

**EFFECT OF PLASTIC MONEY ON THE FINANCIAL
PERFORMANCE OF COMMERCIAL BANKS IN KENYA**

BY

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DECLARATION

This research project is my original work and has not been submitted for a degree award in any other university or college.

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This research project has been submitted with my approval as the university supervisor.

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DEDICATION

This research project is dedicated to my mother, Mary Wafula, who offered unconditional sacrifice, support and prayer during the course of the entire MBA programme. Special dedication goes to my family and friends who have always remained my source of inspiration and desire to excel academically.

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I feel privileged to have had the opportunity to carry out this study as a demonstration of knowledge gained during my study for the master's degree at the University of Nairobi. I am indebted to various people and organizations without whose material support or otherwise, this research would not have succeeded. I take this opportunity to express my sincere gratitude to each of these people. First, I give glory to the Almighty GOD for the grace He showered unto me and for being with me throughout the study.

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Consequently, many thanks to all the other professors who through their lectures impacted knowledge that made this research report possible. In addition, in my literature review, I have cited quite a lot of scholarly publications. Some are from earlier research findings from projects done by other MBA students. I have used scholarly papers from the wider academia. These are works without which I could not have had a scholarly insight into this research. Finally, I express utmost gratitude and special thanks to my family, especially my mother Mary Wafula.

ABSTRACT

The study investigated the effect of plastic money on the financial performance of commercial banks in Kenya, that is; whether plastic money usage increases or decreases the profitability of commercial banks in Kenya. The outcome of the study was intended to enable the banking industry to establish the extent of achievement of the purpose for which plastic money was introduced, and offer information for further strategy formulation and enhancement to their competitive advantage.

The study adopted descriptive survey research design. Secondary data from the Central bank annual reports for all commercial banks in Kenya for the period between 2010 and 2014 was used, together with published reports from previous studies in the same field. Descriptive statistics such as mean score for each variable were calculated. The analysis involved multiple regression of variables under study that is the financial performance represented by net profit, number of plastic cards issued by the banks, number of A.T.M system installations, number of Point of Sale Machines, and transaction value of plastic cards by the banks. The findings of the study were that plastic money has a strong and significant effect on the profitability of commercial banks in the Kenyan banking industry. Thus, there exists positive relationship between plastic money and bank performance. The significance test showed that the influence of plastic money on bank profitability was statistically significant meaning that the combined effect of plastic money in this research is statistically significant in explaining the profits of commercial banks in Kenya.

The study recommends that commercial banks should revise the commission charged on plastic cards. This has the end effect of encouraging consumers to increase the usage of plastic cards. Commercial banks should also collaborate with S.M.E's to install ATM/Credit card machines for use by consumers. Banks should also enhance credit risk management by incorporating high technology to mitigate cases of fraud and credit loss provisions. Further research needs to be carried out on the relationship that exists between money and spending, saving or investment patterns. A study would also be undertaken to show the effects of plastic on money supply.

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LIST OF ABBREVIATIONS

SWW-Second World War

CRD- Credit Cards

ATM-Automated Teller Machine

KCB-Kenya Commercial Bank

SCB- Standard Chartered Bank

VIP -Very Important Person

BBK-Barclays Bank of Kenya

E-cash-Electronic Cash

POS- Point of Sale

CBK- Central Bank of Kenya

ICT- Information Communications Technology

MP- Market Power

SME- Small and Medium Enterprises

CHAPTER ONE

INTRODUCTION

1.1 Background of the problem

Plastic money has its roots in the United States of America and its origins can be traced to the Second World War [SWW]. The evolution of the various types of plastic money as we know them today already begun with the introduction of the vouchers system of payment that was used during the Second World War[SWW]. Here in Kenya the adaption by banks and subsequent use by various consumers has led to the various plastic monies becoming an integral part of the banking system in Kenya. In this study the aim is to focus on the manner in which the plastic money has transformed operations in banks in terms of the revenue that can be attributed to various forms of plastic money and to answer the question “is plastic money a necessary evil”? The various forms of plastic money in Kenya today ranging from Automated Teller Machine cards to credit cards including connect cards have definitely had an impact on banks.

A contrast can be drawn between banks that have a wide range of plastic money to those that have limited or non-existent use of plastic money. Credit and debit card overdraft loans account for one of the highest rates of consumer debt growth. Credit card and debit card lending is based on pre-authorized lines of credit that can be taken down as the consumers take cash or make purchases from merchants who accept credit cards. Plastic money may be held responsible for inflation, huge increase in personal indebtedness, the destruction of the basic virtues of thrift spending and the growth of the acquisitive society. Has this really been good for commercial banks in Kenya? This study aims to fill the gap begging an answer.

1.1.1 Plastic Money

According to Business Dictionary.com, plastic money is a generic term for all types of bank cards, credit cards, debit cards, smart cards, Automated Teller Machine cards and charge cards.

The term is used predominantly in reference to the hard plastic cards we use every day in place of actual bank notes. In detail, plastic money refers to plastic cards for example the credit card. Naim (1995) states that credit card is a contract whereby the card issuer is committed to credit a certain amount of money for someone who is the cardholder in order to meet his or her personal purchases from shops that are associated with the issuer of the card with a contract to accept the fulfillment of cardholder's purchases and that is the final settlement after each specified period. According to (Al- Zubaidi, 2002) credit card was defined as a card that gives the holder the right to deal with many shops that are consistent with the issuer of the card to accept the granting of the credit for the cardholder to pay off his purchases, who will repay the value of purchases to the bank through 25 days from the date of the purchase. The customer pays no interest to the bank for this service if the payment was done during the period but if he or she bears an interest of 1.5% on the remaining balance without a payment, the seller earns a commission of between 3-5% from the seller of the total value of the invoice.

The Automated Teller Machines (A.T.M), works in conjunction with plastic cards. A.T.M is an Electro-mechanical device that permits authorized users, typically using machine-readable plastic cards (ATM cards) to withdraw cash from their accounts and/or access other services, such as balance enquiries, transfer of funds or acceptance of deposits. ATMs may be operated either on-line with real-time access to an authorization database or off-line. Another type of plastic money is the smart card. These store personal, medical and financial information within a computer chip implanted in the card. The financial information may contain a section that will hold a certain shilling value that can be reduced by use, like a debit or charge card, in POS or ATMs. The ATM can re-charge the amount available as the account balances increase. (<http://www.plastic-cards/stale>)

1.1.2 Financial Performance

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. Some useful measures of financial performance are coined into what is referred to as CAMEL. The acronym "CAMEL" refers to the five components of a bank's condition that are assessed: Capital adequacy, Asset quality, Management, Earnings, and Liquidity. A sixth component, a bank's sensitivity to market risk was added in 1997; hence the acronym was changed to CAMELS,(Gilbert, Meyer and Vaughan 2000).

One of the benefits banks derive from electronic banking products and service delivery for example the use of credit cards, debit cards, A.T.M cards, is improved efficiency and effectiveness of their operations so that more transactions can be processed faster and most conveniently, which will undoubtedly impact significantly on the overall performance of the banks. Despite the potential benefits of ICT and e-commerce, there is debate about whether and how their adoption improves bank performance. There are positive impacts of e-banking on bank turnover and profitability and to a lesser extent on employment, most notably when e-commerce is part of larger business strategies of bank. The use of plastic money can contribute to improved bank performance, in terms of increased market share, expanded product range, customized products and better response to client demand. It continues to influence banks activities and their income structure. Among the activities that may be subject to stronger pressures for change are those that, up to today, have remained relatively insulated from ICT developments. This applies mainly to some retail banking activities that are suitable for standardization, and also to developments in remote banking Kariuki, (2005).

