

**INFLUENCE OF ELECTRONIC MOBILE BANKING SERVICES ON THE
PERFORMANCE OF COMMERCIAL BANKS IN NAIROBI CENTRAL
BUSINESS DISTRICT: A CASE OF STANDARD CHARTERED BANK KENYA**

BY

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**A Research Project Report Submitted in Partial Fulfillment of the Requirements for the
Award of the Degree of Masters of Arts in Project Planning and Management of the
University of Nairobi**

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DECLARATION

This project report is my original work and has not been submitted for a degree or any other examination body in any other university.

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DEDICATION

This research study is dedicated to my parents, Nicholas and Filomena who took the special interest and commitment in my education. It is as a result of their attitude towards the value of education that I am able to accomplish academic tasks of this nature. May the Almighty God bless all in a special way.

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TABLE OF CONTENT

DECLARATION	i
DEDICATION	ii
ACKNOWLEDGEMENT.....	iii
TABLE OF CONTENT	iv
LIST OF TABLES	vii
LIST OF FIGURES.....	viii
ABBREVIATIONS AND ACRONYMS	ix
ABSTRACT	x
CHAPTER ONE: INTRODUCTION.....	1
1.1. Background of the Study	1
1.2. Statement of the Problem.....	3
1.3. Purpose of the Study	4
1.4. Objectives of the Study	4
1.5 Research Questions.....	5
1.6 Significance of the Study	5
1.7 Basic Assumptions of the Study	5
1.8 Delimitations of the study	5
1.9 Limitations of the Study	6
1.10 Definition of significant terms used in the study	6
1.11 Organization of the Study	7
CHAPTER TWO: LITERATURE REVIEW.....	9
2.1. Introduction.....	9
2.2 The Performance of Commercial Banks.....	9
2.3 Mobile banking marketing and performance of commercial banks.	12
2.4 The cost of mobile banking and performance of commercial banks.	14
2.5 Security of mobile banking and performance of commercial banks.	16
2.6 The mobile banking partnerships and performance of commercial banks	18
2.7 Conceptual Framework.....	19
2.8 Knowledge gap	22

2.9	Summary of Literature Review	22
CHAPTER THREE: RESEARCH METHODOLOGY		23
3.1.	Introduction.....	23
3.2.	Research Design	23
3.3.	Target Population.....	23
3.4.	Sample size and sampling procedures	24
3.4.1	Sample size.....	24
3.4.2	Sampling procedure.....	25
3.5.	Data Collection Instrument	25
3.5.1	Pilot testing of the instruments.	25
3.5.2	Validity of the research instruments	25
3.5.3	Reliability of the Instrument	26
3.6.	Data Collection Procedure	26
3.7.	Data Analysis Technique	27
3.8.	Ethical Considerations	27
CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION		31
4.1	Introduction	31
4.2	Questionnaire Return Rate	31
4.3	Demographic Information	31
4.3.1	Gender of respondents.....	32
4.3.2	Formal Education of respondents.....	32
4.4	Mobile banking marketing.	33
4.4.1	Mobile banking marketing awareness.....	33
4.4.2	The level of understanding of the adverts.	34
4.5	Mobile banking costs.....	35
4.5.1	The mobile banking transactional costs	35
4.5.2	Responses on the ease access of the mobile banking services.	36
4.6	Mobile Banking Security.....	37

4.6.1	Response on how secure is the mobile banking platform.	38
4.7	Mobile banking partnerships	38
4.7.1	The responses on the impact of mobile banking partnerships.....	38
4.7.2	The responses on the demand for partnerships.....	39
4.7.3	Responses on the profit margins got through partnerships.....	39
4.8	Mobile banking implementation costs.....	40
4.9	Spearman Coefficient of Correlation.....	41
CHAPTER FIVE: SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS		44
5.1	Introduction	44
5.2	Summary of findings.....	44
5.2.1	The influence of mobile banking marketing on performance of commercial banks.....	44
5.2.2	The influence of mobile banking transaction costs on performance of commercial banks.....	45
5.2.3	The influence of mobile banking transactional charges on performance of commercial banks.	45
5.2.4	The influence of mobile banking security on performance of commercial banks.	46
5.2.5	The influence of mobile banking partnerships on performance of commercial banks.....	46
5.3	Discussions of the findings	47
5.4	Conclusions of the study.	50
5.5	Recommendations of the study.	50
5.6	Suggested areas for further research.....	52
REFERENCES		53
APPENDICES		58
APPENDIX ONE: INTERVIEW SCHEDULE FOR THE CUSTOMER.....		58
APPENDIX TWO: INTERVIEW SCHEDULE FOR THE STANDARD CHARTERED BANK KENYA STAFF:.....		65
APPENDIX THREE: LETTER OF TRANSMITTAL OF DATA COLLECTION INSTRUMENTS		67

LIST OF TABLES

Table 1.: Summary of Target Population	23
Table 2: Sample size.....	25
Table 3: Operational definitions of the variables	28
Table 4: Distribution of Respondents by Age	31
Table 5: Disaggregation of respondents by gender	32
Table 6: Level of formal education attained by the respondents.....	32
Table 7: The level of position of the respondents in the organization.	33
Table 8: The level of awareness through marketing platform.....	34
Table 9: The level of understanding of the adverts from the respondents.	34
Table 10: Response on the rating of the transactional charges.	35
Table 11: Response of customers on restrictions of transactional charges.	35
Table 12: Responses on the access of the mobile banking services.....	36
Table 13: Responses from respondents on service uptime in a week.	36
Table 14: Responses on mobile banking security breaches.	37
Table 15: Responses on how long it takes to restore unavailable services.	37
Table 16: Response on how secure is the mobile banking platform.	38
Table 17: Responses on the impact of the partnerships.	39
Table 18: Responses from the respondents on the demand for more partnerships.	39
Table 19: Responses on the profit margins acquired through partnerships.....	39
Table 20: Responses on the costs of implementing the mobile banking platforms	40
Table 21: Coefficient of Correlation	41
Table 22: Coefficient of Regression.....	42

LIST OF FIGURES

Figure 1. Conceptual framework	21
Figure 2: Regression Model	42

ABBREVIATIONS AND ACRONYMS

MNOs	Mobile Network Operators
CBK	Central Bank of Kenya
SMS	Short Message Service
MFC	Mortgage Finance Company
DTI	Deposit Taking Institution
SSA	Sub-Saharan Africa
ICT	Information Communication and Technology
EST	Efficiency Structure Theory
FEP	Foundation Enterprise Program
CRBs	Credit Reference Bureaus
ES	Efficiency Structure
IVR	Interactive Voice Response
PDA	Personal Digital Assistant
IT	Information Technology
PIN	Personal Identification Number
TAM	Technology Acceptance Model
ATM	Automatic Teller Machine

ABSTRACT

The purpose of this study was to examine the influence of electronic mobile banking on the performance of commercial banks. The study was guided by four main objectives to establish how marketing of electronic mobile banking services influence the performance of commercial banks, to determine how costs (transactional fees) of mobile banking services influence the performance of commercial banks, to assess how security of mobile banking services influence the performance of commercial banks and lastly but not least establish how partnerships of mobile banking services influence the performance of commercial banks. The target population for the study comprised of four main branches of Standard Chartered Bank Kenya in Nairobi Central Business District location. The researcher employed descriptive research design for answering the four research questions. The sample size for the study of customers and staff members was obtained by using Yamane (1967) simplified formula for calculating sample size. It yielded three hundred and seventy eight out of a target population of seven thousand eight hundred and ninety two respondents. A representative sample for questionnaire administration from the four branches was achieved through cluster sampling. This study adopted descriptive survey design. Data collection tools whose validity and reliability had been verified were used to collect data from both implementing officers and project beneficiaries. Stratified random sampling was used to pick 378 customers who are project beneficiaries while 16 staff members were interviewed. Collected data was analyzed by use of both qualitative and quantitative techniques. Statistical Packages for Social Scientists version 22 was used and responses were presented in terms of percentages and frequencies. This was then presented in table format. Spearman Correlation was used to measure the strength of influence of the independent variables on performance of commercial banks. Use of mobile banking partnerships showed the strongest influence on the performance of commercial banks with a coefficient of 0.777. Mobile banking costs had a coefficient of 0.578 while mobile banking security recorded a coefficient of 0.577. Regression model was used to determine the relationship between performance of commercial banks and the independent variables. Regression model gave a constant of 3.657 with mobile banking marketing, mobile banking costs, mobile banking security and mobile banking partnerships having 0.568, 0.988, 0.444 and 1.654 coefficients respectively. From the study, it was concluded that mobile banking marketing, mobile banking costs, mobile banking security and mobile banking partnerships influence the performance of commercial banks. The study recommended that the commercial banks must invest more in mobile banking security controls to meet the global market standards to safeguard the customers' money, harmonize the mobile banking transactional fees levied to make it more affordable to all, acquire more partnerships to enlarge the market share and ensure proper marketing is done to create more awareness of mobile banking products and services.

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Mobile banking is a term used for performing banking transactions via mobile device such as mobile phones (Anyasi and Otubu, 2009). Tiwari, Buse and Herstatt (2006) define mobile banking as any transaction, involving the transfer of ownership or rights to use goods and services, which is initiated and/or completed by using mobile access to computer- mediated networks with the help of an electronic device. They further indicate that mobile banking refers to provision and availability of bank-related financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customized information from the bank. Mobile banking is most often performed via short message services (SMS) or mobile internet, but can also be used by special programs called clients downloaded to the mobile device.

Mobile banking is an innovation that has progressively rendered itself in pervasive ways cutting across several financial institutions and other sectors of the economy. During the 21st century mobile banking advanced from providing mere text messaging services to that of pseudo internet banking where customers could not only view their balances and set up multiple types of alerts but also transact activities such as fund transfers, redeem loyalty coupons, deposit cheques via the mobile phone and instruct payroll based transactions (Vaidya 2011). The world has also become increasingly addicted to doing business in the cyber space, across the internet and World Wide Web. Internet commerce in its own respect has expanded in various innovative forms of money, and based on digital data issued by private market actors, has in one way or another substituted for state sanctioned bank notes and checking accounts as customary means of payments (Cohen 2001). ATM banking is one of the earliest and widely adopted retail e-banking services in Kenya (Nyangosi et al. 2009). However according to an annual report by Central Bank of Kenya its adoption and usage has been surpassed by mobile banking in the last few years (CBK 2008). The suggested reason for this is that many low income earners now have access to mobile phones. A positive aspect of mobile phones is that mobile networks are available in

remote areas at a low cost. The poor often have greater familiarity and trust in mobile phone companies than with normal financial institutions.

Over the past few years, advancement in information technology has changed the way organizations operate and conduct their business (Al-Jabri, 2012). Technological advancement has brought about the evolution of m-banking and online banking in the banking industry which has revolutionized the manner in which commercial banks conduct their business. Internet and mobile banking has not only made financial organization provide banking services online and via mobile but has also provided customer with easy access to financial services and other benefits.

The movement from traditional branch banking to mobile banking has caused banks to come up with strategies to attract more customers and retain existing ones. The desire to reduce both operational, administrative cost and competition has driven banks to adopt mobile banking. However cost reduction is only realizable with an increase in customer adoption (Bradley and Stewart, 2003). Technological advancements in the area of telecommunications and information technology have continued to revolutionize the banking industry. The delivery of financial services has experienced major changes during the past few years. A feature of the banking industry across the globe has been that it is increasingly becoming turbulent and competitive thereby forcing commercial banks to innovate for survival. Banks, aided by technological developments, have responded to the challenges by adopting new strategies which emphasize on attempting to build customer satisfaction through offering better products and services and at the same time to minimize operation costs (Sohail & Shanmugham, 2003).

