

Constraints to Effective Service Provision by Safaricom M-Pesa Agents in Nyeri Town, Kenya

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Abstract

Purpose: The study aimed at establishing the challenges M-PESA agents face during service provision. The objectives of the study were: to examine the cash float fluctuation challenges that the M-PESA agents face; to assess the legal and regulatory challenges that the M-PESA agents face; to investigate the internal management challenges the M-PESA agents face; and to evaluate the security related challenges that the M-PESA agents face. The study was conducted in Nyeri Town since its located centrally in Kenya and its population is largely composed of the rural Kenyan population; thus the research finding can be inferred to represent a Kenyan case. Primary information was obtained from the actual findings of the study; but secondary data was collected from related past studies, journals, websites and articles with relevant information on the research problem. **Methods:** The study was a descriptive survey conducted through the use of questionnaires and interview guides. Data collected was analyzed and presented through the use of statistical tools like graphs, pie-charts, frequency distribution tables and measures of central tendencies like mean, median and standard deviation. **Results:** The findings show that security related challenges was the most common challenge, closely followed by cash float related challenges; internal management challenges were the 3rd most common challenge; and the least common was legal and regulatory challenges. The study also brought out other challenges that affected the agents in service provision to include: lack of motivation, illiteracy of customers and lack of respect for the agents. The study made recommendations for the possible solutions to these challenges.

Keywords: *Safaricom agents, M-Pesa, Millennium Development Goals*

ABBREVIATIONS AND ACRONYMS

CBK	Central Bank of Kenya
SPSS	Statistical Package for Social Sciences
KYC	Know Your Customers
FSA	Financial Services Authority
PCI	Payment Card Industry

1.0 INTRODUCTION

This chapter brings out the reasons for the study. This study investigated the challenges facing M-PESA agents during service provision within Nyeri Town. The focus of the study was to establish whether the agents face: Cash float related, internal management, security challenges and legal or regulatory challenges; and how these challenges influenced the efficiency of service provision by the M-PESA agents.

1.1 Background of the Study

The increasing speed of transactions has been a critical part of the innovation process. At the cutting edge of money technology, the world is moving beyond batch processing and air couriers, to networks for integrated accounting and payments processing systems. Thus the need for instantaneous money transfers such as Automated Teller Machines or direct computer connections. Cheques are no longer desirable. This is the quest for real time exchange of currency, without the need for physically face-to-face meetings between the parties involved in the transfer (Liu and Mithika, 2009). This innovation process resulted into mobile banking. Mobile banking has been adopted in many parts of the world with little or no infrastructure, especially remote and rural areas. It is popular in countries where most of their population is unbanked, where banks can only be found in big town and cities, thus customers have to travel hundreds of miles to the nearest bank. By 2012, it is estimated that there will be 1.7 billion people with a mobile phone but not a bank account and as many as 364 million unbanked people could be reached by agent-networked banking through mobile phones (Consultative Group to Assist the Poor-CGAP, 2012).

Mobile banking provides money transfer services to the unbanked population through retail agents. These agents facilitate the service by registering the customers, giving them information about the services the mobile banking provides and marketing the mobile banking services to new and potential customers. The agents also operate the actual money transfer operations thus linking the customers to the mobile banking providers. In the process of providing the mobile banking services to the unbanked population, the agents may have faced a number of challenges such as cash float fluctuations, insecurity, infrastructural challenges, legal regulations as well as internal management challenges. This research focused on M-PESA; a mobile banking service in Kenya. The research was a study of these challenges in Kenyan Market using Nyeri Town as the case of study.

1.1.1 Mobile Banking

Mobile banking is a way for the customer to perform banking actions on his or her cell phone or other mobile devices. It is a quite popular method of banking that fits in well with a busy, technologically oriented lifestyle. It might also be referred to as M-banking or SMS banking (Miller and Harris, 2012). Example of mobile banking service providers include: Bankmelli in Iran, Banco Industrial in Guatemala, Omnilife in Mexico, Kenya's M-PESA, Hormuud Telecom's ZAAD service in Somalia, Easy Paisa in Pakistan and Eko India Financial Services in India (Friedman, 2010). The mobile banking sector employs a large number of people as agents or operators, who facilitate these mobile money transfer services. Besides M-PESA, other mobile money transfer services in Kenya include Airtel Money, Yu-Cash and Orange Money.

1.1.2 M-PESA Service

Safaricom launched M-PESA on 6th March 2007; after the successful completion of a 4-year pilot project on the adoption of the service. By the end of 2007, M-PESA had recorded about 250,000 users. This rose to 2.7 million users and 3000 agents by August 2008, just 14 months after its adoption; to 8.3 million registered customers, corresponding to a penetration of 57% in Safaricom's customer base and 21% of the entire population or 40% of adults, served by agents in 14,000 retail stores in September 2009 (FinAccess National Survey, 2009). The numbers stood at 14 million users and 28,000 agents in November 2011 (Safaricom, 2011).

1.1.3 Nyeri Town

Nyeri town is located 150 km towards the North of Kenya's Capital-Nairobi. It has been the headquarters of the former Central province of Kenya; it is currently positioned to be the main commercial hub of Nyeri County. It had a population of 119,273 people with 36,412 households during Kenya Population Housing and Census 2009; (Kenya National Bureau of Statistics, 2010). This population is currently served by 90 M-PESA agency outlets (Safaricom, 2011). The researcher identified Nyeri town as the location of the study, since it is centrally positioned in Kenya and it is a typical agricultural town inhabited by average Kenyans; characterized by relatively low living standards compared to Nairobi and other major towns (Wachira and Kibira, 2004). Therefore its findings can be inferred to represent a Kenyan case.

1.1.4 Variables of the Study

In this study; the independent variables were the challenges that face the agents, such as cash flow fluctuations, internal management constraints and the legal challenges; while the dependent variable was the efficiency of service provision by the M-PESA agents. The population of study was the registered M-PESA agencies in Nyeri Town as at January 2012.

1.2 Statement of the Problem

The mobile banking sector is vital for the growth of the developing economies such as Kenya. It provides money transfer services to the unbanked population, most in rural areas and low income individuals in urban areas. It also creates employment opportunities to people employed as agents. Safaricom M-PESA agents carry out a very vital function of facilitating mobile banking transactions. Dealing with a diverse and dynamic population such as of the urban Nyeri, the researcher had projected that they faced quite a number of challenges. On several occasions when the researcher had been in M-PESA outlets, he had heard the agents complaining of constraints such as cash float fluctuations; such that customers can only withdraw or deposit limited amounts of money into their accounts. Kieti (2010), reported on a number of challenges facing the agents. These included: SMS trickery by conmen, service outages during Safaricom upgrade, employee theft, insecurity, fake currency, and strict operating regulations by Safaricom. The researcher focused on finding out whether these challenges actually affect the agents operating in Nyeri Town, and also identified other challenges that are unique to the Nyeri market.

Studies on Safaricom M-PESA agencies are scarce; some of these studies include: Mathenge (2011) studied the Ethical perspective of Mobile Money transfer in Kenya. This study focused on the ethical issues that the agents as well as the entire industry should address, but it did not bring out the challenges that these agents experience. Mas and Ng'weno (2008) highlighted the keys to the success of M-PESA; which included branding, channel management and pricing, yet they did not bring out issues affecting the agents, yet the agents are the facilitators of the M-PESA transactions. While Munyoki and Mutua (2010) studied the customers' perception of the services provided by the M-PESA agents, yet they did not cover the challenges the agents face. The purpose

of this study was to find out the challenges the M-PESA agents face, as none of these previous studies had dealt with this problem in totality.

1.3 Purpose of the Study

The researcher intended to highlight the major challenges the M-PESA agents face while offering the mobile banking services to the M-PESA customers in Nyeri Town.

1.4 Objectives of the Study

1.4.1 General Objective

The study sought to establish the Challenges facing M-PESA Agents in service provision in Nyeri Town.

1.4.2 Specific Objectives

The study was guided by the following specific objectives:

- (i) To examine the cash float fluctuation challenges that the M-PESA agents face.
- (ii) To assess the legal and regulatory challenges that the M-PESA agents face.
- (iii) To investigate the internal management challenges the M-PESA agents face.
- (iv) To evaluate the security related challenges that the M-PESA agents face.

1.5 Significance of the Study

The players in the mobile banking sector; such as Safaricom and all its competitors would find the research findings very useful. The Safaricom Human Resource department would be able to plan and execute a more favourable working environment for the agents, so that they are able to exploit their full operating potential and thus maximize revenue generation for Safaricom. The other mobile money transfer service providers such as Airtel Money, Yu-Cash, MobiKash, Orange Money; will also get to plan what strategies to put in place to tackle such challenges that affect their agents.

The Safaricom's M-PESA agents would find the study useful since they would find a channel to relay the challenges they face. They were assured that as they raise these challenges, the various stakeholders involved would be informed of these challenges and would attempt to address them appropriately. Investors and potential M-PESA agents would also find the study useful as it gives them an insight into the challenges they should be prepared to face once they commence their operations. Academic scholars would also find this research useful since it gives recommendations on issues for further research.

The Kenya government should find this study useful since it gives an insight into the market conditions that resulted into these challenges; hence the government could try to improve the market environment through infrastructure development and adopting other measures that would ensure that the operating environment is conducive for profitability and sustainability of the country's economic development.

1.6 Definition of Terms

M-PESA: (M for mobile, PESA is Swahili for money) is the product name of a mobile-phone based money transfer service for Safaricom, which is a Vodafone affiliate. M-PESA was initially developed by Sagentia before transitioning to International Bureau Machines (IBM).

