, the human being is naturally risk averse and any sign of loss risk has detrimental effects on the customer. We can almost conclude that wherever signs of risk, loss or lack of security surface the customers will hold back and not want to associate with the service. Security is Therefore,, a basic necessity in the rollout of m-banking and a lack of security is a drawback on uptake. However, to safeguard against vulnerability is a two-fold approach, one being on the service providers' part and the other on the customers' part according to Donner and Tellez (2008).

This brings out the need for customer education as of great importance. When a customer is knowledgeable of the benefits and side effects of wrong use of a system it increases their cautiousness. Porteous (2006, p31) confirms that protection is a major issue for policy makers and regulators. However, he also acknowledges that a lot is said concerning protection though very little is done to enforce measures leaving the financially illiterate highly exposed. From such an observation we see that the lack of appropriate measures exposes the vulnerability of the customers and

educating the consumer may be a way of limiting vulnerability. Porteous and Wishart (2006) emphasised that the key to the diffusion of m-banking in an economy encompasses multiple drivers of which consumer protection is one. Adoption and uptake is stimulated when the customers are aware and in turn appreciate the value presented to them by the service, hence educating customers also increases their protection through correct usage of the service according to Donner and Tellez (2008, p320) and ITU (2011b, p21). What clearly comes out is that educated users do not unknowingly expose themselves to risks that may result in loss on their part. Protection against loss is also minimised when the customer appreciates their role in the correct use of the system.

Authors have placed emphasis on the need to educate customers on issues such as the safeguarding of personal numbers which is important given that the use of mobile phones which are prone to theft or can be misplaced, raising security concerns on customer transactions (Porteous, 2009, Dias & Mckee 2010, Porteous & Wishart 2006). Porteous (2006) highly rates the need for customer protection and cites it as top priority in the framework of enabling principles. However, Porteous (2006 & 2009) also believes there is a need to balance between protecting the customer and promoting the uptake of services as one at the expense of the other has adverse effects. He terms this 'the regulator's dilemma' (Porteous 2006, p53).

On the part of service providers, Alexandre et al (2010) is quick to point out that the regulators tend to over protect in the name of risk management and in so doing stifle the intended growth and financial inclusion of the previously excluded. Porteous (2009) supports this notion and believes it is challenging for regulators to strike a balance.

The propagation of the m-banking service is greatly aided by stability, integrity and security of systems. For this to be a reality there, is need for regulators to strike a balance between risk management issues and basic security measures to be applied as they have a direct impact on rollout and uptake rate as confirmed by Merritt (2010), Mas (2011) and others. Alampay articulated the issue when he stated:

The challenge is striking the right balance where regulation does not hinder useful innovation and experimentation and permit branchless banking to expand and thrive, in other words introduce 'proportionate' regulatory policies(2010, p3).

Based on such concerns, it is clear that it is a challenge faced by the regulators and if not adequately addressed, has adverse effects on propagation.

On the aspect of actual system security, ITU (2011b, p20) confirms that generally there is a high magnitude of investment on technologies and such can also be applied on the m-banking platform to ensure transaction security. Porteous (2006), Dahlberg *et al.* (2007) and ITU (2011b, p22) also add to issues of security and highlight that the use of PIN (personal identification number), encryption and digital signatures aides to building system confidence for the customer and thus promoting the propagation of m-banking services. In 2003, Bank for International Settlements (BIS) suggested measures that would ensure protection of m-banking transactions such as ensuring appropriate measures are in place to ensure data integrity and adequate authentication of transactions which would reduce loss and ITU (2011b, p24) also defined four levels of protection measures to eliminate loss. They believe that the four main areas that need protection are “money laundering; defrauding of customers by agents or other consumers; agents defrauding the service or system; or individuals/consumers defrauding agents” (ITU, 2011b, p22).

The issues of trust also come into play where a customer may have used the service, is confident and has trust in it and recommends to peers. Dube *et al* (2011), Mas and Radcliff (2010) allude that rapid uptake of a service is achieved once the issues of trust have been addressed. This includes trust in the system hence knowing that the originator, transporter and receiver of a transaction are authentic. This contributes to building confidence in the product and is an integral part for its uptake (Dias & McKee, 2010). However, the service providers have to play their part in instilling trust and confidence in what they provide hence the need to provide protection measures in line with developments in the economy. We can see that for a system to be adopted customers have to be confident that their transactions will be successfully

carried through and thus build trust. Such trust will enable uptake to increase as it is believed that a happy customer will always tell another thereby increasing the number of users.

In response to the terrorism attack of 9/11 on America, the bank sector tightened security measures and the regulators enforced KYC requirements on all banking customers as a measure to track all movement of funds (ITU, 2011p12). While this is a measure of security applicable in the developed world, Porteous (2006 & 2009) argues that the stringent measures may have crippled the advancement of financial inclusion in developing countries where the majority populace are either unemployed or informal traders who may meet all the KYC requirements. He goes further to advocate for flexibility in the requirements so as to accommodate the target market who may not necessarily meet the full KYC requirements. ITU (2011b) and Mas (2011) concur and sites that the lack of flexibility may serve as a barrier to reaching out to the unbanked populace. While ensuring that money is not moved to fund acts of terrorism, the ordinary person in the developing world does not have the capacity to move large volumes of money. However, the general requirement for all customers to satisfy KYC requirements is onerous on the unbanked poor man in the street and hence becomes a barrier that keeps him excluded from formal financial services.

The need to step up security measures propelled the enforcement of AML/CFT which in turn contributed to protection measures which would also cater for fraudulent activities that would result in loss (ITU, 2011p12). Dias and Mckee (2010) classify seven risks and the possible mitigation policy objectives to address them. While classifications may vary, what resonates is the main point of safeguarding against any perceived mode of loss. Having tackled the client protection in line with the finance sector, there is a need to do the same for the telecommunications sector as it plays an equally important role in the provision of m-banking.

In telecommunication, the need for SIM registration as a security measure enables the identification of the user which is useful when used in m-banking for monitoring of traffic volumes pertaining to cash movement. ITU (2011b) notes that although not recorded as a universal practice, it has become the norm for policymakers to enforce

SIM registration of pre-paid mobile phones as a crime clamp down measure. Countries such as South Africa, Australia, Philippines and many more have adopted this as standard practice (ITU, 2011p17).

ITU suggests that the practice may be more beneficial in m-banking if done along the AML efforts and would be of greater advantage if synchronised with the KYC regulation (2011p14). Exact information is required for both bank account opening and SIM registration, and raises questions whether it can be achieved through a shared database (Alampay 2010). Consolidated efforts would serve a double purpose, ensuring that records are identical in both KYC and SIM registration databases and it reducing the burden on the customer to go through the same rigorous process more than once. Alampay also notes that uptake can be encouraged when issues that overlap the different domains are adequately addressed. Having gone through the process, one wonders how widespread the benefit to be realised will be.

Will m-banking be confined to a particular service provider? Will m-banking be available on various platforms? Will m-banking be readily available? To address these questions, we look into what interoperability and interconnection entail.

2.4.5 Interconnection and Interoperability

Authors have reported on a wide range of success factors, which include interconnection between the communication infrastructure and the banking infrastructure which is paramount to the formation of a single integrated framework (between financial institutions and mobile industry) and is a logical progression to achieving a mobile banking environment according to Alampay (2010) and Ondiege (2010). Interconnection is the ability of a service provider's customers to use facilities of a different service provider to complete their transactions (Alampay, 2010p15). Interoperability requires the use of standards and protocols that enable different systems to communicate (Dolan, 2009p12). Based on the distinction between interconnection and interoperability, we see that interconnection is essential to ensure successful completion of m-banking transactions as customers from different service providers may need to transact. The ubiquity of infrastructure can also be

made possible through interconnection and it is cheaper for service providers to share facilities rather than duplicating what is already in place (Clarke 2000, p4). Birch (1999) is of the opinion that the ubiquitous availability of mobile infrastructure in low-income earning economies provides a solution that promotes growth through the provision of services anywhere and at any time. Based on the various contributions by different commentators, what reverberates is that there is a need for interconnection to allow for service availability across all available platforms. We also see that through interconnection, cost of service can be managed as the providers do not have to spend more than is necessary by duplicating infrastructure that is already in place.

Porteous and Wishart (2006) argue that the lack of interoperability results in high costs in financial infrastructure deployment which may be avoided through use of standards and protocols that enable systems to communicate. Dolan (2009) and Alampay (2010p15) argue that while interconnection allows new carriers to enter the market on an efficient staged base, through aiding rapid and ubiquitous market entry, interconnection does not guarantee interoperability. Dahlberg et al (2007) seems to disregard the assertions made by others and instead encourages integration of telecommunications platforms as a means for the enhancement of the role of MNOs in m-banking. While views may differ there is a consensus that interoperability through whatever form is a necessity to avail a ubiquitous service.

While interoperability sounds an ideal logic towards a wider coverage, questions have been asked as to whether it would suffice to get to efficiency and critical mass as cited by Porteous (2006). Perhaps we also need to appreciate that a customer on one platform would gain value when allowed to transact with another from a different platform seamlessly hence draws a larger clientele with minimal limitation. Porteous (2006) and Dolan (2009) advocate for the encouragement of interoperability which will allow providers access to payment systems and provide users the ability to switch financial providers. This may sound minor, but ITU (2011b, p15) cites it as becoming increasingly important as the development of m-banking outgrows its infancy stage. This is backed up by authors such as Dolan who cites it as key to reaching critical mass (2009, p12).

Given that there are no interoperability agreements widely drawn among various m-banking providers, the lack of interoperability may prove to be a drawback and costly on customers who end up paying twice for the cost of a transaction when they may need to transact between different providers who do not necessarily interlink (ITU, 2011). World Bank (2011) notes that interconnection entered into voluntarily would be a feasible way of widening the network, though they cited it may not feasibly take off due to divergent business interests.

Although it is very possible, regulators have not yet taken steps to prescribe interconnection standards in m-banking though this would be very beneficial to the customer though with other drawbacks (ITU, 2011p15). Alampay (2010) believes that the value of interoperability both at the local and global scale is realised by migrant workers from developing countries who often need to send money home. Interoperability will enable such emigrants to transact and send money home with ease. Mandating interoperability will entail regulators striking a balance between a wider coverage and the risk of stifling investment and innovative development (ITU, 2011). We see that interoperability enables the customer to realise better service value, similarly service providers are able to reach critical mass at less expense.

Alampay argues that network economies of scale will not be realised in the absence of interoperability especially when there is more than one system in use as is the case in Philippines (2010, p18). When transactions are done across systems locally or globally, inevitably interoperability is important and Alampay suggests that standards have to be agreed upon to enable progress. Porteous and Wishart (2006) also encourage the setting of standards beforehand. Alampay alludes that there is an underlying assumption that telcos are generally interconnected from a telecommunications perspective though this may not necessarily be so (2010, p24).

It would suffice to conclude that both interconnection and interoperability are pivotal in the realisation of economies of scale and also impacts on the service cost. It is an opinion that generally customers are drawn towards benefits that include value for their money as deduced from the belief that service providers have a higher chance

of reaching scale when more customers have access to a ubiquitous service. With that in mind, we go further and take a look on the issue of cost.

2.4.6 Who bears the cost?

As in any new innovative development, there are costs attached to achieving success. These have to be borne by someone, else the innovative deployment will be destined to fail. In the provision of m-banking, authors such as McKay and Pickens (2010), Porteous and Wishart (2006 p9) highlight that the uptake of m-banking by the ordinary consumer is made possible when cost of transacting, among other issues is addressed. Alampay (2010) suggests that the tariff regulation is crucial for the proliferation of m-banking. He explains the relationship of cost and service to the unbanked is mainly attractive when it is lower than that of the conventional bank or alternative offerings and thus can be an attracting factor to lure the previously financially excluded.

According to GSMA through transactions such as lowering of remittances cost by “between 2-5% the flow of formal remittance could increase by 50-70%” (2008, p10). They believe that the global remittance market will grow as a result. Similarly the MNOs will benefit from a larger client base. From such an observation, we see that clearly there are business benefits to be realised when the pricing structure is right. Alampay (2010) acknowledges that in a monopolistic environment, prices may be unreasonably set. Similarly when heavy costs are imposed on service providers through policy, they translate to high prices that are inevitably passed to the customer (Porteous 2006, p31). We therefore, see the need for policy makers to strike a balance on ensuring that policies that require high costs on service providers as a protection measure do not hike the cost of service to the customer. Such a situation would make m-banking beyond the reach of the intended poor unbanked populace. In line with ensuring that the cost of banking is affordable and to ensure measures that promote the financial inclusion policy in Zimbabwe, the government prescribed the lowering of cost on financial services and issued an ultimatum to ensure that the policy is adhered to (Herald 2013b).

Dube et al (2011) point out that the appeal of mobile services in developing countries hinges on accessibility and affordability. However, the m-banking pricing structure currently in use in Zimbabwe is generally higher than that of the conventional banks as reported by Techzim (2012a). While the main objective is providing an affordable service, the cost of provision has to be adequately covered. Bearing in mind that depositors' funds have to be secured, policy and regulation has been put in place to ensure providers are adequately financed to ensure that they are able to meet customers' cash demands equivalent to volumes they deposit.

ITU (2011b) confirms that banks are generally required to adhere to reserve requirements that meet potential depositors' claims. This alone is a costly requirement as the cost of hold volumes of liquidity is generally high. We see such regulation in Zimbabwe where the central bank has set the threshold for bank capitalisation and the punitive measures of non-compliance (Gono & RBZ, 2012). Such a measure is expensive for the banks that in turn pass the cost to the customer.

Although capitalisation is a pre-requisite for banks, ITU goes on to point out that it is not a requirement for MNOs though developing trends have seen voluminous transactions being done by MNO led m-banking models. While this poses a risk on the depositors' funds, countries such as Afghanistan, Cambodia, India and others in African Economic and Monetary Union have set requirements for non-bank providers to hold liquid assets or securities in a regulated bank (ITU, 2011 p19). Since both banks and MNOs hold depositors' funds would it not be logical for the regulator to set identical requirements for protecting the customer? While we acknowledge the move by countries in the African Economic and Monetary Union, we can raise the opinion that such a move should become standard globally.

While depositors' funds are in their custody, limitations as to what the providers can do with the money are highly restricted more so for non-bank providers and this is a costly scenario. The tariff regulation suggested by authors such as Alampay (2010) and ITU (2011b) become a challenge in providing alternative service as the playing field starts on an uneven note. Based on the various commentators, what emerges is that banks seem to be generally at a disadvantage while MNOs have an upper hand

on costing their services and still have leverage on the money they hold without providing collateral securities.

The issue of cost has a direct bearing on how users will respond thereby affecting the rate of uptake. A good example as cited by Mas and Radcliff (2010) is that M-Pesa achieved success through utilisation of a low-cost platform. To add to the conundrum of increasing the rate of diffusion, another aspect related to the way the populace views the services on offer is that of the general social and financial culture of a context (Dahlberg et al 2007, p6). At this juncture it would suffice for us take a look at the variables relating to a culture.

2.4.7 Financial culture

Various contexts are affected by their prevalent cultures which have a bearing on the perception of certain offerings. Dahlberg et al (2007) and Porteous (2006) insinuate that the culture has an impact on the levels of propagation in the use of m-banking. Examples cited are the cash centric culture of Japan, the cheque payment culture of the USA and the account culture of Germany and many others. We see that there is a need to understand the financial culture of a country as this will help come up with a product that will satisfy a country's specific needs. This was the case as written by Heyer and Mas (2010) as they assessed the country factors of Kenya and how they propelled the success of M-Pesa.

Dahlberg et al (2007) bring out another dimension, that financial services in the various markets may also hinder the development of m-banking. It seems the financial culture of a country is stimulated by the financial services made available in that country or is that really the case?

What reverberates is that service providers need to understand the factors that surround a country's business environment. It is only after gaining an understanding that service providers can develop appropriate products that adequately address country specific needs. When the tailored products are implemented, positive results will be realised.

Having considered various aspects that have a bearing on whether a service is rolled out successfully with high uptake, it is equally important to look into other issues that have an effect on the rate of diffusion, either as catalysts or hindrances to the overall outcome.

2.4.8 Other diffusion factors

As in any new product, there are bound to be pros and cons as customers try out and eventually adopt or completely discard. Dahlberg et al (2007) calls for the providers to make efforts to understand consumer power and adoption factors. They assert that the consumer holds the prerogative to either accelerate diffusion or hamper progress through not adopting a service or by embracing and using it. Authors such as Mas and Radcliffe (2010) have sought to identify the factors that would aid adoption and give the example of the strategy used by Safaricom in Kenya.

Safaricom designed a very easy to use system to attract many users by making it simple and quick to register, with no minimum balance and no charge to deposit. Such an offering attracted multitudes of users who were keen to try out the M-Pesa product and ended up recruiting other members as minimal benefit is realised when only a few users are on the system referred to as the 'network effect' by Mas and Radcliffe (2010). Alampay (2010) however, notes that Safaricom made registration even easier through SMS but raises concern on the regulatory gap that comes up since there will be no physical verification of user identity.