As at 31st December 2012, the banking sector comprised of the Central Bank of Kenya, as the regulatory authority, forty four banking institutions (forty three commercial banks and one mortgage finance company - MFC), four representative offices of foreign banks, six Deposit-Taking Microfinance Institutions (DTMs), one hundred and eighteen Forex Bureaus and two Credit Reference Bureaus (CRBs) (CBK, 2012). Out of the forty four banking institutions, thirty one locally owned banks comprise three with public shareholding and twenty eight privately owned while thirteen are foreign owned. The six DTMs, two CRBs and one hundred and eighteen forex bureaus are privately owned. The

foreign owned financial institutions comprised of nine locally incorporated foreign banks and four branches of foreign incorporated banks. According to Central Bank of Kenya (2012) out of the forty three commercial banks thirty of them are domestically owned and thirteen are foreign owned. In terms of asset holding, foreign banks accounted for about 35% of the banking assets as of 2012. In Kenya the commercial banks dominate the financial sector. In a country where the financial sector is dominated by commercial banks, any failure in the sector has an immense implication on the economic growth of the country. This is due to the fact that any bankruptcy that could happen in the sector has a contagion influence that can lead to bank runs, crises and bring overall financial crisis and economic tribulations. Mobile banking offers millions of people a potential solution in emerging markets that have access to a cell phone, yet remain excluded from the financial mainstream. It can make basic financial services more accessible by minimizing time and distance to the nearest retail bank branches (CGAP, 2006) as well as reducing the bank's own overheads and transaction- related costs.

Mobile banking presents an opportunity for financial institutions to extend banking services to new customers thereby increasing their market (Lee, Lee and Kim, 2007). Simpson (2002) suggests that e-banking is driven largely by the prospects of operating costs minimization and operating revenues maximization. A comparison of online banking in developed and emerging markets reveal that in developed markets lower costs and higher revenues are more noticeable. While Sullivan (2000) finds no systematic evidence of a benefit of internet banking in US click and mortar banks, Furst, Lang, and Nolle. (2002) find that federally chartered US banks had higher ROE by using the click and-mortar business model. Furst et al (2002) also examine the determinants of internet banking adoption and observe that more profitable banks adopt internet banking after 1998 but yet they are not the first movers. Jayawardhena and Foley (2000) show that internet banking results in cost and efficiency gains for banks yet very few banks are using it and only a little more than half a million customers are online in United.Kingdom.

1.2. Statement of the Problem

According to Wambari (2009), mobile phones provide technological services that reduce costs; increase income and increases reach ability and mobility. They can help to extend

social and business networks and they clearly substitute for journeys and, for brokers, traders and other business intermediaries. Most of the existing studies in electronic banking services or electronic banking delivery of financial services in Kenya have adopted an organizational perspective or distribution access channel perspective (Ontunya 2006, Otieno 2006, Otieno 2008 and Wambari 2009). This leaves the influences of mobile banking on the financial performance of commercial banks in Kenya unexplored territory yet the country has witnessed an increased rollout of mobile banking. The commercial banks are now coming up with innovation which is the answer to reduce costs and solve the tension between sustainability and reaching to the very poor (Drucker 1985), Hence forcing banks to link with mobile telecom companies to provide better quality services given that the low income earners can now own mobile phones. This research aims at filling the existing gaps by shedding light on the influence of mobile banking on financial performance of commercial banks in Kenya after enormous investment. It focuses on financial performance of commercial banks with respect to products and services offered through mobile banking platform. The research attempts to answer the following question:- What influence does electronic mobile banking have on the performance of commercial banks?

1.3. Purpose of the Study

To determine the influence of electronic mobile banking services on the performance of commercial banks in Nairobi Central Business District, case of Standard Chartered Bank.

1.4. Objectives of the Study

- i. To establish how marketing of electronic mobile banking services influence the performance of commercial banks.
- ii. To determine how costs of mobile banking services influence the performance of commercial banks.
- iii. To assess how security of mobile banking services influence the performance of commercial banks.
- iv. To establish how partnerships of mobile banking services influence the performance of commercial banks.

1.5 Research Questions.

- i. How does marketing of electronic mobile banking services influence the performance of commercial banks?
- ii. How does the costs (transactional fees) of mobile banking services influence the performance of commercial banks?
- iii. How does security controls of mobile banking services influence the performance of commercial banks?
- iv. How does the partnerships/agency banking of electronic mobile banking services influence the performance of commercial banks?

1.6 Significance of the Study

It is hoped that, the findings of this study will benefit many commercial banks which have embraced mobile banking platforms. The study will go a long to benefit commercial banks to utilize mobile banking platform effectively to better the customer service experience, improve mobile banking security and expand the market share through more partnerships. It is also hoped that the findings of the study will contribute to additional knowledge and have recommended areas for more research.

1.7 Basic Assumptions of the Study

The study ensured that the respondents co-operated and provided accurate information when responding to the research questions and also that the sample size chosen was adequate that enabled the researcher draw a valid conclusion about the population.

1.8 Delimitations of the study

The study was carried out at Standard Chartered Bank, Central Business District branches. It focused on the influence of the electronic mobile banking on the performance of commercial banks. The study focused on the influence of mobile banking marketing, mobile banking security, mobile banking costs (transactional fees) and the mobile banking partnerships on performance of commercial banks. The target population for this study was the 7,892 customers benefitting directly from the project and the 16 staff members' project directly involved in this project. Out of the 7,892 the study targeted a sample of 378 beneficiaries and a census for the staff officers was carried out.

1.9 Limitations of the Study

While in undertaking the study a number of challenges were encountered that delayed the progress: The challenge of bureaucracy in getting approval to respond to questionnaires with most institutions or people insisting that permission be sought from the Chief Executive Officer or Human Resource Manager was encountered. This led to a delay in obtaining the required responses for data analysis in time, to the extent that by the time the final report was being drawn, a number of responses had not been received since the project is time bound. The approach used here I acquired an official letter from the institution to introduce myself so that respondents can understand the motive behind the whole exercise. Another limitation the researcher encountered was on confidentiality of banking information since many financial institutions have an obligation to maintain and protect their customer and intellectual property. However, the research was in no way going to use information from any customer and the only limitation that was being addressed was on whether the information share would infringe on intellectual property hence giving away of competitive data and information. The approach used to mitigate this was I signed the non-disclosure agreement to bind me within the legal terms. Another factor was balancing between official allocated working times and collecting data from the field was a tedious exercise and also getting enough resources (financial and time) to facilitate the research logistics was not easy.

1.10 Definition of significant terms used in the study

Mobile banking marketing: This is the strategy employed by the banks to create more awareness to project beneficiaries to understand mobile banking services and products more effectively.

Commercial Bank: Is a financial institution that provides services such as accepting deposits, giving business, mortgage lending and basic investment products like saving accounts and certificates of deposit.

Mobile costs: These are the costs incurred by the project beneficiaries to access the mobile banking services.

Mobile banking Partnerships:

A type of business organization which two or more individuals pool money, skills and other resources, and share profit and loss in regards with the terms of the partnerships agreement in absence of such agreement, partnership is assumed to exist where the participants in an enterprise agree to share the associated risks and rewards proportionately. An example is where several banks have partnered up with a number of mobile service providers to offer banking service close to people at any location.

Mobile Banking: Refers to the use of a smartphone or other cellular device to perform online banking tasks while away from computer, such as monitoring account balances, transferring funds between accounts, bill payment and locating an ATM

Banking Performance:

The accomplishment of a given task measured against pre-set known standards of accuracy, completeness, cost and speed

Mobile Security: Is the protection of computing systems and the data they store or access. The security of ensuring the customers money is safe.

1.11 Organization of the Study

This project is organized into five chapters. Chapter one includes the introduction, background of the study, statement of the problem, purpose of the study, study objectives, research questions, significance of the study, delimitations of the study, limitations of the study, assumptions of the study, definition of significant terms and the summary of the chapter. Chapter two entails the literature review and the conceptual framework. Chapter three includes the research methodology including research design, target population, the

sample and sampling procedure, research instrument, data collection procedure and data analysis techniques to be applied. Chapter four of the report will contain data analysis, data presentation and interpretation. Chapter five will have summary of the findings, discussion, conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction.

This chapter reviews the literature on bank performance and mobile banking services. The literature is based on secondary and primary sources of information.

2.2 The Performance of Commercial Banks.

ATM banking is one of the earliest and widely adopted retail e-banking services in Kenya (Nyangosi et al. 2009). However according to an annual report by Central Bank of Kenya its adoption and usage has been surpassed by mobile banking in the last few years (CBK 2008). The suggested reason for this is that many low income earners now have access to mobile phones. A positive aspect of mobile phones is that mobile networks are available in remote areas at a low cost. The poor often have greater familiarity and trust in mobile phone companies than with normal financial institutions.

Over the past few years, advancement in information technology has changed the way organizations operate and conduct their business (Al-Jabri, 2012). Technological advancement has brought about the evolution of m-banking and online banking in the banking industry which has revolutionized the manner in which commercial banks conduct their business. Internet and m-banking has not only made financial organization provide banking services online and via mobile but has also provided customer with easy access to financial services and other benefits. The movement from traditional branch banking to mobile banking has caused banks to come up with strategies to attract more customers and retain existing ones. The desire to reduce both operational, administrative cost and competition has driven banks to adopt mobile banking. However cost reduction is only realizable with an increase in customer adoption (Bradley and Stewart, 2003).

Technological advancements in the area of telecommunications and information technology have continued to revolutionize the banking industry. The delivery of financial services has experienced major changes during the past few years. A feature of the banking industry across the globe has been that it is increasingly becoming turbulent and competitive thereby forcing commercial banks to innovate for survival. Banks, aided by

technological developments, have responded to the challenges by adopting new strategies which emphasize on attempting to build customer satisfaction through offering better products and services and at the same time to minimize operation costs (Sohail & Shanmugham, 2003).

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AFI (2010a) defines mobile banking as the sub-set of electronic banking (e-banking) where funds are accessed and financial transactions like balance enquiries, transfers, payments are conducted through a mobile phone. AFI (2010a) specify that mobile payments (m-Payments) are usually considered payments conducted via the mobile phone

without the interaction with a store of value like a bank account, however sometimes mobile payments are conducted using a store of value. The issues regarding mobile money and mobile banking have gained center stage in the recent couple of years. New legislative frameworks and other regulatory guidelines have come up to act as a guide and to monitor the extent to which these services can be used. It has become necessary to safeguard the consumer from any ill the actions of players concerned, notably the Mobile Network Operators (MNOs) as well as the corresponding banks Central Bank of Kenya (CBK) prudential guidelines and the Banking Act. The financial regulator plays a crucial role in the economy of any country; for ordinary citizens, it is the regulator that stands between them and financial chaos, by attempting to ensure the financial stability of the economy, and that those institutions wishing to offer financial services do so in a responsible manner. So, in addition to his role in maintaining financial stability, the regulator also has key responsibility for consumer protection. There is a third role for the regulator, though, that is particularly important for emerging economies; that of promoting the country's social objectives, by ensure that suitable financial services are available to the widest population possible. The CBK is the regulator of banks in Kenya.

In 2008, Kenya had a stable, growing banking sector that appeared to have avoided most of the problems arising from the global financial crisis of 2007/8. However, despite the strong growth of leading local retail banks like Equity Bank in the preceding five years, still only 19 percent of Kenya's population of 35 million had bank accounts. Kenya has had one of the fastest rates of mobile adoption in the world. In 1999, only about 15,000 people owned a mobile phone; by the time of the first Fin Access study in 2006, there were over 14.5m mobile subscribers. Results from the second Fin Access study that was completed in March 2009 showed that 47.5% of the adult population in Kenya had their own phone. Including those able to use a phone through a friend, family member or agent, access was 78.4%. There was considerable growth between 2006 and 2009 in rural areas with mobile phone ownership increasing from 19.2% 2006 to 41.6% in 2009 to 61.5% in 2013. This development was mostly driven by the availability of low cost mobile phones and the emergence of pre-paid airtime (FSD study, 2009 & 2013). M-PESA is an innovation that clearly dominates its money-transfer predecessors on virtually all dimensions. Users say it

is faster, cheaper, more reliable, and safer, and a very large majority report that they would suffer significant negative consequences if it were to be shut down. Jack and Suri, 'Economics of M-PESA' 2009. In 2009, the Central Bank of Kenya (CBK) commenced measures to open up banking channels to non-bank agents. An amendment to the Banking Act (passed as part of the Finance Act 2009) allowed banks to start using agents to deliver financial services. Using small shops, petrol stations, pharmacies and other retail outlets as agents could have a dramatic influence on improving access to financial services, especially in rural areas.