Millennium Development Goals: these are eight international development goals that all 193 United Nations member states and at least 23 international organizations have agreed to achieve by the year 2015 (United Nations Development Programme Millennium Development Goals-UNMDG, 2009).

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the available literature, related to the research problem. To succeed in achieving the objectives of the study, the researcher presents a summary of literature from studies. The literature review is based on past research studies and specific organizations' journals. The researcher organized the related studies according to the specific objectives in order to ensure that it is relevant to the research problem.

2.2 Theoretical Framework

2.2.1 Adoption of Mobile Banking

The adoption of mobile banking has enabled the consumers' easier access to financial services, unbanked people in developing and emerging market countries, like Kenya have access financial services offered by the mobile banking agencies. This technology is a great tool towards the achievement of Millennium Development Goal Number 8; which seeks global partnerships to foster development. It has changed lives of many Kenyans; it has soft but hard ethical issues which ought to be addressed by the industry. Being 'moral agents' who are directed by 'will and freedom' mobile players will need to cultivate good motives which the society accepts and respects. The ethical issues such as security threats, fraud and money laundering must be addressed (Mathenge, 2011).

Mobile money transfer is still very much in its infancy and mobile service operators are competing with each other to establish themselves within a potentially lucrative market.

M-PESA's launch in the Kenyan market was best timed. From its launch in March 2007, its performance has been very impressive; it has since become the most famous and probably the most successful implementation of mobile money service to date. In May 2008, 14 months after the launch, M-PESA in Kenya had 2.7 million users and almost 3000 agents. As at November 2009, M-PESA had 8.6 million users; which is about 25% of Kenya's population; close to 15,000 agents and monthly person to person transactions worth over \$320 million with an average of \$37 per user per month (Independent Financial Sector Deepening Trust, 2009). M-PESA has become the most popular method of money transfer in Kenya with 40% of all adults using the service. It also realized a dramatic increase in national remittances; from 17% in 2006 to 52% in 2009, which may be attributed to the ease of money transfer through ubiquitous M-PESA agents (FinAccess National Survey, 2009).

As of April 2010, Safaricom reported: 9.7 million registered M-PESA customers, out of whom it is estimated that about 60% are active users; 18000 retail agents through whom M-PESA users can cash-in and cash-out. Nearly half of these agencies are located outside urban centers and US \$328 million per month in person-to-person transfers, which on an annualized basis, is equivalent to nearly 10-15% of Kenya's gross domestic product; US \$650 million per month in M-PESA customer cash deposits/withdrawal at agent locations across Kenya, with an average transaction size equivalent to US \$32 (Mas and Radcliffe, 2010). By November 2011, M-PESA had over 14 million subscribers and well over 28,000 agents across the country (Safaricom, 2011).

Safaricom's M-PESA service was one of 10 private sector initiatives in 2008 to be recognized by the World Business and Development Award as making a significant contribution to the UN Millennium Development Goals. M-PESA has been recognized by several other awards, including: (i) Stockholm Challenge 2008 – Winner, Economic Development category; (ii) Kenyan Banking Awards 2007 and 2008 – Special Award for Product Innovation; (iii) Global Mobile Awards 2008 – Nominated, Best use of Mobile for Social and Economic Development; (iv) Global Mobile Awards 2008 – Winner, Best Broadcast Commercial (M-PESA 'Send Money Home' TVC); (v) AfricaCom Awards 2008 – Changing Lives award and Best Solution for Rural Services award; and (vi) MSK Warrior Awards 2008 – Best Innovation.

2.2.2 Concept of M-PESA

The initial concept of M-PESA was to create a service which would allow microfinance borrowers to conveniently receive and repay loans using the network of Safaricom airtime resellers. This would enable microfinance institutions (MFIs) to offer more competitive loan rates to their users, as there is a reduced cost of dealing in cash. The users of the service would gain through being able to track their finances more easily. But when the service was trialed, customers adopted the service for a variety of alternative uses; complications arose with Faulu-Kenya, the partnering microfinance institution (MFI). M-PESA was re-focused and launched with a different value proposition: sending remittances home across the country and making payments (Hughes and Lonie, 2007).

M-PESA is a branchless banking service, meaning that it is designed to enable users to complete basic banking transactions without the need to visit a bank branch. The continuing success of M-PESA in Kenya has been due to the creation of a highly popular, affordable payment service with only limited involvement of a bank. The network of M-PESA agents across Kenya has also aided in the marketing and selling the M-PESA banking service as a reliable money transfer service. The study focused on the M-PESA agents; and brought out the major challenges that affect the operators of mobile banking in the entire market. These challenges are not unique to M-PESA operators only, but also affect the agents of other mobile banking service providers.

2.2.3 Services of M-PESA

M-PESA Customers can deposit and withdraw money from a network of agents that includes airtime resellers and retail outlets acting as banking agents. The service enables its users to: (i) Deposit cash: but third party deposits are not allowed; (ii) Withdraw money from any M-PESA agent outlet or participating ATM network; (iii) Transfer money to other users and non-users; (iv) Pay bills: such as water and electricity bills; and (v) Purchase airtime for self or other Safaricom subscribers.

2.2.4 Legal Regulation and KYC rules

M-PESA sought to engage Kenyan regulators and keep them updated on the development process. M-PESA also reached out to international regulators, such as the UK's Financial Services Authority (FSA) and the Payment Card Industry (PCI) to receive input on how best to protect client information and adhere to internationally recognized best practices. Know Your Customer (KYC) requirements impose obligations on prospective clients and on banks to collect identification documents of clients and then to have those documents verified by banks. The Kenyan government issues national identity cards that M-PESA leveraged in their business processes to satisfy their KYC requirements.

M-PESA obtained a "special" license from regulators, despite concerns by regulators about non-branch

banking adding to the current state of financial instability. The Kenyan government issues national identity cards that M-PESA leveraged in their business processes to satisfy their Know Your Customer requirements. M-PESA is not positioned as a bank alternative and hence the “Know Your Customer” requirements are quite relaxed. The users are required to submit only the identity proof to get the service started. This limited KYC helped many Kenyans especially in the rural areas where the address proofs and other documents required by the banks are not available with most of the Kenyans. People who are not able to fulfill the documentation requirements of the bank see M-PESA a very good alternative. In April 2010, the Central Bank of Kenya issued new agency banking regulations which for the first time allowed banks to engage a wide range of retail outlets for transaction handling and product promotion such as receiving account applications, though applications must be approved by a bank staff. This paved the way for banks to begin utilizing the M-PESA platform and associated network of M-PESA outlets as a channel.

2.2.5 M-PESA Technological Advancements

In January 2010, Equity Bank and Safaricom announced a strategic partnership for M-PESA. Basically, any of M-PESA’s 8 million subscribers in Kenya are now be able to make card-less drawings from any of Equity Bank’s 550 ATMs throughout Kenya (Safaricom, 2010). This was not the first time that Safaricom made such strategic partnership since it already did the same with PesaPoint’s nationwide ATM network in Kenya. Safaricom launched an M-PESA backed VISA debit card in Kenya. The Safaricom M-PESA Prepay Visa Safari Card enables one to use their M-PESA account to make purchases online as well as access over 28 million VISA outlets globally. The VISA card is available from Safaricom outlets nationwide and is being supported through a strategic partnership with I&M Bank (Safaricom, 2011).

Safaricom and Equity Bank also launched M-KESHO, a co-branded suite of financial products that will ride on the M-PESA transactional ‘rails.’ In 2009, there were 2.5 million bank accounts in Kenya, out of a population of 39 million. Today, there are close to 8 million bank accounts, out of which 4.5 million are with Equity Bank, plus a further 9.5 million M-PESA accounts. One third of M-PESA accounts are held by people that are otherwise unbanked, and this is the segment that the new product was targeting. Equity’s aggressive objective was to acquire 3 million M-KESHO customers by the end of 2010. Like M-PESA accounts, M-KESHO accounts have no account opening fees, minimum balances or monthly charges. But unlike M-PESA accounts, M-KESHO accounts pay interest, do not have a limit on account balances, and are linked to limited emergency credit and insurance facilities. And unlike its regular Equity account holders who can only transact at the bank’s 140 branches, Equity’s M-KESHO customers will be able to transact at any of the 17,000 retail outlets that accept M-PESA. M-KESHO is fully integrated into the M-PESA user interface on customers’ mobile phone, and is also accessible through Equity Bank’s own mobile banking service. Customers can deposit and withdraw money from their M-KESHO account by transferring value either to or from their M-PESA account, which they can in turn cash into or cash out from at any M-PESA outlet. Deposits into M-KESHO are free to the customer, whereas withdrawals incur a Ksh. 30 payable to Equity Bank plus the normal Ksh. 25 cash out fee payable to Safaricom (Mas, 2010). Safaricom is also connecting M-PESA with the accounts of other banks, enabling customers to cash in or out of their bank accounts through M-PESA. But Safaricom and Equity have agreed on a short-term exclusivity on M-KESHO, relating to product co-branding, use of select M-PESA agents to promote the bank’s products, and user interface integration.

2.2.6 Mobile Banking Agents

Agents are increasingly used by all types of financial institutions to distribute financial services. More than 90 mobile banking operations are live worldwide: nearly all rely on agents as the main way to sign up and service customers. A Brazilian bank, Bradesco operates the world’s largest agent network, with 24,500 locations nationwide. Several technology firms in India are morphing into complex players that also manage distribution channels, link banks and mobile operators, and design products; all delivered to customers via agents. Table 2.1 shows the seven branchless banking operations in the world that have attained mass scale, defined as having more than 10,000 agents in their network (Flaming, McKay and Pickens, 2011).

