

# **Mobile Money Provision and Adaptation in a Multicurrency Economy: The Case of Zimbabwe**

A Dissertation

Presented to

**The Development Finance Centre (DEFIC)**  
The Graduate School of Business  
University of Cape Town

In partial fulfilment  
of the requirements for the Degree of  
Master of Commerce in Development Finance

By

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July 2018

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## **ABSTRACT**

Mobile money has been regarded as a catalyst for financial inclusion in developing areas where traditional banking is limited. This research provides a critical assessment of the factors that facilitate or impede the provision of mobile money services in a fragile multicurrency economy, in particular, Zimbabwe. It explores how mobile money providers adapt to the fragility of the economy and what needs to be done to broaden mobile money uptake and performance in same environment. The study employs a qualitative and multiple case study approaches to understand mobile money business models in three mobile network operators in Zimbabwe. Research findings revealed that MNOs have developed MNO led approaches which are slowly migrating to collaborative models thereby greatly enhancing financial accessibility for the mass traditionally unbanked. With reference to the first sub question it was established that the multicurrency regime enabled remittance and withdrawals aspects of mobile money in Zimbabwe as during the 2016/2017 cash shortage era high demand in local and international money transfer was backed by the rise of a supportive role from the Central bank and Public Finance authorities. Most people were more favourable to mobile money transfers and banking which offered more control to customers since they negatively viewed traditional finance entities following a series of local bank collapses. On the downside, challenges of obtaining cash in the country that is illiquid reduced agent network and affected the confidence in mobile money deposits and withdrawals as mobile money customers were used to handling cash. In addition the lack of interoperations amongst the service providers significantly affected effective uptake of mobile banking. The research shows that use of collaborative approaches suggest the ability to adapt and adjust a model based on the prevailing conditions and customer needs and wants by MNOs. With reference to the third question it was recognised that mobile money can succeed in a multicurrency ecosystem when a focused and coordinated approach to fundamentals is applied to properly deal with the challenges that come with shifting from a cash economy to a digital ecosystem.

## **ACKNOWLEDGEMENTS**

Many thanks to Dr Mundia, all my family and friends for their support during the research process.

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## **GLOSSARY OF TERMS**

Dstv	-	Digital Satellite Television
GSMA	-	Global System for Mobile Communications
ICT	-	Information and Communication Technologies
ISP	-	Independent Service Provider
M-banking	-	Mobile banking
MFS	-	Mobile Finance Services
M-Money	-	Mobile money
MMT	-	Mobile Money Transfer
MNO	-	Mobile Network Operator
M-payment	-	Mobile payment
POS	-	Point Of Sale
P2P	-	Person to Person
RBZ	-	Reserve Bank of Zimbabwe
SMS	-	Short Message Service
ZimSwitch	-	Sole national electronic funds switch for Zimbabwe.
ZIPIT	-	Zimswitch Instant Payment Interchange Technology

# **1. INTRODUCTION**

## **1.0 Introduction**

Over the last decade, the mobile platform has heavily altered the way in which many people around the globe access and use their money. Zimbabwe has not been left behind in this new discourse. This introduction of these mobile money platforms has resulted in a big shift in how financial institutions and other firms offer services to their clients. This has also been against the context of the use of multi-currencies in Zimbabwe and the biting liquidity challenges in the country. The unprecedented use of mobile money has also been a form of convenience, easing the liquidity challenges and cash crisis which has gripped the country. This study then sought to understand how mobile money services can be optimally provided in the context of the multicurrency regime.

## **1.1 Background**

The growth of mobile money services globally has been phenomenal and could be a panacea to global development challenges through improvement of financial services. According to the Global Mobile Money Adoption Survey, the number of registered m-money users globally was 18.8 million in 2012 and has continued to rise by more than 35% per year. Thus mobile money transfer providers are increasingly facing challenges in a highly competitive and rapidly changing business environment. It is important to highlight from the onset that there are different facets of mobile money and these include transactional and bank savings. This study focuses on the transactional services offered through mobile platforms in developing countries with a focus on multi-currency economy. In the developed countries, mobile money is playing a complementary role while in the developing countries, Africa in particular, it is an alternative to the general lack of formal financial services (Chibango, 2014). Formal financial services have failed to penetrate all the areas especially the rural areas which largely remained underdeveloped. Fengler (2012) also states that the introduction of mobile money has therefore been a revolution that has received high penetration levels in the continent; as a result there has been a high demand for mobile phones.

West and East Africa are some of the world's fastest mobile regions with mobile investment tremendously contributing to economic and social development across the region. Mobile money in these regions has been growing owing to their unique mobile subscriptions. However despite

the remarkable subscriber growth in Africa in recent years, more than half of the Sub-Saharan Africa's population do not yet subscribe to a mobile service (GSMA, 2018). Within the East Africa region, Kenya's SMS based money transfer system, M-Pesa, has been lauded as a success story in the provision, adoption and performance of mobile money (Yousif et al., 2011, Diniz et al., 2011). In Uganda the industry is even more consolidated and MTN Uganda has up to 80 percent of the active mobile accounts in the country, and positively changed the way people transact in the country (Intermedia, 2013). The introduction of mobile money proved to be more convenient and safer than the traditional methods of transacting and sending money between the urban and rural folks. Such success stories show the ability of mobile money providers to take advantage of the difficult socio-economic conditions that have impeded formal financial services from penetrating all areas on the African continent.

Efforts to replicate success across the whole continent hinge on many African states increasing their mobile penetration and internet connectivity. In addition success stories are made difficult by the different local conditions under which mobile money providers operate. For example the economic and legislative landscape in Zimbabwe is not similar to Kenya or West African countries that have reportedly implemented mobile money successfully. Hence the research interest to analyse and evaluate how mobile banking can be adequately provided in a developing multi-currency regime. Although there are more than 120 mobile money projects being undertaken in about 70 emerging markets (Beshouri et al., 2010), mobile payments have become a normal practice in a few countries showing that successful cases are not clearly understood, and as a result are not being easily replicated further suggesting that lessons are not being learnt from the places where the system has been successfully adopted (Diniz et al., 2011).

When inadequate investment is made to understand the pillars of each successful model viz the conditions in the intended area of implementation and key factors that need adaptation the business model will not replicate similar success. This has been the case with the mobile banking case of M-PESA. While M-PESA has recorded tremendous success, similar scale has not been achieved in other countries when the same model has been implemented. Hence suspicion by Diniz et al., (2011) that adoption in most countries are not being investigated deeply enough to allow implementation strategies to be employed on the basis of reliable business models (Diniz et al., 2011). It is on this foundation that the research seeks to understand factors facilitating or impeding the provision of mobile money and strategies to broaden mobile money uptake and performance in multi-currency regimes.

In Zimbabwe the mobile money has also been adopted and its usage has increased steadily but not exponentially as in Kenya's MPESA case. Access to use of mobile money has recently been at the heart of some policies and the country's central bank (RBZ) has been advocating the use of mobile money and has urged other financial institutions to innovate and come up with mobile money services which reach to all corners of the country as well as to the unbanked (Munyoro and Matinde, 2016). Something echoed by Baine (2003) and Hanning and Jansen (2010) who noted that financial services to the unbanked have become a major area of interest for policymakers and academics for a long time who emphasise on financial inclusion as an objective of economic development. Furthermore, Maurer (2014), Mayo et al., (1998) and Schleifer (2000) stated that billions of people in the world's remote areas lack access to sustainable financial services. This group has been excluded from participation in the financial sector, consequently showing the need for innovativeness in the sector. In Zimbabwe less than a quarter of the rural population have access to bank accounts (Munyoro and Matinde, 2016). What it means statistically is that, only 800 000 Zimbabwean citizens out of a population of 13 million have bank accounts, reflecting a huge variance of financial inclusion (Kabweza, 2012). As a consequence, this is what led to the introduction of the Mobile Money Transfers facility because it eases the penetration in low income earner and unbanked segments (Hanning et al., 2010). As discussed below, this Mobile Money Transfer facility has been in use for more than five years

However, things changed following the adoption of multi-currency in 2009. According to the Reserve Bank of Zimbabwe (RBZ) (2011), the Zimbabwean banking sector experienced a gradual improvement in its intermediation role since the introduction of the multiple currency regime in January 2009. In spite of the growth in the number of financial institutions, the bank penetration rate as measured by the collective number of accounts held by banks was not more than 20% of the entire adult population (RBZ, 2011). Geographical representation of branches was concentrated in major cities and towns. Accordingly, 70% of the country's population which is in the rural areas is served by only 11.7% of the banks' total branch network (RBZ, 2011). Rural communities and the informal sector continue to be shunned by some banks. In 2016, the Zimbabwean economy experienced serious cash (USD) shortages. Long queues of bank customers attempting to withdraw cash (USD) from their accounts became the order of the day at banking halls. As such mobile money transfers have become a convenient to circumvent the challenges brought on by use of multi-currency and shortage of cash. For mobile money to be successful it is also important to address the success factors of mobile money so that the policy becomes a resounding success. Against this background this study sought to understand the performance,

adaptation of mobile money transactions in the country under the current macro-economic realities in Zimbabwe.

## **1.2 Problem Statement**

Mobile money can be a panacea to economic challenges faced by Zimbabwe and other developing countries. Zimbabwe remains a unique market which has peculiar macro-economic conditions prevailing which includes use of multicurrency's and acute cash shortage. Under these conditions there are opportunities for the growth of mobile money transactions. Success levels recorded by other providers such as M-PESA may remain elusive for Zimbabwe's mobile money providers such as Econet, Telecel and Netone without empirical research to ascertain local factors which promote or impede the adaptability and performance of mobile money. Formulating strategies necessary to grab this opportunity for achieving economic and social development can only be possible through exploring local context specific factors that affect mobile money. Similarly Dennehy and Sammon, (2015) find there has been a widening gap in research projects that examine the adoption of m-payment systems from across multiple countries and be continent specific. However lack of information on context would mean implementation shortcomings and challenges in one country will be replicated in another without adapting to suit that country context. Therefore this study attempts to contribute to literature by providing a template on how mobile banking can be adequately provided in a developing multi-currency regime by evaluating and analysing adaptability factors facilitating or impeding the provision of mobile money in Zimbabwe. It also seeks to position mobile money theory into the larger context of inclusive finance research by identifying what needs to be done to broaden mobile money uptake and performance in multi-currency regimes.

As the country steers towards a cashless society there are still doubts about the use of mobile money for some stakeholders. There has been deliberated policy thrusts on the part of government to promote use of mobile money in the country although the mobile money subscriptions have been growing slowly when compared to other African developing countries that adopted mobile money in the last decade. This is because the country still struggles with acute funding and infrastructure deficits in its efforts to address various economic challenges.

It is on this premise that this study seeks to provide a roadmap that helps stakeholders understand what is required to sustain mobile money growth and innovation in a multi-currency environment.

In addition to their efforts to expand and improve mobile money this research seeks to bring to light what is needed to create the right conditions for continued investment in the mobile money industry. Understanding critical success factors that broaden mobile money uptake and performance in a multicurrency economy will help regulators and mobile money providers formulate context specific strategies and business models that will help the Zimbabwe mobile money landscape evolve beyond in-country transfers to more complex financial products, and payment platforms for products and services across a wide range of sectors. Pouttchi et al., (2004) state that the mobile phone is ever popular and has created scope for financial transactions on mobile phones, whilst Birch et al., (2008), Saunders (2000) and Mas et al., (2010) suggest that recent encroachment in mobile technology have continued to develop the banking sector and the advent of mobile banking has created prospects for the susceptible people who now have access to pecuniary services. In short, this convergence of telecommunications. This study therefore seeks to understand the ways in which mobile money can be expanded and provided optimally and the critical success factors needed to be factored in.

### **1.3 Research Question and Scope**

This study focused primarily on answering the following question

“How can mobile banking be adequately provided in a developing multi-currency regime?”

The primary question also gives rise to the following secondary research questions:

- a) What are the factors facilitating or impeding the provision of mobile money in Zimbabwe?
- b) How are mobile money providers adapting to the fragility of the multicurrency economy in Zimbabwe?
- c) What needs to be done to broaden mobile money uptake and performance in multi-currency regimes?

The study was limited to Zimbabwean context as it is the only developing African country with mobile money and a multi-currency regime. In addition this study focused only on mobile money transactions as they occur under the ambit of Mobile Network Operators. The research focused on service providers and staff since they were considered key informants helpful for this study. This study also focused on the business models that have been adopted in the mobile money market and the challenges which prevent the flourishing of mobile money.

## **1.4 Research Assumptions**

The study was built upon the following assumptions:

- a) The current money mobile models have not adequately maximised business strategies to maximise the benefits of mobile money
- b) Mobile money transfers hold the future of banking and offer an attractive alternative to future banking in Zimbabwe
- c) Mobile money`s success is an unprecedented success for financial inclusion in Zimbabwe

## **1.5 Study Rationale**

This study builds on previous studies carried out on mobile money transactions and the performance of this sector. This is to assist with obtaining a deeper understanding of how uptake of mobile banking in that context can be improved. Focusing on mobile money models adopted in a multi-currency cash based developing context with low uptake of mobile banking the study will provide empirical evidence on the characteristics of both successful and unsuccessful m-banking initiatives within Africa (Dennehy & Sammon, 2015). The main thrust of this study therefore was to focus on operational strategies as they concern mobile money against the Zimbabwean context of liquidity challenges.

The current study provided the basis for which mobile network operators can draw lessons on assessing market dynamics and making necessary adjustments on pre-existing conditions that make a multi-currency regime conducive for mobile banking. The results of this study will facilitate service design that eases rapid uptake and early capturing of network effects. It will provide researchers with an integrated understanding of m-money adoption and provide guidance to the stakeholders involved in the design and delivery of an m-adoption system with the opportunity to advance the adoption and use of m-mobile systems from isolated single case success stories to universal m-payment systems (Dennehy and Sammon, 2015).

In addition to expanding existing literature on the subject from this study the potential social and economic impacts of mobile money can be more effectively measured and this can persuade policy-makers to create favourable regulatory environments for fostering the practice of m-banking (Diniz et al., 2011). Also it is important that mobile money services be adopted by banks as they represent the most important component in the money matrix. The traditional banking

sector remains the most common form of money transfers and a failure of the banking sector would seriously retard efforts of mobile money platforms to spread since an integrated approach between banks and new forms of money transfers represents the much needed innovation in mobile money. Recommendations from this study will help industry stakeholders including policy makers holistically review the viability of mobile money models adopted in Zimbabwe, considering its distinctive components, economic viability, coordination problems that need to be resolved and make necessary adjustments to come up with a suitable model and regulations that can be replicated in other cash based multi-currency regimes.

## **2. LITERATURE REVIEW**

### **2.0 Introduction**

A considerable number of people particularly in the developing world are not included in mainstream financial services. Globally, 38 percent of adults remain unbanked with Sub-Saharan Africa ranking third highest with the unbanked population (Demirgüç-Kunt, Klapper, Singer, & Van Oudheusden, 2015). However with a rising proportion of household income devoted to mobiles services in developing countries (Lapukeni, 2015), opportunities exist to expand financial inclusion among the unbanked. Hence the increasing tremendous focus on addressing financial inclusion by a number of countries. Financial inclusion is one of the channels through which ICT mobile phone affects economic growth and financial development thus it will also contribute to sustainable economic growth of countries and create economic opportunities for the unbanked and underserved rural households (Duncombe & Boateng, 2009; Lapukeni, 2015; Etim, 2014; Kikulwe et al., 2014; Niyogi and Niyogi, 2012). The development of other mobile financial services including mobile insurance, mobile credit and savings will allow service providers to deepen financial inclusion by offering financial services beyond money transfer and payment.

Mobile money has had a far reaching impact even on those sections of the people marginalised from mainstream financial services. In addition change in spending priorities has led to many rural people in the developing world who are deprived of basic services such as banking, pipe-borne water and electricity, having access to mobile phones resulting in the number of mobile phone users exceeding the number of people with bank accounts across the world (Tobbin, 2012; Porteous, 2006; Lapukeni, 2015). A number of mobile firms and financial institutes in developing countries including Zimbabwe are utilising this opportunity coupled with rising mobile phone ownership to provide mobile banking services to the under banked and underserved community.