2.3 Mobile banking marketing and performance of commercial banks.

In the past few years, the Information and Technology Sector has emerged as a steadily growing contributor to the Kenyan economy. Since 2000, the sector has outperformed all other in the Kenyan economy, growing on average by approximately 20% annually (World Bank Economic Update, 2010). This has been largely due to the major advancements in infrastructure, favourable government policy, as well as an active and innovative private sector. Many Kenyans are now interacting actively with technology in terms of creation and development of the technology, as well as actual application and dissemination of technology products and services. In this manner, as technologies advance, they are becoming integral components of daily lifestyle. According to Kenya's communications regulator in their Quarterly Sector Statistics Report (June 2012), Kenya has a mobile penetration of 75.4% (October, 2012). This figure is significantly higher than the African average of 65% (Praekelt, 2012). Nevertheless, these figures could offer a slightly misleading picture of access to mobile phones, since there is an important difference between mobile connections and unique individual mobile subscribers. The high mobile usage holds true even for those at the lower end of the economic spectrum. Of those Kenyans living on less than \$2.5 USD a day, 60.5 percent owned a mobile phone (RIA, 2012). With the cost of mobile phones decreasing steadily, what was once considered a luxury good is now more commonly considered a necessity by many Kenyans? Much of the literature on Information Communication Technologies (ICTs) suggests that with the availability of telecommunications, incomes increase and local economies become more efficient (Jensen, 2007; Aker, 2008).

Survey data from Morocco reveals that mobile phones make a financial difference in the lives of micro entrepreneurs and act to both intensify and extend local and nonlocal forms of communication (Ilahiane & Sherry, 2012). We anticipate the same to hold true in the Kenyan context, although a definitive quantitative study has yet to be released. Research on mobile usage at the base of the pyramid from Asia has shown that voice calls and SMS are the most common activities (LIRNEasia, 2009). The same research shows that there is a small but growing segment of the BoP that uses “more-than-voice” services including mobile Internet. The African market shares similar characteristics of usage at the BoP, with calling and SMS the most popular services (Okello et al., 2009; Crandall, 2011). “Beeping” or the use of intentional missed calls is also a common practice in both Asia and Africa (Donner, 2005; LIRNEasia, 2009) demonstrating the price sensitivity of this market. There has not been any data available on mobile Internet usage at the BoP in Kenya, one of the important contributions of this study.

A growing body of literature on the base of the pyramid focuses on how to develop innovative business models for this population (see Anderson & Markides, 2006; Akula, 2008; Frandano et al., 2009; Ismail & Masinge, 2011; Hystra, 2011; GSMA, 2012). Roughly, these business models focus on keeping products simple, useful, and affordable; taking into account the variable income of the BoP; and building for the environment, culture, and norms already in existence. In anthropological and philosophical literature, there is also a debate centered on the notion of “BoP” and whether an emphasis on market-based solutions depoliticizes the notion of human development and overlooks the influence of history and context (see Bendell, 2005; Kuriyan et al, 2008; Elyachar, 2012; Ilahiane & Sherry, 2012). Karnani (2007) argues that rather than targeting the BoP as a niche consumer market, private sector can play a greater role in poverty alleviation by viewing the poor as producers and buying from them rather than just attempting to sell to them. Not surprisingly, a sizable segment of the literature on ICT in Kenya looks at M-PESA, arguably the world’s most successful mobile money transfer platform, and analyses possible reasons for its wide-spread success and uptake (Hughes & Lonie, 2007; Mas & Ng’weno, 2009; Mbogo, 2010; Morawczynski, 2011; Jack & Suri, 2011; Stuart & Cohen,

2011; Dermish et al., 2012). The general consensus is that M-PESA was largely successful in Kenya because of Safaricom's significant market dominance, strong branding, and the openness of the Kenyan regulator to encouraging innovation, thus allowed M-PESA to emerge and flourish. The literature continues to expand as new case studies and statistics emerge with the increasing penetration of mobile phones and innovation around the same changing the lives and livelihoods of citizens. The following outlines findings from fieldwork conducted in Kenya to better understand mobile usage specifically by those at the base of the pyramid. The work was funded by infoDev, a global development financing program housed by the World Bank. This study aims to contribute to the growing body of literature around the subject by offering updated data on the actual impact for mobile banking on the performance of commercial banks in Kenya at large.

2.4 The cost of mobile banking and performance of commercial banks.

Financial institutions, which have had difficulty providing profitable services through traditional channels to poor clients, see mobile financial services (MFS) as a form of "branchless banking", which lowers the costs involved in serving customers (Ivatury & Mas, 2008). Technological development has provided opportunities for service providers to develop their services and offer customers more flexibility. As a consequence, banks have launched multiple service access methods via new delivery channels like ATM, internet and mobile phone (Laukkanen & Pasanen, 2007). Low-cost banking can bring into its fold a considerable group of consumers who formerly could be served only at too high a cost (Datta, Pasa, & Schnitker, 2001). However, studies have shown that there have been bottlenecks in the rate of adoption of MFS in various parts of the world. One issue driving future mobile banking is the cost efficiency pressures from supply side. Payment transaction costs vary. Quite often wireless capability is built into financial institution's software platform, leaving maintenance and upgrades as the only added costs (Mattila and Pento 2002; McCall, 2002). European IT consultants, International Data Corporation, expect mobile banking to be the fastest growing sector of total information technology spending on electronic banking, with a 1999 to 2003 compound annual growth rate of 129% (West, 2001). Relative advantage is concerned with the degree to which an innovation is perceived as being better than the idea it supersedes. The degree of relative

advantage is often expressed as economic profitability, social prestige, and savings in time and effort, immediacy of the reward or as decrease of discomfort (Rogers, 1995). Various studies have been conducted to extend the base technology acceptance model (TAM) as well as other extended models of TAM by testing the significance of different constructs and antecedents. For example, perceived financial cost, system quality and social influence had been added to the original TAM constructs and were found to be positively associated with consumer intentions to use mobile banking services (Kleijnen, et al., 2004). Other studies repeatedly listed mobile device attributes like tiny displays, slow data connection, weak usability, and associated cost as inhibitors of mobile banking services (Laukkanen & Pasanen, 2007; Mallat, Rossi, & Tuunainen, 2004). According to Mallat (2007), the cost of a payment transaction has a direct effect on consumer adoption if the cost is passed on to customers. Transaction costs should be low to make the total cost of the transaction competitive. The transaction costs of sending money through the mobile payment technology are lower than those of banks and money transfer companies.

In their studies in India, Rajanish & Sujoy (2011) found that the cost of availing the mobile financial services was a common matter of concern among the villagers who were interviewed. People wanted to know whether they would need to purchase a new handset for using mobile financial services (MFS) and were also eager to know the cost of transaction for availing this service. People were ready to pay a small amount (in the range of one rupee to two rupees) per transaction for using MFS. They were aware and appreciated the fact that using MFS would save them a lot of time, effort and money that they currently spent for accessing banking and financial services through the existing channels of delivery. Hence, cost of the MFS is an important factor that would determine the adoption of the services among the rural population. Given the fact that majority of the rural population falls within the lower income group, the total cost of availing the services need to be minimized for ensuring faster adoption. According to Nah, Siau, and Sheng (2005), the cost of mobile devices and mobile services was identified as an investment concern. Luarn and Lin (2004) argued that financial cost was one of the greatest concerns in adoption of mobile banking services. Furthermore, Ram and Sheth (1987; 1989) stated that it was not viable for consumers to change their way of performing their banking tasks

without offering a strong performance-to-price advantage. The price of banking services may have an opposite effect with respect to the adoption of mobile banking, which may result in consumers preferring the traditional banking services (Laukkanen et al, 2007). Users agree to pay a reasonable fee to use a service. However this would depend on the banking and service provider. Provision of a lower service cost is a major benefit for users using mobile banking and performing banking transaction functions through a mobile device; so the “value for money” barrier may be another factor influencing the adoption of mobile banking services (Laukkanen et al)

2.5 Security of mobile banking and performance of commercial banks.

A major challenge for the adoption of mobile banking technology and services is the perception of insecurity. In the survey conducted by the Federal Reserve, 48% of respondents cited their main reason for not using mobile banking was “I’m concerned about the security of mobile banking”. In the same study, respondents were asked to rate the security of mobile banking for protecting their personal information and 32% rated it as somewhat unsafe and very unsafe, while 34% were not sure of the security. These statistics represent a significant barrier to the use of mobile banking products and services. (“Consumer and Mobile Financial Services,” 2012). When you analyse the security risks of the mobile space, many of these feelings are not necessarily irrational. The lack of maturity of the mobile banking space brings many risks in the areas of new technologies, new inexperienced entrants in the ecosystem and a complex supply chain with risks in secure integration of the complex ecosystem. Many of these new entrants are innovative and dynamic with minimal experience or attention to security as a discipline. These risks are most evident in the mobile application development and mobile hosting areas. New privacy risks are brought to light with personal data collected by the applications and information about the customer’s physical location. Finally, customers are largely uneducated or have a high risk tolerance and unfortunately may opt into services that put their security and privacy in jeopardy.

The malware is becoming a growing challenge with mobile devices and according to a report by Juniper, the amount of malware targeted at mobile devices rose by 155% in the past year. (Morgan, 2012) Ninety nine percent of the malware growth was in two

categories: spyware and SMS Trojans. Malware has been specifically troublesome for the Android platform with malware increasing exponentially from 400 identified samples in June 2011 to 13000 in December 2011. (Jackson, 2012) According to a Kaspersky Lab report, malware targeted at mobile devices increased 6.4 times in 2011, with the overwhelming majority of detected mobile backdoors targeting Android devices. ("Mobile malware increased six-fold in 2011," 2012) Short Message Service (SMS) is susceptible to misuse including redirection, hijacking and spoofing. In early 2012, a programmer developed a program that could allow anyone to launch social engineering attacks, spoofing SMS with the purpose of obtaining valuable information and potential even money. (Kovacs, 2012) The SMS channel can also be compromised by malware as was the case with a malicious application posing as a free well known Android application. The malware was dubbed Android.Opfake designed solely to surreptitiously "send SMS texts to premium-rate numbers," until the smartphone owner's account balance was maxed out. (Schwartz, 2012) Another fake Gmail Android application called DDSPy was capable of intercepting and uploading SMS messages, call logs, and vocal records to a remote server. (Danchev, 2012)

The privacy of user information is a particularly challenging issue as mobile devices are much more personalized and tied to the user's identity than a traditional computer. Risks related to legitimate applications passing user data to other applications or 3rd parties in an unauthorized manner is gaining more attention in the public arena. One recent case included EU customer personal data being sent to a US based advertiser. In this situation several Android applications were accused of breaking EU data protection laws by passing personal information to a US advertising firm named MobClix without user's explicit permission. (Worth, 2012). There can also be security vulnerabilities associated with the operating system that give unauthorized access to user information or content. In early 2012, there was a vulnerability discovered on both iOS and Android that gave applications access to the user's photo library without permission. (Chen, 2012) Geo- location is additional information that can be gathered by the application and shared in an unauthorized manner. This is a particularly challenging issue since many applications ask the user permission to use their location data; unfortunately it is not clear all the ways that

application may use the data. There are various measures that can be taken to address the security challenges of mobile banking and payments. As a summary, the table below lists the major risks and the suggested mitigations:

2.6 The mobile banking partnerships and performance of commercial banks

Jenkins (2008) listed several countries that have had a good uptake of mobile banking systems in their economies. These included South Africa, Japan, Philippines and Kenya. In his report, the researcher listed the advantages that mobile money banking systems could bring to the economies of countries that adopt them. Risk of carrying paper money is reduced when mobile money services are adopted. Such a service also takes advantage of the already established telecommunication infrastructure. This brings to the fore the importance of sharing technology and engineering infrastructure in strategic partnerships. Strategic partnerships between mobile phone companies and commercial banks have taken different shapes in the world. A survey done in 2010 in Australia gave a gloomy report about the performance of mobile banking in the Commonwealth when compared to the global performance. Use of mobile banking in the country is in infancy stage, despite the fact that 94 % of Australians under the age of 40 years have mobile phones. The survey showed that 16 % of Australians use mobile banking services, compared to the global use of 30 %. Compared to the Asian Pacific region, where Australia belongs, 43 % of the population uses mobile banking (O'Doherty et al, 2010).