Table 2.1: Mobile Banking Service Providers with the Highest Number of Agents

Country	Mobile Banking Service Provider	Number of Agents
Brazil	Banco do Brasil	15,300
	Bradesco (incl. Banco Postal)	24,200
	Caixa Economica	15,200
India	FINO	10,000
Kenya	M-PESA	20,500
Pakistan	Easypaisa	10,500
Philippines	GCash	18,000

Source: Flaming *et al* (2011). Agent Management Toolkit: Building a Viable Network of Branchless Banking Agents-Technical Guide, Consultative Group to Assist the Poor CGAP-The World Bank.

While there is widespread belief that agents are an attractive delivery channel for increasing reach and

driving down costs of delivering financial services, most branchless banking providers are still working to present a viable business case to the agents themselves. Agents play a critical role in acquiring new customers, enabling them to transact, and keeping them satisfied. Agents verify the identity of customers, both when clients sign up and at subsequent transactions. This not only keeps the service in compliance with know-your-customer (KYC) standards set by regulators, but it also helps guard the entire system against fraud, which may help clients view the service as safe and trustworthy. Agents must keep adequate stocks of both cash and electronic value (e-float) to enable clients to transact. If they cannot do so, customers may see the service as unreliable, and the provider's reputation can be quickly tarnished. Agents are also quite literally the face of the service; customers turn to agents to show them how to use the service, provide an opinion about whether the service is worth trying, and troubleshoot problems when they arise. Agents help bridge the gap between a high-tech service and low-literacy clients.

2.2.7 M-PESA Agents

M-PESA Agents provide mobile banking services to the customers. There are over 28,000 M-PESA agents countrywide with new outlets being added daily (Safaricom, 2011). Agent's key tasks are: (i) Registration and education of M-PESA customers; (ii) deposit cash into registered customers M-PESA accounts; (iii) Process cash withdrawals for registered M-PESA customers; (iv) Process cash withdrawals for non-registered M-PESA customers; (v) Compliance with Safaricom AML & KYC Policies; (vi) Compliance with Safaricom business practices; and (vii) Branding of their outlets as per provided guidelines. M-PESA Agents include: Safaricom authorized dealers operating one or more outlets around Kenya, other retailers with a substantial distribution network like petrol stations, distributors, supermarkets and registered Small and Medium Enterprises (SMEs) and Selected Banks and Micro-Finance Institutions.

2.3 Empirical Review

M-PESA has attracted a wide range of research work, some researchers' focus has been on the consumers' perception of the M-PESA service while others have focused on the prospects and success of M-PESA; yet others focused on consumers' satisfaction. So far no published researcher has focused on the challenges which the M-PESA agents face. This motivated the researcher in identifying the research problem and in formulating the methodology to carry out this study. Some of the related previous studies to the research problem include the following:

Munyoki and Mutua (2009) noted some of the challenges in mobile banking; these challenges include cash float difficulties and regulatory issues. They argued that there are different models with mobile banking, the users can easily switch, or change SIM cards leading to legal challenges like in the identification of M-PESA users. However, they did not to identify whether these are challenges to the M-PESA agents or users.

Mas and Morawczynski (2009) asserted that M-PESA agents play a vital marketing role through registration and linking up the customers to the service and despite the existing reward system for the agents, the agents still have a number of issues that need to be addressed such as training on how to handle customers and cash management. They also pointed out the strict, frequent and consistent monitoring by Safaricom of the agents' operations, as a pointer that Safaricom does not trust them to transact in good faith with the mobile banking service users. This lowers the M-PESA agents work morale and motivation. They note that lack of sufficient value in the agents' M-PESA accounts to meet customer requests for cash deposits or withdrawals as a challenge since the customers are unable to make transactions due to agents' lack of liquidity, thus making the service less useful. These are challenges that affect the MPESA agents as far as internal management of the service is concern. Yet they did not come up with possible solutions to these challenges.

Omwansa (2009) reported that banks have often complained that M-PESA has been allowed to operate without much regulation, while banks are heavily monitored. He noted that M-PESA abides by the minimal regulatory requirements set by the Central Bank of Kenya (CBK) and that on several occasions; the management of Safaricom has clearly indicated that it is ready to operate under any regulatory framework the government will implement. He also explained that M-PESA agents have contributed tremendously to the consistent growth and progress of M-PESA over the years. There is therefore need to study and analyze the regulatory challenges in order to understand how they affect the operations of the agents; who play a very important role in the growth and progress of M-PESA.

Mas and Ng'weno (2008) highlighted the Keys to the Success of M-PESA; as branding, channel management and pricing, yet they did not to bring out issues affecting the agents, who are facilitators of the M-PESA transactions. In the study of the channel management they did not bring out challenges the agents face, yet the agents are at the core of the channel management, hence contribute significantly to the success of M-PESA.

Liu and Mithika (2009) established the opportunities and challenges presented by the M-PESA service and how it could be introduced in other countries; but they did not identify the specific challenges that the agents face during the service provision. They noted insecurity and cash management challenges, but the study did not

present them as challenges facing the agents. International Finance Corporation-World Bank (2009) pointed out the key outcomes of the M-PESA pilot project. Safaricom realized how important agent training and management would be to the success of the service. During focus groups conducted with trial participants, their major complaint about the service was the lack of agent availability, understanding of the service and the agent's inability to maintain float liquidity. It noted agent training and management still needed to be improved but failed to highlight the specific challenges the agents face as far as training and M-PESA management are concerned.

Plyler, Haas and Nagarajan (2010) identified security concerns, human capital accumulation and limited training as challenges to the M-PESA's economic growth. Yet they failed to clarify whether these are challenges to agents, users or Safaricom management. The researcher is therefore determined to establish whether these are challenges to the agents and how these challenges affect their service provision. Flaming *et al* (2011), argued that globally, agents do not make much for their services. Brazilian, Indian, and Kenyan agents typically make profits of less than US\$5 per day. For this sum they may be asked to put up substantial capital investment. M-PESA requires agents to hold cash and e-float equal to US\$1,250 (1.5 times greater than the annual Gross Domestic Product [GDP] per capita in Kenya). This therefore poses management challenges to agents. They also noted that 10% of the M-PESA agents were robbed in 2009. They however fail to show how these challenges impact on the service provision by the M-PESA agents.

Mathenge (2011), argued that in order to achieve efficiency, mobile banking agents should improve the quality of their services by improving the speed of the service, offer more information and advertising as proposed by virtue ethics and enhance users' ability, experience and knowledge about mobile banking. He raised the need of integrating and applying ethics in the mobile banking industry since it is susceptible and vulnerable to threats of fraud and money laundering.

2.3.1 Knowledge Gap

The above studies just mentioned some of the challenges the M-PESA agents face in service provision, they have not done a comprehensive analysis of this research problem. The study investigated the major challenges that M-PESA Agents face; and also came up with possible solutions to address these challenges. This would help Safaricom to come up with appropriate strategies to ensure better working conditions for its M-PESA agents. The M-PESA customers, general public as well as the government agencies are now, in a better position to understand the M-PESA agents and the challenges they face as well as their contribution to the country's economic growth.

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter consists of research design, methods of data collection and methods of data analysis which the researcher employed during the study.

3.2 Research Design

The study was a descriptive survey carried out using questionnaires to achieve the objectives of study. Descriptive survey enabled a detailed description of a distribution of data using statistical tools. The researcher used descriptive statistics since it aids in simplifying large amounts of data in the most sensible manner (Mugenda and Mugenda, 1999). This was the most appropriate method since the research was qualitative and was based on subjective and judgmental information such as M-PESA agents' opinions and experiences. Descriptive survey brought out the qualitative data through a detailed analysis of the problem of the study. The secondary data was obtained from Safaricom website and previous studies on M-PESA, especially those touching on the agents; while primary data was from the actual research fieldwork.

3.3 Population of Study

The M-PESA agencies in Nyeri town constitute the population studied. There were 90 registered M-PESA agencies operating in the town (Safaricom, 2013). These agents' outlets are concentrated within the Central Business District; along the town's main streets such as Gakere Road, Kimathi Street and Nairobi Road. Some agents operate chains of M-PESA outlets such as Visions Mobile Limited and Skyline Holdings. Others operate single M-PESA outlets, such as; Nyeri Teachers Sacco and Kora Agencies Ltd. Some agents offer M-PESA services only, while others offer additional services such as retailing of Safaricom products such as phones, modems, laptops and airtime. The agencies employ varied number of agents depending on the size of their businesses. Chain agencies like Visions Mobile Ltd employ at least 3-agents per outlet, while small agencies like Nyeri Teachers only have an agent per outlet.

3.4 Sampling Procedure

A representative sample was obtained from the population since the researcher could not carry out a census.

This sample was carefully selected from the whole population of 90 M-PESA agency outlets which constituted the sampling frame. The sample relayed the relevant cross cutting characteristics to represent the entire population. The researcher employed both stratified and purposive sampling techniques to come up with the sample. The entire population of 90 agency outlets was the sampling frame. Mugenda and Mugenda (1999) a representative sample is at least 10% representative sample size. The sample was 33.33% of the entire population, which is 30 outlets; each was issued with a questionnaire. The stratification was in accordance to the streets where the outlets are located; the 3 main streets being, Gakere Road, Kimathi Street and Nairobi Road. The sample was purposively selected from those M-PESA outlets along these major streets since much of the commercial activities such as banking, insurance among others thrive along these streets. The majority of the agencies are also located along these streets.