Similarly Demirguc-Kunt et al., (2014) found in 13 countries around the world, penetration of mobile money accounts is 10 percent or more with all 13 of these countries being in Sub-Saharan Africa and in 5 of the 13 countries—Côte d'Ivoire, Somalia, Tanzania, Uganda, and Zimbabwe—more adults reported having a mobile money account than an account at a financial institution. The question is no longer whether mobile money services are available, but how to ensure that the industry grows sustainably. As mobile phones can have positive spill overs on nonusers, universal adoption is not required to generate significant benefits (Aker & Mbiti, 2010) hence innovative mobile money business models have played a major role in the explosive growth of financial

inclusion in Sub-Saharan Africa with the mobile phone increasingly being used to extend financial services past the limits of bank branches (Lapukeni, 2015). In Africa, the most visible case is Kenya, where technological innovations facilitated overcoming several of the obstacles that affect the supply and demand for financial services in remote or sparsely populated rural areas while enhancing the convenience of accessing the services and net household income (Lapukeni, 2015). This has been enhanced by concerted efforts towards infrastructure building so as to increase coverage in those marginal areas.

M-PESA's success was so huge such that the business model was replicated in several other countries with variable results. Tanzania launched its own version of M-PESA recording over 47 percent of households have a family member who has registered and Uganda, 26 percent of adults are users (Kendall & Voorhies, 2014); however replicating successful services in additional geographies has proven challenging, including efforts by Vodafone to take the M-Pesa model to other countries in which it operates, such as South Africa (Lal and Sachdev, 2015). Based on the knowledge of varied contexts, this study is grounded on the understanding of the unique features of the Zimbabwean market. This has prompted research in the direction of probing why mobile phones approach for financial inclusion has worked so well in some contexts while yielding a different uptake and adaptability success rate in others.

## **2.1 The High Demand for Mobile Money in Africa**

Generating direct revenues of over \$2.4 billion worldwide with 690 million registered accounts worldwide, mobile money has evolved into the leading payment platform for the digital economy in many emerging markets (GSMA, 2017). While mobile money is playing a complementary role in developed countries, in the developing world, Africa in particular, it is an alternative to the lacking formal financial systems. It can be paralleled to the role of a mobile phone in the developed world, which is there to complement a landline, whereas in Africa, it is the only type of phone available. As a result, there has been a high demand for mobile phones in the continent. In the Sub-Saharan Africa, for instance, only 1.7 out of 100 people had access to mobile phones in 2000. By 2009, things had changed since 37.3 out of 100 people were then using mobile phones (World Bank, 2011). In 2011, mobile phone penetration in Africa was estimated at 52% (Getting the right numbers, 2011), i.e. about one mobile phone per adult.

Mobile money penetration in Africa has been on the increase since its introduction. In 2011, 25 countries in Africa had penetration rates that exceeded 90% (GSMA, 2011). A more recent survey by GSM Association on mobile adoption revealed that there were 150 mobile money services for

the unbanked in 72 countries across the globe, 41 of which were launched in 2012. The survey showed that 56% of live mobile money services deployments were in Sub-Saharan Africa. Still in Sub-Saharan Africa, about 56.9 million people had a registered mobile money account in June 2012. This number was twice the number of Facebook users in Sub-Saharan Africa (GSMA, 2012). It has been reported that Kenya benefitted from a favourable regulatory framework and from M-Pesa's parent company Safaricom's position as the country's dominant mobile carrier. However this combination is not offered in every other African country where mobile money has been implemented. For example South Africa is well regulated with strict monitoring on mobile money offering. Furthermore African countries have varying levels of access to traditional financial services compared to the pioneering country Kenya around the time when MPesa introduced mobile money making it difficult to evaluate the successful mobile money uptake. For instance Zimbabwe had suppressed demand for financial services but the uptake was not speedy and high as in the case of Kenya.

External factors relating to geography and socioeconomic conditions have partly contributed to the level of mobile penetration in Africa. Some of these include the poor or lack of infrastructure, the difficult geography and the scattered populations living in remote areas where there are no roads. These conditions have made it difficult to offer formal financial services. The introduction of mobile money has, therefore, been a revolution that has received high penetration levels in the continent. Most of the families in Africa have been dispersed due to urbanisation. Some members of the families have settled in urban areas that are far from their rural villages and yet they would still want to keep in touch and support their families with remittances. The introduction of mobile money proved more convenient than the expensive and sometimes risky methods they were using before. It is these difficult conditions, giving rise to a high demand of mobile money that partly led to the success of mobile money operators such as M-PESA of Kenya, a pioneer of mobile money in Africa (Fengler, 2012).

## **2.2 Multicurrency regime and mobile money in Zimbabwe**

For almost a decade Zimbabwe's economy was characterised by hyperinflation which led to cash shortages in 2008. The country was using the Zimbabwe dollar and had the second highest incidence of hyperinflation with Nov 2008 inflation rate of 79.6 billion percent (Hanke & Kwok, 2009) leading to a significant decline of manufacturing, mining and agriculture output. The harsh macroeconomic environment with limited availability of foreign exchange also put capacity

constraints in handling high volumes on banking and information technology systems. It involved multiple currency reforms characterised by printing of Zimbabwe dollars, circulation of bearer and agro cheques, limited withdrawal limits and multiple currency redenomination like the currency reform effective August 2008 (RBZ, 2008) where all monetary valuations were redenominated by a factor of 1:10,000,000,000 which effectively meant the removal of ten zeros from all monetary values. In January 2009, the Zimbabwe government stopped printing its own currency and adopted use of a multicurrency system to enable smooth and efficient flow of transactions in the economy and ease pressure on the payment systems, albeit the prevailing low economic activity in the country. Unlike in traditional dollarisation schemes where a dollarising country adopts one hard currency, five currencies initially were legally allowed to circulate at the same time. At inception the multicurrency regime allowed as legal tender a basket of major currencies such as the US Dollar, Pound Sterling, Euro, South African Rand, and the Botswana Pula with trade settlement in payment systems taking place in US Dollars. The adoption of the multi-currency regime was viewed as a temporary measure to restore stability, and even the number of currencies included in the basket was mutable. In January 2014, following increased trade ties between the Zimbabwe government and various countries, the government expanded its basket of currencies by adding Chinese Yuan Renminbi, Japanese Yen, Indian Rupee and Australian dollars as legal tender currencies (RBZ, 2014). With these multi-currency changes the central bank (RBZ) policies began incorporating a financial inclusion strategy driven by intergovernmental agency co-operations and collaborations. The institutional framework was meant to address financial access gaps and provided financial service providers with a platform for expedited mobile money provision in previously unbanked areas where people had access to a cell phone.

Since the Zimbabwean economy adopted the US dollar as a major currency in 2009, the economy which is hungry for production and productivity has not performed to expected standards. The resultant job losses created a huge base of unemployed Zimbabweans heavily reliant on informal trade for survival. Since most of the trade is small in value and more than 70% of informal traders are not properly registered limiting their eligibility to own bank accounts they contribute to the unbanked population providing fertile ground for mobile money provision. According to RBZ (2016) the under performance of the economy since 2012 is attributable to the legacy of policy inconsistencies/ contradictions when the country moved into dollarisation. This could have paved the way for MNOs to take the lead in mobile money provision since there was limited regulation

in this field with regulators focusing on formal financial banks. Secondary to political settlement the cited inconsistencies include over liberalisation of both the current and capital accounts at a time when the country had very limited access to foreign finance due to debt overhang, and a non-conducive investment climate due to sanctions and unattractive domestic investment policies; wrong choice of trading currency and; failure to benchmark with regional comparators to maintain competitiveness (RBZ, 2016). While the adoption of the multicurrency regime seemed to have stabilised the economy, foreign currency shortages persisted without much of a solution in sight. The cash shortages creates a scenario whereby many people had access to bank accounts in urban Zimbabwe but excessive restrictions around account withdrawals of insufficient liquidity paves the way for more mobile money based cash withdrawals backed by MNOs versus emergence of crypto-currencies and hence success of mobile money in Zimbabwe. The multi-currency exchange system that, de facto, is currently totally dominated by the use of US\$ came with its own challenges such as the problem of change for retail transactions. In response RBZ introduced small denomination coins in the local currency called bond coins in a bid to promote and enhance price competitiveness. Procuring a total of US\$10,000,000 bond coins, RBZ issued 1c, 5c, 10c, 25c on 9 December 2014 and 50c on 31 March 2015 (RBZ, 2015).

The economic environment in Zimbabwe, for the past decade, has been characterised by a shortage of foreign currency as the economy has struggled to match imports with exports, in the economy that has no currency of its own, relying mainly on United States Dollar, South African Rand, Botswana Pula, British Pound and European Euro, as mediums of exchange. The Reserve Bank of Zimbabwe (2015) pointed out that the liquidity crunch bedevilling the Zimbabwe economy, requires that exports be enhanced or improved, since exports remain the chief source of financial liquidity. Against this backdrop there was a deliberate policy amongst the government to promote the use of plastic money and cashless transactions. This saw an increase in the use of digital payments as well as the emergence of mobile money transfers. Adoption of a multicurrency system in Zimbabwe coincided with the adoption of mobile money in Zimbabwe. At that time the internet and mobile banking platforms were evolving and available to the banking public on a limited scale being mainly used for informational services, intra-bank and bill payments (RBZ, 2008). Studies by Munyoro et al., (2017) showed that mobile money transfers increased significantly during this era and this has also led to broader financial inclusion. Mobile Money Transfers (MMT) have a significant contribution to economic development through employment creation and financial inclusion. In addition, MMTs are easily accessible in remote areas and easy to use when paying

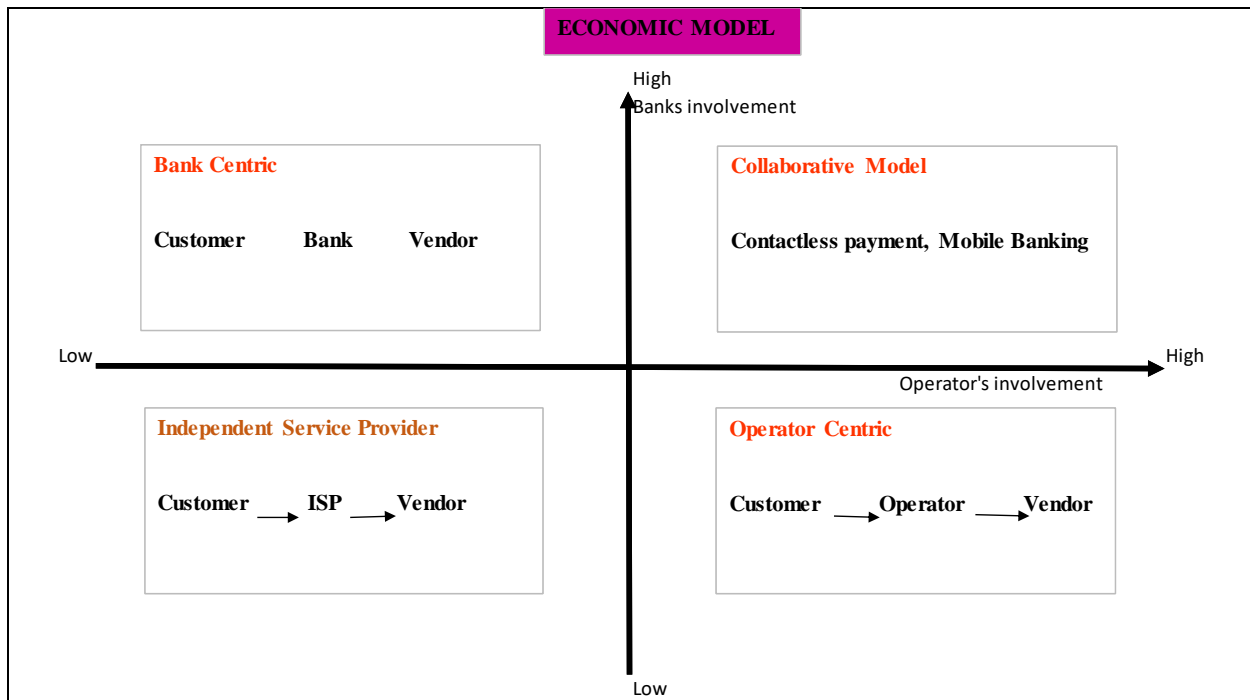
and receiving cash. In short, this is the reasons why it provides opportunity to increase the use of plastic money in Zimbabwe as well as reducing the transaction costs and risk.

### **2. 3 Mobile Money Models**

Mobile money transactions can be of different types namely non-bank model; a bank led model and hybridisation with each model having its own advantages and disadvantages (Niyogi & Niyogi, 2012). According to literature some non-bank models start as parallel to the banking system but as the system is further developed it becomes integrated into the banking structure as in the case of M-PESA which is progressing into a hybrid model considering the linkages of M-PESA with the banks and the various features that have been introduced since inception. Business models can play a central role in explaining firm performance and involves simultaneous consideration of the content and process of “doing business”, which explains part of the challenge in defining and operationalising the construct (Zott et al., 2011). As such business models remain an important ingredient in defining the success of any business.

Presently different types of models are successfully operational in different emerging economies with some models driven entirely by banks, while others are driven entirely by telecom operators (e.g., M-PESA, Kenya; Smart and Globe in Philippines), another type of model is driven by third party service providers and the emerging model which is a collaborative one between banks and telecom operators (Mishra & Bisht, 2013; Porteous, 2006). The models are summarised below:

Figure 2. 1: Four Models and the level of Implication of Partners



Source: Chaix & Torre (2011)

a) **MNO led/ Operator Centric Model:** MNO acts as the effective bank offering mobile financial services thus it operates independently of a financial institution. The MNO offers the technology, operates the transactions and compensates the system through liquidity provided by a third party (Chaix & Torre, 2011). MNOs have the benefit of owning the cellular network, providing and having access to consumers' mobile phones, and frequently have a physical presence in the relevant communities, but typically do not have experience in developing or distributing financial services, nor the regulatory ability to do so (Lal & Sachdev, 2015). In this model the MNO connects the m-payment system and banking accounts or cash deposits before payments and credits the accounts or to pay in cash the last recipients after clearing of last transactions (Chaix & Torre, 2011). Currently Econet Wireless, Telecel Zimbabwe and Netone mobile network operators in Zimbabwe fall in this quadrant with their Ecocash; Telecash and One Money mobile money platforms respectively.

According to Chaix & Torre (2011) the MNO led model is more suited to an economy of cash money owing to its adaptability to small but distant transactions for which it decreases the costs and the risk of transfer and its convenience for low revenue users that it could help to realise a few number of useful transfers. With mobile money in Zimbabwe mobile phone users deposit physical cash through an agent or MNO shop into an e-wallet account. This money then becomes e-money, which customers can then transfer electronically to other mobile phone

users without visiting any bank. M-money transactions enjoyed by Telecash; Ecocash and One Money customers include person to person money transfer, buying prepaid airtime, paying for merchandise, Dstv subscriptions, and prepaid electricity and City Council bills among other services. Users enjoy these benefits owing to the fact that MNOs hold the technology and secure element and frequently compete with a small number of partners (Chaix & Torre, 2011) and unlike often weak banks they have much stronger retail brands and distribution networks as in the Econet Wireless case, therefore face less competition in the payment space (Porteous, 2006). The wide and innovative mobile payment system offering by three MNOs in Zimbabwe has given them the leverage in the m-money payment space. All three MNOs in Zimbabwe have debit card services whereby customers can make local payments using a ZimSwitch enabled debit card that is linked to their ewallets, thus offering full liquidity and security outside of the banking system, whilst making the conventional functions of banks performing liquidity and maturity transformation become less critical for the financial system (Klein & Mayer, 2011).

- b) **Bank led/ Centric Model:** The Bank-Centric Model extends the existing four-corner model used for credit cards into the mobiles and is a model where the merchant relationship is owned by the acquiring bank who in many cases provides the merchant with the appropriate acceptance (Smart Card Alliance, 2008). Distributing property rights, the bank primarily offers mobile financial services to its account holders through a network of agents. Users are in relation with their bank which provides them the way of payment (the mobile-phone) and the users receiving the payments (frequently commercial intermediaries) are not generally clients of the same bank than the payer (Chaix & Torre, 2011).