The general adoption of technology also has an effect as to whether users will use or abandon according to Dahlberg et al (2007). Users of a system need to have the comfort and trust that it will give them the required result always. This is confirmed by Mas and Radcliffe (2010) when they highlight that the success of M-Pesa was due to potential users having trust in the technology offered by Safaricom prior to the introduction of m-banking. They also note that there was a level of trust and confidence in the network of agents that partnered Safaricom in providing M-Pesa. Mas and Radcliffe believe that without trust it could have been a mammoth task to get volumes to accept and use M-Pesa which did not have anyone to vouch for its

capabilities within the shortest period of time possible. They refer to this as the 'sub-scale trap', which is a dilemma in most contexts offering m-banking (2010, p18).

The need to satisfy tasks at hand such as moving money or having a secure place for money would also be a driver for predominantly informal and cash economies where the practice is to "keep money under the bed" outside the formal system is also a driving force for the adoption of m-banking services according to Mas and Radcliffe (2010). Once previously unbanked users appreciate and understand the real-time transfers possible with the service, they tend to adopt. Donner and Tellez (2008) believe this is vital in bringing money out of the informal system and thereby strengthening the formal system. We see that there is a general belief that in most developing countries there are two parallel economies running (formal and informal). The larger population make use of informal means of transacting and hence remain unbanked. However, this could be turned around through offering an alternative formal option like m-banking and by doing so bringing back money flowing in the informal sector.

Over and above building trust in the system, Mas and Radcliffe recommend appropriate marketing strategy through customer awareness campaigns such as aggressive above-the-line (TV, radio) and below-the-line (stage plays, banner ads) marketing campaigns. They confirm that Safaricom used such a strategy to reach critical mass and utilised as much as \$10 million within two years of the initial rollout of M-Pesa. The agents also played a critical role in bolstering product awareness to the customers. Mas and Radcliffe note that agents embarked on the tedious and time consuming exercise because they were adequately compensated and saw great opportunity in the product and refers this practice as 'greasing merchant channel' (2010, p19).

This seems to be the channel being followed by Econet Zimbabwe as there is a massive marketing drive ranging from billboards, TV and radio adverts, coupled with offering discount incentives for joining the Ecocash platform and broadcast sms marketing to mention a few of the means utilised. Media reports confirm that major

chain stores, tuck-shops, public transport operators among many others have joined the Ecocash agent network (Techzim 2012b, 2012c & 2012d).

Looking at the business models, the model used has a bearing on the rate of diffusion. According to Porteous' (2006) business model definition, the target audience is driven by the adopted model and in pure bank driven models he points out that the target clientele is the already banked as opposed to the unbanked and he confirms that this is usually a case of additive value. ITU concurs but argues that "banks can extend services to mobile telephony customers who do not currently have a bank" (2011b, p3).

The target audience of a telco led model differs significantly from a bank-led as its target audience are the mobile voice service users who are not necessarily banked. Porteous refers to this as a 'transformational model' and confirms that it is far more reaching than network coverage than that of conventional bank. He advocates for branchless banking citing the costs associated with brick and mortar branches. Mas and Radcliffe (2010) assert that fixed costs (infrastructure and staff remuneration) in traditional banks become variable costs in m-banking. Using an ideal business model would have an advantage in reaching the critical mass necessary for a service to be self-sustainable.

2.5 Zimbabwe's m-banking literature

While there is generally a vast body of knowledge on m-banking in various countries, literature on the Zimbabwe context is not yet available. The current recordings are basically opinions in the media, but academics are yet to report on the policy and regulatory framework of m-banking in Zimbabwe. There is acknowledgement that this area is lagging behind as observed by media commentators such as Fripp (2012), Biriwasha (2011) and Kabweza (2013). The RBZ governor also acknowledges that currently there is no regulatory framework that articulates m-banking but pledged to set up a framework in phases during the 2013 MPS (Gono & RBZ, 2012). Similarly the minister of finance also acknowledged that policy on m-banking is currently work in progress and should be in place in the near future (RBZ, 2013).

The lack of literature which articulates the role of policy and regulation is in itself a weakness and believed by many to be a drawback on progress monitoring. Mambondiani (2013) believes it is taking too long for the responsible authorities to address the lack of policy and regulations that articulate m-banking. He also raises an interesting debate on whether it is really necessary to regulate or it would better to maintain the status quo.

What comes out from the current situation in Zimbabwe is that m-banking is still in the infancy stage and stakeholders are still trying to come to terms with it. As a new product, policy makers and regulators alike are in the process of re-aligning their frameworks to accommodate the recent developments. However, from a research point of view, the m-banking environment is like virgin land that still needs cultivation.

2.6 Conclusion and research gap

The body of literature pertaining to m-banking is growing as different countries embark on rollout. Understanding the dynamics and contexts is clearly emerging as key to understanding the drivers of diffusion. Stakeholders continue to revamp their *modus operandi* and place their focus on the establishment of a conducive environment where policy and regulation promotes the propagation of m-banking.

From the reviewed literature there is a general view that although the m-banking ecosystem is identical in most contexts, but driving factors that constitute an ideal environment that stimulate or hinder m-banking rollout are country specific. Similarly the development or modification of policy and regulations is subject to the evaluation of existing frameworks which differ according to country. The rollout and uptake of m-banking is affected by the existing policy and regulatory framework in the country.

It is also evident that m-banking straddles various domains but the issue of co-jurisdiction remains a challenge. Similarly interconnection and interoperability are believed to be the solution for ubiquity and reaching scale, but they are both not yet a set standard in most countries.

Issues that pertain to customer protection came out clearly as needing attention, with most commentators agreeing that they are core to the uptake of m-banking. Likewise

the cost issue is believed to be fundamental to the customer who may remain unbanked if they feel m-banking is unaffordable. Policy addressing m-banking is believed to be ideal in addressing issues of cost and other diffusion factors.

However, despite the recorded works and tangible evidence of success in other contexts, stakeholders still seem not to get to the core of what would be an ideal or conducive environment for the proliferation of m-banking and how to reach it with the mix of factors and drivers contributing as they acknowledge that no context is exactly the same as another.

Authors such as Dahlberg et al (2007) and Dermish et al (2011) note that factors vary and are country specific, but the bottom line is to achieve a full scale rollout of a service which may not necessarily be duplicated elsewhere due to the unique offerings. It is with this background that a research gap what seems to be the lack of articulate m-banking policy and regulatory framework is identified and there is a need to map a way forward in fulfilment of the purpose stated in chapter one.

Let us proceed to the definition of the methodology employed in tackling the research in Chapter 3.

CHAPTER 3 Research Question and Methodology

We set the background and identified that there is a problem in the propagation of m-banking in Zimbabwe and with the intention of investigating the policy and regulatory environment as stated in chapter 1. We then conducted a review of literature on the existing body of knowledge in chapter 2. Based on the preceding chapters, a research question will be formulated and in chapter 3 we define the approach and method that will be used to try and get answers to the question.

3.1 Research Question

Responding to the literature review and identified gap, this research focuses on identifying the regulatory environment as it affects the uptake of m-banking in Zimbabwe. It looks at the various aspects relating to m-banking and how they help or hinder the propagation of m-banking. This will be achieved through semi-structured interviews which will endeavour to get answers to the main question:

How do policy and regulation either stimulate or limit the diffusion of mobile banking in Zimbabwe?

To get a comprehensive response the following sub-questions will be tackled:

- To what extent and in what ways does policy stimulate the shift to mobile banking?
- To what extent does policy blockage hinder mobile banking diffusion?
- What are the regulatory stimulants pertaining to mobile banking in Zimbabwe?
- What are the regulatory obstacles pertaining to mobile banking in Zimbabwe?
- What are the emerging regulatory requirements with respect to licensing, banking and infrastructure development to support mobile banking?

- How is the key area of co-jurisdiction between the mobile communication and banking sectors being addressed?
- Are there any other factors that influence the diffusion of mobile banking in Zimbabwe either positively or negatively?

By tackling the above questions, we get an understanding of the policy and regulatory environment in Zimbabwe and its effect on the rollout of m-banking. This will test the assertions made by Porteous and Wishart (2006), Ondiege, (2010) and Omwansa, (2009) when they emphasise on the need for an enabling environment to allow for the diffusion of mobile banking. We are able to identify the blockages hindering the propagation of m-banking and hence analyse them based on the literature review. This will give an insight for the stakeholders and may possibly craft an informed way forward.

3.2 Methodology

In this section, the methodology applied in answering the main research question and successive sub-questions is defined. While Leedy and Ormrod (2005) define research design as a plan, Cooper and Schindler (2005) state that strategy and structure of a research project and a research report can be regarded as a blueprint of answering a research question. The approach used also takes into cognisance how the question will be answered, how it will be answered and by whom. It provides a guideline of how the research will be conducted and how data will be collected and analysed (Neuman 2011 p157). The limitations of the instrument will also be discussed.

3.2.1 Why a qualitative methodology?

The two main approaches to research are quantitative and qualitative.

Quantitative study is defined by Creswell (1994, p2) as “an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers and analysed with statistical procedures, in order to determine whether the

predictive generalisations of theory hold true". This involves the testing of a preformed hypothesis and usually ends with a confirmation or disconfirmation of the hypothesis according to Leedy (1997).

Creswell (1994, p2) defines qualitative study as "inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting".

Based on the above definitions, a qualitative approach will be used to satisfy the research inquiry. This is because we will be trying to gain an understanding of actual events which will be described as experienced by the various actors and as they happen in the natural setting. The qualitative approach is the most suitable because it allows the research to make use of description and allows for rich insight into human interpretations as opposed to a quantitative approach which places emphasis on testing preformed hypothesis (Leedy, 1997p105).

As stated before, the aim is to gain an understanding on the impact of policy and regulation as it affects m-banking in the Zimbabwe context. Therefore, the qualitative research will enable the study to be conducted in the natural setting and allow for "thick descriptions" that will provide interpretive understanding of the m-banking environment of Zimbabwe (Babbie and Mouton, 2004 p270).

3.2.2 Argument for interpretive approach

Authors differ on the number of paradigms available for research. Authors such as Leedy (1997) and Neuman (2011) state that there are three approaches to research namely positivism, interpretive social science and critical social science, while other authors such as Sipe and Constable (1996) add a fourth namely deconstructivism.

Neuman (2011, p81) defines positivism as "the approach of natural sciences" he states that it is mainly used in quantitative data and often uses surveys, experiments and statistics. Neuman states that interpretive social science is characterised by in-depth understanding of how written words relate to social action and value relativism.

Put simply, the emphasis is placed on understanding social meaning in context.

On the other hand, critical social science places emphasis on “combating surface-level distortions, multiple levels of reality and value-based activism for human empowerment” (Neuman, 2011p94). It hinges on revealing the hidden through dispelling myths and empowers people to radically change society.

The above paradigms do have common features such as being systematic, empirical, theoretical, self-reflective, public and open-end processes (Leedy, 1997 & Neuman, 2011).

Having considered the above definitions, this research will utilise the interpretivism approach as we want to gain understanding of the social context where m-banking is functioning. This supports an assertion made by Neuman (2011) that the reason of such a research is to “understand and describe meaningful social action”. In this research we aim to gain an in-depth understanding of the m-banking environment in the Zimbabwe context and find out the effect that policy and regulation have on it. To do so, we will be taking into consideration the contribution of each stakeholder and use it to draw their perception of m-banking. We will be drawing sets of concepts and ideas from other contexts and verifying whether they are applicable to Zimbabwe. When we gain the understanding, we will be able to identify the drivers that are generally affecting the propagation of the service. Neuman (2011) further states that interpretivism places importance on values, as they are an integral part of social life. This confirms that people’s perceptions and views may differ according to the value they place on an item, event or process.

3.2.3 Why case study?

Leedy (1997, p111) articulates that there are various approaches to qualitative research such as “case study, ethnography, phenomenology & grounded theory”. He also points out that each may have overlapping qualities though not synonymous, each also has unique identifiers that differentiates from the others (1997, p155).

Ethnography centres on the study of a culture in a group of people (Leedy, 1997, p156). It hinges on explaining human action in a lived social or cultural context. Ethnography is therefore, clearly not relevant to the study.

Neuman (2011, p381) states that its emphasis is on “providing a very detailed description of a different culture from the viewpoint of an insider in the culture to facilitate understanding of it”.

Phenomenology is not appropriate as it refers to the quest to understand the meaning of an experience to a people (Leedy, 1997, p156). Leedy and Ormrod (2005, p139) define it as a person’s perception of the meaning of an event. It focuses on understanding a people’s perception, understanding as well as perspective of a situation.

The grounded theory approach is considered not to be discipline bound, but as a set of procedures for data analysis with a view of developing a discipline related theory (Leedy, 1997p163). The aim of the approach is to identify the unknown variables in order to fill in the missing gap as highlighted by Strauss and Corbin that closing the gap between theory and empirical research can be achieved through the grounded theory approach (1990, p27). Leedy and Ormrod assert that where there is insufficient theories about a specific phenomenon, this design is useful (2005, p140). Given the volume of literature analysing m-banking, grounded theory is also unlikely to provide the necessary incite.

A Case study approach on the other hand appears more promising as it generally aims to document, describe or explain a particular case. Tellis (1997) confirms that it enables an in-depth investigation thereby revealing intricate detail of a particular environment. Creswell (1994) sees case study as appropriate because it explores an entity or case, is time and activity bound and collects detailed information through the use of various data collection procedures during a specific period of time.

Having carried out an evaluation of the characteristics of the various qualitative approaches what clearly is that ethnography, phenomenology and grounded theory

do not satisfy our research need this therefore, leaves only the case study method. Although our context of study is not a classic case study, it has a lot of elements in common with a case study. Hence this research will use the case study method.

As stated earlier, our aim is to understand the features of a successful m-banking environment based on other contexts and then use the template to evaluate the status of m-banking in Zimbabwe. As stated by Leedy (1997, p157) and Leedy and Ormrod (2005, p135), the researcher's focus may be on a case "because its unique or exceptional qualities promote an understanding or inform practice for similar situations". Although Tellis (1997) argues that to "construct validity is especially problematic in case study research", Yin (1994) proposes remedy of "establishing a chain of evidence" that way there will be validity in the study.

Although there is a vast body of knowledge on m-banking in many contexts, not much has been written about the Zimbabwe context. Leedy and Ormrod (2005) believe that the case study is ideal for learning or investigating more about a situation where little is known or poorly understood. Yin (1994) proposes the use of case study when attempting to answer the "how" or "why" questions in research. In this instance, the research is investigating how policy and regulation is affecting the proliferation and uptake of m-banking in Zimbabwe. In line with Tellis (1997) assertion, an in-depth investigation would suit the Zimbabwe situation on m-banking as there is scant documentation and digging for answers on the "how" and "why" it will also satisfy the proposition as put forth by Yin (1994). An explanation as to why there is minimal diffusion of m-banking services in Zimbabwe is not readily available hence the use of case study to find answers to questions based on other similar cases such as Kenya and South Africa, thereby leading to conclusive evidence based on characteristics of the phenomenon Leedy (1997, p156).

As the research will be conducted with a view of understanding events, actions and processes, Babbie and Mouton refer to this as a holistic research strategy which when conducted only then can a researcher claim to understand events (2004 p272). This will satisfy the quest of an in-depth understanding of attributes of the regulatory environment of Zimbabwe that have an effect on m-banking propagation. Neuman

(2011, p.157) highlights that an inductive approach gives room for developing insight from the collected data and develop theory to enable a holistic view of a scenario. In this research, Neuman's assertion will be put to use and results can be achieved through the input by the various stakeholders in m-banking.

In line with the assertions made by Neuman (2011) and Babbie and Mouton (2004), in order to get a holistic picture, the research will be conducted on key informants on the m-banking ecosystem. These have in-depth knowledge of the Zimbabwe m-banking environment and are directly or indirectly involved in its day to day operation.

3.2.4 Interviews

There are various methods available for the collection of data. Available options on the formal side include questionnaires, experiments, surveys and others that are mostly suitable in quantitative research. In qualitative research, options are more on the informal side and they include review of official records and interviews.

Tellis states that the types of interviews employed in qualitative research approaches include open-ended and focused or semi-structured (1997, p. 7). Babbie and Mouton explain that in an open-ended interview, the researcher questions and probes and this allows room for participants to respond in their own words (2004, p. 289). In semi-structured interviews, Tellis asserts that the researcher is guided by an interview protocol. This type of interview follows a focussed framework and this makes it relatively brief and to the point (1997, p. 7).

This research makes use of the semi-structured interview to gain detailed insight while not limiting the respondents' freedom of expression. Similarly, focus will also be maintained through the use of the framework. The use of informal and less structured methods is therefore, the most appropriate. Although they are time consuming and need a rapport with the interviewee, face to face interviews have a high response rate thus giving the much required data for the research (Neuman, 2011p301). Secondary data is through document analysis including published media articles, existing case studies done by other researchers, statutory instruments and journal articles.