3.5 Methods of Data Collection

The research instruments employed in this research for data collection were questionnaires, since they are cost effective. The study made use of standard questionnaires for all the respondents. They contained structured questions relating to the objectives and questions of the study. The researcher used a total of 30 structured questionnaires and distribute them equally among the outlets along the 3-main streets of the town; Gakere Road, Kimathi Street and Nairobi Road. This implies that 10 questionnaires were used for 10 outlets along each street. These tools were issued to the respondents who filled them within a period of 2-weeks; after which the researcher collected them back and analyzed them.

3.6 Validity and Reliability

Reliability is a test of the stability and consistency with which the data collection instrument measures the problem of the study. Validity test of a data collection instrument is to enable the researcher to ascertain that he measured the correct concept. The researcher ensured that content, criterion and construct validity were achieved.

Validity: To achieve construct validity, the researcher ensured that the findings of the actual study were similar or compatible with the findings of the pilot study that was carried out before the actual study. To achieve content validity, the researcher ensured that all the selected sample of respondents participated in the study. To achieve criterion validity; the same sampling technique, that is stratified and purposive sampling technique was used.

Reliability: To achieve reliability, a sample questionnaire was pre-tested at Nepart Communications Limited M-PESA in Kimathi University, to authenticate reliability. The pilot study was done in Kimathi University; 6km from Nyeri Town, to avoid any possible influence on actual respondents before the actual study was carried out. Before commencement, the researcher sought permission from management of the outlets by writing and assuring them of the confidentiality of the information and that it would not be published without their permission; and that under no circumstance would personal details be divulged according to the Confidentiality regulations. The researcher also assured the participants that it was their sole decision to comment or give their opinions. Another important issue was the timing; the researcher established the most appropriate time for interviews, such that he did not disrupt the normal day to day businesses of the agencies.

3.7 Methods of Data Analysis

The researcher employed both qualitative and quantitative methods of data analysis and related them to research questions. For each research question, he analyzed the variables and their relationships or differences. He also described the type of statistical techniques used and justify why he chose them. The responses to the questionnaires and interviews were edited and cleansed to ensure correct entry of every response. The data were then coded and fed into Statistical Package for Social Sciences (SPSS) package version 19.0. The coded data was keyed into the SPSS program where it was developed into a database and analyzed. SPSS was preferred because it is very systematic and covers a wide range of the most common statistical and graphical data analysis.

4.0 RESULTS AND ANALYSIS

4.1 Introduction

This chapter presents the analysis of primary data, findings and discussions. The study utilized a combination of both quantitative and qualitative techniques in the collection of data. The study targeted 30 M-PESA agents in Nyeri town. The agents operating these outlets were the respondents in the study. Out of the 30 questionnaires sent out, 27 questionnaires were returned completed, a 90.0% response rate. The high response rate could be attributed to the fact that the researcher followed up closely on each of the respondents and explained the purpose of the study. The data was analyzed by employing descriptive statistics such as percentages, frequencies and tables. Statistical Package for Social Sciences (SPSS) was used to aid in analysis. The researcher preferred SPSS because of its ability to cover a wide range of the most common statistical and graphical data analysis and is very systematic. Computation of frequencies in tables was used in data presentation. The information is presented and discussed as per the objectives and research questions of the study.

4.2 Background Information

Registration Status: The respondents were asked to indicate whether their businesses were registered. They all indicated that they were registered, an indicator that all the respondents had met the requirements for registration and were operating legally.

Duration of Service as an M-PESA Agent: This question sought to establish for how long the respondents had served as agents. The results are presented in table 4.1 below.

Table 4.1: Duration of Service as an Agent

Response	Frequency	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
Less than 1 year	2	7.4	7.4		
1-3 years	8	29.6	37.0		
Over 3 years	17	63.0	100.0		
Total	27	100.0		2.56	0.641

The findings in the above table imply that 63% of the respondents had served for more than 3 years, 29.6% had served for a period of 1-3 years, while only 7.4% had served for less than 1 year. This implies that majority of the respondents have had a long period of experience and have adequate knowledge of all the challenges that they face during service provision.

Argument that M-PESA Agents face challenges: This question was intended to find out from the respondents whether they faced any challenges during their operations. Findings are illustrated in table 4.2 below.

Table 4.2: Do you support the Argument that M-PESA agents face challenges during service provision?

Response	Frequency	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
Strongly supported	17	63.0	63.0		
Supported	8	29.6	92.6		
Neutral	2	7.4	100.0		
Total	27	100.0		1.44	0.641

Out of the 27 respondents; 63% strongly supported that they faced challenges while 29.6% supported, implying that a total of 92.6% agreed that the agents faced challenges. It is only 7.4% of the respondents who are neutral or rather not sure whether they faced challenges or not. This implies that majority of the M-PESA agents agreed that they faced challenges.

Evidence that the Agents faced Challenges: The agents gave the reasons tabulated in the table 4.3 as evidence that they faced challenges during service provision.

Table 4.3: Reasons for supporting the argument that Agents faced challenges

Response	Frequency	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
Loss of money due to float shortages	1	3.7	3.7		
Deposit of cash into wrong accounts	2	7.4	11.1		
Slow response by Safaricom customer care	2	7.4	18.5		
Arrogance of customers	4	14.8	33.3		
Theft and fraudsters	1	3.7	37.0		
Tough working conditions	4	14.8	51.9		
Money laundering	3	11.1	63.0		
Inadequate user identification procedure	2	7.4	70.4		
Long hours of delays	4	14.8	85.2		
Insecurity	4	14.8	100.0		
Total	27	100.0		6.26	2.782

The respondents listed some of the challenges that they faced in service provision as evidence to back their argument that they faced a number of challenges during service provision. The major challenges listed were long hours of delays, insecurity, tough working conditions and arrogance of customers; all at 14.8% response rate. This confirms the argument that agents face quite a number of challenges during operations; ranging from security related to cash float and internal management challenges.

4.3 The Challenges faced during Service Provision

4.3.1 The Extent to which the Security challenges affected the Agents

This question sought to find out the extent to which the agents operations are affected by security related challenges. Findings are in table 4.4

Table 4.4: Extent to which agents are faced with security challenges

Response	Frequency	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
Not at all	2	7.4	7.4		
Neutral	4	14.8	22.2		
Somehow	7	25.9	48.1		
Much	6	22.2	70.4		
Very much	8	29.6	100.0		
Total	27	100.0		3.52	1.282

The majority of the respondents that is 29.6% were very much affected, 22.2% were much affected while 25.9% were somehow affected by security related challenges. Summing to 77.8% of respondents agreeing that they were affected by these challenges; 14.8% of the respondents were unsure whether they were affected, while 7.4% confirmed that they were not affected by security related challenges. This implies that a majority of the agents were affected by security related challenges.

4.3.2 The Extent to which Cash float-related challenges affected the Agents

The respondents were asked the extent to which their operations are affected by cash float related challenges. Table 4.5 shows the findings.

Table 4.5: Extent to which agents are faced with cash float challenges

Response	Frequency	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
Not at all	3	11.1	11.1		
Neutral	3	11.1	22.2		
Somehow	9	33.3	55.6		
Much	2	7.4	63.0		
Very much	10	37.0	100.0		
Total	27	100.0		3.48	1.397

The findings shown that 37% of the respondents were very much affected, while 7.4% was much affected while 33.3% were somehow affected; summing to 77.8% of the respondents confirming that they were affected by cash float related challenges. It is only 11.1% who were uncertain whether or not they were affected while 11.1% confirmed that they were not affected by cash float related challenges. This indicates that cash float poses a major challenge to the agents during operations.

4.2.3 The Extent to which legal and Regulatory challenges affected the Agents

This question sought to find out the extent to which the respondents were faced by legal and regulatory challenges. This is presented in table 4.6 below.

Table 4.6: Extent to which agents are faced with legal and regulatory challenges

Response	Frequency	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
No response	1	3.7	3.7		
Not at all	7	25.9	29.6		
Neutral	7	25.9	55.6		
Somehow	8	29.6	85.2		
Much	2	7.4	92.6		
Very much	2	7.4	100.0		
Total	27	100.0		2.33	1.271

The findings in table 4.6 show that only 7.4% was very much affected, another 7.4% was much affected while 29.6% were somehow affected. The sum of those affected totals to 44.4% of the respondents. Since the cumulative score of those either not affected at all, those who were neutral and non respondents summed up to 55.6%; this is an indicator that legal and regulatory challenge is a minor challenge to the agents.

4.3.4 The Extent to which Internal Management challenges affected the Agents

The agents were asked the extent to which they encounter challenges related to internal management while in operations. Findings are shown in table 4.7

Table 4.7: Extent to which agents are faced with internal management challenges

Response	Frequency	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
No response	1	3.7	3.7		
Not at all	10	37.0	40.7		
Neutral	5	18.5	59.3		
Somehow	5	18.5	77.8		
Much	1	3.7	81.5		
Very much	5	18.5	100.0		
Total	27	100.0		2.37	1.573

The table above shows that only 18.5% were very much affected by internal management challenges, 3.7% was much affected while 18.5% were somehow affected; therefore the cumulative total of those affected is 40.7%. On the other hand, 18.5% were neutral, 37% were not affected at all while 3.7% were did not respond; therefore accumulative total of 59.3% were not directly affected by internal management challenges, this is an indicator that majority of the respondents did not experience internal management related challenges during service provision, therefore it is not a major challenge to the agents.

Specific Security challenges that the Agents faced: This question sought to identify the security challenges that the respondents faced during service provision. The responses are listed in the table below.

