

**RELATIONSHIP BETWEEN SERVICE DIVERSIFICATION AND PERFORMANCE OF AGENCY BANKING FIRMS: A CASE OF COMMERCIAL BANK AGENCY FIRMS IN IMENTI-SOUTH SUB-COUNTY, KENYA.**

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**ABSTRACT**

The Kenya Banking sector has demonstrated a solid growth over the past few years. The industry continues to offer significant profit opportunities for the major participants and this has compelled banks to adopt strategies such as Agency banking and mobile banking so as to diversify the bank products and services. Agency banking was introduced in Kenya in May 2010. The innovation was intended to assist in financial inclusion and reduction of congestion in banks. Agency banking has faced several challenges such as the network failure, insufficient float and insecurity issues. Despite efforts by banks to put in place measures to ensure smooth running of the agency firms most agency firms are still not able to handle large cash transactions due to inability of banking agents to maintain sufficient float. This study therefore sought to determine the relationship between service diversification and performance of commercial bank agency firms in Imenti-South sub-county. The objective of the study was to establish the relationship between service diversification practices and performance of agency banking firms. A descriptive research design was adopted. The target population was 100 banking agents of Equity, Cooperative and Kenya Commercial Bank in Imenti-South Sub-County. A Sampling model was used to get a sample size of 80 banking agents and stratified random sampling technique was used to select subjects to form the sample. Primary data was collected using questionnaire with both open and closed ended questions. The questionnaire was pretested to enhance the validity and reliability. Split half technique was used to assess the reliability of the research instrument. A reliability coefficient of 0.84 was obtained which indicated a high degree of reliability. Data analysis was facilitated by Statistical Package for Social Sciences version 21.0. Descriptive statistics such as frequencies and percentages were used in data analysis. Hypotheses were tested using chi-square test at 5% significance level. The analysis of the results revealed that service diversification had significant relationship on performance of agency banking firms ( $p$ -value  $< 0.05$ ). The findings of the study would be useful to banking agents in designing effective cash management system for sustainable bank agency business operations. This would in turn enhance provision of banking services to the unbanked population, thus improving economic growth of the financial sector.

**Key Words:** Agency Banking, Service Diversification, Bank, Cash management, Finance, Performance.

**ABBREVIATIONS AND ACRONYMS**

**ACH** :Automated Clearing House

**ARC** :Account Receivable Conversion

**ATM** :Automatic Teller Machine

**CBA** : Commercial Bank Agents

**CBK** :Central Bank of Kenya

**CGAP** : Certified Government Auditing Professional

**EFinA** :Enhancing Financial Innovation and Access

**GAFIS** :Gateway Financial Innovations for Savings

**KCB** : Kenya commercial Bank

**NACOSTI** :National Commission for Science, Technology and Innovation

**RDC** :Remote Deposit Capture

**SACCOs** :Savings and Credit Cooperative Societies

**SPSS** : Statistical Package for Social Sciences

**USA** :United States of America

## 1. INTRODUCTION

### 1.1 Background of Study

Cash management involves the efficient collection, disbursement and investment of cash while it resides in the firm. Cash management includes management of marketable securities too; in modern terminology money comprises marketable securities and actual cash in hand or in a bank (Khatik&Rashmi, 2009). According to Ranson (2005), cash management is a set of guidelines established by a firm to ensure that it has optimal cash balance at any time. Bort (2004) asserts that cash is the lifeblood of the business. The key to successful cash management lies in proper cash planning, monitoring collections and disbursements, adhering to budgetary parameters and ensuring proper cash control.

Proper cash management practices are vital for the success of any business. In times of economic difficulty, it is even more important to ensure the inflow and outflow of money is carefully and wisely managed. Cash management helps the business people to safeguard financial situation by preventing losses and maximizing the earning potential of every shilling. Businesses need to ensure that they have sufficient levels of cash in hand in order to ensure they meet day-to-day expenses and also be able to take advantage of the available market opportunities (Pandey, 2010). This is possible if they can practice proper cash planning and cash control. This would also help the business to pay its debts as they fall due. However, the business should not hold too much cash since this is an idle asset which could be better invested and generate profit for the business. Most businesses want to keep a minimal amount of cash in hand. Firstly, according to Pandey (2010) firms hold cash to conduct their businesses in the ordinary course, that is, to make payments for purchases, wages and salaries, other operating expenses, taxes and dividends. Secondly, to meet contingencies in the future, that is, providing a cushion or buffer to withstand some unexpected emergency. Thirdly, for investment in profit-making opportunities whenever they arise.

The faster a firm collects its receivables the more time it has to pay its own bills (Block &Hirt, 2005). When cash is received in exchange for products or services rendered, many small business owners spend most or all of these funds on growing their business and tamping down debt. But while such priorities are commendable, they should leave room for businesses to absorb lean financial times down the line.

According to Central Bank of Kenya Annual Report (2010) an agent is an entity that has been contracted by an institution and approved by the central bank to provide the services of the institution. A banking agent therefore is an entity that has been contracted by the bank to provide financial services on its behalf. Banking agents can be pharmacies, supermarkets, savings and credit cooperation (SACCOs), lottery outlets, post offices, petrol stations and many more (Kumar et al., 2006). Agency banking was first established in Brazil and Colombia with the aim of providing financial services to low-income households who are not reached by traditional bank networks especially those living in remote and rural areas (CGAP, 2010a). Brazil has the largest agent network in the world. Kenya has experience with both bank based and non-bank based agent banking models. Parliament gave approval for banking legislation to be amended to enable the use of agents in June 2009, and the regulations for agent banking were published by the central bank of Kenya in May 2010 (CBK Report, 2010). Since the introduction of agency banking in Kenya in May, 2010 the number of agents has grown from 8,809 in 2010 to 21,816 in 2013 (CBK Report, 2013).

The banking agents can provide a wide range of financial services such as cash deposit and cash withdrawal, cash repayment of loans, cash payment of bills, cash payment of retirement and social benefits, cash payment of salaries, transfer of funds, balance enquiry, generation and issuance of mini bank statements, collection of documents in relation to account opening, loan application and agent mobile phone banking services. Though the bank agents can provide such a wide range of financial services, they are most often used as cash-in/cash-out points where customers may deposit funds into their account and redeem electronic value for cash (Tarazi& Paul, 2011). According to a survey carried out by Kenya Bankers Association (KBA, 2012), 40.9% of agents' operations are cash deposits while 36% are cash withdrawals 3

The survey also revealed that customers are requesting for additional of services including ATM cards, recommendations for loans and advice on various bank products on offer. This therefore makes service diversification very important for the banking agents to serve their customers effectively. Agency banking has faced several challenges since its adoption in various countries. According to (CGAP, 2010 h), in India it is difficult to break even as an agent due to low cash transaction limits which prevent agents from facilitating more profitable transactions. It also takes a long time to increase average account balances and encourage users to transact more frequently. In Brazil, moving and protecting cash is costly, risky and time consuming (CGAP, 2010 b). Also in Brazil, most agents specialize in receiving bill payments, which account for approximately 75% of all agency transactions. Withdrawals and deposits account for 12.6% and are nearly equally divided into savings and current accounts. Only 0.16% of transactions are account opening and 7.3% are government transfers (CGAP, 2010 C). Atandi (2013), studied challenges of agent banking experiences in Kenya, in Pokot County and pointed out the following challenges: Lack of mobile network services, insufficient float, insufficient capital and issues of insecurity. According to a study done by (Ndung'u&Njeru, 2014) on assessment of factors influencing adoption of agency banking in Kenya, agents far from the bank branches had difficulties replenishing their float and those with adequate float had difficulties in balancing their cash at hand and the cash at bank.