1.1.3 The Banking Industry In Kenya

According to the Central Bank of Kenya annual report as at 31st December 2012, the banking sector consisted of the Central Bank of Kenya, as the regulatory authority, 44 banking institutions (43 commercial banks and 1 mortgage finance company -MFC), 5 representative offices of foreign banks, 8 Deposit-Taking Microfinance Institutions (DTMs), 2 Credit Reference Bureaus (CRBs) and 112 Forex Bureaus. Out of the 44 banking institutions, 31 locally owned banks comprise 3 with public shareholding and 28 privately owned while 13 are foreign owned. The 8 DTMs, 2 CRBs and 112 forex bureaus are privately owned. The foreign owned financial institutions comprise of 9 locally incorporated foreign banks and 4 branches of foreign incorporated banks. As indicated in the CBK reports, local banks dominate Kenyan banking sector in terms of numbers, and account for 66.6% of the sectors total net assets, while foreign owned banks account for 33.4%.(Market intelligence, 2005).

In Kenya, The Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by the Central Bank of Kenya (CBK), govern the banking industry. The banking sector was liberalized in 1995 and exchange controls lifted. The CBK is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system. The CBK publishes information on Kenya's commercial banks and non-bank financial institutions, interest rates and other publications and guidelines. The commercial banks have come together under the Kenya Bankers Association (KBA), which serves as a lobby for the commercial banks' interests and addresses issues affecting its members (Kenya Bankers Association Annual Report, 2008).

Any development initiative from the commercial banks requires the endorsement of the monetary authority, CBK. Key developments emerging from Kenyan commercial banks include Free ATM Usage by BBK in 2010, Diva Account by SCB in 2007, and launch of Islamic products by BBK in 2005 among others. Looking at commercial banks in Kenya, they have exponentially embraced the use of information and Communication Technologies which plastic money is dependent on, both in their service provision and as a strategy to ensure their survival.

They have invested huge amounts in implementing the self and virtual banking services with the objective of improving quality of customer service. Digital-based financial services have made significant contribution in covering the cost of offering financial services. As the banking fraternity continues to make forays into the retail segment of the market, it is becoming more paramount that customers must be given value for their hard earned deposits.(Market intelligence, 2005).

1.1.4 Effect of Plastic Money on The Financial Performance of Commercial Banks In Kenya

According to Padwal 1995, commercial banks assaulted by the pressure of globalization and competition from non-banking functions must find new ways to add value to the services. The question “what drives performance?” is at the top in understanding superior performance and hence striving for it. Substantial research efforts have gone into addressing this question, starting from the strategic level and going down to operational details. Banking is no longer regarded as a business dealing with money transaction alone, but it also seems as a business related to information on financial transaction. Several innovative services such as Automated Teller Machines (ATM), Internet banking, Smart cards, Credit Cards, Mobile banking, Phone banking, Anywhere-Anytime banking have provided a number of convenient services to the customer so as the service quality improves, the probability of customer satisfaction increases. Increase in customer satisfaction in turn increases the mutual understanding, customer retention and a bond of trust between the customer and bank. The banks which are providing these services at large extent to customers are more reputed in the eyes of customers. But at the same time technology based product is different in public and private sector banks.

Plastic money is an improvement over traditional banking system because it has reduced the cost of transaction processing, improved the payment efficiency, financial services and the banker-customer relationship. (Sathye, 1999).

Adoption of plastic money leads banks providing for bad debts, this is because there is no clear framework in Kenya to follow up credit card defaulters thus some customers take advantage on this. It also leads to fraud in card business. Fraudsters come up with counterfeit cards whereby sometimes they successfully manage to steal from the banks. Issuers rather than individual cardholders bear the initial cost of fraud. (A.F. Cook - 1990) An example of a fraud is the “Salami technique.” This involves the slicing of small amounts of money from a computerized transaction or account. The sliced amounts are then re-routed to the perpetrators accounts If computer hackers or other criminals were to break into ATMs machines, they could instantaneously filch the electronic wealth of thousands or even millions of innocent consumers. (Information Systems and Audit Control Association – 2005).

1.2 Statement of the problem

A relationship exists between plastic money and the financial performance of commercial banks in Kenya. Banks have received plastic money as an opportunity to boost performance. According to the US based Business Weekly money can boost a bank’s earnings by up to 14%. Several researchers agree that commercial banks have promoted the use of plastic money because it overcomes the following problems:

For a long time banks have been characterized by long queues in the banking hall. This has been costly in terms of time spent to serve a customer and also cost incurred for hiring Tellers to handle the large numbers. The unfriendly requirement that individuals only bank at their branches limited individuals’ access to their cash and other facilities thus denying banks interest income.

The lack of direct interconnectivity between banks and other retail outlets denied banks an opportunity to expand customer base through electronic fund transfer. Costs associated with wear and tear of notes and coins have led to additional expenditure to Central Bank in printing new notes and coins over the years. Plastic money usage is expected to increase the profitability of commercial banks, as the plastic card is a very convenient mode of purchasing goods and very acceptable mode of payment in merchant outlets hence more profits to the banks through the interchange fees paid by the merchants, late payment charges to the customers, annual fees, card renewal fees and the interest charges to the customers.

Recent local studies relating to this research include; Odhiambo (2012) did a research on credit cards and performance of commercial banks portfolio in Kenya and particularly Migori town. The study sought to determine the relationship between adoption of credit cards and credit card holder's satisfaction and to establish whether adoption of credit cards has improved commercial banks performance. The results showed that credit cards have contributed positively to satisfaction of credit card holders and adoption of credit cards improved commercial banks revenue. This was a more specific study hence the need to carry out study on the effect of all plastic money on the financial performance of all commercial banks in Kenya. According to Fransiscar Kyalo, 2014, in her study on effect of credit card usage on financial performance of banks, she found that there was 0.612 coefficient of determination between credit card usage and performance of commercial banks in Kenya. She recommends that commercial banks should revise the interest rates charged on credit cards to boost credit card usage. This was a more specific study hence the need to carry out study on the effect of all plastic money on the financial performance of commercial banks in Kenya. Hannington Odhiambo (2013) of The University of Nairobi M.B.A project found that e-banking including credit and debit cards, and A.T.M cards has a strong effect on the profitability of commercial banks in Kenya. He found statistical significance between e-banking and profitability. Highly profitable banks adapted quickly to innovations, thus recommendation to management to adapt quickly to e-banking. Odhiambo, H (2013). The effect of electronic banking on financial performance of commercial banks in Kenya.

Though related to the topic of study, this was an umbrella coverage hence the need for specific study in relation to effect of plastic money on the financial performance of commercial banks. Kariuki Joan of The University of Nairobi, in her M.B.A Project research, finds that new product development impacts positively on the financial performance of commercial banks in Kenya. However, there was no statistical significance to her findings and she recommends further research. Wanjiru, J.K (2012). The effect of product development on the financial performance of commercial banks in Kenya.

It is in light of the above problems that this study attempts to underscore the important roles that plastic money has played in boosting banks' performance in Kenya. What is the effect of plastic money on the financial performance of commercial banks in Kenya? This study seeks to answer the questions of whether plastic money has had a positive impact or negative one on the aspect of growth in relation to commercial banks. This study attempts to answer the research question: To what extent has the adoption of plastic money boosted commercial banks' earnings in Kenya?

1.3 Objectives of the study

The main objective is to determine the impact of plastic money on the financial performance of commercial Banks in Kenya. The research objective is to establish the extent to which the adoption of plastic money has boosted commercial banks' earnings in Kenya.

1.4 Significance of the study

This study will enable the banking industry to establish the extent of achievement of the purpose for which plastic money was introduced and offer information for further strategy formulation and enhancement to their competitive advantage.

This study may enable other service industries to see the effects of strategy formulation and implementation to the challenges brought about by changes in the environment they operate. It may also encourage the adoption of plastic money within their setting.

To scholars, this study will provide another practical example on the effect of formulation of strategy marketing plan and their implementation to meet the challenges they face from the changing environmental factors as they pursue their objectives. It will also generate and allow for formulation of specific hypothesis and thereby offer them basis for further research.

This study will benefit management consultants as they ponder on development of tools for management and quantification of the impact of plastic money.

CHAPTER TWO-LITERATURE REVIEW

2.1 Introduction

This section discusses literature on plastic money theories and empirical findings on the effect of plastic money on the financial performance of commercial banks in Kenya. The chapter reviews the various studies that are relevant to plastic money usage and commercial banks performance. It also presents the relevant theories that explain the plastic money usage and organizational performance.