According to O'Doherty et al (2010) the strategies employed by banks and mobile phone service providers could be blamed for this slow uptake. This study showed that 40 percent of Australians had no idea whether their banks offered mobile banking services or not. 21 percent of Australians interviewed had confidence in mobile banking. This is as opposed to 34 percent of the global population. The concerned players in the banking and telecommunication industry should take into considerations the security concerns of the customers. Again, the report insisted that the players should look into the marketing strategies of the services.

A study of mobile banking services in China done by Laforet & Li (2005) shows a high uptake by most males who are not necessarily educated or young. The Chinese market has

adopted this service because of security concerns that come with use of the traditional banking systems. The security has been enhanced by shared technological platform between mobile telecommunication companies and the commercial banks. This comes out as a contrast to the west whose reason of not adopting the mobile banking services is fear of risks involved in the services. While the Chinese market looks at the mobile banking as less risky, the west looks at it as the most risky platform of money transaction.

Mobile banking systems in Malaysia are said to be of importance to the economy even though certain factors were found to be useful in increasing the acceptance of the services. Wei et al (2009) found out that most users in Malaysia valued cost; trust and ease of use as the factors that could make them choose whether to use the mobile money banking systems. In the conclusion of the report, the authors stated that mobile phone service provision companies should establish proper structural and strategic relationships with the banking institutions in order to improve security, trust and ease of use of the mobile money banking services. Jack & Suri (2011) did an analysis of the extent to which mobile banking has gained traction in Kenya. A survey of the households in the country came up with results that showed promising returns occasioned by strategic partnerships between commercial banks and Safaricom Limited, a leading telecommunication company. The partnership between M-Pesa and Commercial Bank of Africa was found to have improved the lives of most houses surveyed. The service was used for saving money, sending and receiving remittances. Mas & Radcliffe (2010) captured some of the reasons that made M-Pesa money transfer services to go viral after its launch in 2007. In the report done by the researchers, M-Pesa had more transactions in a year as compared to what Western Union does globally. Three sets of factors have been looked at as the causes of this M-Pesa success. They include the pre-existing market conditions, good design that facilitated integration of the mobile phone services and money transfer and business execution strategy that enabled the company to get a critical mass. This critical mass helped to avoid the chicken and egg problem that would have affected the new payments.

2.7 Conceptual Framework.

The conceptual framework used in this academic project depicted the various variables under study in the research. The variables used in this research are as follows: the

independent variable under study is electronic mobile banking. This refers to all the services offered through the mobile banking platform. These services include, interbank funds transfer, cash withdrawal, balance inquiry, bill payment, information inquiry and registering new accounts or customers. The dependent variable under study is performance. This encompasses four perspectives of measurement. The marketing of mobile banking, mobile banking transactional costs, mobile banking security and the mobile banking partnerships to capture more market share. These variables led to the conceptual framework of this study illustrated in Figure 1: Conceptual framework

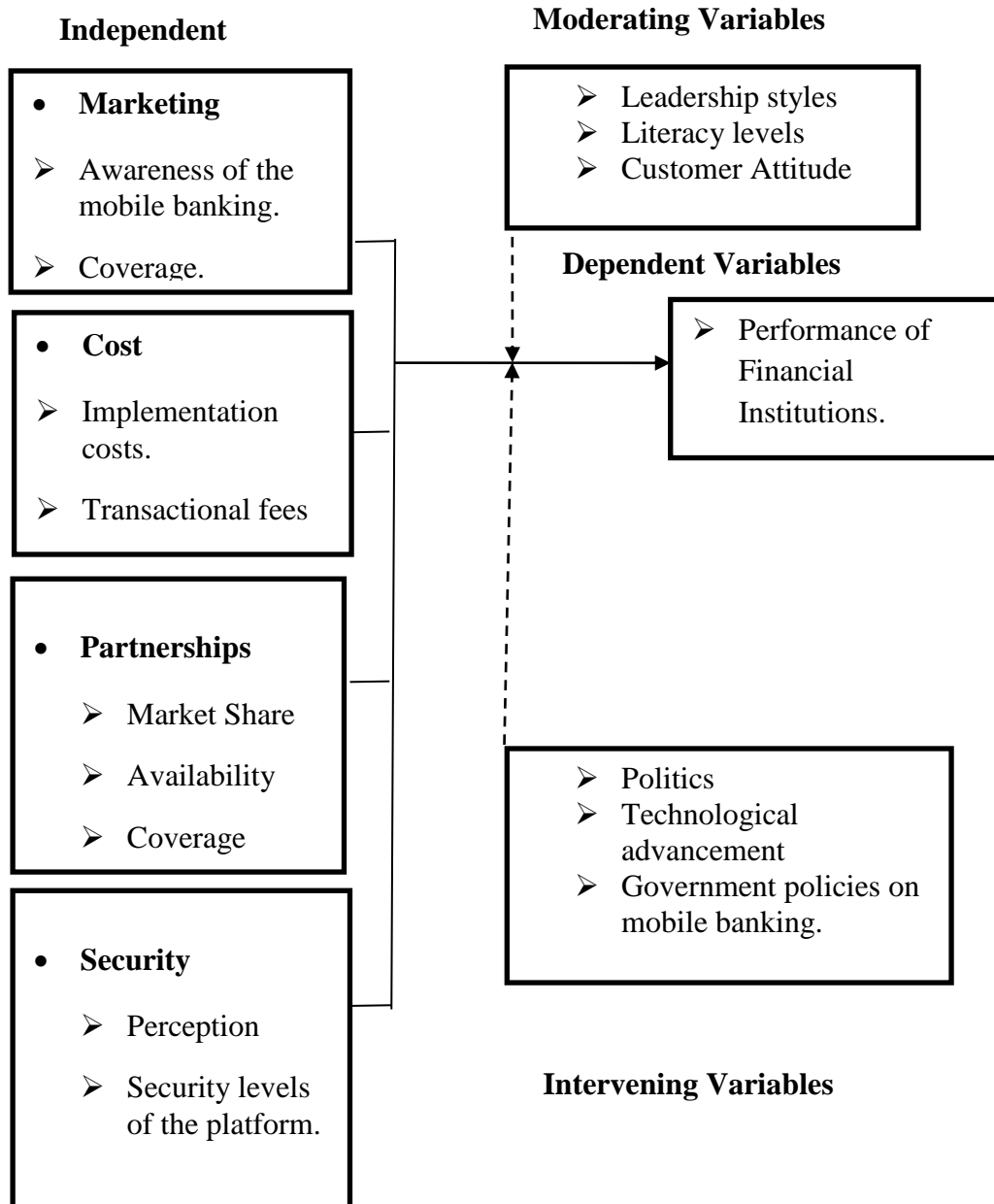


Figure 2: Conceptual framework

2.8 Knowledge gap

Review of literature revealed that there is limited work done towards understanding the impact of mobile banking on the performance of financial institutions. From the study therefore it can be noted more entries on mobile banking partnerships with the bank will bring some level of good performance across the organization. The study also noted security controls in place should be beefed up to meet the required standards to attract more customers and increase banks performance.

2.9 Summary of Literature Review

Mobile technology which has contributed to electronic mobile banking has seen an unprecedented development and growth during the last few years and it is becoming a major catalyst for economic and social development in many countries Kenya inclusive. Hundreds of mobile applications ranging from mobile health to mobile banking have been developed and mobile communication is becoming increasingly affordable for the poorer segment of the population worldwide. The introduction of electronic mobile banking draws upon the successful marriage of two fundamentally different technological platforms; banking and mobile telephone. Financial Institutions such as Standard Chartered Bank Kenya have entered into partnership with companies that provide utility services, mobile service operators in the aim of providing electronic mobile banking. However, the daunting task of overcoming technological challenges will not constitute the major barrier in the future for fast diffusion.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter gives a brief description of the research design, target population, sampling design, data collection procedures, data collection tools, validity and reliability of the research instruments and data analysis methods.

3.2. Research Design

The research included both quantitative and qualitative methods of data collection with the use of a descriptive involving an ex post facto design consisting of the use of interviews, questionnaires which were distributed to various individual at selected branches of Standard Chartered bank. According to Meyer 1999 this kind of survey (descriptive survey) is appropriate when a study is collecting first hand data using either interviews or questionnaires and from respondents.

3.3. Target Population

Target population is a group of individuals, items or objects from which a sample is to be taken for desired measurement to be conducted as a way of inferring on the larger population from the small selected sample (Kombo & Tromp, 2006). This research was carried out in Nairobi Central Business District and the target population comprised of the staff working in these branches in the mobile banking department, and the beneficiary customers listed in the branches. Standard Chartered Bank Kenya has 4 branches in Nairobi Central Business District, with 7,892 customers and 16 staff dealing with mobile banking services section.

Table 1: Summary of Target Population

Branches	Customers	Staff
4	7,892	16

Source: primary data

3.4. Sample size and sampling procedures

According to Kombo and Tromp (2006), sampling is the process of selecting a number of individuals from a population of concern in a way that allows the selected group to effectively represent the characteristics of the entire group. Yamane formula was used to calculate a representative sample for the customers, while a census was done for the branches which represented 100 percent of the sample since their population was below 30 (Kumar, 2009).

3.4.1 Sample size

The formula below provided by Yamane was used to calculate the sample size, the size for the project beneficiary (University of Florida, 2013):

$$n = \frac{N}{1+N(e)^2}$$

Where; n is the sample size,

N=the estimate of the population size,

e =error limit

At 95% level of confidence and with an error limit of 10 %

$$N = 7892 \quad \frac{N}{1+N(e)^2} = \frac{7892}{1+7892(0.1)^2}$$

n =378 respondents for customers

The formula resulted 378 as the sample for customers. The sample taken from each branch proportional to the total number of customers listed in the branch. This information is presented in the table below:

Table 2: Sample size.

Subject	Population	Sample size	Percentage (%)
Staff	16	16	100
Customers	7,892	378	5
Total number of respondents	7,908	394	

Source: primary data

3.4.2 Sampling procedure

Out of 7,892 customers in Nairobi Central Business District branches a sample of 378 was targeted through stratified random sampling after creating strata based on the banking hours and this allowed an all-inclusive representation of different sub groups in the sample (Mugenda and Mugenda, 2003). The study targeted to collect data from different clusters of primary stakeholders. The population was divided into sub groups that were more homogenous individually. From each stratum, a proportional sample was drawn randomly.

3.5. Data Collection Instrument

A number of tools were used to collect both primary and secondary data. Questionnaires were used for the implementing officers while face to face interviews were used for the project beneficiaries. The questionnaires contained both closed and open ended questions that allowed the respondents to give an explanation of their answer in their own words.

3.5.1 Pilot testing of the instruments.

Before embarking on data collection, a pilot study was carried out to pretest the instruments. This was done in order to assess the clarity of items, validity and reliability of the instruments (Mugenda & Mugenda, 2003). The pre testing was carried out on project implementing officers and any questions found to be interpreted differently during the pre-testing were rephrased so that they could have the desired meaning to all respondents.