According to Pandey (2010) the aim of cash management is to maintain adequate control over cash position to keep the firm sufficiently liquid and to use excess cash in some profitable way. A banking agent needs to be sufficiently liquid in terms of available cash-at-hand and sufficient e-float in order to provide as many daily transactions as possible. This is only feasible if the bank agents effectively manage their cash.

### 1.2 Statement of the Problem

Agency banking was introduced to enhance financial inclusion among people and as a branch de-congestion strategy. Since its introduction in Kenya in May, 2010 the 4 number of agents has grown from 8,809 in 2010 to 21,816 in 2013 (CBK Report, 2013). The innovation was intended to offer full range of banking services such as account opening, fund transfer, loan repayments, cash deposits and withdrawals, bill payment, tax payments and enquiry handling to banks' customers at the comfort of their neighbourhood. However, according to a survey done by (EFInA, 2011) on evaluation of agent banking models in different countries, bank agents in Kenya provide mainly cash deposit and cash withdrawal services. The survey also found out that the agents had problems keeping sufficient floats to sustain business continuity. Measures taken by commercial banks to ensure smooth running of agency firms include; vetting of agents, training and re-training of agents, monitoring their operations and encouraging them to take insurance cover of their businesses. Despite these measures, the banking agents are still not able to maintain sufficient float. This therefore raises the question as to how the agents manage their cash.

### 1.3 General Objective

The study sought to achieve the following objectives:

- i. The overall objective of the study was to determine the effect of service diversification practices on performance of agency banking firms.
- ii. To establish the service diversification strategies adopted by agency banking firms in Kenya

### 1.4 Hypotheses

H01: There is no significant relationship between service diversification and performance of agency banking firms.

H03: There is so significant difference between the service diversification strategies adopted by agency banking firms in Kenya.

### 1.5 Significance of the Study

Banking agents would be enlightened on the various cash management practices and association with the performance of agency banking firms. This information would assist banking agents in decision making geared towards improvement of their cash management. They would be in a position to increase their number of transactions leading to sustainability of their businesses. As a result commercial banks would increase their market share and hence their profitability. This would in turn improve the country's economic growth through the financial sector. Finally, the findings of this study would add to the available stock of knowledge in cash management and provide a basis for further research in this field of cash management.

### 1.6 Scope of the Study

The study covered the area of service diversification in relation to performance of commercial banks' agency firms. The study examined the effect of cash management on performance of agency firms by considering cash deposits, cash withdraws, bills payment and mobile banking. The study examined the performance of commercial bank agency firms in terms of number of daily transactions. The study targeted the established and active commercial banks' agency firms registered by Central Bank of Kenya. Geographically, the area of study was Imenti-South sub-county which is located in Meru-County, Kenya. The study concentrated on cash management practices by banking agents since their inception in the year 2010 to 2014.

### 1.7 Limitations of the Study

Some agents were not willing to provide information because of the sensitivity of the financial information that was being sought and fear of possible competition. They only did so after being assured by the researcher that the information would be handled confidentially and was only meant for academic.

## 2. LITERATURE REVIEW

### 2.1 Introduction

This chapter covers the review of the available related literature from the global scene and draw comparison with the Kenyan situation. It will also help to identify the gaps that exist that the study tries to fill.

## 2.2 Agency Banking in Kenya

According to Central Bank of Kenya Report (2010) an agent is an entity that has been contracted by an institution and approved by the central bank to provide the services of the institution. A banking agent therefore is an entity that has been contracted by the bank to provide financial services on its behalf. Globally, the entities range from post offices in the Outback of Australia where clients from all banks can conduct their transactions, to rural France where the bank Credit Agricore uses corner stores to provide financial services, to small lottery outlets in Brazil at which clients can receive their social payments and access their bank accounts (Berger & Humprey, 1998).

Many countries permit a wide range of individuals and legal entities to be agents for banks while other countries limit the list of eligible agents on the basis of legal form (Tarazi & Paul, 2011). In Kenya, entity eligible for appointment as agent must be profit-making entity that had been in business for at least eighteen months and can afford a float account. These entities include: Limited liability companies, Sole proprietorships, Partnerships, Societies, Cooperative societies, State corporations, Trusts, Public entities and any other entity which the Central Bank may prescribe (CBK Report, 2010). Agents may be able to play a role in a broad range of services, including account opening, cash-in and cash-out services-including cash disbursement of bank-approved loans and repayment collection, payment and transfer services-including international remittances and person-to-person domestic transfers, and perhaps even credit underwriting (Tarazi & Paul, 2011). Regulation however, often sets limits on the role agents can play in providing financial services, considering reliability, security, and competence of such third parties.

In Kenya, an agent may provide any of the following financial services as may be specifically agreed between an agent and the bank; Cash deposit and cash withdrawal, cash repayment of loans, cash payment of bills, cash payment of retirement and social benefits, cash payment of salaries, transfer of funds, balance enquiry, mobile banking, generation and issuance of mini bank statements, collection of documents in relation to account opening, loan application, credit and debit card application, collection of debit and credit cards, agent mobile phone banking services, cheque book request, cheque book collection by customers, collection of bank mail/correspondence for customers and any other activity as the central bank may prescribe (CBK Report, 2010).

Though the bank agents can provide a wide range of financial services, they are most often used as cash-in/cash-out points where customers may deposit funds into their account and redeem electronic value for cash. According to GAFIS (2013) agents are selected based on their creditworthiness, reputation in community, size/performance of existing business and robust business activity. These agents often operate by first opening and funding their own account with the bank, and all transactions with customers are transacted against this personal agent account. For example, when a customer wishes cash to be credited to her electronic account, the agent accepts the cash and transfers electronic value from the agent's account to the customer's account. Conversely, when a customer wishes to redeem electronic value for cash, the customer transfers electronic value to the agent's account, and the agent gives the customer the corresponding amount from the agent's cash reserves. These agents are sometimes viewed as "cash merchants", that is, retailers who engage in the business of transferring value between electronic and physical forms. In this regard a commercial bank agent needs to be sufficiently liquid in terms of available cash-in-hand and sufficient float. These cash merchants transact against their own accounts and transactions are typically conducted in real time, permitting the customer to confirm receipt of electronic funds thus reducing the risks involved. To deal with some challenges faced by agency firms such as theft, Mwangi (2013) explains that banks need to equip their

agents with secure operating systems capable of carrying out real time transactions generating an audit trail and protecting data confidentiality.