3.2.5 Drawing the sample

Selecting a sample for a research study is done to ensure that all aspects of the phenomenon under study are represented (Neuman, 2011). Approaches that can be used are segmented into two categories: - probability and non-probability. Authors such as Leedy (1997), Cooper and Schindler (2005), Neuman (2011) and others concur that in probability sampling, every element in the population has an equal chance of being selected. They also agree that in non-probability sampling, a sample drawn is rarely determined in advance and there is no guarantee that every element of the population will be represented. Samples are drawn based on relevance in a study as opposed to representativeness and must meet set criteria. Types of non-probability sampling include “snowball, haphazard, quota, purposive, deviant case and sequential” (Neuman 2011, p220).

Various authors such as Babbie and Mouton (2005, p228), Leedy and Ormrod (2005, p145) and others state that sampling in qualitative research is guided at certain inclusive areas. This being the case, Neuman (2011, p222) specifies that purposive sampling is ideal for unique cases that are informative and it allows a researcher to select members of a population that are normally difficult to reach.

In line with Neuman’s specification, this research will make use of a purposive sample. It will be ideal for the Zimbabwe m-banking platform which is a unique case as it is still at its infancy stage. As it is a fairly new phenomenon to Zimbabweans, it is characterised by a relatively small specialist group, from which interviewees are drawn. Flick (1998, p41) confirms that qualitative researchers rarely draw large samples from groups. In line with Flick (1998) and Leedy and Ormrod’s assertions, the interviewees are therefore, “a carefully selected sample of participants” (2005, p139).

Although rule of the thumb as reported by many authors is the larger the sample the better, (Leedy, 1997 p212, Kent, 1993 p54) it does not follow always as other complexities have to be considered. Consideration of cost and time constraints complexities have a direct bearing on the sample size as Stoker states and goes on

to elaborate that “the more homogenous the population elements, the smaller the sample may be” (1989, p130). In relation to m-banking in Zimbabwe, the population is not homogenous and can in fact be segmented into a number of stakeholder groups, each with a different relationship to and perspective on the m-banking environment. These include: companies providing the m-banking platform, organisations charged with regulating the sector, entities with a policy making mandate and the m-banking service providers themselves.

Given this basis and applying stratified purposive sampling to the Zimbabwe m-banking environment, this research identified a sample of possible key informants consisting of three participants from MNOs, five participants from telecommunication and finance regulators, three participants from telecommunication and finance policy makers, an analyst and media commentator and four participants from banks offering m-banking services, making a total of sixteen. This draws a balanced section from the universe of all possible participants and hence provides sufficient representation of stakeholders in the m-banking ecosystem in Zimbabwe.

In the interest of specific content, key informants comprise those responsible for formulating policy (communication and finance sectors) and have a good understanding of the developments in the industry. Those in the business of service provision (MNOs and banks) and have to tackle delivery challenges emanating from various factors and also provide insight on how the regulatory environment affects their service provision. Those that create and enforce regulation (communication and finance sectors) will provide insight to challenges encountered by regulators on issues pertaining to their respective areas of jurisdiction. They will also provide insight on how they converge in providing a co-jurisdiction for the provision of m-banking services. Those who have a keen interest on developments in industry (analysts and media commentators) and carry out critical analysis on development will provide a birds-eye view of the environment based on a third-party’s perspective. A comprehensive analysis of the m-banking environment will be achieved through a cross section of interviewees thereby giving a holistic view. This is summarised in the following table.

Table 5: Interview participants

MNOs	3
Regulators	5
Banks	4
Policy Makers	3
Analyst/ media commentator	1

As various authors such as Neuman (2011 p157), Leedy and Ormrod (2005, p133) and Babbie and Mouton (2004 p309) affirm that qualitative data allows for the collation of real events and expression by people in the social context, this will be ideal as information gathered from the cross section of interviewees will provide a holistic assessment of the state of m-banking environment in Zimbabwe. Having carefully selected a study sample, we now move on to defining the research design.

3.3 Research design

A case study of various m-banking ecosystems in developing countries will be carried out with a view of comparing the Zimbabwe m-banking environment. Regulatory environments of other developing countries such as Kenya and South Africa will be analysed and the outcome used as a comparison basis for the Zimbabwe context. In line with the assertion made by Leedy and Ormrod (2005), the unique or exceptional qualities identified can promote an understanding for similar situations. In this instance, the outcome of analysing other contexts shed light on the Zimbabwe context.

This provides an insight into the current status of the regulatory environment and the effect of policy on the magnitude of m-banking rollout.

Creswell (1994) and Leedy and Ormrod (2005) state that extensive data collection in case study is required. This can be done through observing the study phenomenon, questionnaires, structured and semi-structured interviews and gathering details about the context of study. Leedy and Ormrod (2005) affirm that through the extensive

data, an understanding of the context may be shared with others and helps in drawing conclusions about the context.

Having had an insight into the research design, we now embark on the research instrument.

3.3.1 Research instrument

Through the use of the qualitative research methodology and case study, we aim to understand underlying meaning and patterns in the context of study in line with the assertion by Babbie and Mouton (2004). The comparison of various policy and regulatory environments will provide an in-depth understanding and will satisfy the qualitative research objective according to Leedy (1997) and Creswell (1994 & 2002).

3.3.1.1 The interview questions

As the research makes use of semi-structured interviews by way of open-ended questions with a cross-section of interviewees, a single set of questions will be used on all participants. This is done to get a level of comparable responses with a common thread running through to enable ease of data compilation, but at the same time answering the main research question as well as the sub-question. The interview protocol is included as Appendix A.

A pilot of the instrument was done with two specialists in the field of technology and banking with a view of testing whether the interview questions would adequately address the stated research question and its sub-questions. The two pre-run respondents both confirmed that the questions were understandable and would draw out adequate data to satisfactorily answer the sub-questions and ultimately the main research question. Based on the feedback given before the actual research interviews were conducted, no changes were made. Due to confidentiality and sensitivity of the information, the interviews were conducted in a manner that maintained anonymity of respondents.

3.3.1.2 Interview technique

As stated earlier the research purpose is to understand the role played by policy and regulation in m-banking with a view of understanding the drivers that affect rollout and user uptake. An analysis of the magnitude to which policy and regulation is applicable for m-banking proliferation as stated in '1.5 why this research', will be conducted.

3.4 Significance and Limitations

The research is necessary to bring to light the level of policy adoption and regulatory issues on mobile banking in Zimbabwe in comparison to other developing countries. The assessment of the regulatory environment will shed light on shortcomings that may have been previously overlooked, and remedial action may be effected. Once lagging areas are identified and addressed, they may have a positive contribution in accelerating m-banking rollout and uptake.

Neuman (2011) cites that interviewer bias is a downside of the research instrument. The researcher's deportment is critical and may affect the way participants respond. This suggests the need for high interpersonal skills which may not naturally be present. However, limitations within the context of study based on the infancy of m-banking in Zimbabwe are that generally there is limited understanding of aspects that relate m-banking. The sample size is relatively small given compared to the universe of possible participants and this may affect the outcome of the research. Similarly, the sample size may be biased and that may also affect the credibility of the study. As the context has unique factors what has been recorded for other countries cannot be generalised in the Zimbabwe scenario. There is a tendency of generalising issues rather than being articulate due to the uncertainty of the exact content of m-banking. This limits the research as some interviewees fail to articulate themselves in areas of their perceived speciality.

The outcome of interviews conducted is presented in the next chapter. Reference is made to secondary data to enable contextualisation of participants' opinions.

CHAPTER 4 In the Eyes of the Participants: Research Outcome

This chapter reports the findings of the interviews conducted. Emphasis will be placed on the areas of knowledge of interviewees in response to the research question and sub-questions in Chapter three. This will be supported by the relevant literature and secondary data were appropriate.

As mentioned earlier, anonymity and confidentiality will be maintained throughout the research. This is in line with the 'rule of thumb' according to Barnes (1979, p39) which states that, "data should be presented in such a way that respondents should be able to recognise themselves, while the reader should not be able to identify them." To fulfil this assertion, participants were given general identity tags in the form of numbered acronyms. (Appendix B).

In order to fulfil the exercise, a selection process of the appropriate interview candidates was done and phone calls made and a brief synopsis of the interview focus was verbally given. This was followed through with the complete interview protocol (Appendix A) and code of conduct prior to the actual date of the interview. This was done to ensure the interview process would be precise as interviewees would be prepared in advance.

On arrival for the interview, the researcher established a rapport with the interviewees through casual talk not related to the research. This open-ended and informal approach loosened the atmosphere and gave the participants confidence to converse freely during the interview process. As the questions were open-ended, insight into other developments as perceived by the interviewees was gained. With the interviewees' permission, recordings were done though a few declined the request citing that they were uncomfortable due to the nature of the interview content. They felt that they could be divulging information that could be used by their competition to their detriment. As stated earlier, due to the confidentiality aspect, all participants signed an acknowledgement form to confirm that they understood that the nature of the research was purely academic and therefore, their interviews would be used to satisfy the requirements and would be in a public document though

anonymity would be maintained throughout. Follow-up discussions were made in cases where further clarity was required.

The objective of the research methodology was to add to the body of research in the area of policy and regulatory environment with a view of defining the appropriate mix that will generally enable propagation and adoption of m-banking.

The outcome of the research will be organised according to the research sub questions. Feedback on the interviews will be done using participant acronyms which are defined in Appendix B. The following are the findings gathered in the interviews:-

4.1 A participant's view of the bank sector

To break the ice, each participant gave an overview of their experience in banking in Zimbabwe. This was aimed at getting the participants' views without limiting them to structured questions. The following questions were asked to enable insight into the banking sector.

To begin with, please tell me your experience with banking: when and how did you get to know about m-banking?

Do you think the diffusion of m-banking is up to speed or ahead of prediction or lagging? Please elaborate.

Bank1 like most interview participants narrated a vast experience in the banking sector which spans across decades. As a user, Bank1 narrated the changes in banking over the years and pointed out that there has been a significant change in banking behaviour generally. Emphasis was on the constant drive to have better service hence, "we are always searching for better ways to provide a customer experience and since the mobile phone became a natural adoption, its association with the bank started with sms to confirm bank balance or notify withdrawals dates back as early as 2000-2001" (Bank1 interview, 3 January 2013).

Bank1 believes mobile telephony has provided a platform to convert the unbanked populace hence it is disruptive through innovations that re-define banking. There was a general consensus across the interviewed sample that the bank model was

revamped as there was no longer a requirement for many brick and mortar branches as before and almost 99% of infrastructure now resides on the mobile phone. Med1 (interview, 19 February 2013) acknowledges the evolution and remarked “those who do not join the band wagon will find themselves in isolation and will soon be extinct”. Med1 placed emphasis on the fact that everything is now centred on technology.

While it was unanimously agreed that mobile telephony is a gateway to decreasing the magnitude of the unbanked, Reg4 (interview, 23 February 2013) believes the negative impact on the economy ignited a lack of confidence in banks and the high level of informal trade increased the unbanked populace. However, Reg5 (interview, 23 February 2013) expressed optimism and belief that through the impact of m-banking, “the banking sector is undergoing a revival that will see statistics surpassing those of the good old days”.

Most participants noted the general erosion of confidence in the banking sector due to the period of micro-economic decline which was characterised by hyperinflation. MNO3 (interview, 22 January 2013) concurs with Reg4 and estimates that the unbanked populace is approximately 90%. There was concern that the banks pricing structures have not been catering for the low income earners who are the majority of the population. The general consensus was that banking products were highly priced and not accessible for most as the country is characterised by a very low employment rate and high informal trade. This observation was confirmed by Med1 who expressed concern on the charges levied by the banks and service providers, in comparison to counterparts in the region, Med1 confirmed that the cost of banking in Zimbabwe is exorbitant and called on the responsible powers to address this disparity.

Bank4 (interview, 16 February 2013) confirmed Med1’s observation and pointed out that on the onset, banking services were mainly for the elite and those who could afford and this was a distorted starting point. Branch network concentration was mainly in towns and growth points leaving out the remote areas where the majority of the population resides. With such a model as a starting point, the effort to increase the banked may be an uphill task as the general populace have an ingrained belief

that it is meant for the “chosen few”. As a result, Bank4 draws a conclusion and estimates that financial inclusion is below 30%. However, Pol3 (interview, 1 February 2013) believes that if banks had impetus to draw more customers they would exponentially grow their market and easily recoup their capital through volumes at a reduced cost.

For the formally employed, Pol1 (interview, 23 January 2013) commented that the banking experience was interesting, but most banked to fulfil employer’s requirement for paying out salaries/wages. MNO1 (interview, 11 January, 2013) pointed out when it is pay-day, there are long queues at the banks because people want to withdraw all their money for fear of a repeat of banks closing down. In MNO1’s view, “regardless of the purported stability in the banking sector, there is high scepticism and it will not be easily removed”.

However, in line with MNO3 and Reg4’s observations, Pol1 also pointed out that there is a loss of confidence in the banks brought about by the turn of events in the decade of economy turbulence and in particular during the period 1998-2008 where people lost their money through hyper-inflation and as some banks closed down without compensating depositors. MNO2 (interview, 14 January 2013) confirmed this and adds “the recent practice of banks opening today and closing tomorrow is uncharacteristic of an institution trusted with people’s money”. The high uncertainty levels on the safety and custodianship of banked funds has negatively affected the sector. Pol2 (interview, 7 January 2013) believes the onus is on the banks to work and rebuild customer confidence over time. Reg1 (interview, 8 January 2013) echoed similar sentiments and emphasized “as a country we are emerging from a lean patch and banks need to spruce their act if people are to regain confidence in them”. There was an expression of relief because MNOs are now playing a pivotal role in the banking sector, thereby assisting in the positive development in the restoration of the banking sector.

Pol2 confirmed that the government through the regulator has put capitalisation measures in place.

The above is a depiction of the various views of banking in Zimbabwe. It is a summation of how participants believe the current environment can be turned around to usher a change of perception in the banking sector.

4.2 Effects of policy

The following questions were aimed at extracting each participant's view of the current state of affairs in the policy environment. In so doing, each contribution will contribute in shedding light on the research question on the impact of policy on the propagation of m-banking. The questions were:

To what extent and in what ways does policy stimulate the shift to mobile banking?

- o Is there a particular current policy that you commend and note as being key in promoting m-banking uptake?**
- o What new policy would you envisage as a possible catalyst for m-banking?**

There was a view on the lack of policy to stimulate the rollout of m-banking and concern that government still does not regard m-banking as a channel through which banking services can be delivered. Bank1 reiterated, "m-banking is robust, flexible and efficient enough but government still lacks the appreciation and hence still there is no policy on it. There is no advocacy from the policy makers, in short there is no stimulation at all". MNO3 acknowledged that policy is pivotal as is there for formulating rules that will allow sanity to prevail, however, it can also be a stumbling block especially when policy makers do not appreciate what one is aiming to achieve.

Although financial inclusion is what the government is aiming for, they have failed to appreciate that m-banking is the most efficient way to achieve that goal and are still pushing banks to open branches which are costly for the rural populace where the majority resides. Bank1 believes "government ought to be advocating for m-banking as an acceptable standard".

There is a general undertone that policy is not up to date. Bank3 (interview, 10 January 2013) acknowledged the financial inclusion policy as a noble one, but points

out that the way policy makers are crafting ways of achieving it may be ultimately damaging to the banks and will defeat the intention. However, others felt it would catapult the rollout of m-banking. MNO3 believes “engagement is key for influencing the policy makers”.

In line with Bank1’s view, Bank2 (interview, 4 January 2013) believes that government has to take the initiative and lead in embracing m-banking by “adopting it for payment of social services, grants, pensions and even for employee salaries since they are the biggest employer. Through leading by example, they will help in instilling confidence in the system”.

In a contrary view, Bank4 believes that policy is silent on m-banking but because it speaks on financial inclusion, the driving factor would be banks keeping their fort in trying to stay in business and hence “they are forced to think out of the box” and come up with ways of staying afloat. Both Bank3 and Bank4 believe that the stimulus is stiff competition presented by various players and has propelled banks to embrace ways that enable them to retain their existing clients and also grow their market share at the least possible cost; hence banks are left with not much option but to embrace m-banking. Bank4 remarked that “the drive for m-banking by the banks is more out of necessity rather than by design because even if banks opted for e-banking, it would not solve the challenge at hand. One can only reason that m-banking is the logical solution”. It is believed that unclear policy is currently hindering progress.

From another perspective, MNO1 points out that due to the volatile nature of their business “voice has seized to be the key revenue driver in telecoms”. That is what brought about m-banking service for them. MNO1 confirmed that the capacity for the demand of voice service is reaching point of saturation, thus stimulating the drive to offer value-added services. So it is more out of maintaining a competitive urge that intensity for the rollout of m-banking was necessitated.

The central bank’s concern on cash-centric economy has made room for ideas that do not revolve around cash to be embraced hence the space allowed for the deployment of m-banking. Reg5 also stated that although there is no policy

articulating m-banking the National Payments Systems (NPS) Act [Chapter 24:23] recognises electronic payments under which m-banking falls (RBZ, 2001).