Banks have the benefit of already offering similar services to the banked population, but must partner with an MNO to access consumers' phones, and must often develop new business models to succeed in lower income populations (Lal & Sachdev, 2015). For the model to work a general compensation system must operate between banks with or without connections with the classic inter-bank flows and the partners banks of this compensation system must pay fees to one or many mobile operators associated to the operation (Chaix & Torre, 2011). Banks have many competitors and do not own the technology hence they must compete or more successfully cooperate with other financial partners and collaborate with mobile operators without any substantial bargaining advantage (Chaix & Torre, 2011).

- c) **Hybrid/Collaborative Model-** Bank and MNO work together offering mobile money services and share proprietary rights. It involves collaboration between operators, banks and the participation of a third party which creates a link between the two main partners where each partner is in its natural role and concentrates on his own skills (Banks concentrate on financial responsibility and operators on the transmission network) and all partners derive their revenue from fees charged to merchants and final users (Chaix & Torre, 2011). The three MNOs however have partnered with some banks in Zimbabwe to provide m-money transaction services such as remittances and payments. If a mobile money user's bank account is linked to ewallet, they can only access their bank account through a mobile money platform to transfer money from wallet to bank account; pay bills and check bank account directly from the phone.

Steward Bank one of only a few banks worldwide fully owned by a mobile network operator (Econet Wireless Zimbabwe), since 2013 is a player in the mobile money market and has a good market share as its strategy is to be a mobile first bank with a differentiated business model which integrates innovative digital offering. As such mobile money customers without a Steward Bank account can swipe into their bank accounts on Steward Bank POS machines to transfer money directly from their bank accounts into their wallets. However with a collaborative approach, distribution of profits and the management of property rights remains an open problem which requires an understanding of an advanced collaborative process requiring a learning period for rather suspicious partners (Chaix & Torre, 2011). In Zimbabwe this scenario has seen only ten out of fifteen banks willing to partner with MNOs to provide mobile money services.

- d) **ISP Model:** Independent companies establish a joint venture with MNO/Bank to meet specific demand not currently being met with Internet companies being the ideal candidates to intervene as ISP given their previous experience with monetary transfers and the organisation of electronic commerce websites (Chaix & Torre, 2011). This model is an innovation created by payments industry newcomers who are trying to find ways to process payments without using existing wire transfer and bank card processing networks and it is attractive to merchants looking to decrease the costs of processing credit and debit payments, to underbanked customers who cannot obtain a traditional bank card, and to customers seeking cross-border remittance (Smart Card Alliance, 2008). In Zimbabwe Zimswitch, a third party distinct from a financial agent or a telephone operator, plays the role of intermediary between banks, operators, traders and final users while concentrating all the organisational prerogatives held

by banks or operators in the previously presented models and managing the distribution of property rights between the operators and the banks (Chaix & Torre, 2011).

Zimswitch plays intermediary role by offering interoperability while also facilitating financial inclusion in Zimbabwe through its introduction of innovative technology driven solutions to the financial industry, while meeting the payment processing needs of the mass market. Any mobile registered user on any network is able to conveniently use their mobile phone to send money through Zimswitch Instant Payment Interchange Technology (ZIPIT); buy airtime and transfer airtime to another mobile user; send funds instantly from a Zimswitch member bank to another member bank and funds are received instantly and transfer funds from the bank to the mobile wallet. The ISP and bank centric model and are more adapted to regions characterised with a high level of development of financial intermediation as they adapt to many types of users and professional uses in financially developed contexts respectively; on the other hand the collaborative model provides the more efficient solutions if partners involved in the system are able to find consensual ways to share the property rights (Chaix & Torre 2011). In the Africa context such business models could work extremely well in an economic context such as South Africa where the financial market is developed hence the adaptation of this model with MNOs in Zimbabwe.

The three firms chosen for this study can be placed in this quadrant as indicated above. Although they might have independently started in MNO led quadrant, as demonstrated with Econet Wireless Zimbabwe there has been shift to collaborative partnership with banks and switch service providers. These three companies have important marketing executives who are also an important part of this research. MNO executives are an integral part of mobile money services as they are the key personnel responsible for the marketing strategies as well as being a credible source of information for this study. Therefore they constitute the key informants for this study and this is why they have also been chosen as participants for this study.

Hinson (2011) argues that the Open Federated Brick and Click Model of mobile-based banking services could be useful in building pathways for increasing financial access to the poor in developing country contexts and further proposes that MNOs and banks should work hand-in-hand to offer financial services to the poor, thereby reducing incidents of poverty, especially in rural areas. However he further emphasis that any MNO-Bank collaboration can only be effectively constituted within the context of the appropriate legal and regulatory frameworks in place to harness the promise of new technologies and allow competing financial service providers

and consumers (Hinson, 2011; Suárez, 2016). Several of the m-banking models are successful as well as stable despite being run by different stakeholders implying there is no one successful model and each country/geographic allocation will experience the evolution of a model that would be a function of prevailing socio-economic and political factors (Mishra & Bisht, 2013). Hence each mobile banking model is as successful as the alterations specific to its implementation context.

The mobile telecommunications services sector in Zimbabwe has grown tremendously over the years with the telecommunications operators defying all logic and sense in a bid to create and sustain a competitive edge. This has also been spurred by the stabilisation of the local currency after experiencing high volatility for some years. The introduction of the multicurrency system enabled a lot of stabilisation which was a spring board for mobile money deposits and transfers to blossom. Econet was the first provider of mobile money transfers while the other two did follow behind. With the basic services relatively identical, the need for differentiated market offerings became vital hence the launch of mobile money transfer services. Along with global trends, innovation has become a buzzword and epitomises modern day enterprises such that survival in today's turbulent environment is somewhat hugely dependent on relentless continuous product innovation and improvement approaches that harnesses mobile technologies cutting across all demographic segments.

In Zimbabwe with 70 percent of adults unbanked neither direct nor indirect (Finscope, 2014); three money mobile models exists namely MNO led; Bank centric and Collaborative (Marumbwa and Matsikwa, 2012). Currently MNO led money mobile dominates in terms of transaction and monetary money transfers. All three MNOs adopted the MNO m-banking model. Econet Wireless management saw four significant opportunities namely; to bring electronic payments services to the informal economy. Zimbabwe uses a number of currencies with the US dollar being the most widely used. However the currency has remained in short supply because of the unfavourable macroeconomic fundamentals currently occurring in the country. This has manifested in a cash shortage as most are unable to access cash from banks. Mistrust and scepticism for mainstream banking services is a reality coupled with a history of bank failures and hyperinflation, opportunities and threats abound for mobile money transactions (Lal & Sachdev, 2015).

Having seen these opportunities to both mitigate significant problems they saw with Zimbabwe's financial and payments systems and to bring value to consumers, and developed their service

accordingly (Lal & Sachdev, 2015) and introduced Ecocash in 2011, the same year as Netone and Telecel’s mobile money product launch. Netone (a Parastatal) relaunched its OneWallet in 2013 but following failure to pick up of the product it relaunched under a new brand named One Money in 2017 and Telecel relaunched its Telecash in 2014. EcoCash Econet reached 2.3M customer registrations within 18 months of launch (equivalent to 31% of Zimbabwe’s adult population), with 1M of those active, and annualised transaction volume equivalent to 22% of the country’s GDP (Lal and Sachdev, 2015).

As presented in Table 2.1 below, According to Potraz (2015), the total value of transactions on mobile money platforms increased by 16.3% to record \$533,067,245 from \$458,412,196 recorded in the previous quarter; the number of mobile money subscribers also increased by 9.9% to reach 7.3 million subscriptions from 6.7 million subscribers recorded in the previous quarter and the number of agents also increased by 11.7% to reach 33,259 from 29,775 agents recorded in the previous quarter as shown in the table below.

Table 2. 1: Mobile Money Transfer Transaction Value

<b>Mobile Money Transfer</b>	<b>3rd Quarter 2015</b>	<b>4th Quarter 2015</b>	<b>Quarterly Change (%)</b>
<b># of Subscribers</b>	US\$6,670,959	\$7,333,388	9,9
<b># of Agents</b>	29,775	33,259	11,7
<b>Total Value of Transactions</b>	\$458,412,196	\$533,067,245	16.3

Source: POTRAZ, Operator Returns

Since Ecocash had built the rails, the other MNOs simply need to jump onto the bandwagon and subsequently this ride could actually go as far as approaching all of the same agents and merchants that Ecocash has as there is no exclusivity agency-ship after all (Mukandatsama, 2013). The Mobile Money Technology (MMT) offered by the three MNOs are more or less the same, send and receive within one network and the ability to receive only from another network, although for a long period in 2013 Ecocash withdrew MMT to Telecel subscribers, so while Econet subscribers were limited to send funds to their 8.5 million subscribers, Telecel and Netone had the liberty of sending funds to potentially 11 million subscribers (Mukandatsama, 2013). This reflects on the research gap regulatory, bandwagon and imitation effects as well as psychological resistance highlighted by (Chaix & Torre 2011).

## **2.4 Determinants of Mobile Money Provisions and Performance**

In Africa the obvious lack of financial services has meant there is an unprecedented demand for mobile phones and this has driven people towards use of mobile financial services. The introduction of mobile money transactions has been convenient and more inclusive than the riskier ways done in the past. It is these difficult conditions, giving rise to a high demand of mobile money that partly led to the success of mobile money operators such as M-PESA of Kenya, a pioneer of mobile money in Africa (Fengler, 2012). Mobile banking from country to country such as that based on the local banking regulations, mobile phone provider's strength and the mobile money initiatives have received mixed results (Niyogi & Niyogi, 2012). The mobile telecommunications services sector in Zimbabwe has grown tremendously over the years with the telecommunications operators defying all logic and sense in a bid to create and sustain a competitive edge. Some of the factors noted by literature to affect MNO successful deployment include:

### **a) Extent of Demand**

Demand-side metrics underpin the scalability of a mobile money solution given that any payment and store-of-value system ultimately serves a number of purposes for its users, but identifying a principal product application with strong mass market appeal of early adopters is the cornerstone for a mobile money launch towards a viral effect (Heyer & Mas, 2009). While the mobile wallet product has strong market appeal, the product cannot achieve viral effect without taking into account existing constraints on low income and irregular income streams; inadequate product information and lack of confidence in the product given the instability of financial structures in Zimbabwe. Thus purposes and structures vary from country to country where different institutional and business models deliver systems that offer a variety of financial functions, including micropayments to merchants, bill-payments to utilities, P2P transfers between individuals, and long-distance remittances (Donner & Tellez, 2008).

Changing Customer Demand was identified by E-Government (2012) as a key success factor for the m-banking model adopted by Safaricom making reference to its partnership with Equity Bank that accelerated trend and lead to other partnership and forms of integration with wider banking services. Therefore if P2P transfers were its only business model, M-PESA would not be growing as quickly as it is today (E-Government, 2012). However MNO model success as in the case of M-PESA cannot be pinned down to any one specific factor but consistency among all the elements

of the customer proposition and MNO's attentive monitoring of the entire system (Mas & Morawczynski, 2009). Also as witnessed in Bangladesh and Pakistan understanding user demands and building products around their specific needs that already have a market appeal is positive for faster uptake of mobile banking in any economy. Both countries recognised low coverage of banking and bank usage in rural areas and pursued mobile banking to address the gap given the large population with access to cell phones.

#### **b) Existing Alternatives**

In order to assess the market opportunity for a new mobile money scheme, Heyer & Mas, (2009) suggest demand-side indicators must be looked at in the context of the accessibility and quality of the alternatives. Given the existence of poor infrastructure in rural areas leading to reluctance by traditional banks to expand in both Kenya and Zimbabwe, opportunity existed to provide an alternative to transact for the inhabitants of rural and remote areas. Assessment gives MNO an indication of the work required to convince users to switch if good alternatives exist and the need to create an entirely new service in the absence of alternatives (Heyer & Mas, 2009). While Kenya and Zimbabwe had similar conditions prior to mobile money uptake the variation in uptake could be attributed to inadequate investment by the other to understand processes of those at the bottom of the pyramid. Mobile money schemes can gain traction through identifying specific weaknesses of existing alternatives, and crafting their service proposition to demonstrate advantages over those attributes hence brand value and market share may be more significant to speed of uptake (Heyer & Mas, 2009).

#### **c) Retail Landscape**

A mobile money service needs to be supported by a network of retail agents who carry out functions on behalf of the principal (Klein & Mayer, 2011) reaching into the communities where customers live to provide cash in/out services within easy reach of their customers; promote the service within their communities; register new customers and educate them (Heyer & Mas, 2009). However adoption of the MNO model by retailers and consumers is not immediate owing to fears of different risks that they associate to the system (possibility of fraud, blow to privacy, deployment of additional point-of sale equipment at merchant, billing and customer service requirements challenge to mobile operators and lack of business relationships between merchants and operators (Smart Card Alliance, 2008), also adoption costs integrate material fixed costs (adaptation to the new technology, time to accept operators as financial partners) incurred by

retailers, clients and finally the operator which could be involved to differ adoption until their decrease.

#### **d) Cellular Landscape**

Aker & Mbiti (2010) find there is strong correlation between mobile phone coverage, the types of services offered and the price of such services and the market structure for a particular country. Technology explosion in the past decade gave rise in ownership of handsets that can perform the basics of texting and calling in Sub-Sahara Africa thus creating opportunity for mobile banking. However the services offered and associated costs for mobile banking is also influenced to a large extent by the costs of infrastructure invested in the mobile banking platform by the MNO. Characteristics of the mobile market which may condition the size of the mobile money opportunity on the demand side such as the degree of mobile penetration within the population, whether based on own/shared mobile phones, should be considered noting that while a mobile money offer may eventually boost subscriber numbers, it will initially depend on the deployed base of mobile phones (Heyer & Mas, 2009).

#### **e) Need for Scale**

Factors which influence the scalability of the mobile money opportunity, in terms of the potential volume of transactions captured and the speed of take-up by customers, need to largely align to set the scene; Consumer and context design orientation (Lal & Sachdev, 2015); for a successful mobile money deployment (Heyer & Mas, 2009). A critical element for the uptake of mobile financial services is banking of workers' remittances into a bank account hence acquisition of greater liquidity and exploitation of scope and scale economies fundamental to reducing transaction costs (Prior Sanz & De Lima, 2013). Similarly the MNO model is a disruptive innovation that allows mobile money to penetrate a new payments market hence the need for volume (being able to capture a large number of relatively small transactions), speed (being able to generate momentum and trigger simultaneous interest among users and merchants) and coverage (being able to use it anytime, wherever one happens to be, and to send money to anyone, anywhere); together suggest that the business model needs to be highly scalable (Heyer & Mas, 2009).

#### **f) Regulatory Environment**

Adapting the regulatory framework is the most important challenge for the uptake of mobile financial services initiatives with m-money and agent regulation being the key elements of the regulatory framework needed for m-banking success (Prior Sanz & De Lima, 2013). However

taking a measured approach is vital to achieve optimal societal and industry outcomes (Anderson, 2010). Similarly research by Lal & Sachdev (2015) identifies characteristics of the successful mobile money deployments to include the regulatory structures set up by their central banks / regulators, their corporate structures, the guiding principles of their business models, and the way in which they went about building their agent networks and driving adoption.

In any m-banking, enablement requires a blend of legal & regulatory openness, which creates the opportunity to start-up and experiment, with sufficient legal & regulatory certainty that there will not be arbitrary or negative changes to the regulatory framework, so that providers have the confidence to invest the resources necessary (Porteous, 2006; Acker & Mbiti, 2010). On the contrary Berger & Nakata (2013) argues m-banking model implementation is effective when the unique socio-human, governmental-regulatory are accounted. Regulation of mobile money can help to secure trust in new mobile money schemes and constrain the success of mobile money schemes by forcing an inferior customer experience from a usability point of view; and limiting the operator's degrees of freedom in structuring the business model, service proposition and distribution channels (Heyer & Mas, 2009). Limited regulation in Zimbabwe gave one MNO, Econet Wireless a monopolist advantage over others at the onset as they had a huge degree of operation freedom in their approach.