This would improve the operations of agents and also give customers confidence to transact at the agency firms instead of the bank branches. Since there are a broad number of services that are allowed by Central Bank of Kenya, there is need for banks to expand the financial services that can be offered by agents. Most agents deal with deposits, withdrawals, balance check, and account opening. These services are not enough to offer the agents sufficient gain.

### **2.3 Evolution of Cash Management**

The development of cash management backs the late 1920s and early 1930s during the great depression; this is the period when managers first got concerned with liquidity. Before this, they paid more attention to choosing appropriate financing instrument and considering their impact on capital structure. The severe decline in revenues experienced during the 1929-1933 period and the consequent failures of many highly-levered firms showed very clearly the importance of liquidity management. During the late 1930s and early 1940s, firms expanded rapidly in order to fulfill diversified wartime needs and also predictability of cash flows and general liquidity of the firms improved (Lawrence, Edward & Thomas, 1979). Key developments in cash management began in the 1950s with the major question being how to provide adequate cash to meet bill and debt obligations at a minimum cost. During the period from 1950 to present many contributions to cash management have occurred especially in cash balances (Miller & Orr, 1966), and cash planning and budgeting (Stone & Wood, 1972).

### **2.4 Cash Management Cycle**

Cash management cycle is the time it takes for the flow of cash from business operations till when surplus cash is invested or cash deficit is borrowed. Pandey (2010) explains that sales generate cash which has to be disbursed out and in case of surplus cash it is invested while if there is deficit it is borrowed. Cash management cycle is what cash management seeks to accomplish at a minimum cost while also seeking to achieve liquidity and control. The aim of cash management is to maintain adequate control over cash position to keep the firm sufficiently liquid and to use excess cash in some profitable way. Abioro (2013) found out that more availability of cash without proper management does not necessarily translate into favourable performance for business. This therefore necessitates need for effective cash management for better performance.

### **2.5 Motives for Holding Cash**

Understanding the reasons why firms have the need to keep cash is essential for a better financial management. Following this reasoning, Pandey (2010) pointed out three reasons why firms hold cash. Firstly, firms hold cash to conduct their business in the ordinary course, that is, make payments for purchases, wages and salaries, other operating expense, taxes and dividends. Secondly, to meet contingencies in the future, that is, cash provides a cushion or buffer to withstand some unexpected emergency. Thirdly, for investing in profit-making opportunities whenever they arise. Ross et al., (2012) also states that firms could also hold cash balances in the banks to compensate for banking services rendered to the firm. A compensating balance is a certain amount of cash the firm is required and agrees to hold on deposit on its current account with the bank (Pinches, 1997). This is backed by Horne and Wachowitz (2009) explaining that firms hold cash for transaction motive, speculative motive and precautionary motive.

The more predictable the inflows and outflows of cash for a firm and ready borrowing power to meet emergency cash drains reduces the need for cash balance for precautionary motive needs. Most firms do not engage in speculations and therefore they concentrate mainly on the transactions and precautionary motives. Firms with greater investment opportunities tend to hold more cash while firms holding liquid assets other than cash, higher capital expenditures and higher dividend pay-out hold less cash (Kim, Kim & Woods, 2011). Firms also keep cash on hand to take advantage of trade discounts. Suppliers often offer their clients the option of discounts for early payment of obligations, which would be easily obtainable if there was extra cash lying on the corporate account (Ehrhardt, 2006). Agency firms hold cash mainly for transaction motive, that is, to have ready cash to serve their customers.

### **2.6.6 Agency Banking Service Diversification**

Diversification refers to the act of introducing variety, especially in investments or in the variety of goods and services offered. Service diversification is the act of offering variety of services in a firm. When the types of services available across the agency banking firms are limited, liquidity problems are likely to be even more prevalent because agents tend to end up cash rich or cash poor. As service diversity increases, there are more opportunities for retail agents to balance their cash holdings through cash deposits, cash withdrawals, loan repayment, cash transfer and bill payment.

In Afghanistan, M-Paisa agents currently face severe liquidity management challenges since mobile money is mainly used for loan payments (<http://www.gsma.com/mobilefordevelopment>). This means that cash withdrawals and deposits are very unbalanced, with the number of customers repaying their microfinance loans far exceeding the number of withdrawals. Thus agents need to keep a significant amount of M-Paisa funds available, requiring them to either tie up a large amount of float in the system or to make frequent trips to the bank. In the coming months, the mobile operator that runs M-Paisa is hoping to address this imbalance by increasing the number of users receiving their salary through M-Paisa as these customers will be withdrawing cash from the agents and will, hopefully, balance the cash deposits for loan repayments.

The Brazilian government gave Caixa responsibility to disburse government benefits, including pensions. Since paying pensions is a cash-out procedure, agents faced the problem of balancing their funds and the bank had cash loading issues, especially in rural areas. Hence, Caixa started offering bill payment services as well to customers. Bill payment solutions serve as a cash-in option for the bank's agents and help in balancing the cash flow.

### **2.7 Service Diversification and Performance of Agency Banking Firms**

Performance of agency banking firms refers to the act of providing banking services through a third party. It can be measured by number of transactions handled by the banking agents, volume of transactions or profitability. Arihoona and Tusubira (2011) carried out a research on cash management and growth of small scale businesses in Ntungamo market and observed that those businesses that planned for their cash performed better than those that never planned for their cash.

Uremadu, Egbide and Enyi (2012) carried out a study on working capital management, liquidity and corporate profitability among quoted firms in Nigeria evidence from the productive sector and explain that creditor payment period was very significant in influencing profitability in Nigeria and also recommends that excess cash should be reinvested in short-term securities (assets) to generate profits. Kaddumi and Ramadam (2012) carried out a research to investigate the effect of working capital management on the performance, using a sample of 49 Jordanian Industrial firms listed at Amman Stock Exchange from 2005 to 2009. The results showed that the negative relationship of average collection period, average age of inventory and the positive relationship of average payment period with the

profitability implied that keeping lesser inventory and shortening the collection period along with extending the payment period will increase profitability for the Jordanian industrial firms.

Tsamenyi et al., (2005) in their study of a Russian multinational company (RMC) noted that the RMC's management had extreme difficulties in planning and control due to unstable cash flows. To solve these difficulties an international cash management system was established to stabilize cash flows and also provide stable short-term credit necessary to support the company's operations and also to minimize short-term debts. Cotugno and Stefanelli (2012) using a panel dataset comprising 4038 observations relative to Italian banks for the period 2005-2010 found positive relationships between product diversification and bank performance.

## 2.8 Theoretical Framework

The study hinges on the following theoretical frameworks:

### 2.8.1 The Baumol Model

One of the first formal models for determining the optimal cash balance a firm must hold was developed by William Baumol (1952). The model analyzes the cost associated with the maintenance of cash balance, that is, holding cost which is the combination of the cost of administration- the costs incurred for keeping track of the cash, and the opportunity cost of cash, which is the cost of not investing the cash elsewhere. The cost of opportunity is determined by the interest that the firm does not receive by not applying the resources elsewhere, and the transaction cost which is the cost of acquiring more cash, either by conversion of investments into cash or borrowing (Ross; Westerfield& Jaffe, 2002). The Baumol model assumes that the net cash flows occur at a constant rate, day-to-day cash needs are funded from current account and buffer cash is held in short-term investment.