MNO3 applauded the positive change in policy and acknowledged the January 2013 Monetary Policy Statement (MPS) issued in terms of the RBZ Act chapter 12:15 section 46 by the RBZ governor which had an m-banking focus and defined a roadmap and milestones to come up with policy and regulation articulating m-banking by June 2013. Pol1 confirmed that an eloquent policy speaking directly to m-banking is under construction and is envisaged to be included as part of the policy currently under review.

While it is work in progress, Pol1 envisages the time taken to conduct the necessary consultation forums with the various stakeholders countrywide may act as a stumbling block as it is tedious and time consuming resulting in the slowing down of development on the m-banking arena. Pol1 also confirms that it is a mandatory process since the service in question over-arch across all sectors in the context. Pol3 believes since policy affects the country as a whole it is better to take time to come up with a comprehensive document rather than take short-cuts which may result in a rework.

This section looked at the effects of policy on the rollout of m-banking. There was a consensus that there is no policy directly articulating m-banking albeit with differing conclusions on the ultimate outcome. Some believe it does not affect propagation while others believe it has a negative impact on the outcome. There was acknowledgement that there is work under progress to ensure policy covers m-banking.

4.3 Policy – Good or bad

Having gained an insight on the state of affairs in policy, the following questions were asked to ascertain whether the situation is good or bad for the rollout of m-banking. The following questions were asked to enable the participants to air their views.

To what extent and in what ways does policy stimulate the shift to mobile banking?

- o Is there a particular current policy that you commend and note as being key in promoting m-banking uptake?**
- o What new policy would you envisage as a possible catalyst for m-banking?**

What do you see as blockages within current policy that hinder mobile banking diffusion?

- o How best can these blockages be tackled?**

The tendency of adopting “the way it has always been done” prohibits change and that alone is damaging diffusion. The policy makers also seem oblivious and are not taking corrective measures in channelling towards m-banking. Current policy still places focus on traditional banking practices with no inclination or drive towards m-banking.

There is some form of resistance as the people still have the traditional means of transacting engrained in them i.e. cash, cheques or swipe cards through ZimSwitch. However, Med1 believes that notion will soon be a thing of the past given the rate at which a service such as Ecocash has been received. Med1 predicts that at such exponential growth rate, Ecocash will soon be the biggest bank if its counterparts do not redefine their business strategies.

MNO3 believes the diffusion of m-banking is up to speed and confirmed that a big investment was channelled into awareness campaign through an exhaustive marketing strategy “that used strong marketing machinery” and it yielded results through exponential uptake growth as early as three months from inception. MNO3 stated that from the onset, the main focus was “to make a visible mark through pioneering innovative change in the banking sector”. MNO3 confirmed that they decided on a model to complement rather than compete with the banks hence their focus was on the unbanked. This is visible in the drive to encourage banks to join the platform which MNO3 confirmed that banks such as Commercial Bank of Zimbabwe (CBZ), Zimbabwe Banking Corporation (ZB) and Stanbic have done.

Bank1 supports this opinion through giving an insight into the developments in their bank. The reported statistics show tremendous improvement as the bank's clientele stood at approximately 76 000 active accounts prior to m-banking. M-banking was launched in 2011 and by end of 2012 the client base was about 326 000 signifying a tremendous growth of over 425% by any standards is good.

Although this was achieved through the bank's initiative and drive, most believe better results are achievable if turned into a national drive led by the authorities. Bank1 believes that "the message still needs to reach the masses and convert them to become adopters of the innovation. If sent by the legitimate authorities, the message will be well-received and stands a better chance of success". Others believe that since inception, m-banking has gathered momentum and is up to speed in terms of adoption. This is in response to the need to fill in the unbanked gap and to address financial inclusion. This was confirmed by the majority who applauded the extensive awareness drive by the private sector. Pol1 supports Bank1's notion and further states that compared to the Kenya experience; Zimbabwe is following similar strides in diffusion rates.

On the contrary, Bank4 believes that propagation of m-banking is lagging behind due to lack of focus and targeted policy that specifically addresses it, coupled with the failure to share infrastructure by the players. It is noted that not all MNOs are willing to avail their platform for use by their competition and hence this is stifling growth.

There is a general consensus from all that m-banking has not yet reached full potential and with an estimation of over 7 million mobile phone subscribers, they all agree that there is a lot that can be done through policy to encourage the embrace of m-banking. Though policy makers tend to disassociate from the pivotal role preferring to opine that it is a banking matter. Reg1, Reg4 and MNO3 also acknowledged that although the penetration of m-banking is impressive, there is still a large untapped market. Reg4 pointed out that for "for as long as mobile phone penetration is higher than registered m-banking users, there is potential for expansion, but m-banking has gathered momentum".

The removal of import duty on ICT equipment was a welcomed decision by all citing that it promotes information technology availability to all based on reasonable cost of purchase. According to Bank3 and Bank4 it would have taken longer strides had it encompassed mobile handsets, as they are one of the means by which services such as m-banking are delivered. The cost of connectivity through mobile handsets would be relatively low compared to the current rates.

Bank2 concurs and further suggests that a policy on taxing banking hall transactions unlike m-banking transactions would be a good driver to channel customers to make use of m-banking thereby encouraging uptake.

Pol2 gave an insight that policy articulating m-banking will be in future policy documents as it is work under progress. MNO1 confirms that policy plays a vital role and believes m-banking is lagging behind because there is no clear-cut policy and regulation in place; hence there is a lot of confusion as to what can or cannot be done. MNO1 notes that this in itself is a major hindrance to progress.

In a difference of opinion, Reg1 believes m-banking is up to speed since a major impediment of inadequate bandwidth was addressed through connection to the undersea cable via Mozambique and South Africa; hence adequate resources are in place to support its rollout. Reg1 confirmed that the abundant provision of broadband significantly reduced the cost of access.

Reg1 and Reg3 pointed out that although there is no direct policy on m-banking, the universal service obligation policy requires that broadband facilities be made available across the country to enable inclusion for all, including remote/rural areas. By fulfilling this requirement, a platform is set for mobile network expansion, and the network will avail a platform for m-banking. Reg2 (interview, 8 January 2013) also points out that they are mandated to fulfil such obligations at the least possible cost to enable services to be affordable and accessible to all people. Reg1 concurs and believes it is a key driver for the propagation of m-banking.

Reg1 noted with concern that although broadband facilities have been availed, the lack of funding is slowing down the rollout pace and also noted that “if the investment climate improves, there is bound to be exponential growth”.

Based on the above response, what reverberates is current policy is out-dated with an inclination to the old banking model which places emphasis on brick and mortar branch expansion. There is an overwhelming response on the concerns of who is best placed to champion awareness and acceptance of m-banking.

4.4 Regulation – Is it a must?

The regulatory turf was investigated and participants took time to articulate their views by responding to the following questions.

To what extent and in what ways does current regulation stimulate the shift to mobile banking?

- **Are there any particular current regulations that you commend and note as being key in promoting m-banking uptake? Can you explain why?**
- **Are there any particular current regulations that you see as problematic for the diffusion and uptake of m-banking? Please explain why?**

It was widely highlighted that current regulation does not encompass m-banking, hence the lack can be viewed as an obstacle. Bank1 also expressed concern that there is insufficient policy and “m-banking is an innovation that has run ahead of current existing regulation in the country”.

In support of Bank1’s observation, Bank4 confirmed that current regulation is out-dated and that is actually working as an obstacle. Concern was raised that in the current regulations, RBZ stipulates that for a bank to operate, they should have physical presence in remote areas and they require brick and mortar branches which are very costly to set up. This suggests that the regulator is not pushing for the widening of the network through technology, though such an obligation can be easily met through m-banking and the use of a wide network of agents thereby “bringing the

bank to the people rather than a branch setup which draws people to the bank”, Bank4.

Med1 concurs and states “banking is no longer somewhere you go, it is something you do. People need banking, but they do not necessarily need banks”. Bank3 noted that this is an m-banking advantage which allows ease of access and addresses the financial inclusion. Bank3 added that the level of appreciation should increase in view of the fact that “it costs less for both the service provider and the customer and therefore, provides a win-win situation”.

With the United States dollar (USD) as the main currency in Zimbabwe, Bank4 pointed out that it is not Zimbabwe’s own currency and therefore, floating notes are not easily replaced when soiled and highlighted that although the business tradition is cash-centric, it is time to embrace change and move with technology. Bank4 also stated that not all transactions require cash and hence the use of m-banking to transact will be highly useful in to alleviate liquidity challenges in Zimbabwe. Although there is scepticism on non-cash transactions, Bank4 made a clear distinction that cash and money are different and added that “there are fears that m-banking is substituting cash. People should understand that m-banking is not substituting cash, but is a channel through which money transactions are done, while the cash still resides in the bank. Government can help demystify and clarify through policy”.

However, Pol2 was quick to dismiss the notion that Government would be pivotal in changing the customers’ cash culture rather preferring to put the onus on the service providers. However, Med1 notes that “the time has come for a radical change to take place, and this will see the phone becoming the day-to-day bank account of the near future”. This being the case, the bank that does not embrace the change, will soon be out of business.

In view of the many benefits that the Zimbabwe context can benefit through use of m-banking, Bank4 expressed concern on the regulators’ lack of speed in adjusting to the developments in the industry and insinuated that “they seem to enjoy playing the catch-up game. One day they will be totally left behind and will not be able to cover

the gap”. Bank3 also expressed concern over lack of m-banking regulation and pointed out that regulating through the current Bank Act under chapter 24:10 may have negative outcome should the unexpected occur.

Bank4 also pointed out that Ecocash took first mover strides in marketing their product, with seemingly great response. “A lot of effort was put into this and it is now paying off for the providers as they have the biggest market share in m-banking, but now banks through Bankers Association of Zimbabwe (BAZ) are now lobbying the regulator to stop Ecocash progression yet they did not take the initiative to join the bandwagon and they also would enjoy a piece of the pie”. While this is an example of the regulator trailing behind development, could it not be averted had the regulations been revised in line with development?

It has been confirmed that there is no regulation on m-banking but cited that the RBZ governor in the monetary policy for first quarter 2013 has acknowledged and promised to work on it. Bank3 was sceptic of the promise and rather preferred to take the “let us wait and see if it materialises” stance.

Pol3 and Med1 pointed out that the lack of regulation is what has propelled the expansion of Ecocash and Med1 believes that “while all other players are lamenting that there is no regulation others are riding the wave and establishing their position on the market”. According to Med1, by the time the regulation is pronounced, the market will be saturated through “unregulated dominance”.

Although hesitant, most confirmed that the regulation in m-banking is not up to speed hence the need for regulators to step-up revision pace to have regulation that speaks explicitly to m-banking in place. Others preferring to say it is non-existent. Med1 raised a question should m-banking be regulated? How best can it be regulated? Med1 points out that if regulation is to be done, the contestations between MNOs and banks need to be addressed not merely for the protection of the customer, but also to provide a base for sanity to prevail. The regulation needs to be articulate, lest the simmering wars between the sectors will not cease. MNO2 cited the Kenya

experience, highlighting that it had a quantum take off due to the endorsement it received from the authorities hence the populace embraced it.

Echoing the sentiments put forward by Bank1, MNO1 believes if the government and regulators endorse m-banking, it would change the general perception on cashless transactions and encourage its uptake. However, Reg5 stated that “it is not the regulator’s job to promote m-banking, ours is to moderate and ensure robust risk management is in place for the benefit of the gullible customers and for the preservation and protection of the country’s payment system”.

MNO1 reiterated that regulators ought to standardise the models of m-banking they allow, as a way to have a full complement of service providers as the lack of it is an impediment to the rollout of m-banking. MNO2 also believes that once clear-cut policy and regulation are in place, there is nothing that would stop m-banking reaching full capacity.

Know your customer (KYC) regulations are necessary to avert terrorism attacks, but interviewees concurred they are onerous on the majority of the people who do not have all that is required but at the same time do not pose any security threat. Bank1 concurs and adds “regulation should be flexible enough to allow the use of discretion as it currently is inhibiting progress”. It is believed they are aiding as a stumbling block for the unbanked that are not able to satisfy them hence keeping them excluded from financial services. Participants called for KYC relaxation and instead allow room to deal with each applicant on a case-by-case basis. Thus accommodating the ordinary man in the street, who may not meet requirements but at the same time will not pose any risk that would violate AML/CFT regulation.

Reg1 confirmed that there is no regulation for m-banking but their focus is on quality of service delivery which may include but is not limited to m-banking. Reg1 confirms that m-banking is just like any other product and is not given particular attention hence there are no rules or regulation pertaining to it. However, they also believe that the onus to regulate m-banking lies with RBZ.

However, Reg4 believes that there is no inhibition on current regulation so it follows that “by not explicitly putting barriers, it implicitly promotes m-banking” it really depends on what angle you want to tackle from. One can look at it from two perspectives; one being conscientious visible efforts that spell out a drive towards diffusion or from another of not mentioning but at the same time not putting prohibitive measures in place. Therefore based on that justification, Reg4 believes that the regulatory environment is friendly. While there is no current regulation on m-banking, MNO3 applauds the regulator for allowing engagement for the justification of innovative products and not totally rejecting outright without giving a chance. He also believes that this is also a good starting point for setting standards.

From the responses to question relating to regulation, the above sums up the divergent views of the regulatory environment. The overwhelming consensus is there is no articulate regulation though some believe it to be an advantage for propagation; others opted to view it as a blockage to the rollout and embrace of m-banking.

4.4.1 Basic regulatory requirements

The following question was asked to get an overview of the licencing aspect as required by regulation. Each interviewee had the opportunity to elaborate their view based on what transpires in the process. The question was:

To what extent do you feel that the content of m-banking licences or the licensing procedure either stimulates or impedes the rollout and uptake of m-banking? Please elaborate.

All participants confirmed that there is no licence for m-banking per se; the RBZ gives a letter of approval as an addendum to an existing bank licence. This is issued after thorough assessment and evaluation by the central payments department to detect any flows which may disadvantage the customers. Bank1 also stated that one can come up with any model as long as they can justify and prove validity and a letter of approval. “The bottom line is they do not have set standards or a formal protocol for licensing”. MNO3 also confirmed that the current Acts steering the sector make no mention of m-banking hence there is no licence for it.

Reg4 and Reg5 agree that providers have to demonstrate beyond any doubt that they have robust systems that encompass risk management, right governance and are a holder of a recognised bank licence issued in terms of the RBZ Bank Act for a letter of approval to be granted. Supervision of such is provided for under the Bank supervision and the National Payment System (NPS) perspective and is restricted to banks to ensure service is provided by accredited organisations. Bank4 was of the opinion that there is an indirect push for bank-led m-banking model by the RBZ, as m-banking can only be approved for organisations holding bank licences.

Bank3 and Bank4 agreed that the licensing process is onerous and prohibitive for new entrants in the banking sector. This suggests a silent declaration by the regulator that bank-led models are currently the only recognised option which tends to promote monopolistic tendencies and costs will remain high due to lack of competition. Instead Bank4 feels that with the developments in finance and technology, regulators' should have taken the initiative to design procedures that could be taken as a standard for licensing m-banking service providers as opposed to the current "first justify" process. While it may be a way to promote different flavours to m-banking, it chokes progress.

Bank3 confirmed that the finance regulator turned down a request by an MNO to provide an telco-led m-banking model and gave a directive that should the MNO want to bring such a product, they would have to be in partnership with a bank. This confirms rigidity on the part of the regulator. MNO3 feels that the scenario can only change when there are specific standards and guidelines such that if one fulfils them, they may be awarded a licence regardless of sector.

In a difference of opinion Reg5 emphasized that the financial service sector is the most regulated in the country and has tried and tested rules and hence the best possible candidate for experimenting with new ventures thus the decision to require a mandatory bank licence before the issuing of an approval for m-banking. The aim being to safeguard the integrity of the NPS and to ensure risk is adequately managed and customers are not unduly exposed. As a contingency measure only regulated banks have access to the NPS, nonbanks may only gain access through joint

ventures. Reg4 agrees with Reg5's opinion and adds that "in order to maintain system stability [on both financial and payment systems] it is not possible to allow every Jack and Jill to offer services willy-nilly".

Bank1 confirmed that they provide their service via all three MNOs currently running and believes that there are no barriers with regards to the model used and access to infrastructure. Bank4 had a difference of opinion and pointed out that if the platform was readily available for all players, there would be no fights emerging as is currently witnessed and reported in the media. Bank4 quoted an article entitled "Banks gang up against Ecocash" in the Herald (2013a). With such a tangible example, one may be compelled to go with Bank4's opinion given that the report emerged due to recent developments. Reg1 also confirmed the developments and put forward a directive for the MNOs to treat all players without favour, preference or discrimination.

It also emerged that the three MNOs also do not work together in harmony. Bank3 supports this assertion by citing the case between Econet and Netone where the former switched off the gateway on the later due to a disagreement. Bank3 also pointed out the urgent need to address harmony issues between MNOs emphasising that enabling interconnectivity and interoperability aids in propelling m-banking diffusion. Reg4 also believes system availability is made possible through interconnectivity and urged the stakeholders to remove barriers that prohibit such. Bank3 believes that with an interoperability model such as currently used by banks through ZimSwitch and real-time gross settlement (RTGS) where all banks are interlinked through a common platform, MNOs would go a long way in network expansion and promoting ubiquity of service. Bank3 pointed out that currently there is no sharing of infrastructure citing that Netone may have a base station in a remote area like Mukumbura, but in that same area Econet will not be able to function and proposed sharing of infrastructure should be regulated.