3.5.2 Validity of the research instruments

Validity is used to refer to the meaningfulness and accuracy of the inferences made by a researcher based on data collected and research findings (Mugenda and Mugenda, 2003). Validity is seen as the ability of a research instrument to measure what it is designed to

measure (Kumar, 2009). To achieve desired degree of validity, the research instruments were formulated in a way to answer the objectives set for the study as stated earlier. To ensure content validity, the tools were presented to professionals including my supervisor who were requested to critique.

3.5.3 Reliability of the Instrument

Reliability is a measure of degree to which a research instrument will give consistent data on repeated trials (Mugenda & Mugenda, 2003). The split half was used to establish reliability of the instruments. The split-half technique was used to test the reliability of the instrument. The split half reliability artificially divides test into two halves and correlates the individual scores on the two halves. The researcher administered the test to a group of implementing officers and later divided the items into two halves using odd and even numbers. Scores for each individual on the two halves were obtained and coefficient correlation calculated using SPSS version 22. To transform the split half correlation into an appropriate score reliability estimate for the entire test, the Spearman–Brown Prophecy Formula was employed;

$$r_{xx} = \frac{2r_{\frac{11}{22}}}{1 + r_{\frac{11}{22}}}$$

Where,

r_{xx} = estimated score reliability of the entire test

$r_{\frac{11}{22}}$ = Pearson r correlation between two halves

A reliability coefficient of 0.78 was obtained. According to Kumar (2009), a minimum correlation coefficient of 0.65 is recommended as it indicates that an instrument is reliable. This showed that the instrument was reliable.

3.6. Data Collection Procedure

The process involved face to face interviews for all the project beneficiaries after detailed training of research assistants. Collection of questionnaires from implementing officers was also done followed by checks to verify their completeness.

3.7. Data Analysis Technique

After data collection, the questionnaires were sorted out and edited in order to detect any inconsistencies during data collection. Data coding was done by allocating different responses falling in the ordinal scale dummy numeric values that could be computed by Statistical Package for Social Scientists software. Data cleaning was done whereby the data was finally checked for accuracy and completeness. The keyed in data was subjected to SPSS analysis and the data was presented in terms of percentages and frequencies. This was then presented in table format. Spearman Coefficient of Correlation was computed in an effort to determine the strength of the correlation between mobile banking marketing, costs, partnerships and security on the performance of commercial banks. This was done at 95 percent confidence interval.

3.8. Ethical Considerations

The researcher guaranteed that the information provided by the respondents was confidential and they were not required to fill in their names in the questionnaire. The researcher ensured all respondents were accorded treatment with respect.

Table 3: Operational definitions of the variables

Objective	Independent Variable	Indicator(s)	Measurement	Scale	Data Collectio	Data Analysis
To establish how marketing of electronic mobile banking services influence the performance of commercials banks.	Marketing	Level of awareness about the mobile banking products.	Number of customers aware of the mobile banking products.	Ordinal	Interview guide	Descriptive statistics
		Areas by covered marketing.	Number of platforms used to market mobile	Ordinal		
		Clarity of the adverts.	The number of customers who understood the adverts correctly.	Ordinal		
To determine how costs (transactional	Implementation costs and transactional	The charges levied to access the mobile banking services.	Number of customers who feel or think the cost is high.	Ordinal	Interview guide	Descriptive statistics

fees) of mobile banking services influence the performance of commercials banks.	charges.	Transactional charges	Number of staff who feel the implementation costs are high.	Ordinal		
		Availability of the service.	Number of customers who access the services in a given time.	Ordinal		
To assess how security of mobile banking services influence the performance of commercials banks	M-Banking Security	Stability of the system	The number of occasions the system is down in a week.	Ordinal	Interview guide	Descriptive statistics
		Fraudulent practices	The number of frauds that happens in a given period like a month.	Ordinal		
		Reputation on the security platform.	Number of customers who feel their cash is safe.	Ordinal		

To establish how partnerships of mobile banking services influence the performance of commercial banks	Partnerships	Popularity of the partner.	Number of customers who utilize services provided by the partners or agencies.	Ordinal	Interview guide	Descriptive Statistics
		Reputation of the partner or partnerships	Number of customers who trust in the partnership or agency banking.	Ordinal		

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the summary of the analyzed data. The results are presented based on the objectives of the study with the aim of studying factors influencing mobile banking on the performance of commercial banks in Nairobi County. In order to put the results into perspective, research findings were organized under the following categories: cost, marketing, partnerships and security.

4.2 Questionnaire Return Rate

The researcher targeted a sample size 378 of customers and 16 staff members. After the data collection exercise, 369 fully filled questionnaires were received from customers who were the project recipients equating to 98 percent of the target, while 16 staff equating to 100 percent was achieved. This is a reliable response rate for data analysis as any response above 50 percent is regarded adequate (Punch, 2003).

4.3 Demographic Information

This sub-section describes the basic statistical characteristics of the respondents. This includes gender, age and highest level of education achieved.

As part of the general information, the researcher requested for the age of the respondents.

Table 4: Distribution of Respondents by Age

Age	Frequency	Percentage
Below 20	19	5
20-29 years	30	8
30-39 years	118	32
40-49 years	81	22
50-59 years	89	24
Above 60 years	32	9
Total	369	100.0

The results from Table4 show that 19 respondents representing (5 percent) were below 20 years of age, 30 respondents (8 percent) were in the 20-29 in the age bracket, 118 of the respondents (32 percent) were aged between 30-39 years the most represented group, 81 of the respondents (22 percent) were aged between 40- 49 year, 89 respondents (24 percent) were aged between 50-59 years while 32 of the respondents (9 percent) were aged above 60 years. This shows customers below the age of below 20 were less involved in this project.

4.3.1 Gender of respondents

The researcher recorded the gender of the respondents. Table 8 presents disaggregation of the respondents by gender.

Table 5: Disaggregation of respondents by gender

Sex	Frequency	Percentage
Male	243	65.93
Female	126	34.07
Total	369	100

The results from Table5 show that majority of the respondents represented by 243 (65.93 percent) were male while 126 of the respondents (34.07 percent) were female.

4.3.2 Formal Education of respondents.

As part of the general information, the researcher sought to establish the level of formal education of the respondents. Table6 presents disaggregation of the respondents by level of formal education attained.

Table 6: Level of formal education attained by the respondents.

Level of education	Frequency	Percentage
None	41	10.9
Primary	20	5.4
Secondary	97	26.4
Technical or vocational	146	39.7

University or college	65	17.6
Total	369	100.0

The study asked whether the highest level of formal education attained was primary, secondary, and technical/vocational or university/college, the results on Table 7 shows that majority of the respondents represented by technical/vocational 146 respondents (39.7 percent) attained up to college level education while 65 respondents (39.7 percent) did not attain any formal education, 97 of the respondents (26.4 percent) attained secondary education, while 146 respondents (39.7) attained college or university education. This shows that majority of the respondents have technical training or professional training. Most beneficiaries have had some form of formal education with majority having attained secondary level of education.

Table 7: The level of position of the respondents in the organization.

Level of education	Frequency	Percentage
Executive	66	17.9
Middle	132	35.9
Lower	171	46.2
Total	369	100.0

Table 7 show the level of position one is holding in the organization by the respondents. 66 respondents represented (17.9 percent) at executive level, 132 respondents (35.9) hold middle level positions and 171 of the respondents (46.2 percent) are at the lower level positions.

4.4 Mobile banking marketing.

The following section presents data on the marketing of mobile banking. This includes level of awareness by customers about the mobile banking products and services.

4.4.1 Mobile banking marketing awareness

The level of marketing of electronic mobile banking technology has influenced the

performance of commercial banks, the study sought to establish the proportion of the level of awareness.

Table 8: The level of awareness through marketing platform.

Durations	Frequency	Percentage
Daily	118	31.9
Weekly	57	15.4
Monthly	37	9.9
Occasionally	51	14.3
Never	105	28.6
Total	369	100.0

Table 8 shows that 118 respondents (31.9 percent) confessed to have seen the mobile banking advert on daily basis. While 57 respondents (15.4 percent) said to have seen the advert on weekly basis. 37 respondents (9.9 percent) saw the advert monthly, 51 of the customers (14.3 percent) saw it occasionally and 105 respondents (28.6) have never saw the advert.

4.4.2 The level of understanding of the adverts.

As part of the understanding how well beneficiaries understand the content in the adverts, the researcher sought to establish the proportion of the understanding of the adverts.

Table9: The level of understanding of the adverts from the respondents.

Rating	Frequency	Percentage
Fair	118	31.9
Bad	57	15.4
Good	89	24.2
Excellent	105	28.9
Total	369	100.0

Table9 shows that 118 of the respondents (31.9 percent) fairly understood the

advertisement content, while 57 of the respondents (15.4 percent) had not understood the content at all. 89 of the respondents (24.2) had good understanding of the content and 105 of the respondents (28.9 percent) had an excellent understanding of the content delivered through advertisements. From the statistics more needs to be done to ensure the content in the adverts is understood by all categories.

4.5 Mobile banking costs

The following section presents data on how the cost of transactional charges of electronic mobile banking influence the performance of commercial banks.

4.5.1 The mobile banking transactional costs

The transactional costs of mobile banking is a key aspect. The researcher sought to know the proportion of respondents on transactional costs

Table 10: Response on the rating of the transactional charges.

Rating	Frequency	Percentage
Cheap	170	46.1
Fair	83	22.5
Expensive	63	17.1
Unaffordable	53	14.3
Total	369	100.0

Table 10 above shows that 170 respondent (46.1 percent) were of the opinion that the charges are cheap. 83 respondents (22.5 percent) found the charges are fairly cheap. The other 63 respondents (17.1 percent) respondents said the charges are expensive and 53 respondents (14.3 percent) raised the concerns that the charges are unfordable.

The study sought to establish the barriers that come along with high charges levied by the bank on mobile banking services . Table 14 shows responses on the barriers.

Table 11: Response of customers on restrictions of transactional charges.

Response	Frequency	Percentage
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Yes	77	20.9
No	292	79.1
Total	369	100.0

Table 11 above shows that 77 customers (20.9 percent) feel that high transactional charges restrict them from accessing the mobile banking services. Whereas 292 respondents (79.1 percent) felt that transactional charges are not restricting them from the accessing the service.

4.5.2 Responses on the ease access of the mobile banking services.

To establish how easy it is for the customers to access mobile services through mobile phones, the researcher asked the respondents if the menus were ease to access mobile banking services.

Table 12: Responses on the access of the mobile banking services.

Response	Frequency	Percentage
Yes	369	100.0
No	0	0.0
Total	369	100.0

Table12 shows that 369 of the responding beneficiaries felt that they had ease access of the mobile banking services through the mobile phones. The friendly designed phone menus help the customers to access the services with no difficulties.

If the services are up and running in a 24hours 7 days a week mode when required by the customers was of an interest to the researcher.

Table 13: Responses from respondents on service uptime in a week.

Response	Frequency	Percentage
Yes	260	70.3
No	109	29.8
Total	369	100.0

Table13 above shows that 260 (70.3 percent) experienced 100% up time of the service

whereas 109 respondents (29.8 percent) had bad experience that the service was not up 100% in a week. From the findings the bank should do more to ensure that the service uptime is 100% in any given point in time. This will translate to efficiency and reliability whereby customers will build trust to the brand.

4.6 Mobile Banking Security.

To assess how security of mobile banking services influence the performance of commercial banks, the respondents were asked how often do they experience security breaches .

Table 14: Responses on mobile banking security breaches.

Response	Frequency	Percentage
Rarely	231	62.6
Occasionally	85	23.1
Regularly	53	14.3
Total	369	100.0

Table 14 shows that 231 respondents (62.6 percent) felt that the services rarely go down within a week. 85 of the respondents (23.1 percent) experienced occasional downtime of the service. 53 of other respondents (14.3 percent) said that they experience regular breakdown of the service. Much more needs to be done to ensure the service is always up when required by the customers.