### 2.8.2 Agency Theory

This theory explains the relationship between principal and agent in business. Agency theory is concerned with settling problems that can exist in agency relationships; that is, between principals and their agents. Agency theory attempts to deal with two problems, that is, The problems that arise when the goals of the principal and agent are in conflict and the agents have the ability to operate in their own self-interest rather than in the best interests of the firm and The problems that arise when the principal and agent have different tolerances for risk. The theory suggests that an agent is more likely to adopt the goals of the principal, and therefore behave in the interest of the principal, when the contract is outcome-based. Also, when the agent is aware of a mechanism in place that allows the principal to verify the behavior of the agent, he is more likely to comply with the goals of the principal.

Agency theory explains the importance of the relationship between the commercial banks and the bank agents. Commercial Banks are responsible for the actions of their agents and thus they supervise and monitor the activities undertaken by agents to ensure that they do not suffer losses, material or reputation due to the actions of their agents. In concurrence with the theory, some unprincipled agents deviate from laid bank procedures for their own interest such as agents who split a single deposit transaction into several transactions in order to increase their commissions. Since customers do not pay for deposits, banks are disfranchised whenever a deposit transaction is multiplied over by an agent as they have to pay from their profits for each of these deposit transactions. To reduce the bank-agent problems proper screening of agents at recruitment should be done to match the culture and values of the banks they represent and rewarding complying agent

## 2.9 Conceptual Framework

A concept is an abstract or general idea inferred or derived from specific instances. A conceptual framework is a hypothesized model identifying the concepts under study and their relationship (Mugenda&Mugenda, 2003). It identifies the variables and its purpose is to help the reader to quickly see the proposed relationship.

Independent Variables Intervening Variables Dependent Variable

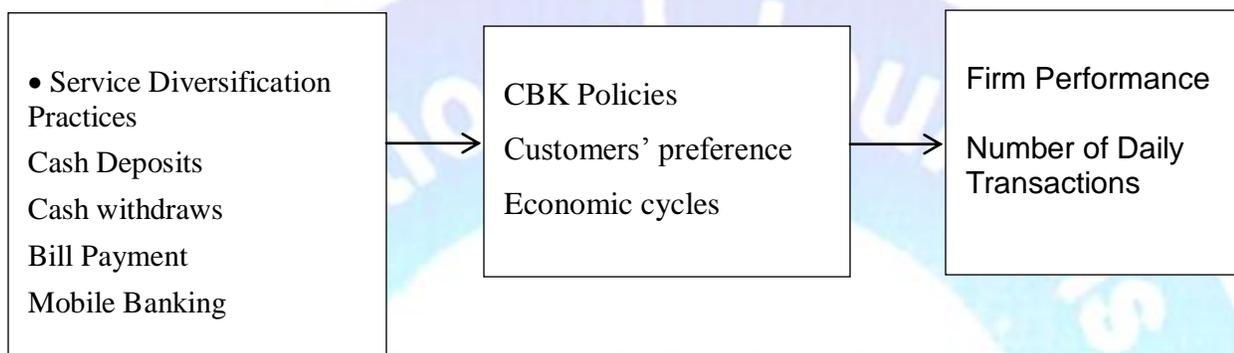


Figure 1: Relationship between Cash Diversification Practices and Performance of Commercial Bank Agency firms

The independent variables consist of three cash management practices that may be practiced by commercial banks' agents to improve their performance. Cash planning is the management process of forecasting the cash needs of a firm. It involves the estimation of cash receipts and cash disbursements to determine cash availability. This is done through budgeting for Cash receipts, cash disbursements and optimum cash balance. Cash receipts can be as a result of cash generated from operations, proceed from sale of equipment and dividends received. Cash can flow out of the business as a result of paying employees, purchase of assets, income taxes paid, bank loan, transport costs-incurred as the agents go to the bank to balance their accounts and text (SMS) costs. Cash planning helps agency firms to maintain adequate cash to meet their daily cash requirements. This would lead to increased number of transactions.

The purpose of keeping cash is to meet day to day requirements along with sufficient liquidity and adequate profitability. A firm should aim at optimizing its cash holdings without impairing the overall liquidity requirements. This is possible if a firm exercises tight control over cash flow. An agency firm can increase its number of transactions by putting mechanisms in place to safeguard their cash thus ensuring its availability. Agency firms should have control over cash receipts, cash disbursements, petty cash and also their investments.

Agency banking firms need to diversify their services so that they are able to balance their cash. When these firms offer a variety of services, they will be dealing with both services that add cash into the firm and also services that will add electronic value into the firms account thus increasing float. When the cash in hand and electronic value balance, the agent can serve their customers effectively.

The dependent variable is performance of agency firms as measured by the number of daily transactions. The number of transactions refers to the number of instances of doing business of some kind at an agent such as a deposit of cash in a bank account, a withdrawal of cash from a bank account and transfer of cash. However, the above relationship may be affected by some intervening variables such as central bank of Kenya (CBK) policies, customers' preference and economic cycles. CBK is the

main regulator of agency banking. It licenses all the commercial banks' agents. It could therefore indirectly affect performance of agency firm by limiting the services that can be offered by agents. Some customers may prefer to make their transactions at the bank branches rather than at the banks' agency outlets. Others may think that agents lack capacity to handle large transactions of cash and under-spend on security measures. This too may limit the number of transactions made per day. Economic cycles refer to the natural fluctuation of the economy between periods of growth and recession (<http://www.investopedia.com/terms/e/economic-cycle.asp>). During recession peoples' purchasing power is reduced and thus they may have lesser banking transactions. This may reduce the number of transactions made at the agency firms. In periods when the economy is doing well, the number of transactions at the agency firms may be higher.

### 3.METHODOLOGY

#### 3.1 Introduction

This chapter covers the research design, location of the study, population, sampling procedures and sample size, data collection procedures, instruments and data analysis procedures.

#### 3.2 Research Design

The study adopted descriptive research design. This was informed by the need to determine and report things the way they are. Descriptive research design is a scientific method which involves observing and describing the behavior of a subject without influencing it in any way. The descriptive research design was suitable for this study since it explains the state affairs the way it is (Mugenda&Mugenda, 2003).

#### 3.3 Location of the Study

The study was carried out in Imenti-South sub-county. The sub-county was selected because it has several economic activities like buying and selling of bananas in the sub-county. Meru county is the largest producer of bananas second to Kisii county (<http://Meru.go.ke/file/20140114>) and therefore requires banking services. However, the area is not well covered in terms of commercial Banks concentration thus it becomes necessary for agency banking services to be brought near them.

#### 3.4 Population

The study targeted a population of 100 commercial banks' agents of the three commercial banks which practiced agency banking in Imenti-South sub-county (Nkubu Banks' Agency Banking Network Report, 2013).

The population comprised three strata as shown in Table 2.