2.2 Theoretical Review

2.2.1 Transaction Cost Theory

This was developed by Schwartz (1974) and it states that suppliers may have an advantage over the lenders in checking the real financial position or the credit worthiness of the clients. In relation to plastic money and specifically the credit card usage, the bank is in better position to know the credit worthiness of a cardholder by evaluating the six months statements and the pay slip at the point of application of a credit card. The bank can also decide to review the credit limit of the cardholder by assessing how the customer has been using the credit card and how the customer has been making the payment. Trade credit may reduce the transaction costs of paying bills, according to Ferris (1981).

Rather than paying bills every time goods are delivered, a buyer might want to cumulate obligations and pay them only monthly or quarterly. This will also enable an organization to separate the payment cycles from the delivery schedules. There may be strong seasonality in consumption patterns for a firm's products. In order to maintain smooth production cycles, the firm may have to build up large inventories. This has two costs: the cost of warehousing the inventory and the costs of financing it. The firm could lower the prices in order to affect early sales but there could be menu costs in doing this as well as a loss in discretionary ability. By offering trade credit selectively, both across customers and over time, the firm may be able to manage its inventory position better (Emery 1987).

In relation to plastic money, different card products in the bank are due for payment in different dates during the month. This will make the customer choose a card product which is convenient as far as making payments is concerned. The bank will divide the payment cycles within the course of the month so as to utilize the available funds from the customer.

2.2.2 The Efficiency Theory

Anthanasoglou et .al. (2006) came up with the efficiency hypothesis which posits that banks earn high profits because they are more efficient than others. There are two distinct approaches within the efficiency; the X- efficiency and Scale-efficiency hypothesis. According to the X-efficiency approach more efficient firms are more profitable because of their lower costs. Such firms tend to gain large market shares which may manifest in higher levels on market concentration but without any casual relationship from concentration to profitability .The scale approach emphasizes economies of scale rather than differences in management or production technology. Large firms can obtain lower unit cost and higher profits through economies of scale. This enables firms to acquire large market share which may manifest in higher concentration and then profitability

In relation to plastic money, firms that adopt plastic money and use it appropriately will benefit greatly from the large market share which comes about as a result of higher market concentration.

2.2.3 Agency Theory

According to Jensen and Meckling (1976) described the agency relationship as a contract in which a person (principal) hires a second person, the agent, to perform an action. The principal will delegate the decision making authority to the agent. Jensen and Meckling (1976) began by assuming that each party to the contract consistently chooses those actions that are likely to satisfy their own interest. Although an agent's motivation may include the desire to work hard to achieve the principal's goals, he may also be motivated by desire to maintain the prestige or perquisites associated with the job.

For the case of plastic money usage, the bank is the principal and the plastic cardholder is the agent. The bank expects the cardholder to make use of the card properly making purchases using the card and repaying it on time. This is because it will be the way the bank can increase the asset levels through the commission they are paid by the merchants and the interest the cardholder pays at the end of the month. The cardholder also expects the bank to advise him/ her on any changes done on the card terms, making sure that the card can be used and that it is properly maintained.

2.3 Review of empirical studies

Several empirical studies have been conducted concerning plastic money usage and the performance of commercial banks. In Kenya, the first general charge card was launched in 1967 by the Diners Africa Ltd. Ten years later, commercial bank of Africa launched the VIP check guarantee card. However plastic money in Kenya is considered to have reached the take off stage after mid 1990s, when banks and non – bank companies launched different types of cards. In June 1985 allied cards Ltd launched a general charge card called senator. In 1986 the merchant card was launched. In September K.C.B launched its cheque guaranteed card .In the same month the standard launched guarantee service charge and was introduced into the money card market. Barclays launched its VIP cheque guarantee scheme in October 1987. Royal edit ad introduced a general snatch card and a credit card in 1989 namely the royal card and the royal credit respectively. In 1990 BBK launched a general charge card, the Barclay card. During this same period several private cards were launched. Professor Aosa, (1992)

Total Oil and Esso fuel cards were introduced in 1987 managed by Diners club .In the same year shell and B.P cards were introduced managed by allied cards. The Caltex star card fuel cards for Caltex petrol were launched in 1989 managed by Royal Card Company developed world. This rapid growth of card companies shows that plastic money spending is a fast growing trend in Kenya. An increasing number of middle and high income sophisticated and affluent Kenyans find it safer, convenient and more prestigious to use plastic money rather than cash. It is regarded today as a sign of individual and corporate success.

Initially the pioneer banks installed them as part of their strategic moves towards obtaining sustainable advantage over their competitors. It was to enable them achieve their objective of profit maximization. Professor Aosa, (1992)

Edith Cowan University of California Los-Angeles studied the impact of cards on banking operations. Her study revolved around the smoothing of operations by plastic cards to banks. Her findings indicated a reduction in the number of teller transactions as well as improved efficiency in overall banking operations, illustrated by lower costs incurred in transactions.

According to Douglas Wood (Manchester Business School 2003), he summarized revenue streams for card issuers. He said that card profitability comprises seven potential sources of income; annual card fees charged to card holders, cash withdrawal fees, income from interest charged on outstanding balances which are rolled over, income from proceeds emerging from the use of the card abroad, commissions received from acquiring banks (interchange income) and other sources of income such as printing additional statements. These potential income sources emphasize the fact that plastic money has a positive impact on profitability of banks.

According to Graham Reginald 2001, most new card entrants have experienced high level of customer disloyalty because once the introductory offer ended customers switched to other issuers. But even with a flood of new entrants during the 1990s Barclay card kept its defection at below 5% per annum. Defection rates for established participants were low thanks to the inertia of bank customers, which was historically high. Even for credit cards were the formalities of changing suppliers as minimal customer retention rates were also high historically.

Muriu (2007) conducted a study on a survey of challenges facing the growth of plastic credit and debit cards in Kenya. A sample of 30 cardholders was taken. Data analysis method used was content analysis for the cardholders and qualitative analysis for card issuer manager. The study found out that marketing is limited for example products like the credit card are not a mass product. Vetting of new entrants in the credit card is very restrictive.

The study also found out that customers do not apply for credit cards because they fear debt, some are risk averse and others fear fraud for both credit and debit cards .

Mutua (2010) carried out a study on the key success factors and bank strategy in the credit card industry: a survey of commercial banks issuing credit cards in Kenya. He studied 12 commercial banks. The research used primary sources of data since the objective was to identify the perception of commercial banks issuing credit cards on key success factors and establish the extent to which they have a related strategy for factors identified. Descriptive statistics were used to transform the data collected into standard form for relative comparison. The study found out that the key success factors that were very important in influencing customer use of bank products and service were service quality, technology, marketing, human resources, pricing, finance and research and development.

Makio (2010) conducted a survey on the factors affecting the use of credit cards: a case study of Post bank employees. Data was obtained from 23 staff from other departments and from post bank card Centre. Data collection was facilitated through a questionnaire and the respondents were made up of 52% male and 48% female. The study found out that top management has credit cards while majority of middle management and lower management do not have credit cards. The survey also found out that factors affecting the use of credit cards were credit card fraud, awareness creation, complaints on the predetermined issues like merchant service commissions fees and the credit card system in the bank among many other factors.

Kibe (2013) carried out a study on the effect of credit card default on the financial performance of the Kenya Commercial Bank. The independent variables were number of accounts closed, non-performing loan and bad debts written off and the depended variables were Earnings per Share, Dividends per Share, Loans to customers, total assets and customer deposits. The research findings were that Gold card holders are the majority of the cardholders in KCB at 56%. Further majority of the cardholders are men with a proportion of 53% and women 47%. In terms of revenue, although gold card has the highest number of card holders (56), it only contributes 33% of the revenue collected through credit cards. In terms of credit card default, 100% of all the holders of local credit cards are defaulters.

This research concluded that the proportions of credit card holders, revenue collected as well as the amounts and proportion defaults from credit cards vary between different types of cards.