Table 15: Responses on how long it takes to restore unavailable services.

Response	Frequency	Percentage
< one day	235	63.7
1-2 days	61	16.5
2-5 days	28	7.7
>5 days	45	12
Total	369	100.0

Table 15 shows that 235 of the respondents (63.7 percent) felt that when the service is down it takes less a day to be restored. 61 of the respondents (16.5 percent) experienced

one to two days for the service to be restored. 28 respondents (7.7 percent) felt it takes 2 to 5 days to restore the service and 45 respondents (12 percent) experienced a downtime of 5 days before the service was restored. From the findings it requires the bank to work on a quick turnaround time to satisfy the customers' needs. The services should be up and running 99% mode.

4.6.1 Response on how secure is the mobile banking platform.

The safe and secure mobile banking platform for customers was of interest to the researcher. The respondents were asked if they were okay with the current security controls in place to guarantee the safety of their cash. Table 19 shows response on how customers rate the mobile banking security controls in place.

Table 16: Response on how secure is the mobile banking platform.

Response	Frequency	Percentage
Yes	304	82.4
No	65	17.6
Total	369	100.0

Table 16 shows that 304 of the respondents (82.4 percent) were of the opinion that the security controls in place are good enough to safeguard the safety of the customers' cash. Whereas 65 of the respondents (17.6) of the respondents felt their money is not secure. Generally the bank should scale up and invest more on mobile banking security to assure the safety of the customers' money.

4.7 Mobile banking partnerships

To establish how the partnerships of mobile banking service providers influence the performance of commercial banks. The following section presents data on the impact of the partnerships on the performance of the commercial banks.

4.7.1 The responses on the impact of mobile banking partnerships

The study was interested in establishing the responses from the customers on the impact of the partnerships through agencies with the bank . Table 20 shows the response

from the respondents.

Table 17: Responses on the impact of the partnerships.

Response	Frequency	Percentage
Yes	304	82.4
No	65	17.6
Total	369	100.0

Table 17 found out that 304 respondents (82.4 percent) felt that partnerships had a big impact on the bank whereas 65 respondents (17.6 percent) felt that partnerships had no impact at all.

4.7.2 The responses on the demand for partnerships.

The researcher was interested in establishing if the customers required more partnerships or agencies for better services and mass market.

Table18: Responses from the respondents on the demand for more partnerships.

Response	Frequency	Percentage
Yes	369	100
No	0	
Total	369	100.0

The study found that 369 respondents (100 percent) felt that there is demand for more partnerships hence the bank should move with speed to ensure that the demand in the market is fulfilled.

4.7.3 Responses on the profit margins got through partnerships.

The study further sought to establish the profit margins acquired through bank partnerships or agency banking .

Table19: Responses on the profit margins acquired through partnerships.

Response	Frequency	Percentage
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<20%	0	4.7
21-40%	2	11.6
41-60%	2	9.3
61-80%	9	58.1
>80% to <=100%	3	16.3
Total	16	100.0

Table19 above shows that 0 of the respondents (4.7 percent) partnerships contributed less than 20% of the bank's profits, 1 of the respondents (11.6 percent) confirmed that partnerships contributed 21-40% to the bank's profits. 2 respondents (9.3 percent) said that partnerships helped the bank to rake in 41-60% in profits. 9 respondents (58.1 percent) felt that the partnerships brought in 61-80% of the profits margin. 3 respondents (16.3 percent) felt that the partnerships brought in 80%-100% in profits.

4.8 Mobile banking implementation costs

The study sought to know whether the implementation costs for mobile banking were high.

Table 20: Responses on the costs of implementing the mobile banking platforms

Response	Frequency	Percentage
Yes	14	86.1
No	2	13.9
Total	16	100.0

The table20 shows that 14 of the respondents (86.1 percent) said that the cost for implementing mobile banking platforms are very high. Whereas 2 of the respondents (13.9 percent) felt that the implementing costs were not that high.

4.9 Spearman Coefficient of Correlation

To compute the correlation between the study variables and their findings the researcher used Spearman Coefficient of Correlation at 95 percent confidence interval. From the findings, it was clear that there was a positive correlation between mobile banking and the performance of commercial banks as shown by a correlation figure of 0.578. Mobile banking security, mobile banking partnerships and mobile banking costs all showed positive correlation with performance of commercial banks with correlation figures of 0.577, 0.777 and 0.378 respectively. Positive relationship indicates that there is a correlation between the factors and performance of commercial banks. The significant values for the relationship between mobile banking security, mobile banking costs, mobile banking partnerships and mobile banking marketing were 0.134, 0.134, 0.023 and 0.356 respectively. Thus at 5% confidence level and at p-value ($P < 0.05$), only use of mobile banking partnerships was significant. Therefore, it is interpreted that with, with the use of mobile banking partnerships, performance will be achieved otherwise no positive performance can be attained.

Table 21: Coefficient of Correlation

		Marketing	Costs	Security	Partnerships
Marketing	Spearman	1.000			
	Correlation				
	Sig. (2-tailed)				
Costs	Spearman	0.578	1.000		
	Correlation				
	Sig. (2-tailed)	0.134			
Security	Spearman	0.577	0.333	1.00	
	Correlation				
	Sig. (2-tailed)	0.134	0.420		
Partnerships	Spearman	0.777*	0.207	0.320	1.000
	Correlation				

	Sig. (2-tailed)	0.023	0.623	0.427	0.058
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Figure 3: Regression Model

The researcher conducted a multiple regression analysis so as to determine the relationship between Performance and the four variables. As per the SPSS generated table 4.33, the equation ($Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$) becomes:

$$Y = 3.657 + 0.568X_1 + 0.988X_2 + 1.654X_3 + \varepsilon$$

Where Y is the dependent variable (Performance of Commercial Banks), X₁ is the mobile banking marketing variable, X₂ is mobile banking costs variable, X₃ mobile banking security, X₄ is mobile banking partnerships while ε is the error term.

Table 22: Coefficient of Regression

Model		Un-standardized Coefficients		Standardized Coefficients		
		B	Std	Beta	t	Sig.
1	(Constant)	3.657	1.033			
	Marketin	X ₁ 0.568	0.097	0.145	0.970	0.013
	Costs	X ₂ 0.988	0.139	0.085	0.687	0.005
	Partnerships	X ₃ 1.654	0.107	0.159	0.787	0.003
	Security	X ₄ 0.444	0.069	0.210	0.349	0.012

According to the regression equation established, taking all independent variables to be at zero, (mobile banking marketing, mobile banking costs, mobile banking security and mobile banking partnerships) performance will be at a constant which equals 3.657. The data findings analyzed also show that increase in mobile banking marketing results in

0.568 unit increase in a awareness of mobile banking products, a unit change in mobile banking costs results to 0.988 increase in performance of commercial banks, a unit change in mobile banking security leads to 1.654 unit increase in performance of commercial banks while a unit change in mobile banking partnerships leads to 0.444 increase in performance of commercial banks. This infers that use of more of mobile banking partnerships contributes more to the performance of commercial banks with mobile banking security contributing the least.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter is a documentation of the study summary of findings, discussion of findings, conclusions derived from the findings and recommendations for action and further research.

5.2 Summary of findings

This study focused on the influence of electronic mobile banking projects on the performance of commercial banks in Nairobi county looking at Standard Chartered Bank Kenya as the case study. The objectives that guided this study were: to establish how marketing of electronic mobile banking influence the performance of commercial banks, to determine how the cost of implementation and transactional charges of electronic mobile banking influence on the performance of commercial banks, to assess how security of mobile banking services influence the performance of commercial banks and lastly but not least to establish how the partnerships of mobile banking service providers influence the performance of commercial banks.

5.2.1 The influence of mobile banking marketing on performance of commercial banks.

The marketing aspect of mobile banking to the customers and the bank is very paramount. Marketing of the services offered through mobile banking is critical if done properly it can transform the customers' base and generate more profits. The study sought to understand the impact of marketing to the institution in two ways: the study sought to understand how marketing has been done to create awareness of the mobile banking to its customers for the maximum impact. The findings indicated that 117 of the respondents (31.86 percent) confessed to have seen the mobile banking advert on the daily basis. The adverts were displayed on different platforms. While 56 of the respondents (15.38 percent) said to have seen the advert on weekly basis, 36 respondents (9.89 percent) saw the advert once a month, 52 of the customers (14.29 percent) seen it occasionally and 105 respondents (28.58) have never seen the advert. The study reveals that the right marketing has a direct

impact on the number of customers' the bank has and will have in future.

5.2.2 The influence of mobile banking transaction costs on performance of commercial banks.

This section gives a detailed discussion of the findings from the study on the electronic mobile banking transactional costs. The study found out the following from the respondents who are beneficiaries of the project. The study indicated that 117 respondents (31.86 percent) were of the opinion that the charges are cheap compared to other financial institutions. 56 respondents (15.38) found the charges are fair given that the same services elsewhere are charged relatively high. The other 36 respondents (9.89) respondents said the charges are expensive and 52 respondents (14.29 percent) raised the concerns that the charges are unfordable. From the statistics some review needs to be done on transactional charges to accommodate all categories which will result into more customers using the service hence more revenue to the bank. The transactional charges are paramount to the bank and the customers as well. A well-crafted transactional charges will attract more customers which can result into more profits for the bank. The aim should be to accommodate all existing and new customers to ensure they locked and happy with the charges. Low-cost banking can bring into its fold a considerable group of consumers who formerly could be served only at too high a cost (Datta, Pasa, & Schnitker, 2001). The idea crafted to lower should capture the following quote. A relative advantage is concerned with the degree to which an innovation is perceived as being better than the idea it supersedes. The degree of relative advantage is often expressed as economic profitability, social prestige, and savings in time and effort, immediacy of the reward or as decrease of discomfort (Rogers, 1995).

5.2.3 The influence of mobile banking transactional charges on performance of commercial banks.

The study indicated that 77 customers (20.87 percent) feel that high transactional charges restrict them from accessing the mobile banking services. Whereas 291 respondents (79.13) of the customers felt that transactional charges levied by the bank are not restricting them from accessing the service. More needs to be done to ensure the restrictions hampering the customers from accessing the mobile banking services are removed and a better solution given to the customers. According to Mallat (2007), the

cost of a payment transaction has a direct effect on consumer adoption if the cost is passed on to the customers.

5.2.4 The influence of mobile banking security on performance of commercial banks.

The mobile banking security is critical to any successful mobile banking platform. For the customers and the bank to realize the benefits of any mobile banking it must incorporate water tight security controls. The study found out that that 314 of the respondents (82.42 percent) were of the opinion that the security controls in place are good enough to safeguard the safety of their cash. Whereas 66 of the respondents (17.58) felt their money is not secure. Generally the bank should scale up and invest more on mobile banking security to assure the safety of the customers' money. A major challenge for the adoption of mobile banking technology and services is the perception of insecurity. In the survey conducted by the Federal Reserve, 48% of respondents cited their main reason for not using mobile banking was "I'm concerned about the security of mobile banking". For the bank to gain customers confidence the security controls must meet the market standards. The respondents who represent 17.58 percent is a big a number which the bank should bank on and invest more in security controls to gain the confidence of customers. Privacy of user information is a particularly challenging issue as mobile devices are much more personalized and tied to the user's identity than a traditional computer. Risks related to legitimate applications passing user data to other applications or 3rd parties in an unauthorized manner is gaining more attention in the public arena.

5.2.5 The influence of mobile banking partnerships on performance of commercial banks.

The study sought to know how much the mobile banking partnerships raked in profits to ascertain if the partnership are worth to keep. The study indicated that 2 of the respondents (4.65 percent) partnerships contributed less than 20% to the bank's profits, 5 of the respondents (11.62 percent) thought partnerships contributed 21-40% to the bank's profits. 4 respondents (9.30 percent) felt that partnerships helped the bank to rake in 41-60% in profits. 25 other respondents (58.13 percent) felt that the partnerships

brought in 61-80%. 7 of the respondents (16.27 percent) felt that the partnerships brought in 80 to 100% in profits.