Table 2: Distribution of Commercial Banks' Agents in Imenti-South Sub-county

Imenti-South Sub-county Bank	Number of agents
Equity	50
Co-operative	26
KCB	24
Total	100

Source: Nkubu Banks' Agency Banking Network Report (2013)

#### 3.5 Sampling

There were thirteen banks that were practicing agency banking during the time of study. The researcher purposively selected three banks out of thirteen that were operating agency banking as per the period of study. The three banks formed three strata. The sample size for this study was of 80 banking agents obtained from a model specified by Krejcie and Morgan (1970).

$$n = \chi^2 * N * P * (1 - P) / (ME^2 * (N - 1) + (\chi^2 * P * (1 - P)))$$

Where:

N = Sample Size

$\chi^2$  = Table Value of Chi-square for 1 degree of freedom (3.841)

N = Population Size

P = Population Proportion (50%)

ME = Desired Margin of Error (5%)

The 80 banking agents were selected from a population of 100 banking agents using proportionate stratified random sampling. The proportionate stratified random sampling was adopted because of mutually exclusive events and internally homogeneous strata of business that were identified. According to Mugenda and Mugenda (2003) the aim of stratified random sampling is to achieve desired representation from various subgroups in the population. The 80 banking agents were selected using table of random numbers.

The sample was proportionate to the number of agents for each bank as shown in Table 3.

Table 3

Sampling Matrix Bank	Number of Agents	Proportion	Sample Size
Equity	50	0.50	40
Co-operative	26	0.26	21
KCB	24	0.24	19
Totals	100	1.0	80

### 3.6 Instruments

This study involved collection of primary data. A questionnaire was designed using categorical scale for the study. The questionnaire contained four sections with both open ended and closed ended questions. The first section aimed at collecting agency firm details, the second section had questions relating to cash planning, third section had questions on cash control and finally service diversification. The questionnaires were administered by researcher through visit to various agents.

### 3.7 Ethics Consideration

Written permission was sought from Meru County Director and the Commercial Banks' chief Executive Officers of the banks whose agents were involved in the study. The researcher sought research permit from NACOSTI to conduct research. Permission from the agents was sought and the agents assured of confidentiality of the information being sought. The researcher also explained the purpose of the study to the banking agents.

### 3.8 Piloting

The questionnaire was tried out on a small sample of eight agents. A Pretest sample of between 1% and 10% of the study sample is recommended (Mugenda&Mugenda, 2003). Pre-testing helped to check reliability and validity of the instrument. The researcher obtained research license before conducting a pilot study in Embu East sub-county. Embu East sub-county was suitable for the pilot study because it has a lot of similarities with the Imenti South sub-county such as the increase in learning institutions and the relative concentration of agency firms. Agency banking firms that participated for pilot study were those of Co-operative bank, Equity bank and KCB. After pilot- testing study, some questions were added and others deleted. The final instrument was redone and data collection proceeded on.

### 3.8.1 Reliability

Reliability is a measure of the degree to which a research instrument provides consistent results (Kothari, 2004). Data collected from pilot study was coded, edited, classified and analyzed using the split-half method of assessing reliability. A correlation coefficient of 0.84 was obtained which was considered satisfactory.

### 3.8.2 Validity

Validity indicates the degree to which an instrument measures what it purports to measure (Kumar, 2005). The questionnaire was tested for both construct and content validity. Content validity is the extent to which a measuring instrument provides adequate coverage of the topic under study while construct validity is a measure of the degree to which data obtained from an instrument meaningfully and accurately reflects a theoretical concept (Mugenda & Mugenda, 2003). In subjecting the tools to validation, the experts in agency banking and the supervisors of the study scrutinized all the questions in the research instrument to assess its appropriateness in measuring variable concepts.

### 3.9 Data Collection

The researcher collected primary data using questionnaires. The questionnaires were self-administered by the researcher to the sampled banking agents, who filled them and they were collected by the researcher the same day. Data collection took a period of ten working days with each day being allocated to 7-9 banking agents.

### 3.10 Data Analysis

Once the questionnaire had been administered, data collected was cleaned which involved identification of incomplete responses and outliers. After data cleaning, the data was coded and entered in the computer using the statistical Package for Social Sciences version 21.0. Data was analyzed using descriptive statistics such as frequencies, mean and percentages. Chi-square was used to make statistical inferences for the variables at 5% level of significance.

## 4. RESULTS AND DISCUSSIONS

### 4.1 Introduction

This chapter presents and discusses the research findings. The study was on the relationship between cash management practices and performance of agency banking firms in selected banks' agents in Imenti-South sub-county. The findings are presented and discussed based on the research objectives. The results are presented in Tables.

### 4.2 Preliminary Analysis

Preliminary analysis covered analysis of response rate, distribution of agency firms, gender of respondents, respondents' age distribution, level of education and length of operation in bank agency service.

#### 4.2.1 Response Rate

Eighty questionnaires were issued out and 72 were returned leading to a response rate of 90% that was considered satisfactory. High response rate is important statistically since it raises confidence in the results.

#### 4.2.2 Distribution of Agency Firms

The respondents were asked to indicate the bank with whom a contractual relationship existed for providing banking services. It was necessary to disclose the distribution of agents in Imenti-South Sub-County in order to establish the banks' level of involvement in provision of banking services through agency firm. The results are presented in Table 5.

Table 5: Distribution of Agency Firms

Bank	Frequency	Percent (%)
Equity	35	48.6
KCB	18	25.0
Cooperative	19	26.4
Total	72	100.0

Information in Table 5 indicates the distribution of banks' agents as: 48.6% for Equity bank, 25.0% for KCB bank and 26.4% for Cooperative bank. This indicates that the bank with a wider agency network in Imenti-South sub-county is Equity bank.

#### 4.2.3 Gender of Respondents

The respondents were asked to indicate their gender in order to determine the level of investment in agency banking firms across gender. The results were presented in Table 6.

Table 6

Gender of the Respondents

Gender	Frequency	Percent (%)
Male	44	61.1
Female	28	38.9
Total	72	100.0

#### 4.2.4 Respondents' Age Distribution

The study sought to find out the age distribution of the respondents in Imenti-South Sub-County. It was important for the respondents to state their age since investment in financial services would differ across the age groups. The findings were presented in Table 7.

Table 7

Respondents' Age

Age	Frequency	Percent (%)
18 to 35 Years	26	36.1
36 to 50 Years	40	55.6
Above 50 Years	6	8.3
Total	72	100.0

The results in Table 7 indicate that 36.1% of the respondents were aged between 18 to 35 years, 55.6% were aged between 36 to 50 years while 8.3% respondents were aged above 50 years. This implies that younger and middle aged people have ventured more in agency banking than the older people who are above fifty years old.

#### 4.2.5 Level of Education

The respondents were asked to indicate their highest level of education. Their responses were presented in Table 8.

Table 8

Level of Education of Respondents

Respondents Category	Frequency	Percent (%)
Secondary Level	16	22.2
Tertiary College Level	48	66.7
University Level	8	11.1
Total	72	100.0

According to information in Table 8 indicates that 22.2% of the respondents had attained secondary school education, 66.7% were middle level college graduates, while 11.1% were university graduates.