Over the period of 1991 and 2001 the volume of credit card transactions grew by 9% per annum while debit card transactions grew by 31% in the United Kingdom. Outstanding balances on the other hand tripled between 1993 and 2001. (Bernado Batiz-Lazo, London South Bank University).

2.4 Financial Performance

Performance is the outcome of all the organization's operations and strategies (Wheelen & Hunger, 2002). Organization's performance is very essential to management as it is an outcome which has been achieved by an individual or a group of individuals in an organization related to its authority and responsibility in achieving the goal legally and conforming to the morale and ethic. Financial performance emphasizes on variables related directly to financial report. Company's performance is evaluated in three dimensions: company's productivity of processing inputs into outputs efficiently; profitability dimension or the level at which the company's earnings are bigger than its costs and market premium dimension or the level of which company's market value is exceeding its book value (Walker,2001). A study was conducted by Joseph (2013) on determinants of organizational performance by tier three commercial banks in Kenya where he listed the below factors:

The first is Corporate Governance. Christopher (2009) stated that proper governance of companies would become as crucial to the world economy as the proper governance of countries and will converge in associated issues of competitiveness, corporate citizenship, social and environmental responsibility. The governance of banks becomes even more pronounced considering their role of financial intermediation in developing economies. Commercial banks are the main providers of funds to enterprise and where there is a thin or absent capital market, their failure becomes the failure of the system.

Sanda, Mikailu and Garba (2005) examined the relationship between banks ownership and several governance aspects and found out that increasing ownership stakes for hired managers and board improves banks performance.

Another determinant of financial performance is technological advancement .Today's business environment is very dynamic and experiences rapid changes as a result of creativity, innovation, technological changes, increased awareness and demands from customers (Woherem,2006). Business organizations especially the banking industry of the 21st century operates in a complex and competitive environment characterized by the changing conditions and highly unpredictable economic climate with Information and Communication Technology (ICT) is at the center of this global change curve. Abroad opening has been experienced around the world for banks and they are currently taking due advantage of these innovations to provide improved customer services in the face of competition and faster services that enhance productivity (Ovia ,2005).

Firm Size is yet another determinant of financial performance. If the relative size of the firm expands, its market power and profit increases. This is the Market- Power (MP) hypothesis. The hypothesis is also referred to as the Structure- Conduct- Performance (SCP) hypothesis (Athanasoglou *et al.*, 2008). It has been argued that the effect of growing size on the bank profitability is significantly positive to a large extent (Smirklock, 2005). Smirklock (2005) further suggested that the difference in profitability among large and small banks is due to production technologies and outputs, which vary across them. The relative efficiency hypothesis (Clarke *et al.*, 2004) presupposes that larger banks (where size is measured by assets) are more efficient than smaller ones, and are more profitable as a result of this superior efficiency.

2.5 Plastic Money

Automated Teller Machine (A.T.M) is an electro-mechanical device that permits authorized users, typically using machine-readable plastic cards (ATM cards) to withdraw cash from their accounts and/or access other services, such as balance enquiries, transfer of funds or acceptance of deposits.

ATMs maybe operated either on-line with real-time access to an authorization database or off-line. . (www.plastic-cards/stale)

Credit card is a card indicating that the holder has been granted a line of credit. It enables him to make purchases and/or draw cash up to a pre-arranged ceiling; the credit granted can be settled in full by the end of a specified period or can be settled in part, with the balance taken as extended credit. Interest is charged on the amount of any extended credit and the holder is sometimes charged an annual fee. (www.plastic-cards/stale)

Debit Card is a card enabling the holder to have his purchases directly charged to funds on his account at a deposit taking institution (may sometimes be combined with another function, e.g. that of a cash card or cheque guarantee card) Today the purchasing of goods and services is fueled by the ready availability of plastic money.

Charge card is a form of plastic money whereby the holder is allowed an overdraft by the bank on condition of paying the balance in thirty days. This type of credit is one of the oldest forms. Actually the roots go back to the general store days when town people would maintain a charge or tab until their crops or livestock were sold at season end.

Smart cards store personal, medical and financial information within a computer chip implanted in the card. The financial information may contain a section that will hold a certain shilling value that can be reduced by use, like a debit or charge card, in POS or ATMs. The ATM can re-charge the amount available as the account balances increase. (<http://www.plastic-cards/stale>)

A point of sale (POS) terminal is an electronic machine used to process cards for payment of goods and services. The system typically includes a cash register; computer, monitor, cash drawer, receipt printer, customer display and barcode scanner, and a debit or credit card reader. (www.techopedia.com)

2.6 Chapter summery

In conclusion of this review it can be said that the key issue in implementation of plastic money as an additional product to the bank is the satisfaction of their paramount objective of profit maximization. Failure to satisfy this would lead to rejection, inconsistency in adoption and usage of plastic money and the lack of involvement by other industry players like financial institutions, other service providers and customers in these innovations. If fulfilled banks would quickly adopt and will continuously and frequently use it. This we assume would have a positive impact to the banks i.e. increase in revenue, which would mean increased profitability.

CHAPTER THREE-RESEARCH METHODOLOGY

3.1 Introduction

This chapter contains the methodology that was used to conduct the research. It describes the research design, the target population, sample, and data collection and how the data analysis was done.

3.2 Research design

This study used descriptive survey research design. Lavrakas (2008) describes a descriptive survey research design as a systematic research method for collecting data from a representative sample of individuals using instruments composed of closed ended and/or open-ended questions, observations, and interviews. It is one of the most widely used non-experimental research designs across disciplines to collect large amounts of survey data from a representative sample of individuals sampled from the targeted population.

3.3 Target population

According to Mugenda and Mugenda (1999), a population is a complete set of individuals, cases or objects with some common observable characteristics. The population of the study consisted of all commercial banks in Kenya, forty four (44), involved in plastic money use, hence a census, the objective being to determine whether the use of plastic money by the Kenyan banks has boosted their profitability.

3.4 Data collection

The data collection was secondary involving published results of previous studies in the same field, and the Central Bank of Kenya journals and financial statements of various banks was also researched. The data collected covered the period 2010 to 2014.

3.5 Data analysis

This section specifies technique in data collection. Data analysis is the process of packaging the collected information in a form that can be understood by the person who is doing the research. Before analyzing the data it was first edited, coded and entered into excel worksheet, where the researcher used descriptive statistics and regression analysis to analyze the data. This was to ensure accuracy of the data. Frequency tables and charts were used to present the results for easier understanding and interpretation. Thus the study generated both qualitative and quantitative data

3.5.1 Analytical Model

The regression model to be evaluated is:

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + E$$

Where:

Y = Financial performance of commercial banks represented by net profit

B₀ = The constant

B = The correlated volatility of estimated value of Y

X₁ = Number of plastic cards issued by banks

X₂ = Number of A.T.Ms system installations

X₃ = Number of P.O.S machines

X₄ = Transaction value of plastic cards by the banks

E = Error term

The multivariate regression model was used to find the value of B₀ and B which explains the relationship between the dependent and the independent variables.

Under this model, the dependent variable was financial performance which was measured using profitability. The independent variables were; number of plastic cards issued by banks, number of A.T.M system installations, number of P.O.S machines, and the usage level of plastic cards by customers; measured by transaction value of plastic cards by the banks.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter addresses the data analysis and research findings on the effect of plastic money on the financial performance of commercial banks in Kenya and includes research variables, descriptive statistics, tables and regression analysis. The data was collected from secondary sources which were the financial statements and CBK annual reports for the years 2010 to 2014. The data was analyzed using Microsoft Excel 2010 and SPSS.