From a regulatory perspective, m-banking in developing markets has the potential to tip towards a dominant platform, especially in situations where a proprietary platform is launched by an established mobile network operator that already has a dominant market position (Anderson, 2010). While this supports the Kenyan mobile banking platform, it was not the case with Zimbabwe whereby the MNO with dominant market position did not automatically translate to economies of scale. Issues of policy and regulation are alluded to as significant constraints on m-finance adoption by CGAP when two previously separate and distinct regulatory regimes of banking and communications converged and the blurring of the distinction between services that are bank-led and non-bank-led (Duncombe & Boateng, 2009). Countries with low levels of effective regulation may be very open but highly uncertain, since regulatory discretion may lead to arbitrary action; conversely, countries with greater certainty may be less open, in that the types of entity and approach allowed to start up are restricted (Porteous, 2006).

South Africa with high levels of effective regulation has been less open to non-bank led services hence the less successful uptake of Vodacom's mobile money platform. Faced with a

conducive environment and low regulatory reforms mobile money projects in Zimbabwe has not reached a mobile money viral effect. Nevertheless adaptive and flexible and regulatory regimes facilitate innovation as demonstrated by the m-banking initiatives in Kenya, whose future was only guaranteed after the Kenyan government introduced special dispensations within the regulatory regime (Coetzee et al., 2003).

Anderson, (2010) sums with two key issues for the regulator: (i) Monopoly outcomes whereby proprietary control of an m-banking platform provides the opportunity for an operator to extract monopoly profits if the industry tips towards a winner-take-all outcome and (ii) Spill-over effects which take place when an m-banking platform becomes dominant in a winner-take-all outcome, this can have spill-over effects for the wider mobile telecommunications sector. This however increases switching costs for consumers considering moving from one mobile network operator to another further strengthening the dominant market position of a high market share operator such as Safaricom in Kenya, increasing the barriers to entry for other enablers and constraints to mobile money can include government policies, economic environment, and political environment among others. These factors can be found anywhere on the African continent and beyond as each market will have its own unique enablers or constraints.

## 2.5 Conceptual Framework

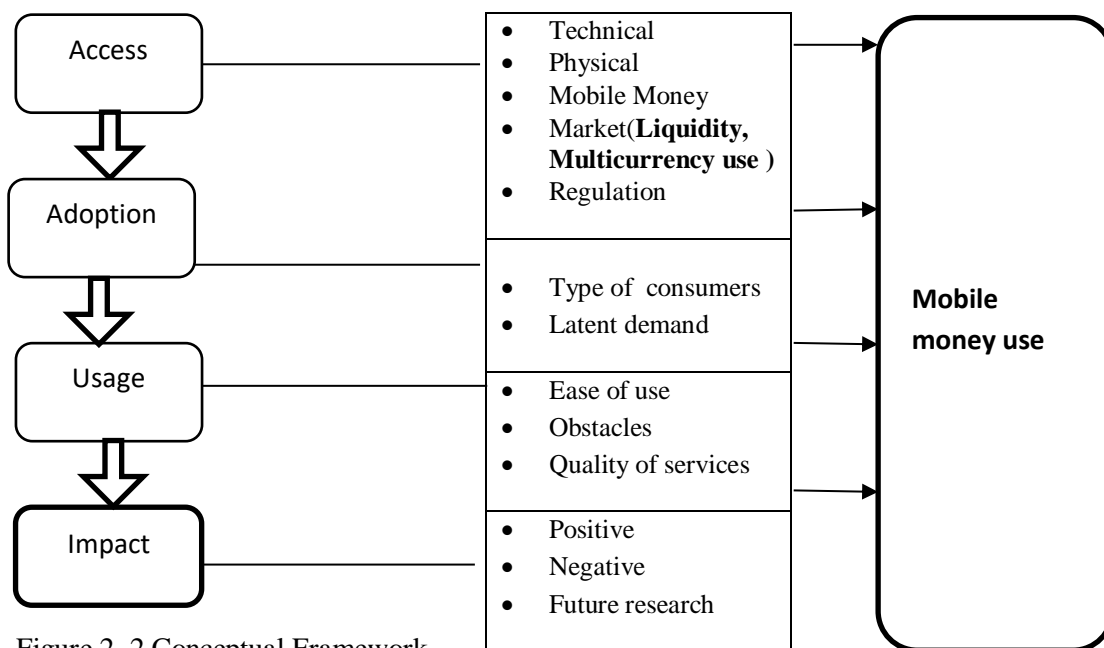


Figure 2. 2 Conceptual Framework.

Source (Nyaruwata, 2017)

Mobile money transfers can be understood from four different perspectives: access, adoption, usage, and impact. Access depends on both the physical and the technical access. The physical access refers to mobile network operators' (MNOs) ability to leverage a widespread distribution of agent networks, while technical access refers to access through the mobile interface (GSMA, 2016). These factors are assumed to be prerequisites for diffusion of mobile money. However, actual uptake and usage of a financial service or product depends on the individual or the firm themselves and the quality of the service provided. Adoption relates to questions of who adopts mobile money and why they do so. The choice of adoption will depend on the latent demand for mobile money and the current outside options. Usage depends on the quality of the services and refers to how customers effortlessly can apply the services, or what are the obstacles for not doing so. It is about creating usage patterns that builds the whole ecosystem. For firms, there are certain drawbacks that makes mobile money less desirable such as a cap on the amount of transaction possible. Diffusion of mobile money will crucially depend on all these factors in the multicurrency system in Zimbabwe. The impact refers to the welfare effects and implications of mobile money at the various levels.

## **2.6 Summary**

This chapter served to examine literature rendered relevant for the study thereby placing this current study in the context of studies conducted by other scholars. Literature confirmed methodological and conceptual gaps and in addition the geographical gap attributed to studies being concentrated in a few cases/countries, with emphasis on Kenya although there are experiences in dozens of other countries (Beshouri et al., 2010; Duncome & Boateng, 2009, Diniz et al., 2011). Since 2007 several leading telecommunication providers in four countries of East Africa; namely Uganda, Kenya, Tanzania and Rwanda, have, entered into partnerships with major banks and sometimes are doing it alone to avail mobile money transfers services in these countries however, there are varying patterns of adoption and use as well as degrees of success associated with the ICT experiences of these organisations and their clients in each of the countries (Muwanguzi and Musambira, 2009).

Financial inclusivity remains a challenge for many societies especially in the developing. However improvements in ICT have also led to more inclusivity as mobile money has become a reality in

the lives of many. Alongside financial inclusion, mobile money has also been an important sector in the growth of many economies as well as financial growth. Development of other mobile money services has also led to other services such as mobile insurance, credit and services and these services enable financial services that go beyond merely payment and transfers. As highlighted before mobile services are important for those people previously marginalised in terms of financial inclusion. Evidence suggests that financial inclusion is a factor in the overall growth of the economy. A number of firms have taken advantage of this development to record impressive performances on the African continent, Zimbabwe included. For example, Demircuc-Kunt et Al., (2014) state that around the world across all continents mobile money is more prevalent than ever. As such the question is no longer about whether mobile money services work but how to ensure the growth of this sector. The visibility of mobile money is more pronounced in Kenya on the African continent. This had been driven by rapid infrastructure development in that country and this has seen banks being bypassed. The success of Mpesa has been so huge and this model has been replicated on many African countries including Zimbabwe

As revealed mobile money transfers are varied or different. These can be non-bank models, bank models or a hybrid of each of the models. As literature has shown there are some advantages and disadvantages to be drawn from these types of services. As it stands different types of models have registered successes in different countries with some models entirely driven by banks while others have been driven by mobile network operators. In Zimbabwe these has been led largely by mobile operators which has also merged with banks to form a hybrid of mobile money platforms. These operators such as Econet, Netone and Telone have been important in the development of mobile money services in Zimbabwe. In particular Econet has a large share of the market and has even formed partnerships with banks through the EcoCash and ZIPIT platforms.

More importantly the performance of mobile money services has a number of determinants. These have to do with the extent of demand; existing alternatives; retail landscape and regulatory environment among other determinants. In Zimbabwe the use of mobile money has also been aided by the liquidity crunch which has made mobile money a very attractive and convenient form of transacting. Recommendations from this study will help industry stakeholders including policy makers holistically review the viability of the mobile banking model adopted in Zimbabwe, considering its distinctive components, economic viability, peculiar challenges, coordination problems that need to be resolved and making necessary adjustments to come up with a suitable model and regulations that can be replicated in other multi-currency cash based developing

countries. The body of knowledge will be enriched by the study of mobile money diffusion among MNOs operating in a developing multi-currency regime.

### **3. RESEARCH METHODOLOGY**

#### **3.1 Research approach and Strategy**

Two main research approaches are identifiable namely deductive and inductive (Trochim, 2006). According to Creswell and Clark (2007) in deductive research the researcher moves from top down, from theory to hypothesis and to data to add to or contradict theory. In disparity, in inductive research the researcher moves from bottom up building themes and generating theories from the research (ibid). Inductive is moving from the specific to the general while deductive begins with general and ends with the specific. This study follows an inductive approach to understand how mobile banking can be adequately provided in a developing multi-currency regime. This is premised on the understanding that several theories have already been generated on the subject which the study shall prove or disprove. However initial definition of the research question helped the researcher specify the kind of organization to be approached and data to be collected. Again to understand all the dynamics of mobile money operators' performance, the inductive approach will not restrict the researcher to previous generated theories but allow the generation of new ones (Eisenhardt, 1989). An inductive approach was considered the best approach to aid the objectives of this research.

This study employed a multiple case study and followed a cross sectional study research design as guided by the objective of the study which is to assess mobile money provision, adaptation and performance in a fragile multicurrency economy. As Eisenhardt and Graebner (2007) found, multiple cases are likely to yield more generalisable, robust, parsimonious theory than single cases as they focus on understanding the dynamics present within single settings (Eisenhardt, 1989). A multiple case study was considered more appropriate since it was able to capture the major MNOs who were also involved in mobile transfer services. Eisenhardt (1989) has argued that data collected through case study research can provide valuable information about the study units along relevant characteristics and also about associations among those characteristics. This enabled the researcher to gain some rich data for this study. The cross sectional study research design, being a once off research endeavour without repeated measurement, sufficed to allow the researcher to gather data pertinent to the research study area. Using several units of analysis was also likely to improve the likelihood of rich, accurate theory (Yin, 2013).

Researchers in business studies need to be very aware of philosophical commitment they make that is through research strategy choice which has an impact on what is being investigated and not merely on their own understanding of the subject matter (Johnson and Clark, 2006). This study

followed the interpretivist school of thought based on the understanding that the social world of business and management is far too complex to lend itself to theorising by definite ‘laws’ in the same way as the physical sciences. Interpretivist advocates that it is necessary for the researcher to understand differences between humans in our role as social actors (Saunders et al., 2009). This emphasises the difference between conducting research among people rather than objects such as trucks and computers. Thus, the interpretivists approach was considered befitting to this study as it enabled the researcher to understand the research areas from the perspective of the respondents who were the main sources of data that provided answers to how mobile banking can be adequately provided in a developing multi-currency regime.

### **3.2 Sampling**

The sampling strategy employed was non-probability, more specifically purposive sampling. This sampling strategy was utilised in selection of the multiple case studies as well as selection of appropriate participants for this study with the aim to control extraneous variation and define limits for generalising the findings (Eisenhardt, 1989). This sampling strategy was chosen since it allowed the researcher to conveniently select the relevant cases involved in mobile money services as amongst mobile network operators. The study was conducted at organisational level and the target population are the three MNOs in Zimbabwe, namely, Econet, Telecel and Netone. This provided a platform for in-depth investigation of the phenomenon of interest and enables the replicability of the case and comparing analysis with other published cases. A sample of 16 interview respondents (Executive representing each of the MNOs and 3 key informants from the academia) selected using purposive sampling is therefore considered representative and was adopted to obtain divergent perspective from industry experts on the topic under study as all three MNOs are providing mobile money services. Key informants are a select group of people who are particularly knowledgeable or experienced about certain issues or problems whose positions within society in a particular research context give them specialist knowledge about what is happening around them as well as the views of those they represent, which offers in-depth, extensive, and over-arching insights into the research setting (Creswell and Clark, 2007). The incorporation of elite key informants for this research from a broad array of sectors is a way of avoiding biases and a way of acquiring diverse views from different experiences and perceptions and also trying to obtain objectivity for this study.

The sampling strategy followed criterion sampling where only respondents who meet mobile money criteria will be selected to participate. For the purpose of this qualitative study, given the

population size for the organisations offering mobile banking in Zimbabwe a sample size of 16 ensures credibility of findings and is determined to be the point at which new data collection no longer brings additional insights to the research questions. Interviewees at organisational level will be chosen on the basis of their personal involvement and experiences with mobile banking and their willingness and ability to answer interview questions accurately and adequately.

A small group of three to six respondents provides a broader spectrum of data for analysis, while others attest that, for selected methodologies, a minimum of ten to twenty participants is needed to ensure more credible and trustworthy findings; How many participants are “enough” can depend on many factors, but as long as there is sufficient interview data, whether from one person or twenty, then there is a sufficient corpus for analysis. (Saldana, 2011). The business model as a unit of analysis, as a system-level concept, centred on activities, and focusing on value serves as an important catalyst for a more unified study of m-banking business models adopted by the MNOs in Zimbabwe and understand what they denote and what they are not (Zott et al., 2011).

The objective of sampling was to extract a sample of five respondents who were representative of MNOs and three key informants from the academia to enhance validity. According to Saunders (2003) sampling is the process of choosing a representative subset of observations from a population to determine the characteristics of the random variable under study. For this study, a non-probability sampling method was adopted as research participants were selected on the basis of their positioning to provide relevant information for the study. Senior managers are strategically positioned to drive the MNO strategies hence critical for this study. Snowballing sampling method was used for selecting two key informants from the academia for the interviews. Below is a tabulation of the respondents and the sampling strategies to be employed.

Table 3. 1: Outline of Sampling Strategies

<b>Sample Characteristics</b>	<b>Sampling technique</b>	<b>Research instrument used</b>	<b>Expected number of Respondents</b>
Senior managers of MNOs	Purposive	Interviews	4
Key informants e.g. academia	Snowballing	Interviews	12

Source: Current Study

### **3.3 Data Collection**

Interview and archival sources were used for this research. The researcher designed interview guides (Appendix A) for data collection purposes targeting MNOs executives and the key informants. Semi structured interviews involving a number of open ended questions based on the research area were employed to collect data. This is the preferred method for this research because they gather quality textual data directly and solicit the perspectives of the people we wish to study (Saldana, 2011). Furthermore it provides opportunities for both interviewee and interviewer to hold discussion on some topics in more detail. It also leaves room for the interviewer to probe for elaboration on given response or follow a line of inquiry introduced by the interviewee. Using a Boston Matrix questions were structured in such a way to delve into the MNOs' long-term strategic planning regarding how they consider mobile money opportunities given the existing portfolio of products to decide where to invest, to discontinue or develop products and adjust models/approach. This approach addressed the primary research question and how mobile money providers adapt to fragility of the multicurrency economy.

Questions were also structured to determine the extent to which principal agent relations and public decisions and regulations have influenced the provision and adaptability of mobile money in Zimbabwe. This addressed the research questions on what needs to be done to broaden mobile money uptake and performance in a multicurrency regime and factors facilitating or impeding the provision of mobile money provision in Zimbabwe. An interview protocol developed to guide the interviewees was categorised to cover mobile money provision; Adjustment of model and considerations for scaling model uptake in a multi-currency regime. The interview protocol was strictly followed, with no questions skipped or order of questions changed although some deviations were allowed to probe further into interviewee's responses that were ambiguous or interesting (Bhattacharjee, 2011). With the interviewee's consent the interviews were electronically recorded for future reference. During the interview the researcher took notes to record observations, comments and behavioural responses and personal impressions of the interviewee.