Table 4.8: Specific security challenges agents face in service provision

Response	Frequency	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
No response	3	11.1	11.1		
Fraudsters and conmen	13	48.1	59.3		
Fake cash	5	18.5	77.8		
Inadequate security	6	22.2	100.0		
Total	27	100.0		1.52	0.975

Table 4.8 shows that there were 3 main challenges the agents faced. Out of all the respondents, 48.1% identified fraudsters and conmen, 22.2% raised inadequate security as a major challenge while 18.5% of the respondents identified fake cash as a security concern. It is only 11.1% that did not identify any security challenges that they faced. This implies that the threat of fraudsters and conmen was the most common security challenge while fake cash was the least common challenge among the agents.

Causes of Security challenges: The respondents were asked to identify the causes of the challenges that they had earlier identified. Findings are shown in the table 4.9 below.

Table 4.9: Causes of Security challenges

Response	Frequency	Valid Percent	Cumulative Percent	Mean Score	Standard Dev.
No response	3	11.1	11.1		
Too much cash at hand	4	14.8	25.9		
Lack of currency regulation by CBK	5	18.5	44.4		
Loopholes in customer identification	7	25.9	70.4		
Impersonation of Safaricom staff by fraudsters	3	11.1	81.5		
Unregistered Safaricom lines	2	7.4	88.9		
Location of outlets such as along major highway	3	11.1	100.0		
Total	27	100.0		2.78	1.805

Findings shown causes of the security challenges from most frequent to least frequent as follows: loopholes in the identification process at 25.9%, lack of fake currency regulation by CBK at 18.5%, too much cash at hand at 14.8%, impersonation of Safaricom staff at 11.1%, location of outlets such as along major highway at 11.1% and unregistered Safaricom lines at 7.4%. Non response constituted 11.1% of the respondents.

Specific cash float related challenges the agents faced: This question established the level and specific examples of cash float related challenges that agents encountered during service provision. This is shown in the table below.

Table 4.10: Specific cash float related challenges

Response	Frequency	Percent	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
No response	6	22.2	22.2	22.2		
Cash float Regulation by Safaricom	10	37.0	37.0	59.3		
Delays	8	29.6	29.6	88.9		
Fake cash	3	11.1	11.1	100.0		
Total	27	100.0	100.0		1.30	0.953

The table shows that cash float regulation by Safaricom is the major challenge at 37%, followed by system delays at 29.6% while fake cash contributes to 11.1%. Non respondents constituted 22.2%. This is an indicator of that cash float related concerns pose a major challenge.

Causes of cash float related challenges: The respondents were asked to identify the causes of these challenges that had been listed in the previous question. The figure 4.1 shows the findings.

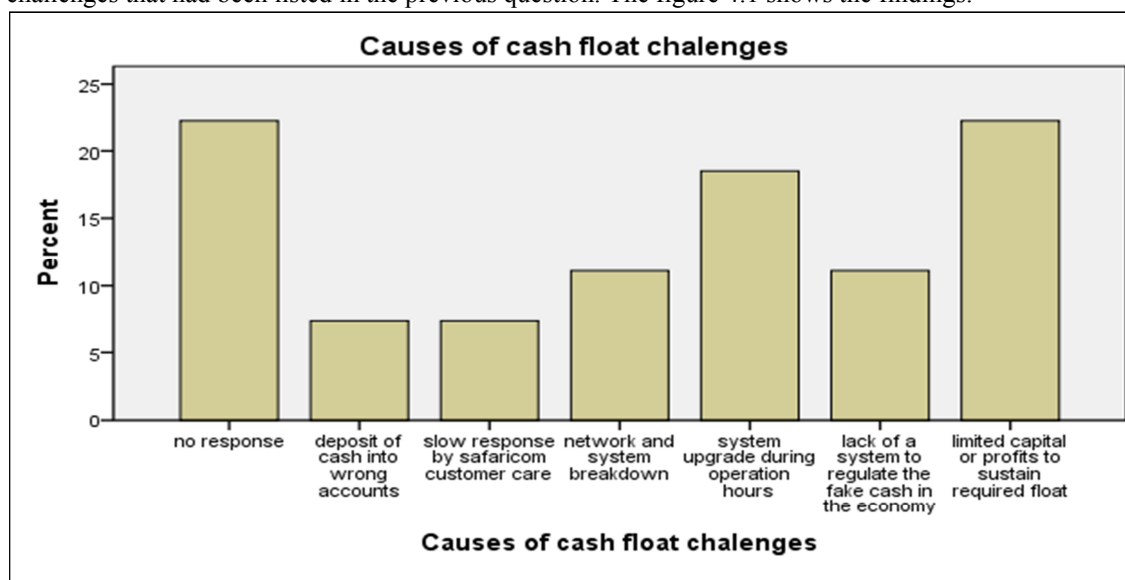


Figure 4.1: Causes of cash float related challenges

The respondents identified the following as the causes of cash float related challenges from the most frequent to the least frequent: limited capital or profits to sustain required float at 22.2%, system upgrade during operation hours at 18.5%, lack of a system to regulate the fake cash in the economy at 11.1%, network and system breakdown at 11.1%, slow response by Safaricom customer care at 7.4% and deposit of cash into wrong accounts at 7.4%. Non response accounted for 22.2% of the respondents. This is adequate evidence that cash float challenges faced the agents.

Specific Internal Management challenges: The respondents were asked to identify the specific internal management challenges; the findings are shown in table 4.11 below.

Table 4.11: Specific internal management challenges

Response	Frequency	Percent	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
No response	13	48.1	48.1	48.1		
Harsh working conditions	4	14.8	14.8	63.0		
Rude customers	4	14.8	14.8	77.8		
Exploitative employers	4	14.8	14.8	92.6		
Untrustworthy agents	2	7.4	7.4	100.0		
Total	27	100.0	100.0		1.19	1.388

Majority of the respondents, constituting 48.1% did not respond; this implies that they were not affected by internal management challenges. Those who responded identified: harsh working conditions, rude customers, exploitative employers and untrustworthy agents as main challenges; cumulating 51.9% of the responses. This implies that internal management is a minor challenge since it averagely affects the agents.

Causes of Internal management challenges: This question lists the causes of the internal management challenges that the agents faced. The findings are presented in figure 4.2.

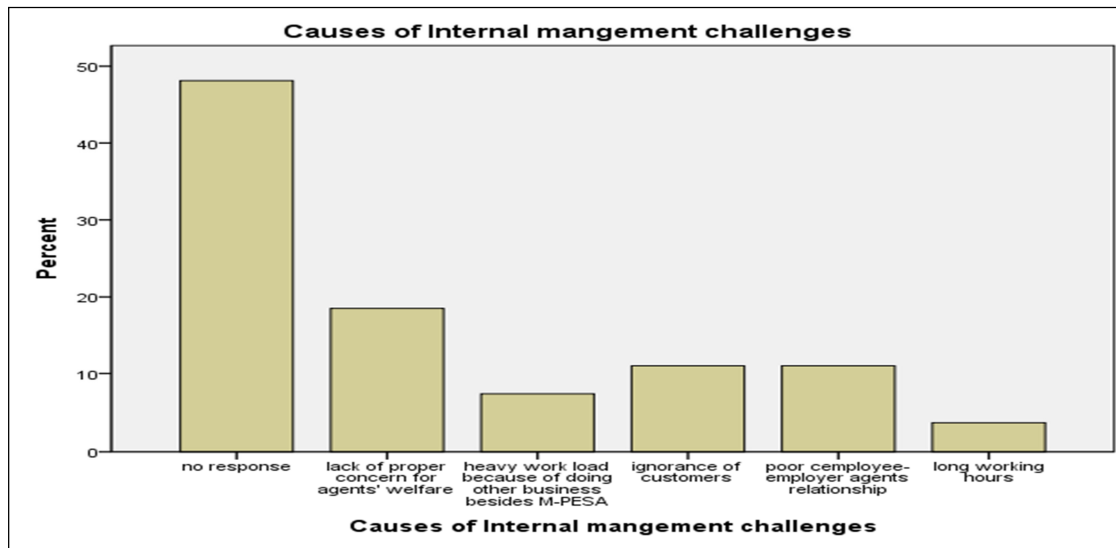


Figure 4.2: Causes of Internal management challenges

The major cause of internal management challenge is lack of proper concern for agents welfare at 18.5%, the others are: ignorance of customers and poor employer-employees relationship, both at 11.1%; heavy work load because of doing other business besides M-PESA account 7.4% and lastly long working hours accounted for 3.7%. But 48.1% did not respond, who constituted the majority of the respondents. This shows that internal management is a minor challenges affecting just slightly above half of the respondents.

Specific legal and regulatory related challenges: The respondents were asked to list the legal and regulatory challenges that they faced. The findings are contained in table 4.12 below.

Table 4.12: Specific legal and regulatory related challenges

Response	Frequency	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
No response	13	48.1	48.1		
Strict regulation by Safaricom	10	37.0	85.2		
High licensing fees by the municipality	4	14.8	100.0		
Total	27	100.0		0.67	0.734

The table shows that strict regulation by Safaricom accounted for 37% while high licensing fees by the municipality accounted for 14.8% while non response accounted for 48.1% of the respondents. This implies that legal and regulatory challenges affected an average number of the agents hence it is a minor challenge that faced M-PESA agents.

Causes of the legal regulatory challenges: The respondents were asked to identify the causes of the listed legal and regulatory challenges; the findings are listed in the figure 4.3.