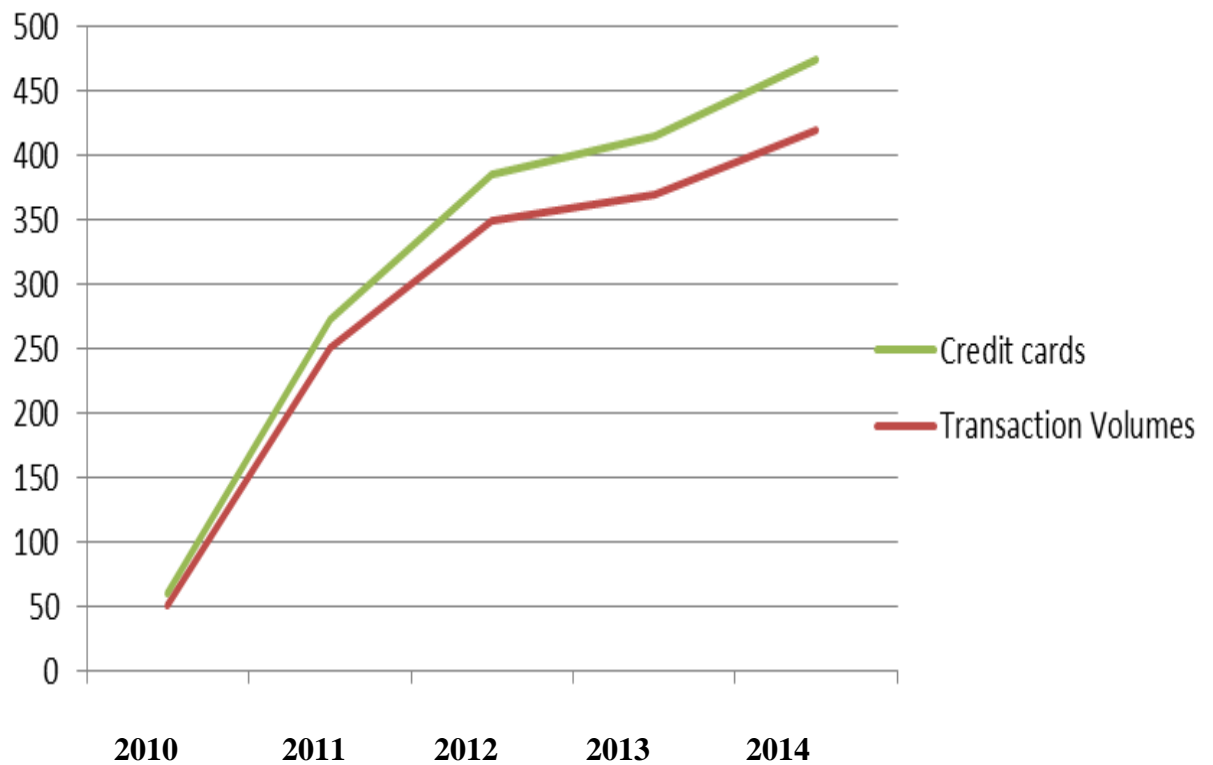
4.2. Variables

There were two variables in the study which included the independent variables and the dependent variable. The dependent variable is the financial performance represented by profitability (net profit). The independent variables of plastic money on the financial performance of commercial banks in Kenya was measured by the number of debit cards/credit cards, prepaid cards/charge cards/ATM cards issued by banks, number of ATMS systems installed by the banks, number of point of sale terminals and the transaction value of plastic cards by the banks.

4.3 Findings

4.3.1 Transaction Volumes and Plastic Cards

Figure 4.1 below shows an increase in transaction volume with an increase in the number of plastic cards issued by the commercial banks. Shopping malls and petrol stations have been installed with A.T.Ms which increases the transaction volumes of plastic cards.



Source: Research Findings

As per the figure 4.1 above, there has been a steady increase in transaction volumes of plastic cards issued by the commercial banks, as the number of plastic cards grows over the last five years of the study.

4.3.2 Descriptive Statistics

Table 4.1 Statistics of variables

Year	Profit after tax (M KES)	No. of plastic cards	No. of ATMs	No. of point of sale machines	Transaction Value (M KES)
2010	2,495.30	7,672,695	2,091	18,179	25,739,794
2011	3,754.75	10,132,799	2,205	16,604	29,472,875
2012	4,970.20	10,730,604	2,381	18,478	29,773,966
2013	5,631.01	11,484,600	2,487	21,089	30,071,705.70
2014	6,374.30	13,926,610	2,613	17,511	30,372,422.80

Source: Research findings

From table 4.1 bank performance was measured by profit after tax over the study period of five years. From the research data, the net profit of commercial banks increased steadily from 2010 to 2014. This study used the number of ATMS installed by commercial banks, number of Credit/Debit/Charge/ATM cards issued, transaction value of plastic cards and number of Point of sale machines installed. These generally indicate financial innovation within the banking sector. The findings show that these have been increasing steadily since 2010 to 2014 and hence contributing to development of the banking industry.

Table 4.2 presents the descriptive statistics and the distribution of the variables considered in this research: financial performance (Y), number of plastic cards (X1), number of ATM installations (X2), number of P.O.S (X3) and transaction value (X4). The descriptive statistic considered were minimum, maximum, mean, standard deviation, skewness and kurtosis.

From the table, financial performance of the commercial banks for the five year period of the study registered a mean of 4,645.1 and standard deviation of 1,539.7. This illustrates that commercial banks generated a net income of KES 4,645.1 for every one shilling invested in assets. However, the value went as high as KES 6,374.3 and as low as KES 2,495.3. On average, the number of plastic cards issued by the forty four commercial banks was 10,789,461 with a maximum number of plastic cards issued standing at 13,926,610. Plastic card transaction value registered a maximum of 30,372,423 and minimum of 25,739,794.

Table 4.2- Descriptive statistics of variable

	Y	X1	X2	X3	X4
Mean	4,645.1	10,789,461.6	2,355.4	18,372.2	29,086,152.7
Standard Error	688.6	1,011,776.2	94.0	751.6	849,898.9
Median	4,970.2	10,730,604.0	2,381.0	18,179.0	29,773,966.0
Standard Deviation	1,539.7	2,262,400.4	210.3	1,680.6	1,900,431.7
Kurtosis	(0.9)	1.1	(1.5)	2.2	4.4
Skewness	(0.5)	0.0	(0.1)	1.2	(2.1)
Range	3,879.0	6,253,915.0	522.0	4,485.0	4,632,628.8
Minimum	2,495.3	7,672,695.0	2,091.0	16,604.0	25,739,794.0
Maximum	6,374.3	13,926,610.0	2,613.0	21,089.0	30,372,422.8
Sum	23,225.6	53,947,308.0	11,777.0	91,861.0	145,430,763.5
Count	5.0	5.0	5.0	5.0	5.0
Confidence Level(95.0%	1,911.7	2,809,141.1	261.1	2,086.7	2,359,697.7

4.4 Regression Analysis

Regression method helped to estimate the unknown dependent variable with the help of several known independent variables.

Table 4.3 Model Summary

Model	R	R Square	Adjusted R Square
1	0.999	0.9801	65535

Source: Research Findings

Predictors: (Constant), Number of Debit cards/Credit cards/ATM cards/Charge cards issued by banks, Number of POS terminals installed, Number of ATMs installed by banks, usage level of plastic cards by customers; measured by transaction value.

Dependent Variable: Profit after tax

Table 4.3 presents the coefficients of model fitness on how plastic money explains bank profitability .The profitability has an overall correlation with plastic money of 0.9801 which is strong and positive. This means that approximately 98% variations from profitability are explained by the plastic money variables at 5% level of significance. The residual, 2%, of the variation is explained by other independent variables not included in the model and the random error term. These indicate good fit of the regression equation used.

Therefore, this is a good indication of the true position that bank performance can be explained by the number of ATMs installed, number of debit cards/credit cards/charge cards and ATM cards issued to customers, number of POSs installed, and transaction value of plastic cards.

ANOVA- Table 4.4

ANOVA			
	<i>df</i>	<i>Sum of Squares</i>	<i>Mean Square</i>
Regression	4	9481147.18	2370286.795
Residual	0	0	65535
Total	4	9481147.18	

Predictors: (Constant), Number of plastic cards issued, Number of ATMs installed, Number of POSs installed, Transaction value

Dependent Variable: Profit after tax

Table 4.4 shows the overall significance of the regression estimation model. It indicates that the model is significant in explaining the relationship between profitability and plastic money at 95% level of confidence. This implies that the regression equation was well specified and therefore the co-efficient of the regression shows that there is a strong relationship between bank performance and plastic money.