5.3 Discussions of the findings

Objective one of the study was to establish how marketing of electronic mobile banking services influence the performance of commercial banks. The study indicated 117 of the respondents (31.86 percent) fairly understood the advertisement content, the understanding was attributed to the well-crafted language which customers could easily understand. The 56 of the respondents (15.38 percent) had not understood the content at all. The 36 of the respondents (9.89 percent) could not understand the content due to the level of education and the kind of language used. 52 of the respondents (14 percent) had good understanding of the content. The last two groups had good understanding due to their high level of literacy. The impact of good marketing on any organization is a method by which a firm attempting to reach its target market uses to attract customers. Marketing strategy starts with market research, in which needs, attitudes and competitor products are assessed and the firm concentrate its limited resources on the greatest opportunities to increase sales and achieve a sustainable competitive advantage (Nymous, 2006). Marketing strategy must focus on delivering greater value to customers and the firm at a lower cost however quantifying the return on investment from marketing expenditure on activities such as advertising, promotion and distribution is one of the most complex issue facing decision makers. Marketing performance is central to success in today's fast moving competitive markets, and measuring marketing performance is critical to managing it effective (Chiliya, 2009).

Objective two on mobile banking costs on the performance of financial institutions plan to offer more than basic mobile banking functionality to satisfy customer expectations, but establishing the business case and obtaining the budgets to implement these capabilities can be a challenge. To prove the value of investing in a full range of mobile banking capabilities, it is important to first understand the aspects of mobile banking that will drive measurable on return on investments. To project return on the mobile banking investment, financial institutions should focus on the following four value propositions.

Customer Retention for Mobile banking customers have deeper relationships with their financial institutions and have been proven to be among the least likely to attrite. This increased customer stickiness can result in measurable recurring revenue for financial institutions. Reduced Channel Costs of mobile banking enables the migration of customers from high-cost offline channels, such as the call center and branch, to the lower cost, higher convenience mobile channel. To project savings, financial institutions must first know the average transaction costs of each banking channel and determine how the expense will be offset by diversion to the mobile channel. According to Fiserv data (compiled from interviews with several financial institutions ranging from \$2B to \$28B in assets), a good rule of thumb is to assume that the potential exists for 20 percent of all transactions to migrate to the mobile channel over the course of a year.

Discussion on objective three of mobile banking security there are a number of standards on information security available now, these standards are often general guidelines or principles that may not all be applicable to a particular organization. If an organization aims to implement security controls that are in compliance with a particular standard, or even a set of standards, a concerted effort from top management down to end-users would be required as part of the development and implementation process. Care must be taken to ensure that standardized policies or guidelines are applicable to, and practical for, that particular organization's culture, business and operational practices. The organization should first perform a "gap analysis" to identify the current security controls within the organization, the potential problems and issues, the costs and benefits, the operational impact, and the proposed recommendations before applying any chosen standards. The creation of security policies and guidelines should only follow the completion of a gap analysis. Management support is necessary at all levels. User awareness programs should also be conducted to ensure that all employees understand the benefits and impacts before the deployment of new security policies and guidelines. A common problem that crops up after implementation of a standardization exercise is an increase in the number of complaints received from users of IT services due to the restrictions imposed by new security controls. The successful implementation of any information security standards or controls must be a balance of security requirements,

functional requirements and user requirements.

Last but not least on objective four discussion on mobile banking partnerships Strategic partnerships between firms have been of great importance in terms of profitability and productivity. Different variables in strategic partnerships synergistically lead to the benefits enjoyed by collaborating firms. Knowledge sharing is one such element of strategic partnership that helps firms to realize their maximum potential. Lee (2001) did an analysis of the benefits of knowledge sharing in information technology firms in Korea. The author defined a hypothesis by looking at the ability of service receivers in outsourced information systems to absorb needed knowledge after collaborating. In the results, the author found that the paths that were hypothesized in their model were of importance. Strategic partnerships in supply chain have been found to be of benefit to firms. Work done by Corbett et al (2004) dwelt on different issues and effects of strategic partnerships to supply chain functions in organizations. In the opening remarks, the author states that highly competitive supply chains can be achieved if suppliers and companies work closely. The author warns against failure of collaborating because it would result to costly inefficiencies since there would be distortion of information. Examples of firms that have been successful because of proper strategic partnerships have been listed as between American Hospital Supply Corporation and Baxter Healthcare Corporation, and between Toyota and its first-tier suppliers. Improved market share, improved quality, inventory reductions, short product development cycle and improved delivery service are some of the benefits that firms get from strategic partnerships that are well organized. Corbett et al (2004) lauded modest partnerships, stating that they were able to lead to a quantum leap in logistics. Such a leap can be occasioned by candid information exchange and proper coordination. A lot of effort is put into creating strategic partnerships between business concerns. It is only proper that they be effective in meeting their objectives. Strategic partnerships between banks and telecommunication firms in provision of mobile banking services have been found to be of use to the customers who use the service. First, it has become easy for the customers to make financial transactions using mobile telephone technology. Kenya is a country that has had a rapid spread of mobile banking growth. M-Pesa is one of the mobile

banking products that have put Kenya on a quick pedestal towards growth of the banking sector. Jack & Suri (2011) observed that mobile banking has benefitted the users through the services of remittances, payments, savings and sending money. This observation fortifies the argument that the strategic partnership between mobile phone firms and banks in provision of mobile banking services have been of benefit to the customers. The strategic alliance between banks and telecommunication firms in mobile banking is of value to customers and the firms. The alliance adds value to the consumers as well as to the capital invested into the firms. (Laukkanen & Lauronen, 2005). In Kenya, adoption of electronic and mobile banking has been on the rise since introduction of mobile telephones in late 90s. Banks and mobile telecommunication firms have entered into strategic partnerships to provide mobile banking services (Gikandi & Bloor, 2010).

5.4 Conclusions of the study.

From the findings of this study, mobile banking is a significant contributor to performance of commercial banks. This therefore means that banks need to take more interest in mobile banking. They need to address the issues that lead to low uptake of this service by customers, optimize on the enormous potential of mobile banking and synchronize their systems with those of mobile banking to ensure full integration of this service and thus enjoy the benefits brought about by mobile banking. It is clear that mobile banking is the next platform for superior banking service offering. The banks should utilize the mobile banking channels as much as possible the reason being that is where business is heading.

5.5 Recommendations of the study.

1. This study therefore recommends that strategic partnerships have benefits in major ways and that this concept should be employed by similar organizations in order to survive and sustain their operations in the competitive environment. Employee experiences should be motivated to stay longer in their organizations in order to promote the mutual strategic partnerships. Moreover, all areas of strategic partnership should be given equal importance for all benefits to be enjoyed by all stakeholders. Currently mobile telephone firms enjoy more of cost and product related benefits while banks enjoy more of the market related benefits. All stakeholders should get mutual benefits. On the other hand, for the partnerships' prosperity, the organizations need to invest a lot on new technology and

innovations to prevent any system breakdown.

2. On mobile banking security the study recommends that although there are a number of information security standards available, an organization can only benefit if those standards are implemented properly. Security is something that all parties should be involved in. Senior management, information security practitioners, IT professionals and users all have a role to play in securing the assets of an organization. The success of information security can only be achieved by full cooperation at all levels of an organization, both inside and outside. Mobile bank marketing the study recommends that; mobile banking solutions are among the top services that banks and credit unions are looking to promote. A report from eMarketer explores methods and media financial marketers can use to raise awareness and increase adoption of their mobile services. Because mobile banking tools are often marketed to existing customers, banks and credit unions tend to rely heavily on “owned media “for example, corporate website, social media channels, and inside the online banking firewall.

3. About mobile banking marketing an institution can adopt some options more than others to gain mass market. For instance, Gavin Michael, head of digital at Chase, told eMarketer that they market the bank’s mobile app in branches, on the bank’s website, and through a variety of company-owned social media properties.” Marc Warshawsky, a mobile solutions exec at BofA, takes a similar approach, using a mix of traditional, digital and in-branch marketing tactics. According to eMarketer, Bank of the West’s traditional advertising agency built an integrated campaign, including marketing online, on TV, and ATM screens. Intercept ads (interstitials) pushing mobile tools are shown to users as they log out of the bank’s online banking platform

4. Objective four which talks about mobile banking costs. On mobile banking transactional the study recommends the charges should be affordable according to Mallat (2007), the cost of a payment transaction has a direct effect on consumer adoption if the cost is passed on to customers. Transaction costs should be low to make the total cost of the transaction competitive. The transaction costs of sending money through the mobile payment technology are lower than those of banks and money transfer companies. The should also ensure that the channels are up and running 24 hours 7 days a week, efficient

and effective as when required by the customer. If the bank gets the channels right considering all factors in place then the sky will be the limit for the growth of the institution.

5.6 Suggested areas for further research

1. The study report recommends that much research be done to establish if the return on the investment is equivalent to the huge investments required to set and run mobile banking systems.
2. Further research should be done on how to harmonize the mobile banking transactional charges to make it affordable and still offer quality services.
3. And finally more research should be done to determine how to make mobile banking platform more secure since huge sums of money pass through the platform.

REFERENCES

- Anyasi, F. I. & Otubu, P. A. (2009). Mobile Phone Technology in Banking System: It's Economic Effect, Research Journal of Information Technology, and Vol. 1 (1), pp. 1-5.
- Almazari, A. A. K., & Siam, A. Z. (2008). E-Banking: An Empirical Study on the Jordanian Commercial Banks. Journal of King Abdul-Aziz University 22(2), 3-26
- Athanasoglou P., Delis M. & C. Staikouras (2006). "Determinants of Banking Profitability in the South Eastern European Region," Bank of Greece Working Paper 06/47.
- Bourke, P. (1989). Concentrating and other determinants of banks profitability in Europe, North America and Australia, Journal of Banking and finance 13, pp. 65-79.
- Bradley L. & Stewart K (2003)"Delphi Study of Internet banking", MCB UP Limited pp. 272-281.
- Benamati, J. S. (2007). Trust and distrust in online banking: Their role in developing countries. Information Technology for Development, 13(2), 161-175.
- Bitner, A. & Hubert, J. (1994), Improving service quality in America: lessons learned, Academy of Management Executive, Vol. 8 No.2, pp.32-52.
- Cracknell, D. (2004). Electronic banking for the poor—panacea, potential and Pitfalls small Enterprise Development, 15(4), 8-24.
- Coleman, J. S. (1988). Social capital in the creation of human capital. American Journal of Sociology, 95-120.
- Cracknell, D. (2004). Electronic banking for the poor—panacea, potential and Pitfalls small Enterprise Development, 15(4), 8-24.
- Donner & Tellez (2008). —mobile banking and economic development: linking adoption, influence, and use, Asian Journal of communication, (184), 318-322.
- Datta.A..Pasa.M..& Schniker. T. (2001). Could mobile banking go global? The

McKinsey Quarterly, I (4), 71-80

Sohail, M.S., & Shanmugham, B.E-b. (2003). E-banking and customer preferences in Malaysia: an empirical investigation. *Information Sciences*, 150, 207-17.

Ernst & Young (2010). *Mobile Money: An Overview for Global Telecommunication Operators*.

Furst, Karen, William W. Lang, & Daniel E. Nolle (2002). "Internet Banking: Developments and Prospects," *Economic and Policy Analysis Working Paper 2000-9*, Office of the Comptroller of the Currency (September).

Geertz, C. (1978). The bazaar economy: Information and search in peasant marketing. *American Economic Review*, 68(2), 28-32.

Granovetter, M. (1985). Economic action and social structure: the problem of embeddedness. *American Journal of Sociology*, 481-510.

Hernando, I. and Nieto, M. J. (2005), —Is the Internet Delivery Channel Changing Banks.

Horst, H. (2006). *The Cell Phone: Anthropology of Communication*. Berg: Oxford.