MNO3 concurred with Bank3 and suggests there should be policy and standards that encourage interoperability to promote ubiquitous presence and achieve the financial inclusion goal.

MNO2 noted with disappointment that the regulator is not entertaining telco-led models, but points out that a first was scored in Kenya by a telco-led model which was offered by Safaricom. MNO2 feels there is a need for flexibility on the regulators' part to enable variety to be offered to the diverse clientele. MNO2 alluded that in principle the regulator rejects telco-led models but in practice has allowed an MNO to go ahead with their product. Such practice has brought confusion and MNO2 abhors the visible double-standards and called for the regulator to "practice what you preach".

Med1 gave examples of the different contexts that embraced different models citing that "in Philippines, MNOs can perform banking functions while in the US, MNOs are required to register with the finance services sector", but was clear that there is no need to be rigid, the model adopted should be decided and agreed upon by the stakeholders. Med1 stresses that the chosen model should be able to satisfy the need of financial inclusion on a secure platform.

MNO2 argues that the regulator should reconsider imposing partnerships with banks in view of the fact that trust and confidence in the banks is very low, but people have confidence in the services offered by MNOs. This is confirmed by the magnitude of the spread of mobile telephony; hence this according to both MNO1 and MNO2 should be used as a platform to entice people to return to mainstream banking though pushed through their already trustworthy service providers, the MNOs. Currently MNOs have a wide customer base compared to banks and MNO2 argued that they are in a better position to convert existing users to banking by pushing a trusted brand rather than polishing one that has been tarnished in the past thereby increasing their own brand risk in the event that the chosen partner may go out of business.

Med1 indirectly acknowledged the argument made by MNO2 and confirmed that "the high penetration rate in developing countries is a lucrative market to recruit the unbanked". In view of this fact, Med1 agrees that stakeholders need to harness the opportunity presented by the mobile telephony base if they are to achieve market penetration to the most remote areas where there is coverage but no physical bank.

Reg1 highlighted that the authority did not auction spectrum licences as is the norm in other countries, but operators were mandated only to pay a licence upgrade fee of \$2 million for them to operate on 3G. Reg1 believes this was a relief on the operators as they did not have to go through an onerous task of filing applications for new licences.

Based on a review of the current licencing procedure, all participants confirmed that there is no licence for m-banking and only an addendum is issued to current bank licence holders. A concern was raised that it is a limiting factor pushing only for bank-led models though success elsewhere (e.g. Kenya) has been evident in telco-led models.

4.5 Impact of policy and regulation

The general perception of the m-banking environment was assessed through engaging participants to respond to the following question,

Would you say the overall impact of current policy and regulation on the delivery of m-banking is positive or negative? Please explain.

Bank1 believes policy and regulation are pivotal to the diffusion of m-banking, but points out that it is currently a fuzzy area and not enough effort to channel adequate policy and regulation is being made. The parties involved are seemingly not aggressive enough to come up with a framework that encourages the embrace of m-banking. It would make an impact if parties agreed and pushed for a clear goal and confirmed the authenticity of m-banking so that there will be an awareness and uptake drive, rather than the seeming resistance currently perceived. Policy makers and regulators alike are seemingly taking a back seat and not playing an active role in pushing for adoption. This is a view shared by most and believe that regulators and policy makers need to play an active, visible role to aid diffusion.

Bank4 stated that once adherence to the Bank Act is there, the mobile platform becomes “simply a delivery channel and there should be no infringement to the regulation pertaining to mobile telephony to enable m-banking sail smoothly”.

Bank3 believes that the current policy and regulatory environment has a negative impact and is stifling the growth of m-banking through not focussing on the propagation factors. Furthermore, the inability to transact across borders due to the current prohibiting policy that no outflow of cash from Zimbabwe limits the capacity to a local level instead of fully utilising the product like it is utilised in other countries as an international product.

However, MNO3 had a differing view and believes that current policy environment is positive given as it has allowed the introduction of a service based on justification merit which definitely impacts the economy in a positive manor. He also believes it is ideal for pioneering innovation and those that are up to the challenge can set the ball rolling. Reg4 agrees with MNO3 and also believes that policies are geared towards promotion of non-cash payment mechanisms as recognised in the NPS Act as a legal framework. However, Reg4 believes that the main point is to ensure that the service is available in an environment where the risk management systems are robust enough to ensure payment system stability.

Based on policy update currently in progress, Pol1 and Pol2 would not be drawn to comment directly on its impact citing it as a premature conclusion, but confirms that positive strides are taking place. Pol2 mentioned that during the reading of the monetary and fiscal policies there was a mention of plans to drive effort towards m-banking to alleviate the liquidity crisis currently faced in the country.

Pol3 on the other hand believes policy may not articulate m-banking but through the broad coverage of NPS Act and the guidance of the Bank Act, “there is no blockage for those with an innovative drive and zest for pioneering new products. That confirms there is ample room for the shakers and movers”. MNO3 on the other hand confirmed that the current regulation such as NPS Act, Bank Act and others are biased towards financial institutions and hence are rigid as they totally block out other players such as MNOs from providing service on their own. He also notes that the lack of regulation contributes to impeding diffusion of m-banking.

Med1 concurs with Bank1 and adds that policy and regulation are necessary for providing guidelines and standards, without which the market will be chaotic. MNO3 concurs and stressed that policy and regulation play a role through influencing how service providers interact with the market.

Reg5 believes that “the fact that current does not prohibit m-banking is a positive contribution otherwise if it explicitly denied any prospects of such innovations then that is when we would talk of hindrances”. Reg5 went on to state that while the NPS Act [Chapter 24:23] provides a legal basis for electronic payments, “an e-payment systems act would be good to have especially for those who are keen on rules on paper”. Generally policy’s main aim is to ensure standards are adhered to for the protection of the public’s interests and this is currently being achieved hence in that aspect it is positive.

Reg4 recons “diffusion momentum can be maintained through the current open-for-all approach which encourages innovation”. Reg5 also believes through constant interaction with stakeholders, any hindering factors can be identified and dealt with.

The above confirms that there is no clarity in the current environment. There is an observation that the authorities are not playing a visible role in endorsing m-banking, hence the diffusion rate is slower than anticipated.

4.6 Levelling the playground

While acknowledging that there are multiple players in the provision of m-banking, participants were asked to respond to the following question. When answered, the question would feed into the overall research question pertaining to co-jurisdiction.

Do you think that the overlap between the regulation of telecommunications and the regulation of banking (co-jurisdiction) is being adequately addressed? Please explain.

- O Can you suggest how telecoms / banking co-jurisdiction might be better dealt with?**

Bank1 maintained that overlap means the sharing of information. RBZ is strict on KYC and for a functioning mobile number, Potraz require SIM registration, both require detailed customer information, i.e. Name, ID number, proof of residence etc. By any standards, banking information should be confidential, but has shared information which is currently being duplicated and it is cumbersome on the customer. Bank1 commented that “regulators need to recognise the commonality of information and come to an agreement with the aim of removing duplication”. Bank1 believes that currently the regulators are working in isolation and this at times brings in confusion on the banks.

In a difference of opinion, Bank4 believes that before policy and regulation are promulgated the responsible parties work closely together in areas that affect their jurisdiction, but also points out that lack of continuous interaction in these issues and areas may be their weakness and may result in disjointed efforts which are what outsiders see. There is a need for continued interaction and not limit it to a once-off occasion.

In agreement with Bank4, Bank3 pointed out the lack of visible synergies and harmony on the part of regulators and believes that it is not given the attention it requires. A consensus suggested a joint commission as a solution to harness focused direction in the jurisdictions and propel the growth of m-banking. A further suggestion is for the policy makers to convene and work together on policy speaking to the regulation of m-banking.

MNO3 and Pol1 agree that “co-jurisdiction is still a green area and still has work to be done, though it is moving in a positive direction”. Pol1 acknowledges that convergence is there, though in infancy stages. MNO1 believes all “stakeholders need to acknowledge the presence of convergence in technology the world over and that it is not a limiting but a liberating factor as they will be able to provide a better service through less effort”. MNO1 believes that if regulators take due consideration, they would not try and continue to work in isolation.

According MNO2, the area of co-jurisdiction is raw as regulators seem not to appreciate the role played by the various parties in the provision of m-banking. MNO2 pointed out that the regulator insists that MNOs should be regulated by finance in the provision of m-banking, but does not want to recognise that it is possible for the two sectors to converge and create a common working ground yet still acknowledging their respective individuality. MNO3 concurs with MNO2 and urged the regulators to create a common ground.

Contrary to the belief of many, Reg5 believes “there are no challenges noted thus far and there is no need for continued collaboration with other regulators”.

However, Reg4 acknowledged that there is convergence and this needs a way of proper administration while the individual regulators maintain the jurisdictions. He proposed the use of service level agreements (SLA) as a collaboration mechanism to ensure harmonisation of regulators in the provision of a robust system and he also believes it will also patch current gaps. Reg4 believes if such mechanisms are not in place there is room for players to use loopholes to their advantage and maybe at the expense of others.

MNO1 believes when there is “the meeting of minds with a clear, common goal, co-jurisdiction will be handled in a way that would benefit all involved in m-banking”. MNO1 cited an example of the way millennium development goals (MDGs) are set by the United Nations (UN) where all sectors and stakeholders put in their contributions for deliberation (UNDP,2010), “this should be the way policy and regulation is formulated or reviewed, not in isolation”.

In validation of sentiments echoed by MNO1, Reg1 and Reg2 confirmed that the RBZ came up with a memorandum of understanding (MOU) that was given to the telecom sector for signature. Reg1 confirmed that there is not much pertaining to the telecoms regulator in the MOU hence not much to talk about co-jurisdiction.

The above confirms that the area of co-jurisdiction is still in its infancy stage and m-banking rollout seems to be done in isolation. There is a general inclination of not

taking responsibility by the parties involved, with a tendency of passing responsibility to the other counterpart.

4.7 Other contributors

To sum up the investigation, room was left for participants to identify other factors that contribute to the propagation of m-banking. This was achieved through asking the following question:

Are there any other issues or factors - outside of policy and regulation - that we should consider as having an important impact on the diffusion and adoption of m-banking in Zimbabwe?

Participants highlighted that charges levied by MNOs on m-banking transactions need urgent addressing as they are punitive. Charges are passed to the customer, thereby making the service too expensive and out of reach for the intended recipients and in turn acting as a deterrent to prospective customers. Reg4 and Reg5 believe the cost of service, accessibility and flexibility are critical for uptake. Reg4 like many others believes there is over \$2billion circulating in the informal sector and at the right price can easily be channelled back into the formal sector. MNO3 echoed Reg4's view stressing that "there is a lot of money sitting under the pillows and flying around the thriving informal sector and that is what we are targeting and channelling back into the formal economy".

Reg1 emphasised that the cost of transmission is very minimal but is surprised at the extortionist prices attached to m-banking. Reg1 explained that pricing for sending an sms regardless of whether it is m-banking related is the same, but handling charges and commission levied by the banks is what then hikes the prices, hence control can only be done by the RBZ.

According to Bank2 and MNO2, the unemployed and informal traders are meant to be the beneficiaries of m-banking, but the high cost is prohibitive and it may end up not realising maximum potential if not urgently addressed. Pol1 also pointed out that "the unbanked are a parallel economy and that is where all the money is. The cost of

banking should be attractive enough for them to bring their money into the mainstream economy". Pol1 believes that m-banking is a tool for possibly bridging the existing gap between the formal and informal economies in Zimbabwe.

On the contrary Bank3 believes that the high pricing structure is justified citing that there are agent commissions to be paid and these have to be lucrative enough to entice agents to push m-banking as part of their products and that is the only way to grow the network and promote ubiquity in the most remote areas. Bank3 acknowledges that inception pricing structure was high due to the commissions to attract agent participants, but has been reviewed having achieved the initial goal. A further assertion was that bank charges were cheaper for the banked, but m-banking is catering for the unbanked and under-banked and hence the two should not be compared. To support this assertion, Bank3 stressed that there is a need to travel to a bank which may be far for the rural remote areas hence incurring travel costs and time wasted, whereas "m-banking is delivering a solution at the doorstep through the use of agents".

MNO3 supports Bank3's notion adding that "we bring the bank to your pocket at your convenience, surely there is a price attached to that!" Confirming Bank3's point MNO3 stated that "the service is capital intensive and also thrives on extensive agent footprint and they need their share of the cake". With that notion, MNO3 believes their charges can only be termed high by those that choose not to view the holistic picture.

Bank4 also placed emphasis on the need to address the electricity supply challenge that has brought in regular blackouts, which affect network availability. "Back-up sources of power may have been put in place, but the frequency of power-cuts makes it problematic to run a viable business."

Bank1, Bank2 and Bank4 brought forth their security concerns on the platforms where m-banking is running. They raised queries with the authorities responsible, but are puzzled at the lack of response. Bank2 actually retorted "no response may mean that like all other issues, they do not have a set standard on security measures and I suppose they will have a quick-fix solution once disaster strikes".

Pol1 confirms that there is a national policy that speaks on security issues, but points out that it is yet to be fine-tuned hence it has not been applied “though it is a worrisome situation as it exposes customers to all sorts of malice activity”. Pol1 also stressed that cyber security was high on the agenda in the policy update and is being treated as an urgent policy, but also noted with concern that “people are happy using m-banking platform, but they do not realise that currently there is no policy to govern security breach should it occur”.

Reg2 agrees and cites the lack of cyber security as a major policy blockage given the magnitude of depositors funds involved. Reg1 and Reg3 confirmed the development cited by Pol1 and acknowledged that the government is steering a committee to ensure that critical information, infrastructure protection (CIIP) framework is in place under the e-transaction policy and would address the disparity. Pol1 believes this will be a notable achievement at a national level, since security cuts-across all sectors. Based on its weight of importance, Pol1 is of a strong opinion that the policy currently under development should be promulgated into an Act so that it translates to law.

On looking at security from MN02’s perspective, there is need to ensure that people’s money is safe, “currently an MNO is providing a service with no visible bank partner, one wonders how they are looking after the volumes of money they move on a daily basis”. MNO2 also points out that as a set rule, banks have to be capitalised and funds held by the central bank, “but in the case of the MNO, there is nothing held as guarantee or to back depositors’ funds or if there is, the regulator should use the same template in allowing other telco-led models to kick-off”.

Pol1 also raised an interesting view that literacy is covered in the policy as it is key for the user to appreciate and understand what it is that they are doing, how best to do it and what outcome to expect. Pol1 emphasized the literacy need and pointed out that diffusion rate of m-banking is highly impacted by it. Reg1 confirmed that through their corporate social responsibility program and the presidential digital literacy program they set up computers and internet facilities for the under-served schools to

promote and enhance digital literacy and that would contribute to increased awareness and increase uptake of technology based services like m-banking.

Another point raised is one of intellectual property, Pol1 stressed that applications are being developed by different organisations and hence are different one from the other, there is a need to document and protect such developments.

Pol1 cited that getting consumer feedback is necessary as that is the only way to ascertain whether m-banking is well received or not. That also is the way to address the people's concerns on the product. With concern, Pol1 noted that "often service providers do not take time to get feedback though it is a point needed if improvement is to take place".

Under other contributory factors most felt bank charges levied are exorbitant and need a downward review. Bankers on the other hand believe the costs are justified. Other issues such as intermittent power supply are affecting business as is the lack of appreciating the benefits that can be enjoyed through the use of m-banking as a result of lack of awareness education.

Conclusion

The interviewees' response to the introductory questions was varied, ranging from the enthusiastic to the cynical. On the one hand there were a number of respondents whose enthusiasm was palpable. For example, Bank1 summarised that the current state of affairs was conducive for innovators who are not afraid to venture into uncharted territory. On the other hand, there were those interviewees who felt the lack of clarity on what is permissible was a setback for multiple players who would want to be a part of the rollout of m-banking. This is illustrated in the response of MNO2 who alluded that in principle the regulator rejects telco-led models but in practice has allowed an MNO to go ahead with their product. Such practice has brought confusion and MNO2 abhors the visible double-standards and called for the regulator to "practice what you preach".

Based on the responses it is evident that there are divergent views on the impact of policy and regulation on the rollout and uptake of m-banking. There is a general acknowledgement that there is no articulate policy and regulation on m-banking. What also emerged is that there is uncertainty on roles played by stakeholders in delivering m-banking services. The research shows that there is a tendency of shifting responsibility between the stakeholders as revealed by the lack of co-ordination and co-operation resulting in rollout efforts in isolation.

In Chapter five we will unpack and analyse the findings based on themes discussed in Chapter two in order to align the research findings with the body of literature thereby giving context to the research.