Table 4.5 Coefficients

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>
Intercept	16241.82765	0	65535
Plastic cards	0.000136774	0	65535
ATM Installations	7.326834383	0	65535
POS	0.026816339	0	65535
Transaction value	0.00019245	0	65535

Source: Research Findings- At 95% confidence level

4.5 Summary And Interpretation of Findings

From table 4.5, the regression model therefore becomes:

$$Y = -16240 - 0.0002 (X1) + 7.33(X2) - 0.03 (X3) + 0.0002(X4)$$

On table 4.5 the regression coefficients of the predictors are presented. Results indicate that ATMs and transaction value are the most significant in explaining profitability of commercial banks. The profitability of commercial banks would be inversely related at 16242, when plastic money components are held constant. Plastic cards (X1) is inversely related to profitability and therefore a unit increase in the number of plastic cards would lead to a decrease in profitability by a factor of 0.0002. However, this is not significant at 5% level of significance. ATMS (X2) is positively related to profitability and therefore a unit increase of ATMS would lead to an increase in the profitability by a factor of 7.33 and this is significant at 5% level of significance. POS is also inversely related to profitability and therefore a unit increase in POSs would result in decrease in profitability by a factor of 0.03.

Transaction value (X4) is positively related to profitability and therefore a unit increase in transaction value would result in an increase in profitability of commercial banks by a factor of 0.0002. From the analysis, the overall regression estimation of the model is significant at 95% level of confidence. It indicates that the model is significant in explaining the relationship between profitability and plastic money usage. It indicates that plastic money is significant in explaining profitability of commercial banks.

Result of data analysis from chapter four indicated that plastic money has strong and positive relationship with financial performance with determinant of coefficient of 0.9801. This implies that increasing the usage of plastic money will lead to an increase in the financial performance. Regression result from chapter four also indicated that plastic money usage is statistically significant in causing the changes in the financial performance of commercial banks. This is achieved at 95% confidence level. These findings are corroborated by Kyalo F, (2012). In her study of the effect of credit card usage on the financial performance of commercial banks in Kenya, she found that credit card transactions are statistically significant in explaining the financial performance of commercial banks in Kenya.

These findings are also corroborated by Odhiambo, H (2013). In his study on the effect of electronic banking on the financial performance of commercial banks in Kenya, he found from his analysis that electronic funds transfer is significant in explaining profitability of commercial banks with a significance of 0.02. In his study, his electronic bank components comprised of number of ATMS and debit cards issued by the commercial banks, POS machines and the usage level.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This study set out to establish the extent to which the adoption of plastic money has boosted commercial banks' earnings. It was also found out that out of all forms of plastic money, that ranges from charge cards, debit cards, credit cards and smart cards, ATM cards were the most widely used by the banks' customers thus produced the most revenues.

The study investigated the effect of plastic money on the financial performance of commercial banks in Kenya, that is; whether plastic money usage increases or decreases the profitability of commercial banks in Kenya. The outcome of the study was intended to enable the banking industry to establish the extent of achievement of the purpose for which plastic money was introduced, and offer information for further strategy formulation and enhancement to their competitive advantage.

The study adopted descriptive survey research design. Secondary data from the Central bank annual reports for all commercial banks in Kenya for the period between 2010 and 2014 was used, together with published reports from previous studies in the same field. Descriptive statistics such as mean score for each variable were calculated. The analysis involved multiple regression of variables under study that is the financial performance represented by net profit, number of plastic cards issued by the banks, number of A.T.M system installations, number of Point of Sale Machines, and transaction value of plastic cards by the banks. The findings of the study were that plastic money has a strong and significant effect on the profitability of commercial banks in the Kenyan banking industry.

Thus, there exists positive relationship between plastic money and bank performance. The significance test showed that the influence of plastic money on bank profitability was statistically significant meaning that the combined effect of plastic money in this research is statistically significant in explaining the profits of commercial banks in Kenya. The spread or diffusion of plastic money in the banking industry in Kenya can therefore be said to have resulted from the satisfaction that must have been experienced by the venturous who tried out the new idea. In Kenya ATMs, Debit Cards and Credit Cards are capable of generating some income for commercial banks due to the convenience they offer to bank customers. Banks in Kenya have been marketing themselves by showcasing their ATM network across the country with an objective to attract more customers and eventually contribute to bank profits.

5.2 Conclusion

The study results show that plastic money has a big influence on profitability of commercial banks in Kenya. The analysis produced a coefficient of determination of 98% which shows the percentage of variations in profitability which is explained by plastic money. The significant test showed that influence of plastic money on bank profitability was statistically significant. This means that the effect of plastic money in this research is statistically significant in explaining the profits of commercial banks in Kenya. However the statistical significance is different for variables tested. Thus, there exists positive relationship between plastic money and bank performance. Plastic cards lead to lower hard currency holding by banks, as less money is needed by the banks to execute the transactions of their customers.

Moreover plastic cards facilitate electronic processing thus minimizing manual work, which is coupled with errors. Standardized application procedures for loans is enabled by plastic cards; this gets rid of non-qualified loan seekers to get loans, as only those within the required committed level will qualify. Plastic money results to relationship building between banks and their customers leading to customer loyalty and retention. The banks appreciate change that makes them adapt the most relevant technology. Customer retention via round the clock services, as plastic money operations do not have closing time thus customers are allowed unlimited access to their money. Result of data analysis from chapter four indicated that plastic money has strong and positive relationship with financial performance. This implies that increasing the usage of plastic money will lead to an increase in the financial performance. Regression result from chapter four also indicated that plastic money usage is statistically significant in causing the changes in the financial performance of commercial banks.

5.3 Recommendation to Policy and Practice

In terms of Revenue generation, management should put effort to increase the level of performance in the area of plastic money. This is in order to reduce the big discrepancy between expectations and perception. Bank management must re-evaluate their policies regarding the amount of commission charged on plastic money. Emphasis should be put in increasing the range of plastic money services for instance cash deposits, credit transfer services and more than one foreign currency withdrawals. This will go a long way in generating both quantity and quality of services thus generating more revenue.

As pertains to Customer Satisfaction, most users know of the existing services offered by banks. While efforts by banks should still be put into further enhancing their customer satisfaction, the banks emphasis ought to be aimed at delivering a mix of services that will boost customer satisfactions. The banks should now start asking their customers what else they require other than thinking for them. Currently pricing of plastic money services is not a big issue as it is generally accepted that it is not expensive to use the services. However there are a significant number of respondents who still feel that the services are expensive and so remain on the fence. The underlying issue behind this dissident opinion is that these customers are not convinced that they get full value for their money. This ought to be addressed quickly lest over time this number increases to become a big issue.

Commercial banks should also collaborate with SME to install ATM/Credit card machines for use by consumers. Most transaction by consumers takes place at shopping malls and petrol stations. However, the cost of installation and technology might be too expensive for small and medium enterprise. Commercial banks should expand the market segments for consumers who are qualified to use plastic cards. However, both standard and enhanced due diligence should be conducted before issuing cards to consumers. Banks should also enhance credit risk management by incorporating high technology to mitigate cases of fraud and credit loss provisions.

5.4 Limitations of the Study

The study faced the challenge of getting some detailed data because of confidentiality reasons which made the data collection very difficult since most of the commercial banks could not provide the critical information that was required because of fear that competitors could use the information for their own gains.

Another challenge to the study was time as this was an academic work which had to be completed within a limited period of time; this made the research work difficult, because of the limited time.

This study was for a population of all commercial banks in Kenya hence a census study. Since the study generalized all the commercial banks in Kenya, inference from the finding would therefore be general hence misleading for some policy makers interested in specific information.

The study was conducted spanning from the year 2010 to 2014 making a sample size of the time of five years. However, in statistical analysis involving regression requires that the time period should be at least 30 years. This implies that some variables which are significant might not have been significant if a larger sample size was used.

5.5 Areas for Further Research

The study reveals that there is evidence that plastic money has a positive impact on the financial performance of commercial banks in Kenya. Further research needs to be carried out on the relationship that exists between money and spending, saving or investment patterns. This would be beneficial to the study.