This implies that majority of the agents had at least Tertiary college education which implied that they possessed basic communication skills, computing skills and basic skills of managing cash such as recording cash inflow and outflows and banking excess cash.

#### 4.2.5 Length of Operation in Bank Agency Service

The researcher sought to establish the length of period for which the agents have been offering banking services. It was necessary to indicate the length of operation since firms that have been in operation for longer period may have acquired adequate experience and sufficient resources to enable appropriate cash management practices. Agency firms that have been in operation for longer period may also have an advantage of boosting their operations by accessing loans from banks and other financial institutions since banks may be reluctant to give loans to start ups. The findings were presented in Table 9.

Table 9

Length of Operation in Bank Agency Service

Length of Operation	Frequency	Percent (%)
6 To 12 Months	2	2.8
13 To 24 Months	19	26.4
25 To 36 Months	36	50.0
Over 36 Months	15	20.8
Total	72	100.0

Results in Table 9 show that 2.8% of the respondent firms had served as agents for a period ranging between 6 to 12 months, 26.4% had served for 13 to 24 months, and 51.4% had served for 25 to 36 months, 19.4% had served for over 36 months. This indicates that majority of bank agents had only been in operation for less than 36 months hence would lack adequate experience and sufficient resources to enable appropriate cash management practices. New firms are risky and have limited ability to expand due to challenges of getting adequate capital. This makes this research important because the findings may help them embrace the best cash management practices that would improve their performance.

#### 4.3 Cash Planning

Cash planning helps to anticipate the future cash flows and needs of the firm and reduces the possibility of idle cash-which lowers firm's profitability and cash deficits which could cause the firm's failure. Firms plan for their cash by preparing cash budget for a given period. Cash planning is a very crucial aspect of cash management and should be taken seriously by firms.

##### 4.3.1 Importance of Cash Planning

Respondents were required to indicate their level of agreement on the aim of cash planning. It was necessary to establish the understanding of bank agents on the aim of cash planning. The results are shown in Table 10.

Table 10

Perception on Importance of Cash Planning

Importance	Frequency	Mean	Standard Deviation
Optimal Cash balance	72	4.028	0.98
Control	72	3.528	1.39
Evaluation	72	4.028	0.98
Forecasting	72	3.333	1.34

According to information in Table 10, most banking agents agreed that cash planning is aimed at maintaining optimal cash balance and evaluation of performance as indicated by mean of 4.028 and a standard deviation of 0.98. The findings also indicate that several banking agents somehow agreed that

cash planning is aimed at forecasting cash needs as indicated by mean of 3.333 and a standard deviation of 1.34, while a mean of 3.52 and a standard deviation of 1.39 shows that some agents agreed that cash planning is aimed at controlling cash. The findings indicate that there is need for more education and training on importance of cash planning.

#### 4.3.3 Frequency of Cash Budget Preparation

The researcher sought to establish the frequency of preparation of cash budget. Frequency of cash budget preparation is essential for determining cash liquidity requirements. The responses are shown in Table 12.

Table 12

Frequency of Cash Budget Preparation

Category	Frequency	Percent (%)
1 to 3 times	15	36.6
4 to 6 times	22	53.7
Above 6	4	9.8
Total	41	100.0

Results in Table 12 indicate that most of the firms (53.7%) prepare cash budget 4 to 6 times per month, 36.6% prepare cash budget 1 to 3 times per month while only 9.8% prepare cash budget more than six times per month. This contravenes the theoretical principles of cash management. According to Pandey (2010), small firms should prepare cash budgets at least once per month since their cash flow does not show extreme fluctuations.

#### 4.3.4 Preparation of Cash Budget and Performance of Agency Banking Firms

Preparation of cash budget was compared with performance of agency banking firms. Descriptive statistics was used to give summary of the findings. In addition chi-square test was also used at 5% level of significance to analyze the relationship between cash budget preparation and performance of agency banking firms. The results were presented in Table 13.

Table 13

Cash Budget Preparation

Response Category		Number of Daily Transactions							
10 and below		11 to 30		Above 30		Total			
F	%	F	%	F	%	F	%	F	%
Yes	0	0.0	28	68.3	13	31.7	41	100	
No	14	45.2	13	41.9	4	12.9	31	100	
Total	14	19.4	41	56.9	17	23.6	72	100	

Chi-square =23.456, df= 2, p-value=0.000

Results in Table 13 shows that majority of the firms that prepare cash budgets, 68.3% have daily transactions ranging between 11 and 30 while the firms that do not prepare cash budgets have majority of transactions, 45.2% 10 and below.

The computed chi-square ( $\chi^2 =23.456$ ) at 2 degrees of freedom indicates that there is a significant relationship between preparation of cash budget and performance of agency banking firms since the p-value (0.000) is less than 0.05 at 95% confidence level. The study therefore established that there is a relationship between cash budget and performance of agency banking firms. According to Ross, Westerfield and Jordan (1998) a cash budget is important for a firm since it helps a manager to explore the need for short-term borrowing.

#### 4.4 Cash Control

Cash control refers to the procedures and processes used by a firm to safeguard its cash. The agents need to ensure that their cash is secure by ensuring the following; Receipts are deposited in bank account, reconciliation of float account, recording of receipts from investments, firm’s cash disbursements are known and petty cash use and receipts are closely monitored.

##### 4.4.1 Importance of Cash Control

Cash control is an important aspect in the performance of agency banking firms. Firms should therefore device methods of controlling their cash to ensure smooth running of their operations. The study sought to establish the importance attached by the agency banking agents to cash control.

The results were summarized in Table 16.

Table 16

Importance of Cash Control

Response Category	Frequency	Percent (%)
Extremely Important	57	79.2
Important	5	6.9
Fairly Important	7	9.7
Not Sure	3	4.2
Total	72	100.0

Information in Table 16 indicates that 79.2% of the respondents view cash control as extremely important while 4.2% were not sure whether cash control is important. This implies that the need for cash control is extremely important in the management of agency banking firms.

##### 4.4.2 Cash Control Techniques

Cash can be controlled by depositing of receipts in bank account, reconciliation of float account, recording of receipts from investments, ensuring that firm’s cash disbursements are known, giving authority to access cash to a specific person and monitoring of petty cash usage and receipts. The study sought to establish the extent to which the bank agents practiced cash control. It was necessary to establish the various techniques used by agents to control their cash due to the fact that cash is main stock in agency banking business and lack of adequate cash may interfere with provision of agency banking services. It is therefore important for firms to put in place adequate resources for controlling their cash.

Table 17 shows tabulation of respondent ratings on the extent of application of cash control techniques by agency firms.