The researcher conducted personal interviews with senior management at the mobile money operators in the country to gather primary data in addressing the research questions. A personal interview is a two way communication method initiated by an interviewer to gather information required from the respondent. The interview guide was designed following an extensive review of literature on the subject under investigation to ensure that it helped the researcher in addressing

the research questions. While both categories when asked questions and spoke to the three research questions, the key informants were primarily targeted to speak to the factors facilitating or impeding the provision of mobile money in Zimbabwe and what needs to be done to broaden mobile money uptake and performance in multi-currency regimes. Interviewees were asked to provide information such as: a) their views on mobile money provision in Zimbabwe, b) mobile money provision drivers and impediments and how they are dealing with the challenges faced, c) critical success factors in mobile money operation in the Zimbabwe context, d) what they believe can improve uptake of mobile money in a multi-currency ecosystem. The interview protocol had semi structured questions classified under the research questions to ensure that the respondents shared their views and ideas rather than just answering a series of questions. This enabled a more in-depth understanding of employee motivation within the organisation which enriched the research findings. However room was left for adjustments to data collection instruments such as adding questions to allow the researcher to probe emergent themes or to take advantage of special opportunities which may be present in a given situation (Eisenhardt, 1989).

Cant et al., (2005) has argued that this process is advantageous as it is personal and the researcher can clarify difficult concepts to the respondents thereby enhancing the accuracy of the data provided. Personal interviews were used and this enhanced the interaction between the researcher and the interviewee. The researcher benefited from the value of personal interviews which gave depth of information and details can be secured which can exceed data gathered by self-administered studies. To ensure a more interactive and informative discussion key questions and sub-questions were designed particularly to encourage respondents to provide more information. The interview questions also began with background variables including skills and past experiences of the respondents to the more specific questions related to employee motivation and organisational performance. An interview schedule was developed to ensure that the interviews will remain on track and allow interviewees to each area under investigation. Thus all ambiguous questions were discarded from the interview guide to maintain the validity of the instrument.

### **3.4 Data Analysis**

Data was presented in terms of different themes in terms of the posed questions from the interviews. Care was taken to be organised and keeping records of data which could be inspected by others. The data analysis was adequate to reveal its significance with appropriate data analysis methods used. Within-case analysis of each research question was conducted following data

collection to help the researcher cope with the large data volume and allow emergent of unique patterns before generalisation. From the analysis where research question similarities and differences were identified and to further exploit the unique insights from different data collection methods, data was divided and reviewed by source. With this approach when a pattern from an interview source is collaborated by evidence from archival source, the finding is stronger while evidence conflicts are reconciled through deeper probing (Eisenhardt, 1989). Tabular displays of information about each research questions were formulated as part of data analysis. Analysis can also overlap with data collection giving the opportunity to adjust the data collection process based on themes emerging from data analysis (Bhattacharjee, 2011). Collected data (verbal or behavioural) was analysed at descriptive and interpretative levels for purposes of classification, tabulation and summarisation. Two level analysis ensured that results take into account what was actually said and what was implied or inferred. Saunders et al., (2009) has rightly noted that in research there is a need to ensure that a data analysis method fits the research design. The data analysis started after data collection ranged from simple frequencies to more complex data analyses. The data analysis stage included interrelated operations to summarise and rearrange the data. Themes were developed as tools of analysis guided by the research questions. Data was organised and saved in accordance with data protection regulations.

Cant et al., (2005) pointed out that it is critical that the researcher ensures the data analysis method fits with the research design. The process of data analysis started after the collection of data and ranged from simple frequencies to more complex data analyses from the desk research. Data was analysed and interpreted using quantitative analysis techniques to ensure that the data is useful to responding to the research questions. Data was edited before coding and creation of a dataset to allow the researcher to check and adjust data for omissions and inconsistencies. The researcher coded data whereby codes were assigned to each question on the questionnaire. Cant et al., opined that the purpose of coding is to transform responses to questions into code that are easy to enter and read using a statistical analysis software package. The researcher minimised common survey errors through defining the population carefully, sample representativeness and respondents who are available and willing to participate in the research. The errors addressed include sampling errors and response errors.

The research triangulated interview data with data obtained through document analysis. Eisenhardt, (1989) argued that triangulation made possible by multiple data collection methods provides stronger substantiation of constructs and hypotheses. The interviews were key informant interviews targeting especially executives of the MNOs. These were chosen primarily for their

knowhow in issues under investigation. Lastly the researcher made use of document analysis as documents can also help to explain the gap between theory and practice on the ground. Thus, the use of documents in this study was meant to offer the researcher insights into the provision, adaptation and performance of MNOs. Therefore to this end journals, bank reports and government policies were used under the study.

Cant et al., (2005) is of the view that documents refer to any record (written) that contains information about human behaviour, social conditions and social processes. The same author suggests that document analysis could provide background information to some of the actions of the respondents, which might be difficult to detect using questionnaire and interviews. Documents can also help to explain the gap between theory and practice on the ground. Thus, the use of documents in this study was meant to offer the researcher additional insights and improve information accuracy. Furthermore, documents were analysed in this research to avoid errors of interpretation by checking current observation with actual practice on the ground. To this end, internal documents, websites, news articles, government policies, journals and annual/midterm reports and other related documents were used under this study.

### **3.5 Research Criteria**

Reliability and validity are inextricably related. Trochim (2006) considers reliability as the degree to which an instrument measures what it sets out to measure. On the other hand, Saunders et al., find validity as the degree to which the recorded description of set data conforms to its referent. A number of careful steps shall be taken to ensure validity and reliability of the study. These include methodological triangulation (interviews and document analysis) and instrument triangulation (e.g. asking the same question differently within the same instrument). Triangulation of archival and interview data provided more accurate information and improved the robustness of the resulting theory (Martin and Eisenhardt, 2010).

Hypothesis was built based on inconclusive emergent concepts and themes and compared with observed evidence to see if they fit observed data with constructs refined when there is no fit and compared with those reported in prior literature as applicable in order to make a case for their internal validity or generalisability (Bhattacharjee, 2011). To create insight into emergent theory, conflicting theory was creatively reconciled.

To ensure independent assessment of the reasonableness, strength and consistency of the reported inferences, the methodology was clearly documented (Bhattacharjee, 2011). The research method for this study was defined in a clear manner with sufficient detail to allow iteration of the study in future for further advancement, while maintaining the continuity of what has been done in the past. Any limitations and assumptions made during this research was clearly documented to support the findings of the research study. Conclusions were confined to data justified and adequately provided by the research.

### **3.6 Limitations**

- a) Confidentiality issues with secondary data available for analysis. The researcher made effort to use publicly available secondary data as much as possible. Research Ethics protocol was followed for this study and consultation made with Supervisor on major hurdles faced, if any.
- b) Respondents were drawn from one region (Harare). This is countered by the fact that there is not much regional based innovation in the MNO but replication which is largely mirrors the sector in Harare which is the hub of Zimbabwean business from which the manageable sample shall be drawn in line with resource and time.
- c) Interviews are time consuming, resource-intensive and require special interviewing skills on the part of the Interviewer (Bhattacharjee, 2011). Advance and adequate preparation were made in order to overcome this challenge. Also in depth Interviews are prone to bias from influence of the interviewer (Bhattacharjee, 2011; Gerard, 2010). It therefore called for the researcher to curb any tendency to talking too much but rather be sympathetic and professional listening without intruding on personal views.
- d) Potential biased results as findings are limited to those opinions and behaviours of those interviewed. The researcher maintained objectivity and used triangulation to deal with respondents' bias.

## 4. PRESENTATION AND DISCUSSION OF FINDINGS

### 4.0 Introduction

The preceding chapter considered the methodology adopted in addressing the research objectives raised in chapter one. It focuses on the presentation of the research results and their interpretation. Views from different stakeholders that are senior MNO management and key informants drawn from the academia are considered and presented in this chapter. Themes were developed to aid in the presentation of the results guided by the research objectives and research questions. This chapter begins with background description of statistics then inferential statistics that show the relationship between variables.

### 4.1 Response Rate

The results that follow show background characteristics of respondents who were involved in the study. Interviews were the major data collection method used complemented by the desktop research and document analysis. Interviews were conducted with senior management from the three MNOs. The table below shows the frequency distribution of interviews conducted.

Table 4. 1: Interview Response Rate

Designation	Targeted	Actual		Relative Percentage
Senior Management from MNO and Academia	8	Male	11	100
		Female	5	
		<b>Total</b>	<b>16</b>	

Source: Field Study Results 2017

The overall response rate from the interviews was 100 percent as all the interviews were conducted as planned. Despite delays encountered in scheduling of interviews, all the senior management respondents and members of the academia availed themselves during the conduct of the study and their insights enriched this study.

### 4.2 Demographic Characteristics of Respondents

The results that follow show background characteristics of respondents who were involved in the study. The three MNO involved in the study rolled out mobile money services at different times and their organisational structures are different as they seek to competitively position themselves

in the industry. The study covered departments that have direct responsibility in the operations of a mobile money system as to include marketing, finance and the mobile brands under the respective MNO operators. This meant that the study was able to capture the critical areas of mobile money business implementation in an unstable environment.

The years spent by the respondents within the MNOs business operations were critical for the study as there was a need to assess the impact of the fragile economic environment on MNOs business operations. A cross tabulation was run and results obtained as shown in table 4.2.

Table 4. 2: Distribution of Respondents by Working Experience

	Frequency
<b>Less than 2 years</b>	0
<b>2-5 years</b>	0
<b>6 -10 years</b>	2
<b>above 10 years</b>	6
<b>Total</b>	<b>8</b>

*Source: Field Study Results 2017*

Table 4.2 above shows that most of the respondents (had between 6 and 10 years' experience within their respective departments and sector which implies that respondents had spent ample time within their organisations covering the period from 2011 when mobile money entered the Zimbabwe market. It positions them well to comment from an understanding of adoption and adaption of mobile money hence this experience and exposure enhances their credibility in issues on the implementation and performance of MNOs.

### **4.3 Factors facilitating provision of mobile money**

The study analysed mobile money services against four provider-level characteristics to assess whether these were associated with the success of services. To varying degrees, all four characteristics appear to be factors in the success of mobile money services as seen from the recurring themes in interviews held. Increased informal trade with small transaction value for the unbanked coupled with a multi-currency regime that provided access to diaspora financial markets for MNOs both provided opportunity for mobile money in Zimbabwe. The study analysis found

that MNOs have been much more successful in developing and delivering digital financial services than other entities, such as banks or nonbank financial services providers. As such most of the respondents interviewed opined that their services were aimed at bringing electronic payments services to the informal economy under the fragile multicurrency regime and to provide an alternative to the formal financial system, of which there was widespread mistrust resulting from earlier economic problems in the country.

Table 4. 3 Factors facilitating provision performance of mobile money transfers

Findings	Details	Representative quote
Findings revealed that reducing financial exclusion is the main drive for MNOs.	Reducing financial exclusion especially in the informal sector remained the main driving force in the provision of mobile money products.	<p>“That populace previously unbanked has been the main beneficiaries of mobile money and ultimately what this does is to increase the country’s financial sector.” Respondent B, Academic”.</p> <p>“Our approach has been influenced by the high unbanked population at the time of inception of our services hence the services are meant to be financially exclusive to everyone, especially those who are in marginal areas and those in the informal sector. In this regard we consider our efforts highly successful as we have managed to increase our coverage through extensive infrastructure development”. Respondent C, Econet.</p> <p>“Ongoing efforts have been made to keep our mobile Telecash tariffs affordable. These efforts are in line with rising efforts by authorities to encourage the use of electronic payments, mobile and plastic money to help ease the current cash shortage and improve financial inclusion so that disadvantaged and low-income segments of our customer base will find mobile banking more affordable and attractive”. Respondent G, Telecel</p> <p>“Not only did we introduce the One Money product on the Zimbabwe market but we went a step further to link the product debit card with ZIPIT because as a company we are moving</p>

		<p>towards a holistic financial ecosystem where every citizen enjoys affordable and convenient financial services”. Respondent E, Netone.</p> <p>“We must be commended for being the pioneers of mobile money transfers in Zimbabwe since we took up the opportunity to capitalise on innovation and scalable nature of mobile money based on the M-PESA case and have initiated financial inclusion especially in the unbanked rural areas with minimal education”. Responded K, Econet.</p>
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Source: Field Study Results 2017

These findings resonate well with Lal and Sachdev (2015) who noted that mobile money enables transactions between the formal and informal economies, as there were actually meaningful flows between the two. Thus, the need to mitigate the financial services problems especially the rift between the formal and informal economies and payment systems has spurred mobile money provision and performance in Zimbabwe.

#### 4.3.1 Major Highlights of performance of MNOs’ mobile money platforms

Availability of cash on launch and unbanked population that heavily relied on informal trade presented conducive environment for all MNOs to tap into the mobile money industry. With Government owned MNOs having pioneered mobile money platforms allowing a privately owned MNO to enter same market implies healthy competition. Findings emanating from the study reveal that a healthy competition exists in Zimbabwe and this has spurred the growth of mobile money services especially in the formative stages of the introduction of MNO.

Table 4. 4 Major Highlights of performance of MNOs’ mobile money platforms

Findings	Details	Representative quote
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<p>MNOs are involved in serious competition among themselves which has only led to more growth of this sector.</p>	<p>Healthy competition in the market led to the growth of the market as firms are jockeying for increasing their market shares.</p>	<p>“The surge in mobile money adoption has stimulated competition between banks and mobile money providers. Each side is wary of the other taking its customer base, and the banks particularly have good reason to be worried: Zimbabwe is one of the few countries where banking penetration has declined, while mobile money adoption has increased. Traditionally, mobile money has focused on remittances and banks on financial products. In Zimbabwe, this is changing as organisations push hybrid products to market”. Respondent F, Telecel</p> <p>“Econet has launched value-added services, such as EcoSave, a mobile savings product that offers interest. Competitors complained Econet was skirting banking regulations, leading to Econet’s purchase of Steward Bank over 2013-2014. After the exodus from banking during the financial crisis, some consumers are returning”. Respondent B, Academic.</p> <p>“Unlike the Kenya context, we are still a long way from mobile money interoperability. Evidently the exorbitant tariffs that are charged to send money across network ewallets is a deterrent to speedy growth of mobile money provision and is a competitive move to maintain market share by domineering MNOs. Nevertheless competition has been beneficial to the customer to a large extent as the MNO are kept on their toes to stay ahead and relevant by coming up with innovative products that address customer’s needs and wants”. Respondent A, Academic.</p>
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	<p>Entity response to internal and external factors presented by multi-currency environment determined the performance of its' mobile money platform.</p>	<p>On their views on mobile money performance in under multi-currency regime respondents had the following to say.</p> <p>“We attribute our product success in multi-currency environment to well-planned execution taking lessons from regional and local mobile money players that had implemented before us and adding our elements based on the market needs. Having launched our Ecocash product we made sure we were visible and accessible and worked hard to earn consumer trust and timely responding to changing in the operating environment to maintain customer satisfaction”. MNO Executive, Respondent O, Econet.</p> <p>“Mobile money products for Government owned MNOs (Telecel and Netone) have not performed well on the market owing to limited agent and merchant network and low agent liquidity. Both have had to relaunch their products since inception owing to poor market performance. Limited capital investment could be an impediment to spread of these parastatals' mobile money offerings”. Academia Respondent A, UZ Senior Lecturer.</p>
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Source: *Field Study Results 2017*

The competition has also resulted in the diversification of relevant mobile money services and packages aimed at offering holistic financial services to customers in a challenging operating environment. Thus, the competition in Zimbabwe has not only ensured the improved performance of MNO operations, but worked to better services rendered to customers.

Closely related, the competing various models developed in the provision of MNO services has also contributed to the improved performance of MNOs. Respondent A, Academic opined that;

*A comparison of the expansion of mobile money services led by MNOs against those led by other entities, and found dramatic differences in the immediate, and subsequent success in terms of active mobile money accounts across these two types of services. Services launched by MNOs obtained an average of almost 45,000 active accounts within a year of*

*launch (compared to almost 28,000 for non-MNOs) a 60% difference. By the fifth year since launch, this difference had grown almost four-fold, with MNO-led services obtaining an average of almost 635,000 active mobile money accounts against 165,000 for non MNO-led services.*

Thus, there exists competition between MNO models which contribute to the performance of MNOs in Zimbabwe as supported by interview with Respondent C, Econet who added that.