A study would also be undertaken to show the effects of plastic money on money supply in Kenyan economy.

This study would boost the study on effect of plastic money on the financial performance of commercial banks in Kenya.

Data for a research of this nature should be sourced from more than two sources. This is because financial institutions do not always reveal their true financial position in the annual financial statements.

Future studies should use a representative sample of the commercial banks in investigating the effect of plastic money on the financial performance of commercial banks in Kenya. Further studies should be conducted using quarterly data to improve on the sample size of the data.

REFERENCES

Kenya Bankers Association Annual Report, 2008

Kariuki, J.W (2012) The effect of product development on the financial performance of commercial banks in Kenya. Unpublished MBA project UoN

Ogare, H.O (2013) The effect of electronic banking on the financial performance of commercial banks in Kenya. Unpublished MBA project UoN

Cooper, D. R., Schindler, P. S.,(1998) ,Business Research Methods 8th Edition

CBK, . "Central Bank of Kenya: Commercial Banks & Mortgage Finance Institutions". Central Bank of Kenya (CBK). Retrieved 2 August 2014.

Slocum & Mathews, (1970) Social class and income indicators of consumer credit

Derrick Mathews M, (1998) the modern ways of banking. Published MBA project, the University of California-Costa mesa.

Ndegwa (1996) Analysis of customer service offered by Kenyan commercial banks. Unpublished MBA project UON

Retail banking research limited. Global plastic money market development of ATMs and CDs. The world market from 1970-2002

<http://www.rbrldn.demon.co.uk/history.htm>

Irons (1994) Managing Service Companies, Strategies for Success

Al-Zoubi, Fayez. (1998, Administrative Control in Business Organisation, 1st Edition, Amman, Jordan.

Addison Wesley Publishing Company

Annual reports and financial statements of Kenyan Banks: CBA, KCB, NBK, BBK, CO-OP Bank

Bellis M, plastic money services

[Http://www.mi.inf.it/www.plastic-cards/stale/history.html](http://www.mi.inf.it/www.plastic-cards/stale/history.html)

Onyango GWA (1999) Credit cards in Kenya; an empirical study on the adoption, growth and marketing strategies of credit cards in Kenya. Unpublished MBA project UoN

Kyalo F, (2014) The effect of credit card usage on the financial performance of commercial banks in Kenya. Unpublished MBA project UoN

Maria, Florica and Catalina (2002). Modern Instruments for Measuring Organizational Performance .Journal of Auditorial Performance and Economics.

Mathews H.L and John W.S (1969). Social Class and Commercial Bank Credit and Usage. Journal of Marketing , VOL 33 (71-78)

Mugenda OM, Mugenda AG (2003). Research Methods: Quantitative and Qualitative Approaches. Nairobi: Acts Press .

Moorie, Rosita, (2004).Credit Card Knowledge ,Attitudes and Practices of College students , Thesis and Dissertation, University of Texas Technology

My FICO.(2012). Credit Stats Retrieved from <http://www.Federalreserve.gov/released/g19/Current/>

Naim , Fayez(1995), Credit Cards, Modern Arab Press, Cairo, Egypt

Nash, R.(1993) Assesing the Riskness and Profitability of Credit Cards. Journal of financial Services Research, 7(2)

Ovia, J. (2005). Enhancing the Efficiency of the Payment System in Nigeria, CBN Bullion, Vol. 29 (1), p.8-18.

Pavel, Christine, and Paula Binkley. (1987). Costs and Competition in Bank Credit Cards. Federal Reserve Bank of Chicago Economic Perspectives XI, no. 2:3–13.

Robert, H. Scott. III, (2005). The determinants of Default on Credit Card, Thesis and Dissertation, University of Missouri-Kansas City

Robert De Young and Tara Rice, (2004). How do Banks Make Money a variety of strategies.

Rotich, B.(2006). Analysis of factors influencing Credit and Default in Kenya: A Case study of Post Bank. School of Business and Economics- Research and Publication. Steve, W.(1995). The Cashless Society, Internal Journal of Retail and Distribution Management Volume:23 issue:7

Sanda, A. U., Mikailu, A. S. & Garba, T. (2005). *Corporate Governance Mechanisms and Firm Financial Performance in Nigeria*, Nairobi: AERC Research Paper 149.

Smirklock, M (2005). Evidence on the Relationship between concentration and Profitability in banking. *Journal of Money, Credit, and Banking*. 17, 69-83.

Soman, Dilip, (1999). *Effects of Payment Mechanism on Spending Behaviour: The Illusion of Liquidity*. Working Paper, Hong Kong University of Science and Technology, Hong Kong.

Uzhegova, O (2010). The Relative Importance of Bank – Specific factors for Bank Profitability in the Developing Economies.

Yacuzzi, E.(2005) A Primer On Governance And Performance In Small And Medium-Sized Enterprises. *Journal of Business Management*, Vol. 2.

Woherem, E. W. (2006). *Information Technology in the Nigerian Banking Industry*. Ibadan, Spectrum.

APPENDIX

COMMERCIAL BANKS IN KENYA

1. ABC Bank (Kenya)
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank Kenya
6. CfC Stanbic Holdings
7. Chase Bank Kenya
8. Citibank
9. Commercial Bank of Africa
10. Consolidated Bank of Kenya
11. Cooperative Bank of Kenya
12. Credit Bank
13. Development Bank of Kenya
14. Diamond Trust Bank
15. Dubai Bank Kenya
16. Ecobank Kenya
17. Equatorial Commercial Bank
18. Equity Bank
19. Family Bank
20. Fidelity Commercial Bank Limited
21. First Community Bank
22. Giro Commercial Bank
23. Guaranty Trust Bank Kenya
24. Guardian Bank
25. Gulf African Bank
26. Habib Bank
27. Habib Bank AG Zurich
28. Housing Finance Company of Kenya
29. I&M Bank

30. Imperial Bank Kenya
31. Jamii Bora Bank
32. Kenya Commercial Bank
33. K-Rep Bank
34. Middle East Bank Kenya
35. National Bank of Kenya
36. NIC Bank
37. Oriental Commercial Bank
38. Paramount Universal Bank
39. Prime Bank (Kenya)
40. Standard Chartered Kenya
41. Trans National Bank Kenya
42. United Bank for Africa
43. Victoria Commercial Bank
44. Housing Finance Ltd

Reference

CBK, . "Central Bank of Kenya: Commercial Banks & Mortgage Finance Institutions". Central Bank of Kenya (CBK). Retrieved 2 August 2014.