Table 17

Application of Cash Control Techniques

Cash Control Techniques	Frequency	Mean	Standard Deviation
Deposit of Receipts	72	1.42	0.60
Reconciliation of float account	72	1.72	0.71
Recording of receipts from investment	72	2.68	0.53
Monitoring of petty cash use	72	1.29	0.46
Disbursement	72	1.32	0.50

Safeguarding of cash	72	1.50	0.69
Authority to cash accessibility	72	1.19	0.49

Results in Table 17 indicate that most bank agents monitored petty cash use and receipts, were aware of their monthly cash disbursement, deposited their receipts and authorized a specific person to access cash to a great extent as indicated by mean of 1.29, 1.32, 1.19 and standard deviation of 0.46, 0.50, and 0.49 respectively. The results also show that firms also controlled their cash through reconciliation of float account and safeguarding of cash as indicated by mean of 1.72 and 1.50 respectively and standard deviation of 0.72 and 0.69 respectively. A few firms record receipts from investment to no extent as indicated by mean of 2.68 and standard deviation of 0.53.

#### 4.4.3 Frequency of Deposits of Receipts and Performance of Agency Banking

The extent to which receipts are deposited in bank account was compared with the number of transactions. Descriptive statistic of cross tabulation was used to give the summary and in addition chi-square test was also used to analyze the relationship between receipts deposits in bank accounts and performance of agency banking at 5% significance level.

The findings were presented in Table 18.

Table 18

Frequency of Deposits of Receipts and Performance of Agency Banking

Extent of Deposit		10 and Below		11 to 30		Above 30		Total
F	%	F	%	F	%	F	%	
To a great Extent	6	13.0	25	54.3	15	32.6	46	100
To moderate Extent	4	18.2	16	72.7	2	9.1	22	100
To no extent	4	100	0	0.0	0	0.0	4	100
Total	14	19.4	54	75	4	5.6	72	100

Chi-square =22.361, df= 4, p-value=0.001

The findings in Table 18 indicate that the proportion of firms that make daily deposits to a great extent and had 10 and below transactions were 13.0% as compared to 32.6% who had transactions above 30. Majority of firms (54.3%) that make daily deposits to a great extent had transactions between 11 and 30. Firms that made daily deposits to a moderate extent and had 10 and below transactions accounted for 18.2% while 72.7% had between 11 and 30. All firms that didn't make daily deposit for their receipt had transactions below 10. This implies that there would be more transactions for the agency banking firms if they deposit their receipts to a great extent while total failure to deposit receipts in bank account would reduce the number of transactions significantly. The study tested whether there was any significant relationship between frequency of receipts deposits and performance of agency banking in terms of number of daily transactions. From the computed chi-square value ( $\chi^2 = 22.361$ ) at 4 degrees of freedom, there is significant relationship between cash control and performance of agency banking firms since the P-value (0.001) was less than 0.05 at 95% confidence level. This therefore means that receipts deposits affect the performance of agency banking firms

#### 4.4.8 Accessibility to Cash and Performance of Agency Banking Firms

Accessibility to Cash refers to the authority given to a specific person to access the firm's cash. The extent to which firms authorize a specific person to access its cash was compared with the number of daily transactions and the results were presented in Table 23.

Table 23  
Accessibility of Cash to a Specific Person  
Response Category

Number of Daily Transactions	10 and below		11 to 30		Above 30		Total	
	%	F	F	%	F	%	F	%
To a great extent	13	21.3	46	75.4	2	3.2	43	100
To moderate extent	1	12.5	5	62.5	2	25	20	100
To no extent	0	0.0	0	0.0	3	100	3	100
Total	14	19.4	41	56.9	17	23.6	72	100

Chi-square =24.957, d f =4, p-value=0.002

Results in Table 23 indicate that firms that authorize a specific person to access its cash to a great extent, have 21.3% of the number of transactions below 10, 75.4% between 11 and 30 while 3.2 % had above 30 daily transactions. Firms that authorize a specific person to access cash to a moderate extent have 12.5% of the transactions below 10, that between 11 and 30 was 62.5% and that above 30 was 25%. Firms that do not restrict accessibility to cash to a specific person have 100.0% of their transactions above 30.

Study tested whether there was any significant association between accessibility of cash to a specific person and performance of agency banking in terms of number of daily transactions. From the computed chi-square value ( $\chi^2 = 24.957$ ) at 4 degrees of freedom, there is significant relationship between accessibility of cash to a specific person and performance of agency banking firms since the P-value (0.002) is less than 0.05 at 95% confidence level. This therefore means that giving authority to a specific person to handle cash is associated with performance of agency banking firms.

#### 4.5. Agency Banking Service Diversification

Diversification refers to the act of introducing variety, especially in investments or in the variety of goods and services offered. Service diversification is the act of offering variety of services in a firm. When the types of services available across the agency banking firms are limited, liquidity problems are likely to be even more prevalent because agents tend to end up cash rich or cash poor. As variety of services increases, there are more opportunities for retail agents to balance their cash holdings through cash deposits, cash withdrawals, loan repayment, cash transfer and bill payment. The results are summarized in Table 26.

Table 26  
Service Diversification Levels

Number of Transactions	Diversification levels							
	Deposits		Withdrawals		Utility		Mobile	
	%	F	F	%	F	%	F	%
5-10	33	45.8	26	36.1	18	25.0	10	13.9
Above 10	27	37.5	14	19.4	0	0.0	0.0	0.0
Below 5	12	16.7	32	44.4	54	75.0	62	86.1

The results in Table 26 indicate that 16.7% of the firms had deposits below 5, 45.8% had deposits ranging between 5 and 10 while 37.5% had deposits above 10, 44.4% of 47

the firms had withdrawals below 5, 36.1% had withdrawals ranging between 5 and 10 while 19.4% had withdrawals above 10. Majority (75.0%) of the respondents had utility transactions below 5 while for

mobile banking majority (86.1%) also had transactions below 5. These results indicate that the agency firms mostly deal with provision of deposit and withdrawal transactions.

#### 4.5.1 Cash Deposits and Performance of Agency Banking Firms

A cash deposit refers to the act of adding funds to a bank account. Cash deposits were compared with performance of agency banking firms. Descriptive statistic of cross tabulation was used to give the summary and in addition chi-square was also used to analyze the relationship of cash deposits and performance of agency banking firms at 5% significance level. The findings were summarized in Table 27.

Table 27

#### Daily Cash Deposits

Scale	Number of Daily Transactions					
	10 and below		11-30		Above 30	
	%	F	F	%	F	%
Above 10	0	0.0	18	66.7	9	33.3
5-10	8	24.2	19	57.6	6	18.2
Below 5	6	50.0	4	33.3	2	16.7
Total	14	19.4	41	56.9	17	23.6

Chi-square =16.224, d f =4, p-value=0.013

The results in Table 27 indicate that majority (66.7%) of the firms that have daily deposits above 10, have transactions between 11 and 30. While majority (50.0%) of the firms with deposits below 5 had 10 and below transactions below.

The study tested whether there was any significant relationship between cash deposits and performance of agency banking. From the computed chi-square value ( $\chi^2 =16.224$ ) at 4 degrees of freedom, there is significant relationship between cash deposits and performance of agency banking firms since the P-value (0.013) is less than 0.05 at 95% confidence level.