*Within five years, the average MNO led service reached 2.83% of the addressable market, while a non MNO-led service reached only 0.53% of the addressable market. MNO-led services have a greater number of active mobile money accounts; have captured a greater proportion of the addressable market; and when looking at mobile money transactions, process a greater value of transactions than non MNO-led services.*

### **4.3.2 Drivers or Impediment in Mobile Money Provision**

#### **4.3.2.1 Lack of trust of formal banking sectors**

The lack of trust in formalised and government institutions created mobile money opportunity for MNOs involved as customers opted to use MNO services which are less formalised and give more control to the customers over their accounts. People were more favourable to mobile money transfers and banking since they negatively viewed traditional finance entities given local financial system distress characterised by indigenous bank failures and most were unbanked. This lack of access to formal banking in the Zimbabwe mass market enabled mobile payment transaction driven more by the history of the indigenous bank collapses in Zimbabwe and volatile economic environment. Since inception of multicurrency system in the country eight local banks have collapsed and twenty since year 2000. Based on this mobile money was more acceptable since it offered more control to customers. Local financial system distress characterised by indigenous bank failures.

Table 4. 5 Lack of trust of formal banks

Findings	Details	Representative quote
There is some lack of trust	This is based on the country's	“The trauma of hyperinflation and economic meltdown damaged faith in the government and associated financial institutions. Zimbabweans saw their savings evaporate during hyperinflation and subsequent

about banks.	history of financial collapse which also	dollarization and trust in banks has diminished since then”. Respondent H, Econet.
	affected customer perception of banks.	<p>“Most people are wary that their USD savings could be frozen if the government decides to return to a Zimbabwe dollar, a move proposed by several ministers who say having autonomy over monetary policy would drive economic growth. High service fees (it costs at least \$5 a month to maintain an account) discourage many from opening a bank account even if they could afford it. However, formally employed workers and entrepreneurs who wish to register their companies are required to have one”. Respondent F, Telecel.</p> <p>“The prevailing volatile economy conditions characterised by cash shortages and banks folding have dampened the public’s confidence in the financial sector again. In the absence of reliability that people can have their money on demand, the majority have moved away from banking their cash resulting in the bulk of cash circulating outside the formal financial system with a chunk migrating towards mobile money transfers platform”. Respondent M, Netone,</p>

*Source: Field Study Results 2017*

In addition to lack of trust in formal financial systems, liquidity challenges faced by the country during the multi-currency brought about restricted cash withdrawals from the bank accounts. With lack of cash in the banks mobile money provided an effective alternative to cash for making payments. Customer satisfaction is important for m-money expansion, given the role of recommendations and need for convenience as drivers of m-money uptake. Transaction volumes for deposits and withdrawals declined following the cash shortages experienced in Zimbabwe as customers were uncertain of their ability to get cash out for monies to send via money mobile platforms. Cash shortages forced mobile money agents to stop issuing cash outs thus redirecting mobile money service towards mainly payment platforms.

#### 4.3.2.2 Liquidity Challenge in Multi-currency regime

RBZ (2017) reported that total foreign currency cash receipts for the year 2016 amounted to US\$5,408.0 million compared to US\$6,260.3 million received during the same period in 2015, representing about a 13.6% decline in liquid foreign currency supply; furthermore for 2016, foreign payments amounting to US\$5,128.0 million were processed representing a 29.0% decline from US\$7,181.0 million for the same period in 2015. Although the central bank reportedly made strides to ensure promotion of efficient circulation of bond notes within the financial market, the cash shortage has not improved as evidenced by the growing black market for both bond notes and foreign currency. With the country battling a cash shortage the government in response has been advocating for the use of other payment streams urging providers to innovate and move towards less cash based models of payment in order for the country to reach an optimum level of a cash-light society.

An analysis (see Fig 4.1) of the payment system changes over the cash period Sep 2015 to December 2016 revealed that mobile money agents were increasing at a rate of 5% versus a similar rate decrease in Active Mobile Financial services Subscribers. At the same time Point of Sale machines increased at an average quarterly rate of 16% against an average quarterly increase of 6% in issued debit cards. This speaks to a consumer preference shift to use of bank cards to transact and could be attributed to challenges faced with cash-out of mobile money at the agents who could not source cash on the financial market.

Figure 4. 1 Payment Systems Access Points and Devices

Access Points							
Description	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Average Quarterly change
Mobile Banking Agents	32 528	33 745	34 351	35 022	37 131	40 590	5%
ATMs	545	556	541	548	566	569	1%
POS	16 268	16 363	17 069	19 280	24 110	32 540	16%
Access Devices							
Debit Cards	2 292 969	2 365 160	2 472 656	2 724 317	2 890 731	3 127 153	6%
Credit Cards	10 809	10 854	13 036	14 299	14 813	16 030	8%
Prepaid cards	28 226	30 125	29 466	30 339	38 660	43 288	9%
Active Mobile Financial services Subscribers	4 306 198	4 683 959	3 576 540	3 212 561	3 289 271	3 279 049	-5%

Internet Banking Subscribers	96 983	108 662	109 669	115 478	128 297	168 339	12%
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Source RBZ (2017)

Table 4. 6 Impediments in the Mobile Money Performance

Findings	Details	Representative quote
The lack of cash in the economy has retarded the growth of mobile money in Zimbabwe.	The crunching liquidity crunch being experienced has been a serious challenge to provision of mobile money deposits and withdrawal services while also providing opportunity for product adjustment.	<p>In responses to questions on drivers or impediments being faced by MNOs in providing mobile money in Zimbabwe given the above liquidity challenge:</p> <p>“The liquidity crisis has dealt a huge blow on customer satisfaction with mobile money services which in turn has negatively affected the adoption of mobile money services by new clients. Our organisation has roped in the services of marketing agents who have embarked on a drive to meet potential clients on a one-on-one basis but most responses show that customers no longer see much convenience in the use of mobile money as they are unable to access cash using mobile money cash-out services”. Respondent C, Econet.</p> <p>“The multicurrency regime has run into challenges of liquidity which has undermined mobile money transactions. As cash challenges have persisted this has also fuelled speculation, rampant abuse and corruption for mobile money which is certainly not ideal”. Respondent G, Telecel.</p> <p>On the other hand Respondent N, POTRAZ respondent had this to say:</p> <p>“Prevailing cash constraints prompted MNOs to innovate through introduction of bank to wallet transfers which has spurred the use of mobile money for effecting payment transactions as shown by POTRAZ Q4 2017 report that airtime, bill and merchant payments increased by 49.1% to record \$725,510,160 from \$486,742,318 recorded in the previous quarter”.</p>

		<p>On same period according to Respondent C, Econet asserted the following:</p> <p>“Although there were serious cash challenges in 2017 through product innovation mobile money provided an effective alternative to cash for making payments resulting the entity experiencing a big leap of 22% in active mobile money subscriptions for quarter four and maintaining its market leadership”.</p> <p>In contrast, Respondent F, Telecel mentioned cash constraints negatively affected mobile money provisions as follows:</p> <p>“Over the last two quarters of 2017, cash shortages have resulted in decline in our active agent outlets as agents require a cash float to effect over-the-counter transactions. This has indirectly caused 3% loss of Market share active mobile money subscriptions for the entity during same period”.</p>
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*Source: Field Study Results 2017*

The study revealed that as in other countries, the case for mobile money in Zimbabwe was initially the ease, affordability, and convenience with which money could be sent over distance, in comparison to wire transfer, delivering in person, or entrusting a bus driver with an envelope. Thus, the initial easy and convenience has been partly eroded by the fragile economic environment that is marred by cash flow challenges. However to this, Respondent B, Academic lamented that mobile money was a particular advantage in Zimbabwe, where money is frequently shared among the extended family and whose large diaspora an estimated 4 million, versus a population of 13 million make a significant contribution to the economy through remittances but this has been threatened by the fragility of the multicurrency regime

#### **4.3.3 Impact of regulatory environment on mobile money provision**

Regulatory environment has had a different effect on provision of mobile money in various countries that have adopted mobile money. With introduction of a multi-currency system the central bank introduced an institutional framework meant to address financial access gaps. However it came with policy inconsistencies/contradictions that limit mobile money opportunities

and constraints. The issue of regulation was considered by most respondents to be a challenge in the operations of MNOs.

Table 4. 7 Lack of synchronisation in regulation

Findings	Details	Representative quote
<p>There are challenges to do with regulation of mobile money in Zimbabwe.</p>	<p>Mobile money is straddling between banking and mobile networks and absence of regulation that harmonises functionality hampers the growth of the sector.</p>	<p>“Since mobile money straddles finance and telecommunications, it faces regulation originating within two different sectors. For mobile money to develop, regulations must encourage inclusiveness, while minimizing fraud and risk. The uncertainty associated with innovative industries means that regulations must be incremental and proportional”. Respondent N, POTRAZ.</p> <p>“The need to ensure that all transactions carried out on the mobile money platform are traceable and accounts held at the banks are fully auditable. There is also lack of tangible proof of payments (e.g. receipts for evidence in the case of a dispute) for billing standards which facilitate tracking of transactions and need service standards to validate claims for investigations &amp; compensation”. Respondent G, Netone.</p> <p>“The regulators both in the telecommunication and financial sectors have taken long to create a level playing field for mobile money by not providing regulation and legislative that governs how mobile money services should be regulated and this presents challenges that prevent seamless uptake of mobile money. Already MNOs have dual role as network provider and competitor with mainstream banks thus affecting financial landscape. Thus it is imperative that regulators provide legislative that enables suitable mobile money models and promote efficient financial sector”. Respondent A, Academic.</p>

Source: Field Study Results 2017

Regulation, while necessary to ensure protection of customers and discipline in the operations of MNOs, can be an impediment in the performance of MNOs. According to the World Bank (2010) Kenya's initial success with mobile money was arguably based on a virtual absence of formal regulation in favour of industry government engagement. However, since mobile money services manage the limited capital of the poor, caution is essential (USAID 2010).

Respondent P, from the academic field highlighted a number of regulatory issues that warrant the involvement of regulators. These include;

*“The need to ensure that all transactions carried out on the mobile money platform are traceable and accounts held at the banks are fully auditable. There is also lack of tangible proof of payments (e.g. receipts for evidence in the case of a dispute) for billing standards which facilitate tracking of transactions and need service standards to validate claims for investigations & compensation”.*

However, the regulation of MNOs in Zimbabwe is not well developed and lacks adequate coordination owing to the nature of MNO operations. Interview with Respondent D, Telecel noted that

*“Mobile money involves a range of market players and cuts across various sectors including banking, payments systems, telecommunications, etc. There is also a variety of market participants involved in mobile money including mobile network operators (MNOs), banks and micro-finance institutions (MFIs). Coordination between regulators; other government bodies; and industry players remains erratic”.*

Secondary data analysis reviewed challenge of existing institutional financial framework that does not directly speak to regulatory models for both MNOs and banks providing mobile money in Zimbabwe and their target customer segmentation. To this Academic Respondent B noted that:

“Prevailing framework lacks clarity on customer segmentation thus increasing competition between banks and non-banks”.

Successful regulation is usually marked by collaborative exchange between industry, government, and civil society. For example, regulation should allow agents outside of bank branches to handle financial transactions and develop tiered anti-money-laundering and know-your-customer requirements). In considering these new regulatory issues, protection against fraud and failure,

including regular monitoring by financial regulators, is essential. But it is also important to remember the need to ensure ease of doing business for the MNOs.

The study also revealed that the lack of technology standard and danger of limited interoperability is an impediment in the performance of MNOs. One of the respondents who worked for telecoms regulatory body, Respondent N stated that

*“There is no fully developed regulatory framework and no independent ombudsman to promote interoperability. Due to the novelty of the phenomenon mobile payments seem to be a “no man’s land” where the service provider would be both the judge and party”.*

As for interoperability itself, respondents concurred that creating the legal conditions for mobile money operators to interconnect and encouraging them to do so certainly makes sense. In this case, care should be taken that the available interconnection arrangements are cost-effective and find approval by the market players. Respondents also pointed out that interoperability between mobile money operators and banks is already being created, via bilateral agreements although no application programme interfaces exist. As mentioned above, this not only makes mobile money services more attractive to potential users, it also increases the liquidity of the system and the viability of agents. In late 2016 two such agreements existed, while all mobile money operators and most banks were interested in having more interoperability agreements. Thus there seems to be no need for intervention concerning interoperability between banks and mobile money operators while further agreements are being prepared.

On the other hand, mandating interoperability between mobile money operators at this stage will only create weak market-wide network effects since the overall penetration of mobile money is still rising steadily. At the same time it risks to stifle investment incentives because it reduces the need to invest in wider coverage and could stunt potential market growth. As concerns agent interoperability, given the difference in development of the agent networks that was reported, an imposition of agent sharing may invite freeriding and discourage further investment. A market-led agreement, on the other hand, with benefits felt by all operators, would be welcome

#### **4.3.4 Infrastructure and Market monopoly**

The dominance of the market by Ecocash, which is Zimbabwe’s biggest mobile wallet provider was indicated to be a cause of concern for other players especially in light of the role played by recommendations in the adoption and in turn the performance of MNOs. The findings clearly reveal that Ecocash is Zimbabwe’s mobile money success story introduced by mobile

telecommunications company Econet Wireless in 2009, which even grew faster than Kenya’s M-PESA. This unprecedented growth by Ecocash presented challenges for latecomers in terms of market share and competitive positioning. Despite a growing number of successes, the mobile money industry faces a number of challenges. Currently there are no harmonised Application Programme Interfaces serving to ensure interoperability between MNOs and banks, or among MNOs. In 2016 the government passed a new regulation (Statutory Instrument 137 of 2016) introducing compulsory infrastructure sharing for the country’s telecoms operators. However it is yet to be put into effect as Econet made a submission against this and the regulator is still reviewing.

A member of the UZ department of commerce asserted that:

Table 4. 8 Market monopoly by Econet

Findings	Details	Representative quote
Market dominance has been an important driver in mobile money provision.	This market monopoly presents a serious challenge for latecomers.	<p>“One-third of registered m-money users said they were motivated to sign up for an account by another individual. Friends’ recommendations tend to be the most important motivators for m-money adoption, followed by recommendations from family members who sent money to or received money from the respondent”. Respondent A, Academic.</p> <p>“The mobile money sector resembles a serious monopoly as Econet has an unassailable lead in terms of market share”. Respondent B, Academic.</p> <p>“Econet did not invent "Mobile Money" or Ecocash but Safaricom did in Kenya. However using the fast follower approach Econet quickly responded using better management and execution skills than our competitor, with devastating efficiency and it was resounding success. This is a known approach to success and there is nothing wrong with it. Mobile money was not patented and likewise other MNOs were able to adopt the same mobile money product in Zimbabwe. Not only has the organisation made huge investment into infrastructure required to provide mobile money services but recognition</p>

		<p>should be made for our efforts to relentlessly provide relevant and varied products to customers in this challenging environment. Based on customer feedback our product offering meets customer needs and wants and is unmatched by other industry players”. Respondent C, Econet.</p>
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*Source: Field Study Results 2017*

#### **4.4 Mobile Money Adaptation techniques in multi-currency economy**

##### **4.4.1 Business Model Adaptation**

Most banks in Zimbabwe reduced branch presence especially in remote areas in order to stay afloat and this has not had a positive effect on the high financial exclusion rates in remote Zimbabwe sections. This situation makes a good case for the establishment of a strong distribution network via agents, a segment MNOs can tap into to spread mobile money provision. According to RBZ (2017) Mobile financial services have been extended to both under-banked and banked through various forms including agents thereby servicing the last mile as evidenced by over 8.9 million registered subscribers across the country while 3.3 million are substantively active as at January 2017.

To this observation Respondent B, said “While there is huge opportunity to participate mobile money provision in remote areas the low active registered subscribers is evidence that the agent network is still quite weak and would require significant capital commitment which only the entity with financial muscle have greater adaptability in this area. Econet currently dominates the market on agent network with POTRAZ reporting that 26 247 of 27 284 Active Mobile Money agents outlets in Zimbabwe as at Dec 2017, are owned by Econet. Of Econet agent network 63% relates to agent outlets in an urban area implying that a lot of investment is still needed to close the gap in the rural agent presence”.

Respondent F, Telecel also added that “Although we have built an extensive distribution network in the country, it should be noted that optimal agent spread has been hindered by the huge capital investment that it demands which even in this multi-currency ecosystem is currently a challenge with the foreign currency shortages the country is currently experiencing”.