CENTRAL BANK OF KENYA

Number of ATMs, ATM Cards, & POS Machines

source: www.centralbank.go.ke

Year	ATMs	ATM Cards	Prepaid Cards	Charge Cards	Credit Cards	Debit Cards	POS Machines	Total Cards
Jun,2015	2,698.00	240,817.00	1,566,074.00	285.00	220,475.00	12,477,834.00	19,259.00	14,505,485.00
May,2015	2,697.00	239,402.00	1,510,361.00	153.00	230,355.00	12,386,636.00	18,711.00	14,366,907.00
Apr,2015	2,671.00	226,952.00	1,436,367.00	126.00	198,893.00	12,350,423.00	17,326.00	14,212,761.00
Mar,2015	2,656.00	221,105.00	1,279,290.00	28.00	214,076.00	12,282,383.00	17,294.00	13,996,882.00
Feb,2015	2,643.00	220,029.00	1,226,603.00	128.00	200,047.00	12,266,529.00	17,345.00	13,913,336.00
Jan,2015	2,632.00	754,670.00	451,944.00	51.00	186,634.00	12,251,979.00	17,487.00	13,645,278.00
Dec,2014	2,613.00	746,620.00	419,258.00	68.00	208,352.00	12,552,312.00	17,511.00	13,926,610.00
Nov,2014	2,609.00	748,476.00	404,865.00	28.00	239,873.00	12,562,173.00	17,015.00	13,955,415.00
Oct,2014	2,596.00	502,862.00	390,355.00	21.00	204,943.00	12,112,926.00	16,627.00	13,211,107.00
Sep,2014	2,595.00	925,598.00	360,114.00	20.00	203,384.00	11,850,146.00	16,143.00	13,339,262.00
Aug,2014	2,597.00	805,909.00	206,579.00	62.00	185,875.00	11,848,742.00	15,963.00	13,047,167.00
Jul,2014	2,602.00	798,232.00	183,694.00	210.00	207,929.00	11,548,046.00	16,201.00	12,738,111.00
Jun,2014	2,618.00	906,908.00	186,064.00	652.00	187,765.00	11,588,007.00	17,395.00	12,869,396.00
May,2014	2,598.00	1,014,432.00	209,400.00	756.00	186,389.00	11,638,981.00	17,315.00	13,049,958.00
Apr,2014	2,609.00	998,904.00	151,218.00	728.00	179,926.00	11,116,734.00	17,340.00	12,447,510.00
Mar,2014	2,595.00	985,649.00	137,203.00	740.00	167,968.00	10,853,117.00	21,868.00	12,144,677.00
Feb,2014	2,507.00	974,148.00	128,872.00	741.00	162,138.00	10,220,766.00	21,647.00	11,486,665.00
Jan,2014	2,501.00	966,871.00	114,582.00	746.00	160,414.00	10,164,145.00	21,436.00	11,406,758.00
Dec,2013	2,487.00	1,708,639.00	73,395.00	750.00	158,612.00	9,543,204.00	21,089.00	11,484,600.00
Nov,2013	2,488.00	1,710,827.00	85,287.00	753.00	179,795.00	9,543,707.00	20,470.00	11,520,369.00
Oct,2013	2,480.00	1,677,485.00	77,959.00	760.00	177,928.00	9,676,371.00	20,569.00	11,610,503.00
Sep,2013	2,478.00	1,671,118.00	53,092.00	764.00	152,041.00	9,503,862.00	20,046.00	11,380,877.00
Aug,2013	2,472.00	1,650,702.00	46,077.00	764.00	137,299.00	9,356,027.00	19,898.00	11,190,869.00
Jul,2013	2,447.00	1,633,318.00	45,029.00	765.00	135,737.00	9,231,819.00	19,638.00	11,046,668.00
Jun,2013	2,439.00	1,625,895.00	34,405.00	772.00	133,137.00	9,126,946.00	19,204.00	10,921,155.00
May,2013	2,426.00	1,604,795.00	30,210.00	772.00	130,763.00	9,103,589.00	18,796.00	10,870,129.00
Apr,2013	2,413.00	1,584,730.00	29,876.00	772.00	129,494.00	9,008,818.00	18,576.00	10,753,690.00
Mar,2013	2,397.00	1,549,961.00	29,463.00	772.00	140,850.00	9,218,609.00	18,350.00	10,939,655.00
Feb,2013	2,404.00	1,543,291.00	30,908.00	772.00	138,963.00	9,849,025.00	18,195.00	11,562,959.00
Jan,2013	2,390.00	1,535,663.00	28,331.00	786.00	138,057.00	9,162,100.00	18,422.00	10,864,937.00
Dec,2012	2,381.00	1,499,035.00	27,558.00	2,095.00	138,011.00	9,063,905.00	18,478.00	10,730,604.00
Nov,2012	2,361.00	1,491,184.00	25,049.00	2,733.00	137,255.00	8,965,252.00	18,435.00	10,621,473.00
Oct,2012	2,339.00	1,484,838.00	22,747.00	2,733.00	134,672.00	8,819,358.00	17,989.00	10,464,348.00
Sep,2012	2,311.00	1,472,902.00	20,769.00	2,733.00	135,221.00	8,649,282.00	17,702.00	10,280,907.00
Aug,2012	2,295.00	1,665,810.00	22,022.00	2,733.00	135,121.00	8,523,104.00	17,589.00	10,348,790.00
Jul,2012	2,283.00	1,647,822.00	21,738.00	2,733.00	132,455.00	8,225,143.00	17,065.00	10,029,891.00
Jun,2012	2,291.00	1,640,004.00	21,399.00	2,877.00	131,397.00	8,121,460.00	16,630.00	9,917,137.00
May,2012	2,282.00	1,598,000.00	21,350.00	2,841.00	131,298.00	8,003,174.00	16,061.00	9,756,663.00
Apr,2012	2,272.00	1,581,844.00	21,089.00	2,838.00	127,554.00	8,102,099.00	16,034.00	9,835,424.00
Mar,2012	2,252.00	1,567,260.00	21,018.00	2,886.00	125,061.00	7,975,167.00	16,395.00	9,691,392.00
Feb,2012	2,236.00	1,533,098.00	21,090.00	2,707.00	125,058.00	7,736,315.00	16,930.00	9,418,268.00
Jan,2012	2,224.00	1,367,822.00	19,969.00	1,319.00	122,650.00	7,909,474.00	16,705.00	9,421,234.00
Dec,2011	2,205.00	1,438,453.00	22,405.00	1,339.00	122,212.00	8,548,390.00	16,604.00	10,132,799.00
Nov,2011	2,186.00	1,249,401.00	22,113.00	1,342.00	120,272.00	7,672,903.00	16,320.00	9,066,031.00
Oct,2011	2,185.00	1,335,866.00	23,383.00	1,351.00	120,701.00	7,322,126.00	15,922.00	8,803,427.00
Sep,2011	2,217.00	1,357,045.00	22,934.00	1,358.00	120,063.00	7,144,094.00	16,209.00	8,645,494.00
Aug,2011	2,208.00	1,420,417.00	22,382.00	1,404.00	118,990.00	7,131,828.00	16,177.00	8,695,021.00
Jul,2011	2,202.00	1,304,114.00	22,038.00	1,390.00	118,100.00	7,073,241.00	15,909.00	8,518,883.00
Jun,2011	2,183.00	1,439,729.00	21,367.00	1,418.00	119,287.00	7,002,176.00	16,714.00	8,583,977.00
May,2011	2,171.00	1,436,091.00	20,800.00	1,431.00	116,724.00	6,924,961.00	16,545.00	8,500,007.00
Apr,2011	2,162.00	1,506,950.00	20,117.00	1,446.00	115,600.00	6,871,502.00	17,060.00	8,515,615.00
Mar,2011	2,151.00	1,352,232.00	19,648.00	1,457.00	114,582.00	6,721,936.00	17,259.00	8,209,855.00
Feb,2011	2,143.00	1,341,800.00	19,036.00	1,474.00	112,433.00	6,247,178.00	17,998.00	7,721,921.00
Jan,2011	2,106.00	1,336,360.00	18,251.00	1,475.00	113,550.00	6,241,071.00	18,313.00	7,710,707.00
Dec,2010	2,091.00	1,348,236.00	18,750.00	725.00	113,192.00	6,191,792.00	18,179.00	7,672,695.00
Nov,2010	2,052.00	1,321,933.00	19,054.00	714.00	113,789.00	5,746,510.00	18,243.00	7,202,000.00
Oct,2010	2,037.00	1,306,185.00	19,641.00	1,129.00	114,058.00	4,617,459.00	19,279.00	6,058,472.00
Sep,2010	2,025.00	1,339,649.00	19,795.00	749.00	114,204.00	4,539,792.00	20,309.00	6,014,189.00
Aug,2010	1,995.00	1,316,350.00	20,115.00	773.00	112,675.00	4,353,272.00	21,805.00	5,803,185.00
Jul,2010	1,973.00	1,271,823.00	19,701.00	802.00	110,788.00	4,256,198.00	21,934.00	5,659,312.00
Jun,2010	1,943.00	1,252,893.00	16,081.00	791.00	111,383.00	4,156,187.00	19,608.00	5,537,335.00
May,2010	1,940.00	1,165,574.00	16,562.00	817.00	110,147.00	4,067,088.00	19,399.00	5,360,188.00
Apr,2010	1,904.00	1,126,793.00	16,803.00	825.00	112,203.00	3,955,160.00	19,753.00	5,211,784.00
Mar,2010	1,887.00	1,090,092.00	17,250.00	844.00	108,345.00	3,894,580.00	18,582.00	5,111,111.00