#### 4.5.2 Cash Withdrawal and Performance of Agency Banking Firms.

Cash withdrawal refers to the act of taking funds out of a bank account. Cash withdrawals were compared with performance of agency banking firms. Cross tabulation was used to give the summary and in addition chi-square was also used to analyze the relationship between cash withdrawal and performance of agency banking firms at 5% significance level. The results are presented in Table 28.

Table 28

#### Daily Cash Withdrawals

Scale	Number of Daily Transactions					
	10 and below		11-30		Above 30	
	F	%	F	%	F	%
Above 10	0	0.0	3	21.4	11	78.6
5 to 10	1	3.8	22	84.6	3	11.5
Below 5	13	40.6	16	50.0	3	9.4
Total	14	19.4	41	56.9	17	23.6

Chi-square =43.000, d f =4, p-value=0.000

Results in Table 28 show that more than three quarters (78.6%) of the firms that have withdrawals above 10, have transactions above 30. Half (50.0%) of the firms with withdrawals below 5 had transactions between 11 and 30. The study further tested whether there was any significant relationship between cash withdrawals and performance of agency banking. From the computed chi-square value

( $\chi^2 = 43.000$ ) at 4 degrees of freedom, there is significant relationship between cash withdrawals and performance of agency banking firms since the P-value (0.000) is less than 0.05 at 95% confidence level.

#### 4.5.3 Utility Payment and Performance of Agency Banking Firms

Cash utility payments were compared with performance of agency banking firms. Cross tabulation was used to give the summary and in addition chi-square was also used to analyze the relationship of utility payment and performance of agency banking firms at 5% significance level. The results are presented in Table 29.

Table 29  
 Daily Utility Payment

Scale	Number of Daily Transactions					
	10 and below		11-30		Above 30	
	F	%	F	%	F	%
Above 10	0	0.0	0	0.0	0	0.0
5 to 10	3	16.7	11	61.1	4	22.3
Below 5	11	20.4	30	55.6	13	24.1
Total	14	19.4	41	56.9	17	23.6

Chi-square = 11.549, d f = 4, p-value = 0.009

Results in Table 29 indicate that no firm had utility payment above 10. Majority (61.1%) of the firms that had utility payments between 5 and 10 had transactions between 11 and 30. While majority (55.6%) of the firms that had utility payments below 5 also had transactions between 11 and 30.

The study tested whether there was any significant relationship between utility payment and performance of agency banking. From the computed chi-square value (11.549) at 4 degrees of freedom, there is significant relationship between utility payment and performance of agency banking firms since the P-value (0.009) is less than 0.05 at 95% confidence level.

#### 4.5.4 Mobile Banking and Performance of Agency Banking Firms

Mobile banking refers to act of carrying out a financial transaction on a mobile device such as a cell phone or a tablet. Mobile banking was compared with performance of agency banking firms. Cross tabulation was used to give the summary and in addition chi-square was used to analyze the relationship of mobile banking and performance of agency banking firms at 5% significance level. The findings were summarized in Table 30.

Table 30  
 Number of Daily Mobile Banking Services

Scale	Number of Daily Transactions					
	10 and below		11-30		Above 30	
	F	%	F	%	F	%
Above 10	0	0.0	0	0.0	0	0.0
5 to 10	5	50.0	4	40.0	1	1
Below 5	9	14.5	37	59.7	16	16
Total	14	19.4	41	56.9	17	17

Chi-square = 9.368, d f = 4, p-value = 0.025

Table 30 shows that none of the firms had number of daily mobile banking services above 10. Majority (59.7%) of the firms that had number of daily mobile banking services below 5 had transactions between 11 and 30. The study tested whether there was any significant relationship between number of daily mobile banking services and performance of agency banking. From the computed chi-square value (9.368) at 4 degrees of freedom, there is significant relationship between number of daily mobile banking services and performance of agency banking firms since the P-value (0.025) is less than 0.05 at 95% confidence level.

#### 4.5.5 Relationship between Service Diversification and Performance of Agency Banking Firms

The researcher sought to establish the relationship between service diversification and performance of agency banking firms. This was achieved through association of all agency banking services and their corresponding number of daily transactions. The results are presented in Table 31.

Table 31

Chi-Square Tests

Value	df		Asymp. Sig. (2-sided)
Pearson Chi-Square	13.205a	6	.040
Likelihood Ratio	13.585	6	.035

0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.00.

The computed chi-square ( $\chi^2 = 13.205$ ) with a p-value of 0.040 is less than 0.05. Thus the null hypothesis was rejected. The conclusion is that there is a statistically significant relationship between service diversification and performance of agency banking firms at 5% significance level. This is consistent with (Cotugno and Stefanelli, 2012) findings that found a positive relationship between product diversification and bank performance on 4038 observations relative to Italian banks for the period 2005-2010.

## 5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Introduction

This chapter presents the summary, conclusions and recommendations arising from the findings on effect of cash management practices on performance of agency banking firms.

### 5.2 Summary of the Research Findings

The research sought to analyze the relationship between cash diversification practices and performance of agency banking firms. The study found a significant relationship between preparation of cash budget ( $\chi^2 = 23.456$ , P-value=0.000) and frequency of cash budget preparation ( $\chi^2 = 9.654$ , P-value=0.047).. The study found a significant relationship between frequency of deposits of receipts ( $\chi^2 = 22.468$ , p-value=0.004), safeguarding of cash ( $\chi^2 = 23.103$ , P-value=0.003), awareness of cash disbursements ( $\chi^2=16.574$ , P-value=0.035), monitoring of petty cash usage and receipts ( $\chi^2 =21.232$ , P-value=0.000), accessibility of cash to a specific person ( $\chi^2 =24.957$ , P-value=0.002), n of float account ( $\chi^2 =18.378$ , P-value=0.019) and performance of agency banking firms. However, there was no significant relationship between recording of receipts from investment and performance of agency banking firms ( $\chi^2 =7.860$ , P-value=0.447). The study found a significant relationship between cash deposits ( $\chi^2 =16.224$ , P-value=0.013), cash withdrawals ( $\chi^2 =43.000$ , P-value=0.000), utility payment ( $\chi^2 =11.549$ , P-value=0.000) mobile payment ( $\chi^2 =9.368$ , P-value=0.025) and performance of agency banking firms.

### 5.3 Conclusions

The study found a significant relationship between service diversification and the performance of agency banking firms since the obtained Pearson chi-square value ( $\chi^2 = 13.205$ ) had a p-value of 0.40 was less than the significant value of 0.05. The Null hypothesis was therefore rejected. This implies that variety of services offered by agents is key to successful performance of agency firms.

### 5.4 Recommendations

In light of the above findings, the following recommendations were made:

- i. Commercial banks should emphasize the need for agents to prepare cash budget as a tool for cash planning.
- iii. There is need for Commercial banks to roll out a wide range of agency banking services that are already authorized by the Central Bank of Kenya

### 5.5 Suggestion for Further Research

From the findings of the study, the following areas are suggested for further studies:

- i. The impact of agency banking on growth of commercial banks.
- ii. The effect of cash management on profitability of agency banking firms.
- iii. The impact of cash management by agency banking firms on the operating risk of commercial banks.

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