CHAPTER 5 Policy and Regulation for M-Banking in Zimbabwe Analysed

In this chapter, the outcome of the research stated in Chapter four will be analysed. In doing so, the research will link the findings back to what is stated in Chapter two – literature review. Following the guideline given by Leedy and Ormrod's statement that the "central task during the data analysis is to identify common themes in people's descriptions of their experiences" (2005, p 140), the analysis will be organised based on commonalities and differences. This will bring out themes discussed in literature review which will aid clarity of response to the research question and sub-questions. Are the current policy and regulation stimulating or hindering the propagation and uptake of m-banking in Zimbabwe? The answers to the sub-questions will help shed light and ultimately answer the main question on addressing the diffusion of m-banking in Zimbabwe and thus enable a conclusion to be drawn in Chapter six.

5.1 The ideal environment

To what extent and in what ways does policy stimulate the shift to mobile banking?

If one is to define a conducive environment for effectively rolling out m-banking as stated by Porteous (2006) and reiterated by Mas and Radcliff (2010), one has to put into consideration various contributing factors. These vary from context to context hence posing a challenge as there is no standard measure. Adding to the complexity, individuals may have varying perceptions and standards on placing meaning on what

is termed conducive. Porteous and Wishart (2006) confirm that there are various externalities that differ in each individual context. However, there are basic factors that one may consider common in relation to every context and these are administered through policy. Porteous (2006) and Omwansa (2009) believe there is a need to strike a balance in order to come up with favourable policies that do not hinder propagation of innovations such as m-banking. The effect of policy on propagation will be analysed.

5.1.1 Security

Regardless of context, security is considered mandatory when dealing with treasure which includes money. Dahlberg et al (2007) confirmed that security is ranked highly on the customer priority list and confirmed that the customer needs to know that their transactions are secure and not prone to any form of loss. Confidentiality and encryption came up as vital. Dias and McKee (2010) also echoed the same sentiments and also pointed out that no matter the magnitude, loss has a negative effect on the customer. Although such gravity is placed on security, varying views came out during the research.

Given the importance of security, we see from Chapter four that the research brings out increased anxiety expressed by the overwhelming majority and confirmed by Bank2 who remarked “no response may mean that like all other issues, authorities do not have a set standard on security measures and I suppose they will have a quick-fix solution once disaster strikes”. The lack of security was confirmed by Pol1 when he stated “people are happy using m-banking platform, but they do not realise that currently there is no policy to govern security breach should it occur”.

This suggests that although scholars may have highly ranked the necessity of security which has been addressed in various contexts, Zimbabwe seems not to appreciate the gravity of lacking it as confirmed by the lack of policy articulating security. This evident in Chapter 4.2 where the effects of policy were scrutinised. Although there is an indication that there is work in progress as confirmed in Chapter four, one wonders why a policy is not already in place considering that technology has been in use long before the advent of m-banking. The lack of security may be

contributing to the slow uptake of m-banking because people are generally risk averse. Donner and Tellez (2008) confirm that when “levels of perceived risk” are high, it hinders adoption.

On security of depositors’ funds, ITU (2011b) indicates that in various countries regulation has made it mandatory for banks to deposit cash equivalent to their transaction volume with the central bank as security, though MNOs are not mandated to provide such. However, given the push by regulators for bank-led models as stated in the previous chapter, one may conclude there is a measure of depositors’ fund security though concerns are raised at the bank sector stability following the period of economic down-turn recorded in Chapter 4.1 which has been noted with concern.

5.1.2 Consumer confidence

It is believed that confidence enables one to venture into the escapades, more-so when it involves unfamiliar ground. Porteous (2006) confirms that when customers are faced with challenges that emanate from security inadequacies, loss of confidence is certain. Dias and Mckee (2010) believe that customer confidence in the financial services is highly affected in the event of a loss.

However, we saw in the previous chapter (cf section 4.1) that there is a general consensus of scepticism in the Zimbabwe banking sector based on the loss incurred during a decade of economy slump which was characterised by hyperinflation. Reg1 commented “as a country we are emerging from a lean patch and banks need to spruce their act if people are to regain confidence in them”. Overwhelming evidence suggests that progress on m-banking uptake hinges on confidence and trust in the banks which is currently low Zimbabwe. This sentiment is echoed by many in 4.3 above and confirmed by the likes of MNO2 who stated “the recent practice of banks opening today and closing tomorrow is uncharacteristic of an institution trusted with people’s money”.

The previous chapter (cf Section 4.2) showed high levels of uncertainty echoed by most participants. This was confirmed by MNO1’s view, “regardless of the purported

stability in the banking sector, there is high scepticism and it will not be easily removed". In such an environment, some customers are banked not based on freewill but only to fulfil an employer's mandate.

Banks on the other hand are very optimistic and believe they are making progress in regaining customer confidence as stated by Bank1 who gave a snapshot of statistics in Chapter 4.1 on their improving client base, attributing it to efforts made by the banks.

Based on divergent views, one is drawn to believe the assertions made by scholars that any form of loss results in an erosion of confidence. Corrective measures may be a result of concerted effort over a lengthy period of time for restoration of confidence to take place. Bank1 confirms that efforts have to be channelled if a positive change is to follow. This is confirmed by the current situation in Zimbabwe.

Donner and Tellez (2008) believe that trust can only develop after confidence is in place, but also acknowledge that it plays a pivotal role. This belief is backed by other authors such as Dube et al (2011), Mas and Radcliff (2010) who confirm that uptake of a service is determined by the level of confidence and when trust issues have been addressed. Mas and Radcliff assert that the success of M-Pesa was achieved because Safaricom dealt with confidence and trust issues.

On trust issues, MNOs believe (cf section 4.4.1) they are better placed to recruit the unbanked based on the credibility of their service as confirmed by the penetration rate of mobile telephones. They note that a stumbling block has proven to be the restriction of permitted models for rollout in Zimbabwe. However, this is despite the fact that scholars have recorded successful rollout of other models in countries like Kenya (cf Porteous, 2006 et al).

Having addressed the confidence and trust issues, another factor that needs to be addressed is affordability.

5.1.3 The cost factor

The uptake of a service is affected by its cost i.e. is it affordable? As observed by Dube et al (2011), the appeal of mobile services in developing countries hinges on affordability. Porteous (2006) and Ondiege (2010) believe the cost of banking is significantly lowered by the use of technology. On the uptake of m-banking, Porteous and Wishart (2006) acknowledge that cost plays a pivotal role. Alampay (2010) confirmed that the propagation of m-banking is related to the attached cost citing that people are lured by prices lower than those on alternative offerings. Mas and Radcliffe (2010) believe this is true as they attribute the success of Kenya's M-Pesa model to its low-cost platform.

However, from the banked came an outcry on the exorbitant charges levied by the banks in Zimbabwe as recorded in Chapter 4.7. This is a contributor to the low uptake of m-banking. Participants like Pol1 emphasised that through the high cost, banks are doing a disservice to the financial inclusion policy and are encouraging "people to keep money under the pillow" and by so doing increasing risk on the unbanked as also confirmed by media reports such as one recorded in the local press titled "Under the bed banking spurs burglaries in Harare" (Herald, 2012).

The overwhelming response on the pricing structure is an indicator that there is a need for redress in order to enable inclusion of the low-income bracket that is currently the biggest customer base according to the responses in Chapter 4.1. This was also confirmed by a survey reported by Techzim (2011). Although efforts have been made by the authorities lobbying banks for a downward cost review, with punitive measures for non-adherence, this has not yielded positive results hence government resorted to giving a directive and ultimatum (Herald, 2013b).

However, in a difference of opinion, one may argue that charges could be justified bearing in mind the cost of platform setup and that of meeting regulatory requirements in the finance sector. This is the case according to some in Chapter 4.7.

One is left wondering whether the push to lower charges will be effective bearing in mind that in the past similar threats have been issued and not followed-through albeit in other sectors. This raises the question of how best to tackle the situation as it clearly affects the embrace of m-banking.

Having dealt with the issue of cost, let us now look at the effect of awareness and literacy.

5.1.4 Spreading the news

If one is to embrace a service, one has to be aware of its existence. This is confirmed by authors such as Donner and Tellez (2008) and ITU (2011b) who believe that adoption and uptake of m-banking is stimulated when the intended recipients are made aware of its existence. Mas and Radcliff (2010) believe in awareness campaign strategies and propose the use of above-the-line channel such as TV and radio broadcast and below-the-line channel such as stage plays and banner advertisements. While the marketing strategies increase awareness, Dias and McKee (2010) believe m-banking is better received when a concerted effort of endorsement is done by authorities such as policy makers, regulators and civil society leaders.

Service providers have done their part to raise awareness as confirmed in 4.3 by MNO3 who says “our aim was to get to all people across the board, so we made use of all advertising techniques possible to ensure every class gets the message that there is a new product on the market. This is visible in our cut-throat aggressive marketing strategy”. There was a strong feeling amongst the respondents that the need for greater awareness was still enormous. Although some were adamant that awareness is a business issue as recorded in Chapter 4.5, it is evident on the various platforms that an organisation’s effort is better received when backed by legitimate authority. Such is backed by scholars like Porteous and Wishart (2006). Banks and MNOs have taken strides in raising awareness, but they feel their message is not well-received to their expectations because policy makers and regulators alike are not playing the visible role of encouragement as observed in Chapter 4.5.

Bank2 strongly feels that government should spearhead awareness through, “adopting it [m-banking] for payment of social services, grants, pensions and even for employee salaries since they are the biggest employer. Through leading by example, they will help in instilling confidence in the system”. This is evident in Chapter 4.4 where divergent views on who is best suited to spearhead the call to embrace m-banking.

Regulators on the other hand feel it is not their duty and policy makers are mum preferring to have work in progress. With such a situation, one is left wondering how best to tackle the situation and bring all stakeholders on a similar page.

5.1.5 What are the policy blockages hindering mobile banking diffusion?

The proliferation m-banking is aided or hindered by various externalities as confirmed by Porteous and Wishart (2006) who believe that financial services structures play a critical role in either encouraging or discouraging the propagation of m-banking. Mas and Radcliffe (2010) believe rollout can be affected by various hurdles such as adverse network effects, chicken-and-egg trap and trust issues. Porteous (2009) agrees and believes the externalities differ and are based on contexts.

The uptake of m-banking in Zimbabwe is largely attributed to an initiative driven by the service providers as evident in Chapter 4.1. This was confirmed by all, though with varying explanations on the motive behind the drive. In chapter 4.4 the general view from interviewees was that society leaders are able to influence the magnitude of m-banking uptake suggests that there is a notable gap, which when plugged has high prospect of positive influence on propagation. This is believed to be a task best handled by the government. Such sentiments reverberate and were confirmed by Bank1 “m-banking is robust, flexible and efficient enough but government still lacks the appreciation and hence still there is no policy on it. There is no advocacy from the policy makers, in short there is no stimulation at all”.

Although out-dated according to the interviewees (section 4.4.1), the financial inclusion policy is indirectly promoting the proliferation of m-banking as service providers avoid the high expenses of setting up branches in remote areas. The drive

to remain in business has propelled banks to compete to maintain and expand their market share.

The general view that policy is at the centre of propagation was shared by most and efforts to ensure that it is in place is commendable though progress appears rather slow. The unanimous agreement is that policy (be it explicit or implicit) plays a vital role in the promulgation of m-banking.

5.2 Role of regulation

What are the regulatory obstacles pertaining to mobile banking in Zimbabwe?

For the proliferation of m-banking to happen various factors have to be in harmony as confirmed by Porteous (2006) when he stated that in whatever context, there is a need to strike a balance in propelling m-banking rollout and the state of the regulatory environment. The Kenya experience has been commented on by various scholars including Mas and Radcliffe (2010), Omwansa (2009) and Porteous (2009) who all believe that success was achieved because of the regulatory framework that permitted Safaricom to experiment with various models. ITU (2011b) confirmed that flexibility and openness in the regulatory environment made rollout and uptake a lot easier. Mas and Radcliff (2010) believe it was made possible through the support of the regulator, so this goes to show that the regulatory environment has a direct contribution to the outcome of m-banking propagation. However, Porteous (2009) believes inappropriate regulation has a negative impact on m-banking.

5.2.1 Regulation – state of affairs

Various perceptions of the regulatory environment emerged from the research. Some participants felt that having regulation or not really did not affect the status of m-banking while others felt the lack of it was a stumbling block for progress as evident in the responses in the previous chapter (cf Section 4.5).

An observation by Bank1 stated “m-banking is an innovation that has run ahead of current existing regulation in the country”. This is believed to be slowing down the proliferation of m-banking as service providers do not have clarity on what can or

cannot be done. While others agreed with Bank1, there is a strong notion in section 4.5 that the current regulation is out-dated and does not articulate m-banking. Based on such a notion one may be drawn to conclude that an urgent review of policy will have a visible impact on progress in m-banking or will it?

As we saw in the previous chapter (cf Section 4.1 & 4.4) Bank3, Bank4 and MNO3 confirm that for financial inclusion, the regulator stipulates that banks should service remote areas through brick and mortar branches which is very expensive, but does not recognise that m-banking is a suitable option on existing infrastructure. Such an observation is noted by MNO3 who believes the regulator “needs to realise that m-banking provides flexibility and a wider coverage than that of brick and mortar branches. M-banking brings the bank to the people rather than a branch setup which draws people to the bank.”

Media analyst and commentator Med1 agreed with the raised sentiments and added that “banking is no longer somewhere you go, it is something you do. In other words people need banking, but they do not necessarily need banks”. With such convincing observations, one is left wondering why some stakeholders are not pushing for a faster rollout as the advantages seem to outweigh the justification of not having m-banking.

On regulatory requirements, some interviewees raised concern on the steep KYC requirements citing that they are an impediment to the proliferation of m-banking. This is articulated in the previous chapter (cf Section 4.4) where it is acknowledged that not all people are able to satisfy them and hence are keeping away and remaining unbanked. The possibility of a relaxation may be a solution which was also discussed by authors such as Porteous (2006). Given that it is a common problem, one may suggest the adoption of accredited solutions which have been successfully applied to other contexts.

Pertaining to regulation on m-banking some interviewees believe that the lack of specific regulation is a blockage to progress as there is no clarity on limits i.e. what is

allowed and what is not allowed. This suggests that clarity on the acceptable standards is a task best handled an ombudsman. Or would this help in any way?

In a difference of opinion, majority believe that the lack of articulate regulation is a blessing in disguise because it does not stop proliferation for as long as the service provider proves beyond doubt that their product is robust enough to be deployed. This is highlighted by Reg4 who believes that there is no inhibition on current regulation so it follows that “by not explicitly putting barriers, it implicitly promotes m-banking”. In line with Reg4’s assertion, the Bank Act [chapter 24:20] part three, section seven articulates the activities permitted by a licensed bank and states “d) providing money transmission services” (RBZ, 1999). Though indirect it is believed to imply m-banking. Med1 believes dominance is what will be attained by the service providers who have taken strides to rollout in the current unregulated environment. This seems to suggest that the current state of affairs does not have a negative impact on the proliferation of m-banking.

5.2.2 Prevailing culture

The financial culture of a country is believed to affect the rate of diffusion in m-banking as confirmed by Dahlberg et al (2007) and Porteous (2006). They believe that in any context the existing transaction culture will aid or abate the uptake of m-banking.

Zimbabwe is a highly informal economy with a cash-centric culture as noted by the respondents in the previous chapter (cf section 4.4) it is reverberated by majority of the participants. However, there is a need to foster a culture shift for the populace to willingly adopt m-banking as an alternative transaction mode. Such a shift may only succeed when endorsed by the authorities as suggested by ITU (2011b). In line with this suggestion, government is in a position to help demystify and clarify non-cash alternatives through policy. Such a move seems to be underway as confirmed in chapter 4.2.

Reg4 However, expressed that for as long as there is trust in the system people adjust easily, though he felt that a change of culture will not be driven by regulation

alone but by a drive from the service providers. Med1 notes that “the time has come for a radical change to take place, and this will see the phone becoming the day-to-day bank account of the near future.

Though differing in view, all believe that the prevalence of a culture does impact the uptake of m-banking.

5.3 Change in requirements

What are the emerging regulatory requirements with respect to licensing, banking and infrastructure development to support mobile banking?

Convergence in the provision of m-banking altered the norm in licensing as confirmed by ITU (2011b). M-banking straddles multiple domains that are governed by different rules and regulation, though expected to flow seamlessly. Porteous (2006) responded to the question on how the role of MNOs affect m-banking considering they are not licensed to carry out financial transaction just as banks are not licensed for provision of transmission platform.

KPMG (2007) acknowledged the need to re-visit licensing in light of the convergence brought about by m-banking citing that there may be a need for revision to ensure security is not compromised. Alampay (2010) and Alexandre et al (2010) advocate for partnerships (MNO and banks) for the simple reason that their licences will complement each other in m-banking.

ITU (2011b) stated that awarding or reviewing licences should be done speedily lest it becomes an onerous procedure thereby becoming a blockage for new entrants.