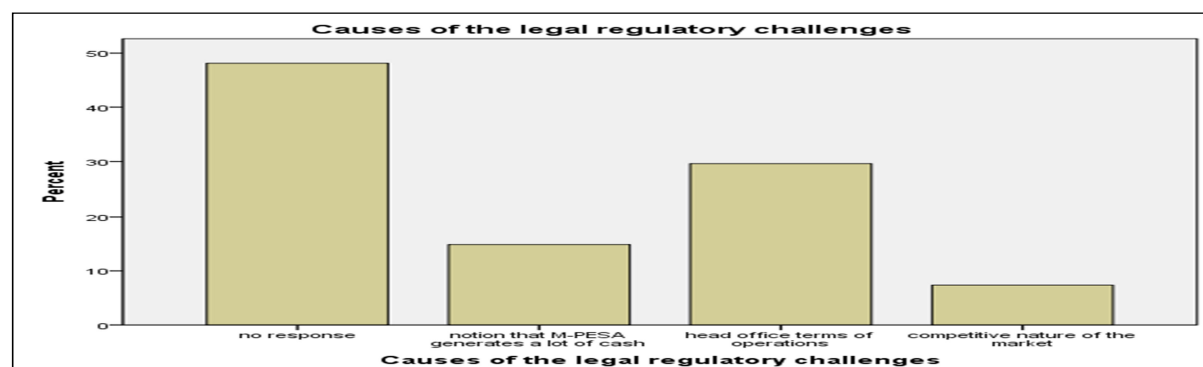


Figure 4.3: Causes of legal and regulatory challenges.

The graph shows that head office terms of operations accounted for 29.6%, notion that M-PESA generates a lot of cash accounted for 14.8% while the competitive nature of the market accounted for 7.4% of the respondents. Non response on the other hand was 48.1% of the respondents. This implies that legal and regulatory challenges are minor challenges since they only affect slightly over half of the respondents.

Other challenges that M-PESA agents faced: This question sought to find out whether or not there

were any other challenges that the agents faced. Majority of the respondents did not state any other challenges that the agents faced, accounting for 59.3%, it is only 40.7% who stated that there were other challenges. This implies that although the four analyzed challenges are the major challenges that agents faced, there were other challenges of lower magnitude compared to the analyzed four.

Examples of Other challenges faced by agents: This question established examples of other challenges that faced the agents during service provision. Findings are presented in table 4.13 below.

Table 4.13: Examples of Other challenges faced by agents

Response	Frequency	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
No response	14	51.9	51.9		
Illiteracy of customers	3	11.1	63.0		
Lack of motivation	5	18.5	81.5		
Lack of respect for agents	3	11.1	92.6		
Stiff competition among agents	2	7.4	100.0		
Total	27	100.0		1.11	1.368

From the table 4.13, we establish that lack of motivation accounted for 18.5%, illiteracy of customers and lack of respect for the agents both accounted for 11.1% of the respondents. Non respondents accounted for 51.9% of the respondents. This implies that majority of the respondents were not affected by any other challenges.

Causes of other challenges that faced Agents: The respondents were asked to identify the causes of the other challenges that faced the agents in service provision. Findings are listed in the figure 4.5 below.

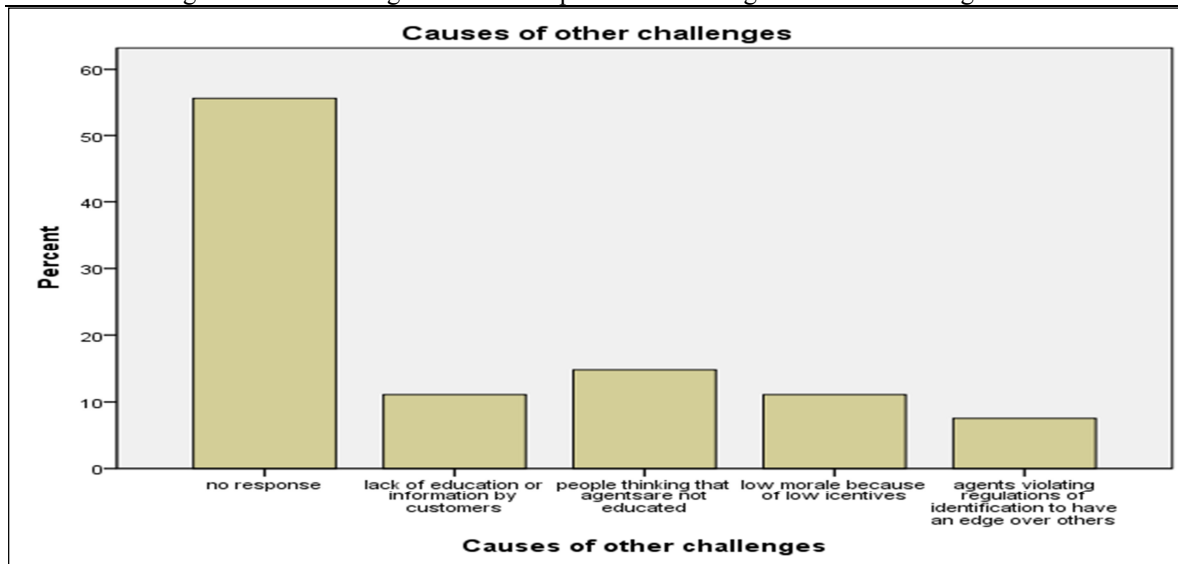


Figure 4.5: Causes of other challenges that faced Agents

The figure shows that majority of the respondents at 55.6% did not respond. Out of those who responded, they identified claims by people that agents were not educated at 14.8%, lack of information by the customer and low morale due to low incentives both accounting for 11.1% while 7.4% identified agents violating identification regulations as causes of these challenges.

4.4 Suggested Solutions to the challenges that faced the MPESA-Agents

Solutions to security related challenges: The respondents were asked to suggest possible solutions that could aid in resolving these challenges. Findings are represented in the table below.

Table 4.14: Solutions to security-related challenges

Response	Frequency	Percent	Valid Percent	Cumulative Percent	Mean Score	Standard Dev.
No response	4	14.8	14.8	14.8		
Fake cash detecting devices	2	7.4	7.4	22.2		
Biometric identification technology	7	25.9	25.9	48.1		
Installation of CCTV cameras	3	11.1	11.1	59.3		
Strict legal actions for fraudsters and conmen	4	14.8	14.8	74.1		
Improvement of user information confidentiality	1	3.7	3.7	77.8		
More investment in security by outlets	5	18.5	18.5	96.3		
Action by CBK on fake cash	1	3.7	3.7	100.0		
Total	27	100.0	100.0		3.07	2.147

Respondents suggested the following solutions: 25.9% suggested biometric or thumb print identification technology, 18.5% suggested more investment in security by outlets, and 14.8% suggested strict legal actions for fraudsters and conmen, 11.1% suggested installation of CCTV cameras, while action by CBK on fake cash in the economy and improvement of user information confidentiality both constituted 3.7% of the respondents. Non respondents constituted 14.8% of the respondents. This shows that the agents understood this challenge and the possible ways to resolve them.

4.4.2 Solutions to cash float related challenges fluctuations

The respondents were asked to suggest solutions to the cash float challenges. They suggested these listed in table 4.15 below.

Table 4.15: Solutions to cash float related fluctuations

Response	Frequency	Percent	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
No response	6	22.2	22.2	22.2		
Banks services like over-drafts and loan facilities	2	7.4	7.4	29.6		
Removal of float regulations	7	25.9	25.9	55.6		
Network upgrades be done at night	6	22.2	22.2	77.8		
Introduction of lockable safes	2	7.4	7.4	85.2		
CBK should act on fake money	4	14.8	14.8	100.0		
Total	27	100.0	100.0		2.30	1.683

Majority of the respondents, 25.9% suggested removal of cash float regulations, 22.2% suggested that network upgrades be done at night, 14.8% suggested an action by the CBK to eradicate the flow of fake money in the economy, while introduction of lockable safes by the agents and banks offering services like overdraft and loan facilities to agents both accounted for 7.4%. Non respondents constituted 22.2%. This implies that the agents understand very well the cash float related challenges that affect them, and they knew very well what needed to be done to solve them.

4.4.3 Solutions to Internal management challenges

This question sought to identify the solutions to the internal management challenges, findings are listed in table 4.16 below.

Table 4.17: Solutions to Internal management challenges

Response	Freq.	Percent	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
No response	14	51.9	51.9	51.9		
Incentives	3	11.1	11.1	63.0		
Positive employer-employee agent relationship	5	18.5	18.5	81.5		
Investigation of exploitation claims	4	14.8	14.8	96.3		
Education of customers on positive relations	1	3.7	3.7	100.0		
Total	27	100.0	100.0		1.07	1.299

Majority of the respondents, 51.9% did not respond. Out of those who responded, 18.5% suggested positive employee-employer agents' relationship, 14.8% suggested investigation of exploitation claims, 11.1% suggested introduction of incentives while 3.7% suggested education of customers on positive relations. This implies that majority of the agents were not faced by these challenges and hence could not suggest possible

solutions to alleviate them.

Solutions to legal and regulatory challenges: The question sought suggestions on the possible solutions to legal and regulatory challenges. The findings are listed in table 4.17 below.

Table 4.17: Solutions to legal and regulatory challenges

Response	Frequency	Percent	Valid Percent	Cumulative Percent	Mean Score	Standard Dev.
No response	13	48.1	48.1	48.1		
Workers union for the agents	5	18.5	18.5	66.7		
Agreements with council on lower licensing fees	3	11.1	11.1	77.8		
Less regulations by Safaricom	3	11.1	11.1	88.9		
Update and training of agents on new regulations	3	11.1	11.1	100.0		
Total	27	100.0	100.0		1.19	1.442

The table show that 18.5% of respondents suggested formation of workers union for the M-PESA agents, 11.1% suggested agreements with council on lower licensing fees, another 11.1% suggested less regulations by Safaricom, while another 11.1% suggested updating and training of agents on new regulations. Non respondents constituted 48.1% of all respondents. This therefore implies that since a majority of the respondents were not affected by these challenges, only a few had ideas on how to tackle these challenges.