When asked about their organisation’s mobile money provision approach, respondents from the three MNOs pointed that their organisation had adopted the MNO led approach as part of their business operations. In Zimbabwe three money mobile models exist namely MNO led, Bank centric and Collaborative. However, an academic respondent from the UZ commerce department pointed out that there has been gravitation towards the collaborative model which integrates the banking and mobile network operations. This is particularly true for Econet Wireless Zimbabwe which through its wholly owned Steward Bank has effectively integrated the MNO banking model in their operations. Collaboration between Ecocash and Steward Bank yielded registration and link of over two hundred and fifty thousand new customers to the banking services in 2017 thereby providing customers the convenience of moving funds from their accounts to their mobile wallets (Steward Bank, 2017). At the same time, with ecocash users who have accounts with banks that partnered with Econet Wireless, one is able to transfer money from bank account to e wallet using a mobile money platform. This is enabled by the fact that Econet Wireless took up partnership to use existing integrated mobile technologies, infrastructure and a collaborative model to share risks involved with mobile money. Despite these observations, MNO led money mobile dominates in terms of transaction and mobile money transfers. The three MNOs namely Econet, Telecel and Netone have adopted the MNO m-banking model. This was corroborated by senior personnel at the three MNOs, although of the respondents who had worked for two of the MNOs at different times pointed to the need for more synergies between the MNOs and financial institutions.

Table 4. 9 Mobile money adaptation in Zimbabwe

Findings	Details	Representative quote
Organisations adopted the MNO led approach although there is notable migration toward collaborative model.	This approach was cited by most scholars and there was some consensus amongst the respondents.	<p>“MNOs could collaborate with financial institutions to support liquidity management or provide agent and merchant financing for e-float or working capital. Financial institutions can also be good partners to support super agents. Hence you can find and promote some basic synergies”. Respondent E, Netone.</p> <p>“When it comes to providing digital financial services, MNOs could perhaps leverage the experience of financial institutions, which clearly have the expertise in delivering financial services. Additionally, they also understand client needs and behaviour, especially when it comes to credit - qualifying for credit, being credit worthy and the capacity to repay. They know how to</p>

		design products. This is usually territory for many MNOs”. Respondent G, Telecel.  “The collaborative approach has become more acceptable as firms are now building alliances with commercial banks”. Respondent J, Netone.
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Source: *Field Study Results 2017*

Important to note from the findings is the fact that MNOs have since integrated their operations and are working with financial institutions hence moving towards the collaborative model. This is so because packages that link MNO services and financial institutions services already exist, for example one is able to link their Ecocash account to their bank account and transact across these two platforms. Also with use of ZIPIT customers can now move funds between their ewallet and bank account.

#### 4.4.2 Economic standing of customer

Another challenge has to do with the economic standing of the clients themselves which is a function of the macroeconomic fundamentals operating in the country at the present. When the multi-currency system was adopted, the economy was cash based and people were used to carrying lots of cash around such that consumers were reluctant to move to mobile money which started with high transaction costs. To promote financial inclusion and ensure that banking products and services are affordable to the banking public, RBZ reviewed cash withdrawal charges downwards, in December 2016 whereby a proportional pricing model was adopted to replace the fixed charges in order to align cash withdrawal charges to the amount withdrawn. Subsequently focus has been on formal bank fees monitoring and regulation leaving MNO with an open platform to determine their transaction pricing models and adjust as they see fit, a move that made it possible for MNOs to profitably adapt to the shift from cash based to mobile money transfer transacting in the economy.

Table 4. 10 Economic standing of customer

Findings	Details	Representative quote
The economic position of the	This challenge is more or less a	“Mobile money deployments in Zimbabwe often target customers who may be poor, dispersed, and remote.

<p>clients also is a serious challenge since the transaction charges are too high in a market which has serious liquidity challenges.</p>	<p>factor of the low disposable incomes as a result of depressed economy in the country. The transaction charges of mobile money become prohibitive which is a serious impediment.</p>	<p>Mobile money also spans two distinct industries with different business models. Telecommunications and payments are transaction-based, with fees collected on transactions; conversely, banking is float-based, with money earned through holding deposits”. Respondent G, Econet.</p> <p>“There are legitimate concerns about the transaction charges by networks especially Econet...., the monopoly of Econet also rewards serious competition in any case and this represents an imperfect market and despite the stability of the multi-currency regime, the benefits are ultimately lost”. Respondent A, Academic.</p>
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*Source: Field Study Results 2017*

Indeed, the economic environment and consequently the economic standing of target customers have not aided the growth and development of mobile money in Zimbabwe. The economy in Zimbabwe has been on a free fall since the turn of the millennium and this has stalled the growth of mobile money services just as any other sector of the economy has been affected. However during the 2016/2017 fiscal period Zimbabwe experienced acute cash shortages. While this affected confidence in the deposit transaction aspects of mobile money, it enabled mobile money remittances as demand in money transfer was backed by the rise of supportive roles from Central bank and Public Finance authorities. This also enabled expedited infrastructure improvement to have more Point-Of-Sale terminals available and improved mobile technologies to facilitate users transacting without cash.

#### **4.5 Strategies to broaden mobile money uptake and performance**

The scepticism towards the more formal institutions has worked to enhance the performance of MNOs in Zimbabwe. In this regard, MNOs have earned trust with their customers which worked for improved performance and use of mobile money. Also with a multicurrency system, it worked

in MNOs favour as inward remittances increased with those living and working in the diaspora placing more confidence in the available mobile money platform to their families and friends without incurring exorbitant transfer fees. In particular through its Ecocash Diaspora product, Econet Wireless partnered with various agents across the globe to make sending money back home by Zimbabweans around the world more convenient and directly. Furthermore it introduced an incentive to pay a bonus of seven percent to recipient’s Ecocash account for person to person remittances made through its Ecocash Diaspora service. Another strategy to broaden mobile money use was Econet Wireless’s Ecocash Payroll & bulk payment platform ideal for payroll administration and aid distribution where recipients receive money using their mobile numbers as accounts. Not only does this strategy provide convenience to the recipient as there is no need to go to the bank to receive money but it is a secure and time saving bulk payment channel.

In essence mobile money product and service diversification has worked more to broaden uptake of mobile money as different products cater for specific demographic segments. In addition migration from MNO led to a collaborative model broadened use of mobile money as the move boosted customer confidence and provided more convenient and ease of use. MNO extensively used a collaborative approach with banks and other service providers to enhance financial accessibility for the mass market that was not part of the traditional mainstream banking. With this migration customers are able to swipe money into their Ecocash Wallets using their Zimswitch linked bank cards on a Steward Bank POS. All three MNOs took the strategy of linking up ewallets to partnering banks to facilitate customer transfer of money and transacting. Also the introduction of Ecocash, One Money and Telecash debit cards that linked directly to ewallets is a strategy that has provided unmatched convenience to mobile money customers with increased use mobile money.

Table 4. 11 Strategies to broaden use of mobile

Findings	Details	Representative quote
The historical realities do work in favour of	Strategies have to be directed at earning the trust of the public.	“Interventions of the Reserve Bank of Zimbabwe in the banking sector for the establishing and maintenance of trust in the financial system is of utmost importance and should be routinely undertaken in mobile money operations. Mobile money is no exception, and if potential mobile money customers believe that their e-wallets are not safe they will not want to have one”. (Respondent, B Academic)

mobile money.		<p>“The Reserve Bank of Zimbabwe has the central role of creating this trust in the mobile money system, including the necessary provisions in case an interoperability agreement is reached. The regulator should help to set clear rules and common standards”. Respondent J, Netone.</p> <p>“Given the economic prevailing economic environment coupled with cash shortage, we resolved to innovatively provide various suitable mobile payment solutions to the populace to enable transacting without cash locally and abroad. Not only did we collaborate with banks to provide mobile money services such as direct transfer of funds from bank account to wallet using swipe including ensuring adequate availability of POS terminals to facilitate seamless movement. All these efforts were in support of the government rising drive to encourage use of electronic and mobile payments to ease cash shortages”. Respondent K, Econet.</p>
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*Source: Field Study Results 2017*

#### **4.6 Summary**

The study has revealed the performance of mobile money as well as its manifestation in an environment riddled with inequality. In addition the challenges which constrain this industry were also revealed using insiders or key informants. This chapter served to present the empirical findings emanating from the field study. Themes were developed as tools of analysis in addressing the research questions raised in Chapter one. Jankowicz (2000) opined that “the stories people tell you will depend on their interpretation of your reasons for asking!” This means that there could have been a tendency by respondents to try and paint the best picture possible of their organisations, regardless of truth in it. Thus findings need to be treated with caution. The following chapter critically considers the research findings drawing conclusions and recommendations for future research and policy formulation and interpretation.

## **5. DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Summary**

In the following Chapter, the main findings from this study are reflected upon alongside a consideration of measures that can be adopted to improve the performance of mobile money. Use of mobile money platforms has grown exponentially and has revolutionised the financial services. In Zimbabwe just as in many other countries use of plastic money has also emerged as one of the widely used methods for money transfers and payments. This has increased on the back of serious economic challenges and acute cash shortages. Against this backdrop this study intended to inquire into the use of mobile money platforms, particularly the adaptation and provision of this form of financial service in a country which has multi currencies and has experienced acute economic challenges and cash shortages. Under these circumstances mobile money assumes greater importance as it becomes one of the solutions to circumvent the current challenges. Specifically this study intended to assess the factors that facilitate or impede the provision of mobile money in Zimbabwe. In addition the study also intended to determine the strategies employed by mobile money providers under the current unfavourable conditions. Lastly the study intended to come up with sound strategies which can be utilised to promote efficient use of mobile money platforms. The study utilised a qualitative study with key informants being important participants for the study. In-depth interviews were conducted on senior management from three MNOs in Zimbabwe who are major players as mobile money service providers.

From the responses given it was shown that organisations in Zimbabwe had taken up a MNO led approach which was now part of their operations. Three models were used in the country which are Bank centric, collaborative and MNO. However others pointed out that there has been an inclination towards the collaborative model which merges banking and mobile network operations. Also noted was that most of the service providers have formed collaborations with financial institutions so as to increase the efficiencies which would denote a collaborative approach. In the end it can be concluded that mobile money services provision is adopting a collaborative approach forming strategic partnerships with financial services such as banks and this has greatly increased the available options and financial accessibility.

### **5.2 Discussion of findings**

The findings revealed that MNOs have developed MNO led approaches in initial stages but have adapted to economic changes and uptake rate of mobile money to migrate to a collaborative model. Similarly in other African countries where mobile money has been adopted the findings revealed

that success is not only based on getting strategies adopted by another country right but adapting to the context. The findings show that mobile money can succeed in a multicurrency ecosystem when a focused and coordinated approach to fundamentals is applied to properly deal with the challenges that come with shifting from a cash economy to a digital ecosystem. Collaborative models were more extensively used where financial collaborations with banks existed. These approaches testify to the ability to adapt and adjust models based on the prevailing conditions and customer needs and wants by MNOs. The most successful mobile money providers in Zimbabwe are integrated with a wide range of third parties. These have greatly enhanced financial accessibility for the groups which are not a traditional part of the mainstream banking. Also multicurrency systems expedited uptake of mobile money in the development stages as customers inclined to the control over deposit and withdrawals in real monetary value. This condition also positively influenced person to person transfers both locally and internationally. The performance of MNOs has also been influenced at the development stage of the market by regulatory policies that maximise mobile money operators' incentives to invest in coverage and wider agent networks.

Evidence points that intensive competition does improve efficiency and quality of services rendered. Operators need to compete in these investments to strengthen competitive network effects, before any regulatory intervention is justified. Otherwise there is a large risk that further investment is stifled and even market wide network effects created through interoperability are not strong enough to let subscriber numbers grow fast. As Evans and Pirchio (2015) stress, markets with network effects such as mobile money markets either take off strongly or they don't take off at all: there is no mid-way outcome. Policies such as simplified KYC (know-your-customer) rules, which have already been adopted in Zimbabwe, are an important policy step, as could be allowing mobile wallets such as EcoSave to earn interest (Marumbwa and Matsikwa, 2013). Since inflation is very low at present, money held in mobile wallets does not devalue quickly if it does not earn correspondingly high rates of interest. On the contrary high inflation can trigger immediate cash-outs of funds and a lack of liquidity in the system that threatens the viability of the agents and the business model.

More generally, the study also found evidence that at a macroeconomic level, MNO-led services are more likely to have mobile money transaction values which exceed one percent of a country's money supply. This points to general adoption of MNO services in Zimbabwe in view of the cash flow challenges being faced in the country. A senior marketing executive from Net One stated that by year 5, MNO-led services on average have a mobile money transaction value equivalent to 15.6 percent of a country's money supply, compared with 14 percent for non MNO-led services. This

represents phenomenal growth for the industry and if the correct economic fundamentals are put in place, growth would be unprecedented. Contrary to previous studies (Donner and Escobari, 2010; Boateng, 2011) which found insufficient evidence to prove that the production impact of mobile technology on money transfers are significant, this paper actually proves otherwise. The available evidence suggests that the Micro and Small Enterprises (MSEs) that are involved in offering indirect mobile services such as mobile money and mobile retail services are able to generate more income.

While this evidence shows MNO-led services tend to see greater success, it also shows that MNO brands are highly recognised and trusted, that they can more easily cross-sell mobile money alongside their existing voice and SMS products, and that MNOs have more experience in building and managing large, low-cost distribution networks in unserved areas. In Zimbabwe there is a historical precedent characterised by financial collapse which had led to suspicion being cast on commercial banks. It is worth noting that while our results demonstrate that MNO-led services have better chances of success, although non MNO-led services in other countries such as bKash have made a remarkable impact on the financial inclusion in their country. bKash is a service in Bangladesh which is majority owned by BRAC bank and has partnerships with four major MNOs in the country, making the service accessible to 98% of the mobile subscribers. With 21.218 million users, bKash is the market leader with 62% market share in the country and has played a significant role in building awareness for mobile money services in Bangladesh.

Mobile money was driven by the need for financial inclusivity especially for those in the informal sector and in marginalised areas. The study also realised challenges to do with the local market and its unique multicurrency regime and liquidity challenges. Challenges to do with liquidity, monopolistic tendencies and the greater macro-economic challenges in Zimbabwe posed a serious challenge to the growth of the sector. It is important then that other economic players stimulate liquidity in the economy and address the challenges being experienced in the market now.

## **5.3 Contribution**

### **5.3.1 Drivers in the Performance of MNOs**

The study revealed that to a greater extent MNOs have been very successful in developing and delivering digital financial services to those groups who have traditionally been excluded from the mainstream banking services. These included even those in the informal sector. There was also some mistrust of banking services rooted in the history of bank failures in the country and mobile money platforms were considered much safer than commercial banks. The financial

trauma of hyperinflation and wiping of services has led to a general mistrust of banking services and this has been a big factor which has driven up confidence and appreciation of mobile money services. The MNOs with mobile money services and products have increased the confidence of customers since they tend to give more control to the customers over their money.

Mobile money services were meant for financial inclusivity to the groups who have previously been marginalised because of high service costs and the rigidity of conditions used by mainstream financial organisations. All these developments have spurred further the growth of the mobile money transactions which has in fact resulted in healthy competitions between commercial banks and mobile money networks. This has also led to a diversification of services provided and improved quality offered by MNOs. The performance of MNOs has also been influenced at the development stage by lax regulatory policies that have led to maximisation of the mobile money operators investing in increasing coverage and wider networks. This increased visibility in marginal areas via network agents has had only positive effects for the growth of mobile money platforms. Another interesting finding revealed that from a macro perspective MNO led services exceeded one percent of the value of the country's money supply. Overall the evidence revealed that MNO led services in a multi-currency regime has been successful, highly visible, highly trusted, easily accessible, although liquidity challenges persist.

### **5.3.2 Impediments in the Performance of MNOs**

The study intended to find out some of the impediments which impact on the successful adoption of mobile money in the country. Crippling cash shortages have made cashing out a big task and has also prevented new customers from undertaking cash-ins. Potential users have been discouraged since not much value is drawn noting that one cannot cash out money when they need to. The MNOs have been able to review their long term plans and product portfolios and make necessary adjustment to their approach and introduce new product offerings that are relevant to the prevailing condition resulting in an increase in mobile payments during the era of a cash crunch. The high cost of transaction affected the widespread use, and this was exacerbated by the prevailing economic conditions which affected users' income streams.