Based on the findings in section 4.4.1, RBZ issues a letter of approval to authorise m-banking service providers as confirmed by all interviewees. This is done by the regulator upon satisfactorily justifying a proposed m-banking solution and meeting the requirement of a valid bank licence issued in terms of the Bank Act [Chapter 24:20] (RBZ, 1999). The licence covers the finance sector and stipulates standards and rules for banks. However, the addendum to the existing licence does not specify

any standard requirements as confirmed by Bank1 who stated “the bottom line is they do not have set standards or a formal protocol for licensing”.

Furthermore banks raised concern the onerous process of obtaining a bank licence is prohibitive. While it may be a way to ensure risk is minimised, it hinders new entrants and tends to promote monopolistic tendencies. This sentiment is raised in section 4.41. With such measures in place, one cannot help wondering how best to achieve a mix that provides an environment which promotes propagation while curtailing risk.

In respect to telecommunication, the regulator confirmed that no special licence for m-banking exists as all traffic on the platform is treated the same. On how they affect m-banking, Reg1 believes their licence has nothing to do with m-banking and that it is the finance regulator’s responsibility. This confirms that the purported licensing procedure is done in isolation as observed in the previous chapter (cf Section 4.6).

However, the majority believe licensing should not hinder participation, but the current scenario has proved difficult for those unable to embrace the ‘engage and justify approach’.

5.3.1 Business model

The m-banking model adopted by a context is decided upon after consideration of various factors as ITU (2011b) stated, giving an example of Pakistan where SBP issued a regulation permitting only bank-led models. Kenya on the other hand permitted a telco-led model with success as confirmed by Omwansa (2009).

However, there was disappointment echoed by MNOs and banks alike who bemoaned the regulators lack of consistency in specifying the model Zimbabwe is adopting. This was brought up in the previous chapter (cf Section 4.4.1) where respondents like MNO2 noted that “regulators give the impression that bank-led models are the only acceptable model, they have accepted what appears to be a telco-led model to take off. They should practise what they preach”. The double-standards displayed suggest an inconsistency on the regulatory platform.

Based on findings in Chapter four, what resonates is that based on the approach used on the onset, a service provider is likely to get their proposed m-banking models approved through engaging and convincing the regulators. However, this is an assumption that has not yet been tested hence the existing restrictions only cater for bank-led model in order to minimise risk and ensure system stability and security.

5.4 Impact of policy and regulation

What is the impact of policy and regulation on the delivery of mobile banking?

Donner and Tellez (2008) believe that for success to be attained in deploying m-banking, the policy and regulatory framework has to be favourable. Porteous (2009) reiterates what he initially mentioned in (2006) that a conducive regulatory environment is a prerequisite for rollout to be successful. This then suggests that the magnitude of success or failure hinges on whether policy and regulation supports m-banking. Mas and Radcliffe (2010) and Omwansa (2009) believe Kenya's success was aided by a friendly regulatory environment which was endorsed by policy makers, regulators and others.

All participants acknowledged that policy and regulation has an impact on m-banking though with mixed feelings. Although some believe it currently is a fuzzy area that is not being given the required attention as we see in chapter 4.1, authorities are not playing a visibly active role to ensure clarity is there to promote propagation as observed in chapter 4.5. Based on such a scenario, one is faced with a challenge on how best to motivate the propagation of m-banking at a faster rate.

In the previous chapter, we see that policy makers and regulators believe the lack of clarity is not a hindrance in any way, preferring to view it as positive though indirect push towards adoption of non-cash transacting options as stated in the Monetary Policy Statement (MPS) (RBZ, 2013). Although NPS Act, Bank Act and others are biased towards financial institutions, they implicitly permit though not visibly encouraging m-banking rollout.

Others preferred not to take a stand on the effect of the current policy and regulatory framework citing that changes are currently underway and only when they are fully

implemented can an assessment on their impact be done. With such an outcome of divergent views, one cannot help but observe the need for specific policy and regulation in order to provide the much needed guidance for a smoother rollout.

5.5 Integration

How is the key area of co-jurisdiction between the mobile communication and banking sectors being addressed?

The provision of m-banking entails dissimilar sectors coming together and this poses a challenge as Dahlberg et al (2007) confirms that there are changes in legal and regulatory that will be done to accommodate the revolving jurisdictions. Goswami and Raghavendren (2009) confirm that the sectors are giants in their own right but they have to contribute to a common cause. They admit that challenges will be encountered but they need to be addressed for success to be achieved. Porteous (2009) confirms that the convergence of sectors needs to be managed as failure to do so increases the risk of co-ordination failure. He also re-iterates that the lack of clear leadership and policy is a major drawback that may result in coordination failure. ITU (2011b) suggests making use of a joint commission which is in constant communication as a measure to safeguard against failure.

As we saw from the responses documented in the previous chapter (see 4.6 above) there appears to be general acknowledgement that convergence is taking place, though many are concerned at the lack of visible synergy between the regulators. We also saw that a minority of interviewees believe there is no need for co-ordination as there have not been any challenges encountered to date. The documented responses in section 4.6 also confirmed that the regulators are working in isolation and in so doing have brought confusion as they at times have conflicting requirements. Based on the existing body of knowledge, through the work of authors such as Porteous (2006), who confirmed that such a scenario is likely to result in co-ordination failure with a negative impact on m-banking.

However, banks and MNOs believe if the two work closely together there would more benefits realised and duplications removed. For example in chapter 4.6 we see that KYC requirements are the same as those of SIM registration and a central database

would be a logical solution. MNOs suggested the formation of a joint commission that would come up with standards and regulation pertaining to m-banking and eradicate the blame game. Such an approach will entice the different sectors to have a continuous working relationship hence addressing the current deficiency. Policy makers acknowledge the need for constant interaction and believe that this is an area that still needs a lot of work to be done. They believe stakeholders need a holistic in order to refrain from passing-the-buck.

What clearly emerged was that each sector believes in working in isolation as that has always been the norm they are not appreciating the mileage they stand to gain in joining efforts. A conclusion may be drawn that co-jurisdiction is still a green area and has work to be done, though it is moving in a positive direction.

5.5.1 Interplay

For ubiquity to become a reality, it is believed to be achievable through interconnection and interoperability according to Alampay (2010), Clarke (2000) and Ondiege (2010). Birch (1999) also believes growth can be achieved through ubiquitous availability of service in low-income earning economies. As a necessity, Porteous and Wishart (2006) warn that the risk of failing to recover fixed costs in financial infrastructure deployment is high if interoperability is lacking. However, Dolan (2009) and Alampay (2010) note that interconnection does not necessarily guarantee interoperability.

It is interesting to note that some respondents believe there is interconnection on the mobile platform as seen in the previous chapter (cf section 4.4.1), while others have a contrary belief as stated by Bank4 who quoted an example of a media article entitled “Banks gang up against Ecocash” (Herald, 2013b). According to Bank4, such would not be reported on if interconnection was there. Others commend the interconnection displayed by the bank sector and recommend that it be copied by the MNOs considering they all are working towards provision of service. Bank3 confirmed the lack of sharing infrastructure and this is backed by a report in the media “POTRAZ to introduce compulsory infrastructure sharing in new regulations”, (Kabweza, 2012b).

5.6 Other factors

Are there any other factors that influence the diffusion of mobile banking in Zimbabwe?

Apart from policy and regulation, it is believed other country specific factors also contribute to the diffusion of m-banking. Dahlberg et al (2007) make mention of the need to understand consumer power and adoption factors, citing that disregarding these factors will impact promulgation of m-banking. Alampay (2010) believes the system needs to be user-friendly to attract multitudes. The service has to be efficient and attractive enough for many users to want to partake of it otherwise with minimal participants very little benefit is realised resulting in what Mas and Radcliffe (2010) term 'network effect'. Donner and Tellez (2008) believe that when users gain an understanding of the real-time transacting value it will be a tool for roping in cash floating in the informal economy back to the mainstream economy.

As we saw in the previous chapter (cf Section 4.7) interviewees raised various concerns and intermittent electricity supply was common. They argued that the frequent power-cuts affect network availability which disrupts service. Bank4 commented "back-up sources of power may have been put in place, but the frequency of power-cuts makes it problematic to run a viable business." This was echoed by the service providers as well. There is a need to engage utility providers to address such an issue otherwise it may result in crippling all efforts on propagation.

In section 4.7 we also saw a strong conviction echoed by all participants that there is a lot of money in circulation outside the banks and most believe that this can be brought into formal circulation through educating the users on the benefits they realise in adopting m-banking. Some participants like Pol1 stated "there is a lot of money sitting under the pillows and flying around the thriving informal sector and that is what we are targeting and channelling back into the formal economy". With such a belief it is imperative for all responsible parties to channel efforts into taming the informal economy and channel the money back to the formal sector.

The majority believe there is a need to get on the ground and hear the customer views and feedback as that is the best way to ascertain the magnitude of acceptance which in turn affects the uptake rate. Pol1 commented “often service providers do not take time to get feedback though it is a point needed if improvement is to take place”. Such an observation suggests that feedback can be a tool used to increase user uptake of m-banking.

Conclusion

There are different views pertaining to the successful propagation of m-banking as recorded by various scholars. Porteous (2006) believes setting a conducive regulatory framework will do the trick and he is supported by Alampay (2010) and Merritt (2010). Mas (2011), Mas and Radcliff (2010) add that the adopted model has an impact on rate of uptake. This notion is supported by Heyer and Mas (2010).

Similarly, the interviewees for this research have diverse views on the factors impacting propagation and user uptake of m-banking. What comes out clearly is that policy is out-dated and still promotes traditional banking. It also emerged that there are no security measures currently in place and this is a cause for concern.

Similarly regulation has not been updated to explicitly cater for services like m-banking, though there are reported efforts currently underway to update. Some participants are convinced that regulation needs to be explicit for clarity to be there while others believe it has little or no impact on diffusion as they believe other business factors are driving rollout.

It also emerged that an addendum allowing m-banking rollout is issued only to bank licence holders thereby limiting the permissible business model to bank-led. The research also shows that while m-banking spans jurisdictions, stakeholders are currently working in isolation. Most participants believe that factors such as awareness campaign are best championed by the government, though some thought it was purely a business function. It is concerning to note that some key players would rather work in isolation while others out rightly evade taking up responsibilities and resort to passing the load to fellow players.

The research shows that the majority of the participants expressed a lack of confidence in the banking sector as a result of the instability experienced during the hyperinflation period, and confirm that confidence needs to be restored. It also emerged that the current cash-centric culture may be a blockage to m-banking. There is a consensus that the service cost is prohibitive and needs a downward revision. Intermittent electricity supply also emerged as a challenge.

In the following chapter an examination of the overall findings of the research pertaining to the assessment of the impact of policy and regulation on the diffusion of m-banking as required by the main research question will be done.

CHAPTER 6 Conclusion: The Impact of Policy and Regulation on M-Banking in Zimbabwe

In this chapter, I will refer back to the research question and sub-questions and the responses based on Chapter four and will link these to the analysis based on Chapter five and come up with possible recommendations. The outcome will identify areas of further research.

Mobile banking has been successfully adopted by various contexts across the globe despite the different externalities involved. This suggests that it has made a positive impact on the various economies given the fact that no forerunner has come up to indicate otherwise. The rollout though still in its early stages has not made full impact to satisfy expectation. Uptake however, also has not reflected enthusiasm.

The research conducted aimed to better understand in what ways the policy and regulatory framework is affecting diffusion and other factors upsetting uptake of m-banking. The objective is to evaluate whether policy and regulation are impeding rollout or if other factors are inhibiting progress. When the factors impacting progress are better understood, policy makers and regulators will be in a better position to ratify to ensure rollout and uptake reaches scale. Regulators will understand how best to regulate the m-banking space.

6.1 To what extent and in what ways does policy stimulate the shift to mobile banking?

It is believed that policy is vital as it directs the trajectory taken when a new product such as m-banking is offered. The perception of the extent of effect varied among the interviewees, but they all acknowledged that it has a part to play. Various aspects were discussed yielding varying views though the bottom line maintained was policy can be a stimulant.

6.1.1 Security

From the research we can see that the issue of security is of great concern. All those interviewed acknowledge the necessity though placing different levels of urgency in addressing it.

While policy makers acknowledge and are crafting a policy to address security, there is no guarantee that it will be adopted and put to action before any mishap occurs. On this basis one can conclude that although services are currently deployed and running, the platform is not secure.

6.1.2 Consumer confidence

It emerged that the decade of recession had a damaging impact on the financial sector and the nation as a whole. There was unanimous agreement that the confidence in the banks is still very low and a great effort is needed for restoration to take place. This was echoed by all interviewees.

While banks believe they are making progress in restoring confidence and increasing their customer base, the research shows that the few that are banked are only doing so to fulfil an employer's mandate otherwise once payment to the bank has been made, all cash is withdrawn and stored under the informal economy thereby still contributing to the reduction of money in the formal circulation.

MNOs on the other hand believe they are better positioned to restore confidence to people and to convert the unbanked through their platforms as their services have been tried and tested by the users.

6.1.3 Cost

There was a general consensus that the cost of banking is exorbitant and this is confirmed by the attention it has drawn across all sectors to the point that policy makers have taken it upon themselves to enforce corrective measures. While this is the case, banks believe their costs are justified citing the onerous requirements levied upon licensed banks and the regulatory obligations they have to satisfy. They

believe the cost of obtaining a licence is high given the capital outlay as stipulated by RBZ, the network setup obligations (remote rural network coverage) they have to meet and they also cite that the systems setup have to comply with regulatory requirements and there is a cost attached. For compensation, the cost is inevitably passed to the customer.

Banks reverberate that system setup and compliance with the already steep regulatory requirements are costly and have to be covered. Over and above the justification, banking is not a free service.

On the other hand concerns were raised on the cost of m-banking as it emerged as still on the high side for the ordinary person. MNOs justified the cost based on the capital outlay for the provision of infrastructure and agent network outlay. They are convinced that their cost is fair considering the magnitude of convenience brought by m-banking.

6.1.4 Awareness

All those interviewed agree that there is a great need for a drive to take the product to the nation as a whole and this can only be achieved through increased awareness. Service providers believe they are doing their part as businesses, through aggressive marketing, but feel they would be better received if the policy makers and regulators joined in and endorsed m-banking.

Policy makers did not share the same sentiments and resorted to be mum on the issue. Regulators on the other hand believe it is not in their mandate to contribute to the awareness drive as they believe it is a purely a business function while theirs is to ensure risk is minimised and the system is kept secure and stable.

Based on the research, we can see that policy plays a pivotal role on the rollout and uptake of m-banking. While the extent was variable, most of the interviewees agreed that policy stimulates diffusion and can be a tool for changing financial culture and incline it towards m-banking.

6.2 What are the regulatory stimulants/obstacles pertaining to mobile banking in Zimbabwe?

Divergent views of the regulatory environment emerged from the research. Some interviewees feel that the current regulatory framework is shortcoming because it is not explicit on m-banking and therefore, is a hindrance for development. They believe the regulation is inclined to the traditional bank as it was known and is not in the least bit reflective of the developments in the sector. For that reason it is out-dated.

Various authors, and those interviewed for this research, acknowledge that Kenya's success was due to a relaxed regulatory environment. Safaricom made exploits without having to deal with heavy regulation. If this be the case, one wonders why others see the lack of articulate m-banking regulation in Zimbabwe as a hindrance. In view of the non-existent m-banking regulatory space, effort and resources could be channelled towards awareness and network establishment. Others are of the opinion that it is not an obstacle based on the fact that it has not disabled the inception of m-banking by any means. They believe that the current regulation alludes to m-banking in some sections though it may not be explicit. Hence the establishment of a product such as Ecocash.

Those that really are of the opinion that the lack of specific regulation is hampering progress applaud efforts exhibited in the 2013 quarter one MPS (RBZ, 2013) and eagerly await the delivery and implementation of the revised regulations.

6.2.1 Cultural Change

There was agreement on the need for a cultural change in the way non-cash mechanisms are viewed by the Zimbabweans as a whole. There is a strong belief that it impacts negatively on the uptake of alternatives such as m-banking and needs to be done as a matter of urgency.

While all agree there is a need for change, some believe cultural change is better achieved if led and endorsed by the policy makers and regulators. Others feel it is

better channelled by the business fraternity given the fact that current regulation already stipulates other forms of legally recognised forms of payment.

Although some feel there are no regulatory obstacles pertaining to m-banking in Zimbabwe, the general consensus is that the lack of articulate regulation is an obstacle in itself and it is hampering proliferation of m-banking.

6.3 What are the emerging regulatory requirements with respect to licensing, banking and infrastructure development to support mobile banking?

A licence is deemed to be a certificate issued to authorise a particular activity and it is awarded upon meeting the specified requirements. All those interviewed confirmed that there is no licence for m-banking, but there is a pre-requisite for a bank licence to which an addendum is appended as an approval to carry out m-banking. However, MNOs were concerned by the arrangement citing that the regulator is pushing for bank-led models that may not easily reach scale on the basis of eroded confidence in the sector.

Others are concerned that the partnerships may not be the best solution as they are restrictive. MNOs are lobbying the regulator to allow them to offer a solo service though without success. As the regulator believes m-banking is purely a finance issue and therefore, must be regulated according to the Bank Act and the NPS Act, hence the pre-requisite of a bank licence.