4.4.5 Solutions to the other challenges that faced the agents

The respondents were asked to identify solutions to the other challenges they had suggested. The table 4.18 shows the findings.

Table 4.18: Solutions to any other challenges

Response	Frequency	Valid Percent	Cumulative Percent	Mean Score	Standard Deviation
No response	15	55.6	55.6		
Avoid transactions during delays	2	7.4	63.0		
Cultivate positive relations	3	11.1	74.1		
Uniforms for agents	4	14.8	88.9		
In-depth training of agents on any emerging issues	3	11.1	100.0		
Total	27	100.0		1.19	1.520

Majority of the respondents that is 55.6% did not respond; out of those who responded, 14.8% suggested introduction of uniforms for M-PESA agents, 11.1% suggested cultivation of positive relations between agents and customers, 11.1% suggested in-depth training of agents on emerging issues and another 7.4% suggested that agents should avoid carrying out transactions when the system is experiencing delays. This implies that since majority was not affected by these challenges, they had no idea of the possible solutions to these other challenges.

4.4.6 Recommendations by the Agents

This question required the agents to relay any other recommendations that they had as far as operations of M-PESA is concerned. The findings show that 74.1% of the respondents did not respond. Out of those who responded, 11.1% recommended that the research findings should be implemented, while 7.4% recommended that M-PESA should be transformed into a bank, another 7.4% suggested that direct deposits into customers' accounts should be revoked. This implies that only a small number of agents had further ideas on how M-PESA could be improved for futuristic benefits.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The findings were analyzed, presented and discussed in the previous chapter. This chapter presents the summary, conclusions and recommendations of the study.

5.2 Summary

The study focused on establishing the challenges M-PESA agents face during service provision. The objectives of the study were: to determine; Cash float related challenges, internal management, security related challenges and legal or regulatory challenges that influence efficiency of service provision. The secondary literature related to the research problem was mainly retrieved from research journals and past studies which are available online. Primary research data was collected through field work. The study was a descriptive survey conducted through the use of questionnaires; which were given to all the 30 respondents. Data analysis involved preparation of the

collected data through; coding, editing and cleaning of data so that it may be processed using Statistical Package for Social Sciences (SPSS) package version 19.0. The coded data was keyed into the SPSS where it was analyzed using descriptive statistics and measures of central tendencies. SPSS was preferred because it is very systematic and covers a wide range of the most common statistical and graphical data analysis. Findings are presented through the use of statistical tools like graphs, pie-charts, frequency distribution tables and measures of central tendencies like mean, median and standard deviation.

The findings show that these were the main challenges that faced the agents during service provision. Ranking by the mean scores; security related challenges ranked 1st with a mean of 3.52 out of 5 accounting for 77.8% of the respondents supported, 14.8% were undecided while 7.4% opposed. The 2nd was cash float related challenges with a mean of 3.48 which accounted for 77.8% of the respondents who supported, 11.1% were undecided while those who opposed were 11.1%. The 3rd was internal management challenges with a mean of 2.37 which accounted for 40.7% who supported, 18.5% were neutral while the remaining 40.7% consisted of those who opposed and those who failed to respond. The fourth challenge was legal and regulatory challenge which had a mean of 2.33, accounting for 44.4% those who supported, 25.9% were neutral while 29.7% either opposed or did not respond. The study also brought out other challenges that affected the agents in service provision to include: lack of motivation, supported by 18.5%, while illiteracy of customers and lack of respect for the agents; both accounted for 11.1% of the respondents respectively.

5.3 Conclusions

Based on the findings of the study, this section presents the conclusions. The findings present answers to the research questions; and the specific objectives: (i) To find out the cash float fluctuation challenges that the M-PESA agents faced; (ii) To establish the legal and regulatory challenges that the M-PESA agents faced; (iii) To determine the internal management challenges the M-PESA agents faced; (iv) To establish the security related challenges that the M-PESA agents faced; were all achieved. This is supported by analyzed data presented in chapter 4, these are the major challenges that the agents faced.

The questions of the study have been answered. The findings show that it is true that the agents are affected by security related, cash float related, internal management and legal and regulatory challenges. The security challenges affected 77.8% of the agents, the specific security challenges and their causes have been listed. The cash float related challenges affected 77.8% of the agents. Internal management challenges affected 40.7% of the respondents while legal and environmental challenges affected 44.4% of the respondents. The specific examples of these challenges and their causes are also listed in the findings. The study adds to the existing literature that has been presented by previous studies and bridges the knowledge gap mentioned in chapter 2. The findings confirm a relationship between the independent and the dependent variables. In that the challenges influence the efficiency with which the agents provide services. In relation to the previous studies:

Munyoki and Mutua (2009) had noted cash float difficulties and regulatory issues as some of the challenges in mobile banking. They argued that there were different models with mobile banking and the users could easily switch or change SIM cards leading to legal challenges like in the identification of M-PESA users. Their study confirmed that these are the major challenges that M-PESA agents faced.

Mas and Morawczynski (2009) asserted that M-PESA agents played a vital marketing role through registration and linking up the customers to the service and despite the existing reward system for the agents, the agents still had a number of issues that need to be addressed such as training on how to handle customers and cash management. The study identified these concerns as the internal management challenges that affected the M-PESA agents as far as internal management of the service is concerned. The study further suggested possible solutions to these challenges, which Mas and Morawczynski had not brought out in their study. Omwansa (2009) had stated that there was a need to study and analyze the regulatory challenges in order to understand how they affected the operations of the agents. The study identified the legal and regulatory challenges that faced the agents. But these were minor challenges since they affected below average number of the agents who took part in the study.

Liu and Mithika (2009) had established the opportunities and challenges presented by the M-PESA service and how it could be introduced in other countries; but they did not identify the specific challenges that the agents face during the service provision. The study confirmed that insecurity and cash float related challenges were the major challenges that faced the agents in service provision. International Finance Corporation-World Bank (2009) pointed out that agent training and management needed to be improved but failed to highlight the specific challenges the agents faced as far as training and M-PESA management were concerned. The study confirmed that the agents needed training in customer relations, employee-employer agent relationships and constant update of the agents on the emerging issues in the mobile banking business.

Plyler, Haas and Nagarajan (2010) identified security concerns, human capital accumulation and limited training as challenges to the M-PESA's economic growth. Yet they failed to clarify whether these are challenges to agents, users or Safaricom management. The study identified that security issues were in fact a

major challenge to the agents and listed examples such as: loopholes in the identification process, lack of fake currency regulation by CBK, too much cash at hand, impersonation of Safaricom staff, location of agency outlets and unregistered Safaricom lines. The study also asserted the need for training of the agents on internal management. Flaming *et al* (2011) had argued that globally, agents do not make much for their services; Brazilian, Indian, and Kenyan agents typically made profits of less than US\$5 per day. They also noted that 10% of the M-PESA agents were robbed in 2009. They however fail to show how these challenges impacted on the service provision by the M-PESA agents. The study confirmed that 18.5% of the agents stated that there was lack of concern for the agents' welfare hence they had low morale and poor motivation. The study further confirmed that fraudsters and conmen accounted for 48.1% of the security related challenges.

Mathenge (2011) raised the need of integrating and applying ethics in the mobile banking industry since it is susceptible and vulnerable to threats of fraud and money laundering. The study confirms that these are security related and cash float challenges that affected the agents; the study supports the call for integration of ethical concerns into the mobile banking service operations.

The main contribution of the study is the identification of the major challenges facing the M-PESA agents in service provision as well as listing the examples of these challenges and suggesting solutions for alleviation of these challenges. These challenges not only affect the M-PESA agents but also the agents of the other mobile banking service providers like Yu-cash, Orange Money and Airtel Money. Therefore the management of the mobile banking companies will find the findings very important in improvement of the efficiency of service provision. The study details recommended solutions by the agents who are the driving force behind the successful operations of M-PESA.

5.4 Limitations of the Study

The following limitations encountered during the research could limit the generalization of the study findings (i) Human capital: due to financial constraint, the researcher could not hire experts to help in the research work, hence a just a sample was used in the study instead of a census of the entire population. The study was done using a sample of 30 agents or 33.3%, inferred to represent the 90 M-PESA agencies in Nyeri town. A census would have been the most appropriate technique to achieve very accurate findings. (ii) The response rate was 90% since 3 out of the 30 respondents did not return their questionnaires; the findings represent just 90% of the views of the sample used. (iii) Cooperation: some agents had a bad attitude towards the research and failed to cooperate with researcher or even provided misleading or false information about the research problem.

5.5 Recommendations

5.5.1 Recommendations for Policy and Practice

The study recommends the following solutions to the challenges that affect M-PESA agents in service delivery: The security related challenges can be resolved through: biometric or thumb print identification technology, more investment in security by outlets, strict legal actions for fraudsters and conmen, installation of CCTV cameras, action by CBK on fake cash in the economy and improvement of user information confidentiality.

The cash float challenges can be solved through: removal of cash float regulations, network upgrades should be done at night, action by the CBK to eradicate the flow of fake money in the economy, introduction of lockable safes by the agents and banks offering financial services like overdraft and loan facilities to agents. The internal management challenges can be eradicated through: positive employee-employer agents' relationships, investigation of exploitation of employee-agents claims, introduction of incentives, and education of customers on positive relations with the agents.

Recommended solutions to legal and regulatory challenges include: formation of workers union for the M-PESA agents, agreements with the local authorities on lower licensing fees, less regulations by Safaricom on terms of operations for the agents and updating and training of agents on new regulations and emerging issues in the mobile banking sector.