Huysman, M. (2004). *Social capital and information technology*. Cambridge.

Ivatury, G., & Pickens, M. (2006). *Mobile phone banking and low-income customers: Evidence from South Africa*. Washington, DC: Consultative group to assist the poor (CGAP) and the United Nations Foundation

InfoDEV. (2006). *Micro-payments and their application to mobile networks*. Retrieved on 20th September 2008 from <http://infodev.org> at 10:00 am.

Jayawardhena C., Foley P. (2000) "Changes in the banking sector-the case of internet banking in the UK", *Internet Research: Electronic Networking Applications and Policy*, vol.10, n.1, pp. 19-30.

- Jenkins, B. (2008). *Developing Mobile Money Ecosystems*. Washington, DC: IFC and the Harvard Kennedy School.
- Jack, William, Tavneet Suri and Robert Townsend (2010), *iMonetary Theory and Electronic Money: Lessons from the Kenyan Experience*, *Economic Quarterly*, 96(1), First Quarter.
- Kombo, D. K. & Tromp, D. L. A. (2006)'. *Project and Thesis Writing: An Introduction*. Paulines Publications' Africa, Nairobi.
- Karjaluo, H. (2002). Selection criteria for a mode of bill payment: Empirical investigation among Finnish bank customers. *International Journal of Retail & Distribution Management*. *International Journal of Retail & Distribution Management*, 30(6), 331-339.
- Kombo K & Tromp L. (2006) *Project and Thesis Writing, an introduction*. Nairobi: Pauline publications
- Laukkanen, T. A. (2005). Consumer value creation in mobile banking services', *Int. J. Mobile Communications*, Vol. 3.
- Lee, K. S., Lee, H. S. & Kim, S. Y. (2007), Factors Influencing the Adoption Behavior of Mobile Banking: A South Korean perspective, *Journal of Internet Banking and Commerce*, Vol. 12 No. 2, 2007,
- Modelling Adoption of Mobile Money Transfer: A Consumer Behaviour Analysis*. Aalborg, Denmark.
- Mugenda, O.M. & Mugenda, A.G. (2003). *Research Methods Qualitative and Quantitative Approaches*. Nairobi: ACTS Press.
- Nzongang, T. & Atemnkeng, J. (2006). *Market Structure and Profitability Performance in the Banking Industry of CFA countries: The Case of Commercial Banks in Cameroon*.

- Ndiwalana, A., & Popov, O. (2008). Mobile Payments: a comparison between Philippine and Kenya contexts. In P. Cunningham, & M. Cunningham (Ed.), IST-Africa 2008 Conference Proceedings. IIMC International Information Management Corporation.
- Ontunya, P.N. (2006); A survey of Consumer Adoption of mobile phone banking in Kenya. Unpublished MBA project report, School of business, University of Nairobi MBA.
- Otieno, B. J (2008), Challenges in the implementation of mobile banking information systems in commercial banks in Kenya, Unpublished MBA project report, School of business, University of Nairobi MBA.
- Otieno M. (2006), 'An Investigation into Internet Banking Technology Adoption among Commercial Banks in Kenya' Unpublished MBA project report, School of business,
- Olweny, T. & Shipho, T. M. (2011). Effects of Banking Sectoral Factors on the Profitability of Commercial Banks in Kenya. *Economics and Finance Review*, 1(5), 01-30.
- Porteous David (2006). —Enabling Environment for mobile Banking in Africa,
- Porteus D. (2008), Is M-banking advancing access to basic financial services in Africa? Tobin, P. (2010).
- Porteous, D. (2006). The enabling environment for mobile banking in Africa.
- Simpson, J. (2002). The Impact of the Internet in Banking: Observations and Evidence from Developed and Emerging Markets. *Telematics and Informatics*, 19, pp. 315- 330.
- Smirlock, M. (1985), "Evidence on the (Non) Relationship between Concentration and Profitability in Banking," *Journal of Money, Credit and Banking*, 17, pp.69-83.
- Tchouassi, Gérard. (2012) "Can Mobile Phones Really Work to Extend Banking Services to the Unbanked? Empirical Lessons from Selected Sub-Saharan Africa Countries". *International Journal of Developing Societies* Vol. 1, No. 2, 70-81

Tiwari R. & Buse S, 2006 *The Mobile Banking Prospects: A Strategic Analysis of Mobile Commerce Opportunities in the Banking Sector*, Hamburg University Press, Hamburg.

Scornavacca, E. a. (2004). 'M-banking services in Japan: a strategic perspective', *Int. J. Mobile Communications*, Vol. 2, No. 1, pp.51–66.

SMIRLOCK, M., (1985), "Evidence on the (None) Relationship between Concentration and Profitability in Banking". *Journal of Money, Credit and Banking*.

Sullivan, R. J., (2000). How has the adoption of Internet banking affected performance and risk at banks? A look at Internet banking in the tenth Federal Reserve district, Federal Reserve Bank of Kansas City. *Financial Industry Perspectives* (December), 1–16.

<http://www.nation.co.ke/business/Mobile-money-transactions-hit-1-3trn/-/996/2818178/-/1c5r5z/-/index.html>

<http://www.ey.com/GL/en/Industries/Financial-Services/Banking---Capital-Markets/global-banking--foresights-and-insights-series-vi>

<https://www.centralbank.go.ke/images/docs/Bank%20Supervision%20Reports/Annual%20Reports/BSD2013AnnualReport.pdf>

<http://www.emarketer.com/>

<http://ourmobileworld.org/post/35349373601/what-is-mpesa-how-does-it-work-how-did-it-start>

<http://www.economist.com/node/16319635>

www.bankablefrontier.com/publications.

APPENDICES

APPENDIX ONE: INTERVIEW SCHEDULE FOR THE CUSTOMER

UNIVERSITY OF NAIROBI

QUESTIONNAIRE FOR CUSTOMERS OF STANDARD CHARTERED BANK

Dear Participants

I am a student of University of Nairobi carrying out a research on “THE INFLUENCE OF MOBILE BANKING ON THE PERFORMANCE OF COMMERCIAL BANKS”. The individual responses will be treated with utmost confidentiality and will be for academic purpose only in fulfillment of my research project. I humbly request to take some of your time to fill this questionnaire. Your assistance will be of great value in the success of this research study. Thank you in advance.

SECTION A

Instructions.

Background information (*Please use a tick in the space provided*)



- | | | |
|---------------------------------|----------------|--------------------------|
| 1. How old are you? | Below 20 | <input type="checkbox"/> |
| | 20-29 years | <input type="checkbox"/> |
| | 30-39 years | <input type="checkbox"/> |
| | 40-49 years | <input type="checkbox"/> |
| | 50-59 years | <input type="checkbox"/> |
| | Above 60 years | <input type="checkbox"/> |
| 2. What is your gender? | Male | <input type="checkbox"/> |
| | Female | <input type="checkbox"/> |
| 3. What is your marital status? | Single | <input type="checkbox"/> |
| | Married | <input type="checkbox"/> |

	Divorced	<input type="checkbox"/>
	Widowed	<input type="checkbox"/>
4. Level of education attained?	None	<input type="checkbox"/>
	Primary	<input type="checkbox"/>
	Secondary	<input type="checkbox"/>
	Technical or vocational	<input type="checkbox"/>
	University or college	<input type="checkbox"/>

SECTION B MOBILE BANKING



(Please use a tick in the space provided)

The following statements are intended to evaluate how marketing of electronic mobile banking technology has influenced the performance of commercial banks.

Objective 1

1.	Do you know about Standard Chartered mobile banking services?	Yes	<input type="checkbox"/>	If no skip to 4
		No	<input type="checkbox"/>	

2. Name a service or product that you know

3. Where did you get information about this/these service(s)

4.	Have you ever heard or seen an advert on Stan Chart mobile banking services anywhere?	Yes	<input type="checkbox"/>	<input type="checkbox"/>
		No	<input type="checkbox"/>	<input type="checkbox"/>

5. How often do you hear of these adverts

Daily	
Weekly	
Monthly	
Occasionally	
Never	

6. Where do you hear about the product?

7. Are these adverts done in a language you understand well? Yes

No

8. How would you rate your understanding of the adverts?

Rating	
Bad	
Fair	
Good	
Excellent	

Objective 2

9. Are you registered for mobile banking?

Yes

No

If yes, skip to 11

10. Why you are not yet registered?

11. How would you rate the cost of making a transaction?

Cheap

Fair

Expensive

Unaffordable

12. Does the cost restrict you from using the services?

Yes

No

If No, skip to 14

13. How do you manage these restrictions?

14. How often do you think the cost force you to seek an alternative service provider?

Rarely

Occasionally

Often

Regularly

15. Do you feel that you can easily access the service through your current mobile phone?

Yes

No

16. What challenges do you face when trying to access the service?

Objective 3

17. Have you ever failed to access the system because the system was down? Yes

☐

No

☐

18. How did you manage to meet your transactional needs?

19. How often are the services down?

Rarely

☐

Occasionally

☐

Often

☐

Regularly

☐

20. Have you ever had to follow up on money because a transaction did not complete? Yes

☐

No

☐

21. If yes, how long did it take to solve this problem?	Less than a day	<input type="checkbox"/>
	1-2 days	<input type="checkbox"/>
	2.-5 days	<input type="checkbox"/>
	More than five days	<input type="checkbox"/>
	Never solved	<input type="checkbox"/>

22. Do you think that the service is secure to transfer large amounts of money?	Yes	<input type="checkbox"/>
	No	<input type="checkbox"/>

23. Give a reason for your answer above

Objective 4

24. What mobile network do you use?	Safaricom	<input type="checkbox"/>
	Airtel	<input type="checkbox"/>
	Orange	<input type="checkbox"/>

25. Do you know about?		Yes	No
	Mpesa	<input type="checkbox"/>	<input type="checkbox"/>
	Airtel Money	<input type="checkbox"/>	<input type="checkbox"/>
	Orange Money Transfer	<input type="checkbox"/>	<input type="checkbox"/>

26. Do you feel you feel your money is safe when using?	Safaricom	Yes	No	N/A
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Airtel

Orange

27. Give reasons for your answer above

**APPENDIX TWO: INTERVIEW SCHEDULE FOR THE STANDARD
CHARTERED BANK KENYA STAFF:**

Instructions:

Please answer all the questions objectively and as honestly as possible.

SECTION A: DEMOGRAPHIC DATA

1. What level are you within the organization?

- a. Executive { }
- b. Middle { }
- c. Lower { }

SECTION B: ONLINE BANKING

2. Please indicate the approximate percentage range of customers registered for online banking.

- a. Below 20% { }
- b. 21%-40% { }
- c. 41%-60% { }
- d. 61%-80% { }
- e. Above 80% { }

3. Please indicate the approximate increase or decrease in percentage in profits (KS) that can be attributed to mobile banking: _____

4. How has the introduction of mobile banking influenced the growth in customer base? _____

5. Please indicate the approximate percentage in terms of customers' growth base attributable to mobile banking.

a. Below 20% { }

b. 21%-40% { }

c. 41%-60% { }

d. 61%-80% { }

e. Above 80% { }

6. Do you think the installation cost is high relative to returns? Yes { } No { }

7. Can customers lose money through the mobile banking systems? Yes { } No { }

8. Kindly explain your answer.

9. Have you had any cases of customers losing money from security lapses? Yes { }
No { }

10. Which mobile providers do the bank partner with?

Thank you and May God bless.

**APPENDIX THREE: LETTER OF TRANSMITTAL OF DATA COLLECTION
INSTRUMENTS**

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Dear respondent,

I am a student pursuing Masters of Arts Degree in Project Planning and Management at the University of Nairobi. I am conducting an academic research on the Influence of Mobile banking on the performance of commercial banks.

Kindly note that all the information provided will be used for research purposes only and your identity will be treated as confidential. Answering all the questions faithfully will be highly appreciated.

Yours Faithfully,

Titus Mayieka
L50/82348/2012