Banks raised concern over the onerous process for obtaining a licence citing that it is prohibitive to new entrants and has a negative connotation for those who may want to join. Policy makers acknowledged this and are appealing for a revised procedure to allow new entrants thereby increasing competition which in turn will eradicate monopolistic tendencies. Customers will also realise benefits as the cost will be lowered.

6.3.1 Interconnection and Interoperability

Authors confirm that for m-banking to reach scale there is a need to have an integrated framework which is only achievable through interconnection and interoperability. Similarly interviewees share the same sentiments and raised concerns that while it is written in principle, in practice Zimbabwe is not fully embracing the concept.

Some interviewees acknowledge that the finance sector has successfully achieved interconnectivity and it is seen in the prevalence of the NPS allowing the use of ZimSwitch and RTGS across all banks effectively. However, it is not visible on the telecommunications sector where the media has reports of misunderstandings. This was confirmed by the regulator who had to appeal with MNOs to work together harmoniously without exuding preference or favour.

Others however, believe there is adequate interconnection though acknowledging that interoperability still needs to be addressed.

What comes out clearly is that the regulators believe there is a need to maintain financial system stability and to ensure risk is managed hence their requirement of a valid bank licence which assures them that the prospective service provider has satisfactorily met the initial requirement. An approval letter is added to an existing licence only after justifying that the product is viable and it does not in any way disrupt the existing systems.

6.4 What is the impact of policy and regulation on the delivery of mobile banking?

Authors and all those interviewed acknowledged that policy and regulation affects the way m-banking is delivered. Some interviewees cited that in Zimbabwe it is currently fuzzy and does not stimulate rollout and uptake citing that policy makers and regulators alike are taking a back seat and following behind proceedings in the sector. They are of the opinion that the authorities need to take a lead in bringing

clarity to the m-banking environment. They believe it currently has a negative impact which is having an adverse effect on the propagation and embrace of m-banking.

Service providers confirmed they lack clarity of what can or cannot be done while users are uncertain whether to take up m-banking or to remain at bay for fear that it may be a fly-by-night offering which may not be there tomorrow.

Potential m-banking customers need reassurance that when they deposit their money with a service provider, they can access it whenever they please and the service provider will still be in business and will also have enough cash to pay out. They need to find comfort in that before any new product is introduced to the public, it has been tried and tested to ensure stability and security and it is done by the regulator.

Others believe that policy and regulation are merely a guide and hence even without policy or regulation that articulates m-banking, the environment is positive enough to allow initiators to come up and rollout their product as long as they are able to justify their cause. They seem to overlook the regulator's integral role of ensuring that checks and balances are in place to ensure integrity of the financial system as a whole.

However, those interviewed acknowledge that KYC regulations serve a purpose but are too strict when followed precisely. They feel a relaxation is necessary to accommodate the majority who are unable to meet all specifications. They believe customers can be serviced based on their merit and such relaxation will still suffice to fulfil safeguarding against possible threats or violation of set rules in line with local and global standards.

It is evident from this research that policy and regulation affect the pace at which m-banking is propelled as much as it also affects the magnitude of uptake. However, the depth of the effect is an area that this research did not cover and is an area for further research. It would also likely be a quantitative research.

6.5 How is the key area of co-jurisdiction regulatory between the mobile communication and banking sectors being addressed?

The convergence of sectors in providing m-banking has brought the need for co-ordination and co-operation. Authors have confirmed that it is the only way to provide a ubiquitous infrastructure and for the service to reach scale. However, it has emerged that in Zimbabwe, the various sectors are working in isolation with not much consistency in interaction.

While many authors have stressed the need to work as a team in tackling and addressing challenges, some interviewees view it as a necessity only on paper leading to the current situation where the RBZ came up with an MOU (developed in isolation) and simply gave it to POTRAZ for signature.

Other interviewees acknowledge the necessity and suggest the formation of a joint commission that will oversee all developments in m-banking. All agreed that the co-jurisdiction turf is still very raw and in need of concerted effort from all stakeholders to take-off and enable the smooth flow of activities.

Similarly others believe with concerted efforts the convergence could foster an amalgamation of KYC and SIM registration databases as they carry identical information thereby removing duplication and promoting co-ordination. This is in line with ITU (2011b) recommendations.

What emanates is that there is no co-jurisdiction framework in place and the current operation of m-banking is made possible through disjointed contributions and effort that are not yielding a desirable outcome. There is an urgent need to address this disparity in order to concentrate on the core business and rollout m-banking to reach scale.

6.6 Are there any other factors that influence the diffusion of mobile-banking in Zimbabwe either positively or negatively?

It is widely believed that apart from policy and regulatory issues, various externalities affect the diffusion of m-banking and they are context specific according to scholars. Zimbabwe is not an exception and all those interviewed agreed that the erratic supply of electricity is affecting business in an adverse manner. M-banking is not spared. While the electricity supply authority may be load shedding for lengthy periods due to a possible lack of resources, their action is affecting the way business is conducted in Zimbabwe. Secondary sources of power may have been installed by the service providers, but they are proving too expensive to maintain due to the length of numerous blackouts.

It is also believed that there is an abundant circulation of cash in the informal sector and it can only be channelled back to the formal sector when the users have trust in the system. MNOs believe there is a major drawback as a result of the bank-led model that has been adopted which forces partnership with a sector in which confidence was eroded. Instilling trust in a service provided over a platform that may be trustworthy but using a network of agents that may not be vouched for may prove challenging. On the other hand due to the multiple shut-down of banks, it makes it difficult for one to trust that platform as well, leaving the customer in a dilemma. Despite the uncertainty, MNOs are convinced they stand a better chance and believe a telco-led model will yield better results due to a drive by a proved and trusted sector.

Others believe there is a need to get feedback from the customers who will shed light and provide an insight to how they perceive m-banking and in what ways it has affected them. One can articulate complex customer needs and address them appropriately. They believe through feedback improvements can be made and they increase the system appeal thereby increasing the client base through satisfying the customers who will in turn persuade others to join in.

What came out of the research is that outside the policy and regulatory framework, Zimbabwe has other factors that are unique to it and contribute to the impact of diffusion and embrace of m-banking.

6.7 The final analysis

In analysing the policy and regulatory environment of mobile banking in Zimbabwe, it has emerged that there are multiple factors that affect the diffusion and uptake of the service. They cannot be addressed in isolation as they are interlinked. For the stakeholders it then calls for teamwork in tackling the various issues raised in the research. For the regulator, it adds complexity to their task as they need to strike a healthy balance lest they find themselves in the 'regulator's dilemma' as stated by Dias and McKee (2010).

After consideration of the m-banking regulatory environment in Zimbabwe, it shows there is still a lot of work to be covered in order to reach the state defined by authors such as Porteous (2006), Omwansa (2009), Alampay (2010) and others. It compounds confusion given the fact that country specific factors are adding to the complexity and are affecting the way rollout is done.

It is clear that Zimbabwe still needs to put structures in place hence a lot of work is yet to be done. The current m-banking space can be viewed as unregulated though efforts are being made to ratify the situation as announced in the 2013 quarter one MPS (RBZ, 2013). Another evaluation needs to be conducted after the implementation of the revised regulations to ascertain their contribution on the proliferation of m-banking. Although the current policy and regulatory framework does not inhibit m-banking, it can be revised to stimulate diffusion rather than its current passive nature.

6.8 Limitations of the research

The sample size of sixteen participants used for this research was small compared to the universe of possibilities (see above section 3.2.5). While this is a relatively new area in Zimbabwe, the selection bias was towards key-personnel only without giving

room for the users to air their views as the recipients of m-banking. It is therefore, limited due to the small universe of possible candidates. Stakeholders tend to focus and push for their individual interest while neglecting the holistic view. The research was conducted under a minimal timeframe constraint hence giving only a snapshot of events which may prove to have a different outcome over a longer period of time.

Due to the nature of sensitivity in the sectors, interviewees were not free to divulge what they regarded as 'trade secrets' thereby only expressing general opinions. The current developments in the political arena may also have affected the way interviewees responded to questions as there seemed to be an undertone of suggestive political affiliation.

The study concentrated on policy and regulatory environment in isolation from other factors and events that have a bearing on the overall outcome such as the socio-political and socio-economic factors.

6.9 Areas for future research

From the research conducted here a number of possibilities emerge for further research in the same broad area.

For example, the research conducted here showed that the policy and regulatory environment in Zimbabwe is currently under development; once the changes have been implemented, a further assessment post change implementation should be conducted to determine the post implementation impact on the m- banking environment.

The user response to m-banking is an area that will also need to be researched to ascertain the role it plays in the embrace of m-banking. A further study on the behavioural pattern of users after a shift from a cash-centric environment may also be conducted as a measure of magnitude of acceptance of availed options.

Literature specifies themes that affect the setting of a conducive, regulatory environment and each contributes to the overall impact on m-banking. There is a

need to tackle each individual theme in order to understand its impact and deal with it if it has a negative influence on the stimulation of m-banking.

Further research on alternative models and international best practice in m-banking needs to be done to ascertain what would be best for Zimbabwe. Comparator countries such as Kenya, Philippines and others should be considered.

A study on the customer adoption pattern and preference would foster an understanding that can assist in future system deployment.

6.10 Conclusion

This research shows that while the rollout of m-banking is viewed by service providers as a solution to the challenges facing the Zimbabwean economy, there is a need to foster teamwork among all stakeholders as that is the only way to ensure all efforts are targeted at achieving an identical goal: - banking the unbanked and by so doing, rebuilding the formal economy. The current framework is subject to abuse and has loopholes that can be manipulated through misinterpretation of regulations. The current cash-centric financial culture can be changed through a concerted effort from all the stakeholders, but policy makers need to be seen playing an active role to fast-track a shift of mindsets and to recognise m-banking as an authentic legal means of transacting.

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Appendix A



23 November 2012

To whom it may concern

Felistas Tahwa: Research Request

This letter serves to confirm that Felistas Tahwa is a registered Master's degree candidate at the University of the Witwatersrand - Master of Management in the field of ICT Policy and Regulation.

The theme of her research is the policy and regulatory environment of mobile banking in Zimbabwe. A major part of her research involves personal interviews with key players involved in, or close to, the processes of policy formation, regulation and implementation regarding the theme under investigation.

Your assistance and willingness to participate in interviews with Felistas Tahwa would be greatly appreciated.

All participants are assured of rigorous adherence to the University's code of ethical conduct relating to social research. This includes the assurance that all interviews will be treated as confidential and that participants' identities will not be disclosed, unless by prior arrangement.

Yours sincerely

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Information Sheet, Consent Form and Interview Questions

Information Sheet:

Masters Research Report: policy and regulatory environment of mobile banking in Zimbabwe

Dear Key Participant

You are invited to take part in this research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please read the following information carefully.

Background & Overview of the study

This study is being conducted by Felistas Tahwa in partial fulfilment of the requirements for a Masters of Management in ICT Policy and Regulation at the Graduate School of Public and Development Management at the University of the Witwatersrand.

The study investigates the policy and regulatory environment relating to mobile banking in Zimbabwe.

Zimbabwe is lacking behind in embracing the use of technology that enables providing financial service access to the previously deprived population through the diffusion of mobile banking. Although some effort has been made in the introduction of this service by a few service providers, the seemingly slow uptake rate stimulates the need to investigate why a product which has a great potential to reach to the nation and address the lack of formal financial services is not taking a quantum leap. It has been tried and tested with positive results in Kenya and South Africa, but in Zimbabwe there seems to be a lack of drive in its uptake.

This research will draw on models drawn and applied in the countries that have successfully implemented, as well as on insights gained from interviews with players in the sectors that have a contributory role in the roll-out of mobile banking, and document analysis of the successful pioneers in mobile banking to understand the policy and regulatory dimensions of m-banking in the Zimbabwean context. In order to do that, the researcher investigates mobile banking, policy and regulation in the telecoms and finance sector through primary and secondary research.

The organisation and funding of the research

Felistas Tahwa is a private student and the study is not being funded.

Deciding whether to participate

Taking part in the research is entirely voluntary. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

There are no risks in participating in this interview although you may be inconvenienced by taking time out of your busy schedule to be interviewed. There will be no direct monetary benefit to you for your participation. However, the study may have several beneficial outcomes. In particular, it will further our understanding of the topic and contribute to the knowledge in the field.

Confidentiality

Any personal information collected about you will be kept strictly confidential. Identifiers will be removed from the data when the research findings are consolidated into a report and will not be included in any subsequent publications. The anonymised data generated in the course of the research will be kept securely in paper or electronic form for a period of five years after the completion of a research project. It may be used for further research and analysis.

Research Ethics

If you have concerns about the research, its risks and benefits or about your rights as a research participant in this study, you may contact Charley Lewis, see contact details below.

Contact for Further Information

Please contact the below for any further information you require pertaining to the study.

Supervisor details

Charley Lewis

Charley.lewis@wits.ac.za

+27 83 539-5242

Student details

Felistas Tahwa

Tahwaf07@gmail.com

+263 772 275 963

Thank you for taking time to read the information sheet.

Consent Form:

Masters Research Report: policy and regulatory environment of mobile banking in Zimbabwe

Please initial box

1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason. ☐

3. I understand that the researcher will not identify me by name in any reports using information obtained from this interview, and that my confidentiality as a participant in this study will remain secure. ☐

Please tick box

Yes No

4. I agree to the interview being audio recorded.

☐ ☐

5 I agree to the use of anonymised quotes in publications.

☐ ☐

6. I agree that my data gathered in this study may be stored (after it has been anonymised) in a specialist data centre and may be used for future research.

☐ ☐

Name of Participant

Date

Signature

Name of Researcher

Date

Signature



Research Topic:

A review of the policy and regulatory environment of mobile banking in Zimbabwe

Name: _____ **Title:** _____

Organisation: _____

Department: _____

Interviewed by: _____ **Date:** _____

As you know, technology and innovation are driving the business world today. To be able to keep afloat and move forward, we need to be able to identify and enhance our strengths and align them with what technology is offering. I'm doing a Master of Management in the field of ICT Policy and Regulation programme with University of Witwatersrand and the theme of my research is the policy and regulatory environment of mobile banking in Zimbabwe. To complete the research I'm interviewing several key people to find out about their experiences in banking and mobile sector and how the sectors may be improved to provide services that promote use of technology in the provision of better service to the customers through services such as mobile banking.

The information you provide in this interview will be treated as confidential and will be used solely for study purposes and enable the researcher to assess the level of mobile

banking diffusion with a view of recommending improvements. The interview takes about one hour. The interview will tend to focus on the various aspects that have a bearing and contribution to mobile banking.

Research questions

Organisations build on proven strengths and adaptability to the volatile business environment. Development worldwide has embraced technology in the provision of banking services such as mobile banking. As stated in the narration above, I am here to talk about mobile banking in Zimbabwe.

To begin with, please tell me your experience with banking: when and how did you get to know about m-banking?

- Do you think the diffusion of m-banking is up to speed or ahead of prediction or lagging? Please elaborate.
- To what extent and in what ways does policy stimulate the shift to mobile banking?
 - o Is there a particular current policy that you commend and note as being key in promoting m-banking uptake?
 - o What new policy would you envisage as a possible catalyst for m-banking?

- What do you see as blockages within current policy that hinder mobile banking diffusion?
 - o How best can these blockages be tackled?
- To what extent do you feel that the content of m-banking licences or the licensing procedure either stimulates or impedes the rollout and uptake of m-banking? Please elaborate.
- To what extent and in what ways does current regulation stimulate the shift to mobile banking?
 - o Are there any particular current regulations that you commend and note as being key in promoting m-banking uptake? Can you explain why?
- What do you see as the current regulatory obstacles impeding the uptake of mobile banking in Zimbabwe?
 - o Are there any particular current regulations that you see as problematic for the diffusion and uptake of m-banking? Please explain why?
- Do you think that the overlap between the regulation of telecommunications and the regulation of banking (co-jurisdiction) is being adequately addressed? Please explain.
 - o Can you suggest how telecoms / banking co-jurisdiction might be better dealt with?
- Would you say the overall impact of current policy and regulation on the delivery of m-banking is positive or negative? Please explain.

- Are there any other policy and regulatory issues that we haven't already discussed which you feel either help or hinder the rollout and uptake of m-banking in Zimbabwe?
- Are there any other issues or factors - outside of policy and regulation that we should consider as having an important impact on the diffusion and adoption of m-banking in Zimbabwe?

Thank you for your time and input.

INFORMATION REQUESTED FROM THE INTERVIEWER (please fill out after each interview)

A. What was the best quote that came out of the interview?

What was the best story that came out of the interview?



Interviewer Name: _____

Date of Interview: _____

Appendix B

Participant identifiers

Participant group	Acronym
Financial institution	Bank1, Bank2, Bank3, Bank4
Regulator	Reg1, Reg2, Reg3, Reg4, Reg5
Policy maker	Pol1, Pol2, Pol3
Mobile network operator	MNO1, MNO2, MNO3
Analyst/media commentator	Med1