The other challenges can be tackled by: introduction of uniforms for M-PESA agents, cultivation of positive relations between agents and agents avoiding carrying out transactions when the M-PESA system is experiencing delays.

Implementation of these recommendations by all the stakeholders in the mobile banking sector such as the service providers, the agents, customers, the government and the society will ensure efficiency in service provision and sustained profits in the long run.

5.5.2 Recommended areas of Further Study

The study was conducted in Nyeri Town with a sample of 30 agencies out of a total of 90 M-PESA agencies in the town (Safaricom, 2011). The researcher suggests that further research need to be carried out: (i) in other towns in different counties in Kenya to confirm whether the findings of this study can be inferred to represent a Kenyan case. (ii) Similar studies should be carried out on the challenges faced by agents of other mobile banking service providers such as Yu-Cash, Orange Money and Airtel Money agents in Kenya. (iii) Similar

study should be carried out in other parts of Africa and the world.

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APPENDIX I: DATA COLLECTION INSTRUMENT

DATE:

GUIDELINES:

Respondents are requested to respond to the questions in each section by ticking (✓) appropriately in the checkboxes provided. The information will be treated with strict confidentiality. DO NOT INDICATE YOUR NAME ANYWHERE ON THE QUESTIONNAIRE.

PART A: GENERAL INFORMATION (Tick as appropriate in only ONE box)

1. Are you a registered M-PESA agent?
 Yes No
2. For how long have you worked as an M-PESA agent?
 Less than 1 year 1-2 years More than 3 years
3. Do you support the argument that M-PESA agents face challenges during service provision?
 Strongly Support Support Neutral Oppose
 Strongly Oppose
 Give reason(s) for your answer

PART B: THE CHALLENGES FACED DURING SERVICE PROVISION

4. The following are some of the challenges that M-PESA agents face during service provision. Kindly indicate the extent which the following challenges affect your operations by inserting a tick (✓) in each column corresponding to challenges (Very much = 5; Much = 4; Somehow = 3; Neutral = 2; and Not at all = 1).

Challenges	Very Much (5)	Much (4)	Somehow (3)	Neutral (2)	Not at all (1)
Security					
Cash float					
Legal /regulatory					
Management					

5. a) Which are the security related challenges that you face?

 b) What are the causes of these security related challenges?

6. a) Which are the cash float related challenges that you face?

 b) What are the causes of these cash float related challenges?

7. a) Which are the internal management challenges that you face?

 b) What are the causes of these internal management challenges?

8. a) Which are the legal and regulatory challenges that you face?

b) What are the causes of these legal and regulatory challenges?

9. Are there any other challenges that you face during service provision?

Yes No

10. a) If YES, list these challenges below:

b) What are the causes of these other challenges that you face?

PART C: POSSIBLE SOLUTIONS TO THE CHALLENGES

11. Briefly recommend possible solutions to the challenges mentioned in PART B.

a) Possible solutions to the security challenges.

b) Possible solutions to the cash float fluctuations challenges.

c) Possible solutions to the internal management challenges.

d) Possible solutions to the legal and regulatory challenges.

e) Possible solutions to the any other challenges mentioned above.

12. Please indicate, briefly, any other information you wish to provide.

APPENDIX II: LIST OF REGISTERED M-PESA IN NYERI TOWN

This is the list of all registered agents in Nyeri-Town:

1. Nyeri	Skyline Holdings	Nducu Building
2. Nyeri	Blocks Solutions	Old Batian Building
3. Nyeri	Simwaka Communication	Near Caltex Petrol Station
4. Nyeri	Forward Mobile	Near 2NK booking office
5. Nyeri	Virtual Mobiles	New Trade Center, Gakere Road
6. Nyeri	Peace Communication ltd	Near Coop Bank
7. Nyeri	Telewatts Communication	Behind Coop Bank
8. Nyeri	Twelve Island	Opp Kung'u Maitu
9. Nyeri	Hand Print Media	Eastleigh Shopping Mall
10. Nyeri	Hand Print Media	Opp Othaya Bus Stop
11. Nyeri	Mobby Touch comm	Near prestige Building
12. Nyeri	Faricom Ltd	Near Tabby Plaza Building
13. Nyeri	Vision Mobile	Opp Customer care
14. Nyeri	Vision Mobile	Near Samrat Super market
15. nyeri	Vision Mobile	Near Haraf Communication
16. Nyeri	Buzzline Communication	Opposite Customer Care
17. Nyeri	Chavarie Ltd	Tabby plaza
18. Nyeri	3 G Telecom	Near Mathari bus stop
19. Nyeri	Upper Hill	Kungu Maitu Restaurant
20. Nyeri	Elami Ltd	Kungu Maitu Restaurant
21. Nyeri	Carolma Communication	next to Co-op Bank
22. Nyeri	Hotline Connections	Nairobi Stage
23. Nyeri	Diana International	Diana center
24. Nyeri	Mergut Communications	Josmica House
25. Nyeri	RU - Walt	Liban House
26. Nyeri	Elami Agencies	National Oil-Othaya Junction
27. Nyeri	Unik Royal ltd	Tabby Plaza
28. Nyeri	Mobby Touch	Middle Bus Park
29. Nyeri	Wings Communications	Teachers Plaza
30. Nyeri	Simwaka Communication	Opposite Open air Market
31. Nyeri	Smithsons	Opp Coffins Workshop
32. Nyeri	Stuanet Comm	Near ECO Bank
33. Nyeri	Smithsons	Kimathi Estate
34. Nyeri	Wajuzi consultants Ltd	General Hospital Nyeri
35. Nyeri	Nyeri Teachers Sacco	Batian Building
36. Nyeri	Kats Communication Ltd	Mukaro Building
37. Nyeri	Ideal Quality Commun. Ltd	Opposite Nanyuki stage
38. Nyeri	Aroscom Communications Ltd	Blessed Communications
39. Nyeri	Chavarie Communications Ltd	Nyeri, upper town
40. Nyeri	Housing Finance Corporation Ltd	Kimathi way
41. Nyeri	Update Investments Co. Ltd	Kimathi way
42. Nyeri	Vineyard General Services LTD	Next to Equity Bank
43. Nyeri	Kora Agencies Ltd	Nyeri, up town
44. Nyeri	Bespa Enterprises Ltd	Gathii House
45. Nyeri	Samchi Telecoms Ltd	Gathungu House
46. Nyeri	Smart Connections Ltd	Near Consolidated Bank
47. Nyeri	G4S Ltd	Kimathi way
48. Nyeri	Mukuyu Mobiles Telecommunications	Opposite Mathari Hospital Stage
49. Nyeri	Mobicom Kenya Ltd	Middle Bus Park
50. Nyeri	Visions Mobiles Connections Ltd	Nyeri
51. Nyeri	Jaynefam Enterprises Ltd	Nyeri
52. Nyeri	Earth Communications Ltd	Opposite KCB
53. Nyeri	Handprint Media Ltd	Near equity Bank
54. Nyeri	Wananchi Sacco	Gatemu Building
55. Nyeri	Rangechem Ltd	Sohan Plaza
56. Nyeri	Generations Insight Ltd	Opposite Mathari Hospital Stage
57. Nyeri	Capital Airtime Ltd	Central Plaza

58. Nyeri	Supermart Communications Ltd	Nakuru Stage
59. Nyeri	Family Bank	Kimathi way
60. Nyeri	Agricultural Finance Corporation	Behind Barclays Bank
61. Nyeri	Safaricom Retail Centre	Safaricom Retail Centre
62. Nyeri	EP Communications Ltd	Near Safaricom Retail Centre
63. Nyeri	Consolidated Bank Ltd	Kimathi Way
64. Nyeri	National Bank Ltd	opp family bank
65. Nyeri	Taifa Sacco	Nyeri
66. Nyeri	Post Bank Ltd	Post Bank Plaza
67. Nyeri	Biashara Sacco	Rware Building
68. Nyeri	Equity Bank	Opposite KCB
69. Nyeri	Dolphin Communication	Gathungu House
70. Nyeri	Tellewats Comm	Peak Building
71. Nyeri	Cellmart	Umoja Service station
72. Nyeri	2nk SACCO	Lower Stage
73. Nyeri	Skyline Holdings	Kauti Investments Building
74. Nyeri	Pacific Waves	Batian Building
75. Nyeri	Hand Print Media	Uhuru Highway Batian Building
76. Nyeri	Haraf Communications	New trade center Gakere Road
77. Nyeri	Samchi Telecom	Rongai Building Gakere Road
78. Nyeri	Ideal Quality	Next to Eco Bank
79. Nyeri	Vision Mobile Connection	New trade center Gakere Road
80. Nyeri	Ideal Quality	Nakuru bus stage
81. Nyeri	Vision Mobile Connection	Gakere Road
82. Nyeri	Simba Telecom	Nyeri, Complex Building
83. Nyeri	Visions Mobiles Connections Ltd	Nyeri, Green House
84. Nyeri	Vision Mobiles Connections Ltd	Nyeri, Nakuru Stage
85. Nyeri	Mississippi Communications Ltd	Nyeri, Off Gakere Road
86. Nyeri	Visions Mobiles Connections Ltd	Nyeri, Green House, Othaya 1
87. Nyeri	Capital Telecoms Ltd	Nyeri, Kimathi Street
88. Nyeri	ABC Technologies Ltd	Nyeri, Mathari Stage
89. Nyeri	Visions Mobiles Connections Ltd	Nyeri, Nukuru Bus Stage 1
90. Nyeri	Blue Grass Communications	Nyeri, off Kimathi street

Source: Safaricom website (January 2013).

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