Lack of interoperability amongst the MNOs and other stakeholders on the financial market constraints performance of mobile money. The market dominance of Ecocash and lack of in inter operations with its rivals was a serious inconvenience for customers. At the moment there appears no hope of interoperations occurring any time soon. There is no fully developed regulatory framework and no independent ombudsman to promote interoperability and govern the rising

mobile money platform. Due to the novelty of the phenomenon mobile payments seem to be a “no man’s land” where the service provider would be both the judge and party.

#### **5.4 Factors Impeding Expansion of Other Models**

The findings showed that MNO is the most dominant model in the Zimbabwe mobile money market. It is important then that the relevant infrastructure and technology be introduced so as to enhance the operationalisation of other models of mobile money. As it stands there are no harmonised Application Programme Interfaces (APIs) serving to improve the seamless integrations which stimulate new and complex use cases such as interoperability between mobile money and banks, or among mobile money providers. Also lack of APIs fertilise the complexity apparent in the fast-growing mobile money industry and slow partner on-boarding, increasing the fragmentation that limits and delays partners to leverage mobile money. On the other hand lack of interoperability and sharing of infrastructure across institutions is impeding development of other business models as potential to bridge the cost and access gaps that hinder the efficient delivery of financial service is lost.

Lack of regulation has also affected expansion of other business models. The biggest constraint for mobile money is the lack of the enabling regulatory environment and cross-cutting industry collaboration necessary for its boom. Lack of specific framework guiding mobile money in Zimbabwe contributes to other models not being successfully explored. It appears the existing framework in the country lets MNOs do mobile money on their own without working in a consortium with independents and without focusing on their customers. This scenario leads to MNOs competing against banks instead of creating value that banks can leverage through a collaborative approach. As GSMA (2017) note Mobile Money services without enabling regulation have activity rates 30 per cent lower on average than those with an enabling regulatory environment as non-enabling regulation can stifle investment, limit the rollout of new services, and raise costs for consumers, all of which can negatively affect activity rates. This has been the case with Kenya’s MPesa and Ghana that received a success boost from a conducive regulatory environment while in Zimbabwe, South Africa and Uganda cases there was reported limited interoperability between banks and MNOs and slow uptake owing to prevailing regulatory frameworks. As reported in GSMA (2017) in just four years, MTN Ghana has experienced exponential growth in mobile money account activity; growth that was accelerated by the introduction of the E-Money Issuers Guidelines by the Bank of Ghana in July 2015.

Currently a bank centric model is constrained by limited bank agency network attributed to poor physical coverage. This could be addressed by collaboration. Collaborative model performance is currently constrained by the current culture of not sharing infrastructure and this will not allow a win-win situation to optimise on existing mobile money opportunities. Attempts to force sharing of infrastructure by stakeholder were unfruitful owing to dominance of privately owned MNO in the industry. Prevailing cash shortages limit the potential of a bank centric model in Zimbabwe as consumers already lack trust in the local formal banks that have a long history of collapse. Although an MNO led approach has dominance, it has not speedily grown owing to high transaction costs across several mobile money service offerings. Proper regulation of mobile money pricing models for affordability and effective education and awareness to encourage optimal usage of the services available could be held over.

## **5.5 Recommendations**

Currently in Zimbabwe the mobile money market is led by MNOs with financial institutions trailing behind in acquiring market share. Nevertheless Mobile money has been quite successful in Zimbabwe and it has averted problems of cash shortages in Zimbabwe. More importantly MNO have managed to collaborate with banks and other financial service providers to avail other ways and means for people to transact using mobile money. However while mobile money has become important under the current economic difficulties, there are still challenges which hamper full success of mobile money. Based on the findings discussed above the following recommendations have been made.

- ✓ Necessary steps should be taken so as to enhance to make interoperations between MNOs a reality so that mobile transactions can occur amongst different service providers
- ✓ There is need to improve mobile penetrations so that interoperability and wider use of mobile transfers can become more widespread and efficient to customers.
- ✓ The government will need to improve the macroeconomic conditions so as to improve liquidity challenges so that people can have more confidence in mobile money transactions in particular when cashing out.
- ✓ MNOs and financial institutions are urged to work towards infrastructure sharing while competing on service delivery.

- ✓ The implementation of an enabling mobile money regulation that facilitates for access to operators' infrastructure is vital and should allow an open ecosystem and market and facilitation of more financial inclusion.

## **5.6 Recommendations for further study**

The study revealed that there are still some challenges when it comes to interoperations amongst the different MNOs. This could be attributed to huge investment costs in developing service and infrastructure for mobile banking. The tendency is pioneers want to regain the investment before opening doors to interoperation. Further studies can be done on the extent to which interoperations among network providers can enhance more cooperation and volume of transactions as in turn this reduces transaction costs and expands the range of financial possibilities for more people.

The monetary ecosystem of Zimbabwe is currently fluid with several changes taking place daily in a bid to address the prevailing economic challenges. The introduction by RBZ of bond notes in October 2016 and severe cash shortages added new dimensions to mobile money adoption as the bond was issued at par with the US\$ and treated in the same manner as bond coins. The bond currency brought currency conversion challenges and fuelled black market in the multicurrency economy. This provides for new ground for future research.

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## **APPENDIX A: Interview Protocol**

### **A.1 Invitation to participate in research**

Invitation to participate in the research project titled: **“An assessment of Mobile Money Provision, Adaptation and Performance in a Fragile Multicurrency Economy: The case of Zimbabwe.”**

Dear (X),

My name is Tinashe Nyaruwata, I am a Mcom Development Finance student at UCT GSB researching on mobile money in a fragile multi-currency developing context. The study aims to find out how performance, provision and adaptability factors influence mobile banking in developing fragile multi-currency context and what forms of enablement or conditions are required to achieve accelerated uptake and performance achievement for mobile money in multi-currency regimes.

As a provider/key informant of mobile banking in Zimbabwe I am interested in your participation as it is in an ideal position to provide valuable first-hand information on this phenomenon of interest from your own perspective and working knowledge. I therefore invite you to participate at a date and time that suits you and I'll do my best to be available.

Participation is voluntary and involves a face to face interview that will take around 60 - 90 minutes at a mutually agreed location. The Interview is audio recorded with your permission. A copy of the transcript will be provided if you wish to confirm the accuracy of our conversation and to add or clarify any points. Your responses to the questions will be kept confidential. Each interview will be assigned a number code to help ensure that personal identifiers are not revealed during the analysis and write up of findings. There is no compensation for participating in this study. However, your participation will be a valuable addition to the research and findings could lead to greater public understanding of mobile banking in a multi-currency regime.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact me by e-mail at [tinashemn@gmail.com](mailto:tinashemn@gmail.com) or at +263 777 929 400. You can also contact my supervisor, Dr Kabinga Mundia at (+27 21 406 1526) or e-mail [mundia.kabinga@gsb.uct.ac.za](mailto:mundia.kabinga@gsb.uct.ac.za).

I very much look forward to speaking with you and thank you in advance for your assistance in this project.

Sincerely,  
Tinashe Nyaruwata  
UCT GSB Mcom Development Finance 2017

## **A.2 Interview Guide for MNO Executives**

### **1.0 Introduction**

My name is Tinashe Nyaruwata, I am studying towards a Mcom Development Finance at the University of Cape Town's Graduate School Business. As part of my studies I am researching on a topic entitled "**An Assessment of Mobile Money Provision, Adaptation and Performance in a Fragile Multicurrency Economy: The Case of Zimbabwe**". The study seeks to determine factors facilitating or impeding provision of mobile money while identifying adaptation strategies that have been used by mobile money operators in this fragile economy. Your organisation has been identified as one of the major providers of mobile money in Zimbabwe and your responses will be critical for my completion of this academic study. The findings of the study shall be used for academic purposes only and your responses will be treated with utmost confidentiality. With your permission I shall be recording this interview in audio for transcribing later. The findings of the study shall be published through the University of Cape Town. Are you willing to participate? You are free to terminate the interview at any time during the course of the interview. You can choose not to answer any of the questions.

### **1.1 Background Information**

To begin our conversation, tell me about yourself:

(a) Name (b) Organisation (c) Department (d) Position (e) Roles and Responsibilities in the organisation (f) How long you have been with the organisation.

### **1.2 Factors that are facilitating or inhibiting the provision of mobile money in Zimbabwe.**

- a) What is your view on mobile money provision in Zimbabwe? How do you describe your organisation's mobile money provision approach? What internal and external factors influenced the approach adopted by your organisation?
- b) Your organisation launched mobile money provision under the multicurrency regime. How do you view the performance of your organisation's mobile money under the

multicurrency regime? What are the major highlights of the performance of your organisation's mobile money platform?

- c) The success of M-PESA is well documented in Kenya with doubled digit growth in only 2,5years. Its success is attributed to interplay of various set of factors but what is not documented, is how exactly this happened. What are the drivers or impediments being faced by your organisation in providing mobile money in Zimbabwe?
- d) Kenya's MNO-led model was attractive owing to the system initially developed in unregulated environment. What was the regulatory environment like when you started? How did that affect the way you provided mobile money? What are your views of the current regulatory framework in Zimbabwe?

### **1.3 Adaptation strategies adopted by mobile money providers in a fragile multicurrency economy**

- a) Launching a new product is not without its challenges in a country like Zimbabwe. What challenges did you face in the initial/formative/final stages? How did these challenges arise? What impact did they have on the business model design elements?
- b) What action was taken to address the challenges? Did the strategies yield the desired results in the short/ long term?
- c) I believe the regulatory environment changed several times since you started providing mobile money, how have you responded to these changes? Probe on specific regulatory, how all/key factors played out, and the impacts they had on adopted business model.
- d) Was the product adjustment on multi-currency more of an internal/external management decision, if so why? How? Was it controllable?
- e) How stable is mobile money performance under the existing economic environment?

### **1.4 Strategies that can be adopted to promote mobile money in a multicurrency economy.**

- a) What internal and external factors would influence your approach and the growth of the mobile money business model? Why? And how?
- b) What are the critical factors in mobile money operation in Zimbabwe?
- c) As an organisation, having experienced the multicurrency regime, what would you do differently? Why? How?

## **1.5 Closing remarks**

Thank you for taking time to answer these questions. I kindly request referrals for subsequent interviews on matters discussed above that relate to other roles in the organisation. Please do not hesitate to contact me should you have any additional comments.

## **A3 Interview Guide for Key Informants**

### **1.0 Introduction**

My name is Tinashe Nyaruwata, I am studying towards a Mcom in Development Finance at the University of Cape Town's Graduate School Business. As part of my studies I am researching a topic entitled "**An Assessment of Mobile Money Provision, Adaptation and Performance in a Fragile Multicurrency Economy: The Case of Zimbabwe**". The study seeks to determine factors facilitating or impeding provision of mobile money while identifying adaptation strategies that have been used by mobile money operators in this fragile economy. You have been identified as a key informant on mobile money services in Zimbabwe and your responses will be critical for my completion of this academic study. The findings of the study shall be used for academic purposes only and your responses will be treated with utmost confidentiality. With your permission I shall be recording this interview in audio for transcribing later. The findings of the study shall be published through the University of Cape Town. Are you willing to participate? You are free to terminate the interview at any time during the course of the interview. You can choice not to answer any of the questions if you feel like doing so.

### **1.1 Background Information**

To begin our conversation, tell me about yourself:

(a) Name (b) Organisation (c) Department (d) Position (e) Roles and Responsibilities in the organisation (f) How long you have been with the organisation.

### **1.2 Factors that are facilitating or impeding the provision of mobile money in Zimbabwe.**

- a) How do you describe mobile money provision approach adopted by mobile money providers in Zimbabwe?
- b) What internal and external factors have influenced the approach adopted by mobile money providers?

- c) Most organisations launched mobile money provision under the multicurrency regime. How do you view the performance of mobile money under the multicurrency regime?
- e) The success of M-PESA is well documented in Kenya with doubled digit growth in only 2,5years. Its success is attributed to interplay of various set of factors but what is not documented, is how exactly this happened. What are the drivers or impediments being faced by organisations providing mobile money in Zimbabwe?
- f) Kenya's MNO-led model was attractive owing to the system initially developed in unregulated environment. What was the regulatory environment like when mobile money started? How did that affect the way mobile money has been provided?

### **1.3 Adaptation strategies adopted by mobile money providers in a fragile multicurrency economy**

- a) Launching a new product is not without its challenges in a fragile multicurrency regime. What challenges did mobile money operators face in the initial/formative/final stages? How did these challenges arise? What impact they had on the business model design elements?
- b) What measures were taken to address the challenges?
- c) To what extent has product adjustment been more of internal/external management decisions? How? Was it controllable?

### **1.4 Strategies that can be adopted to promote mobile money in a multicurrency economy.**

- a) What internal and external factors can influence mobile approach and the scalability of the mobile money business model in the future? Why? And how?
- b) What are the critical factors in mobile money operation in Zimbabwe?
- c) Considering experiences under the multicurrency regime, what would organisations do differently? Why? How?

### **1.5 Closing remarks**

Thank you for taking time to answer these questions. I kindly request referrals for subsequent interviews on matters discussed above that relate to other roles in the organization. Please do not hesitate to contact me should you.

## APPENDIX B: Secondary Research Sources

### Summarized table with list of sources used as secondary research

Topics	Causal influence	Quotes
<p>Factors facilitating or impeding the provision of mobile money in Zimbabwe.</p>	<p>Need for financial inclusivity, especially those previously excluded</p> <p>Intense competition</p>	<p>Respondent C</p> <p>“Our services are meant to be financially exclusive to everyone, especially those who are in marginal areas and those in the informal sector. In this regard we consider our efforts highly successful as we have managed to increase our coverage through extensive infrastructure development”.</p> <p>Respondent F</p> <p>“The surge in mobile money adoption has stimulated competition between banks and mobile money providers. Each side is wary of the other taking its customer base, and the banks particularly have good reason to be worried: Zimbabwe is one of the few countries where banking penetration has declined, while mobile money adoption as increased”.</p> <p>Respondent I</p> <p>“Traditionally, mobile money has focused on remittances and banks on financial products. In Zimbabwe, this is changing as organisations push hybrid products to market”.</p>

<p>Mobile money approaches.</p>	<p>Collaboration between financial institutions and MNOs.</p>	<p>Respondent E</p> <p>“MNOs could collaborate with financial institutions to support liquidity management or provide agent and merchant financing for e-float or working capital. Financial institutions can also be good partners to support super agents. Hence you can find and promote some basic synergies”.</p> <p>Respondent G</p> <p>When it comes to providing digital financial services, MNOs could perhaps leverage the experience of financial institutions, which clearly have the expertise in delivering financial services. Additionally, they also understand client needs and behaviour, especially when it comes to credit - qualifying for credit, being credit worthy and the capacity to repay. They know how to design products. This usually foreign territory for many MNOs”.</p>
<p>Impediments to the growth of mobile money.</p>	<p>Customer satisfaction compromised.</p> <p>Economic standpoint of clients.</p>	<p>Respondent H</p> <p>“The liquidity crisis has dealt a huge blow on customer satisfaction with mobile money services which in turn has negatively affected the adoption of mobile money services by new clients. Our organisation has roped in the services of marketing agents who have went on a drive to meet potential clients on a one-on-one basis but most responses show that customers no longer see much convenience in the use of mobile money as they are unable to access cash using mobile money cash-out services”.</p> <p>Respondent A, Academic</p> <p>“Mobile money deployments in Zimbabwe often target customers who may be poor,</p>

	Lack of binding regulations.	<p>dispersed, and remote. Mobile money also spans two distinct industries with different business models. Telecommunications and payments are transaction-based, with fees collected on transactions; conversely, banking is float-based, with money earned through holding deposits”.</p> <p>Respondent N</p> <p>“Since mobile money straddles finance and telecommunications, it faces regulation originating within two different sectors. For mobile money to develop, regulations must encourage inclusiveness, while minimizing fraud and risk. The uncertainty associated with innovative industries means that regulations must be incremental and proportional”.</p>
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