

**EFFECT OF INTERNAL ORGANIZATIONAL FACTORS ON PERFORMANCE OF
COMMERCIAL BANKS IN KENYA**

BY

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF MASTERS OF SCIENCE IN COMMERCE
(FINANCE AND ACCOUNTING) IN THE SCHOOL OF PUBLIC AND GRADUATE
STUDIES AT KCA UNIVERSITY**

MARCH 2016

DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

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EFFECT OF INTERNAL ORGANIZATIONAL FACTORS ON PERFORMANCE OF COMMERCIAL BANKS IN KENYA

ABSTRACT

Globally and in Kenya, commercial banks play an important role in economic stimulus of the economy as well distribution of growth. Banks channels funds from depositors to investors hence linking economic players of the nation. For this reason, studies seeking to improve commercial banks performance have increased tremendously. However, there is a dearth of studies on the effect of liquidity, capital, costs and operational efficiency on commercial banks' financial performance. This study therefore sought to fill this gap by determining how liquidity management, capital strength, operational efficiency and cost affect commercial banks performance in Kenya. The main objective of this study was to determine the effects of the selected internal factors on performance of commercial banks in Kenya. Specifically the study sought to determine effect of liquidity management, capital strength, operational efficiency and cost on performance of commercial banks in Kenya. The study was based on the neo-classical and efficient structure theories. Descriptive research design was applied in the study. Target population was 42 commercial banks in Kenya. Secondary data was collected for the 42 banks for five years (2010 – 2014). Fixed effects panel regression model and correlation analysis were used in analysis. The findings are expected to inform policy and practice in bank management. The study findings indicate that efficiency and capital adequacy has a significant positive effect on bank profitability while liquidity has a negative effect on profitability. Operating costs have no significant effect on profitability. The study recommends a well-defined policy framework for the management of capital adequacy requirements as banks would be more profitable if they increase their core capital. Further, the study recommends to managers to stabilize their liquidity just above the required legal limit. Lastly, the study recommends banks to optimize their use of resources to ensure that they efficiently utilize their resources and are less wasteful.

Key words: Capital adequacy, liquidity, efficiency, costs, profitability.

ACKNOWLEDGEMENT

I acknowledge the power of the highest God who has seen me through it all. I also thank the entire KCA University fraternity who has always been there to help me during this research. I also thank my supervisor Dr.Tabitha Nasieku who gave me thorough guidance and support throughout my research work. I also thank my entire family and friends who supported me both financially and morally. . I also thank the MSC Commerce class of 2014/2015 who through their exchange of ideas helped me better my research.

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DEDICATION

I dedicate this work to my loving parents, Mr & Mrs. Joseph Mbaya Muguongo Victoria. This work also goes out to my siblings, Eric Mwaki, Judy Gatwiri, James Muriithi and Evans Mwiti and their families. I also dedicate this work to my two best friends, Mercy Kaburu and Rebeccah Kivinda. Thank you for making this possible.

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ACRONYMS AND ABBREVIATIONS

CBK	Central bank of Kenya
CMA	Capital markets Authority
NSE	Nairobi Securities Exchange
POLS	Pooled Ordinary Least Squares
RMP	Relative Market Power
ROA	Return on Assets
ROE	Return on Equity

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Globally and in Kenya, commercial banks play an important role in economic stimulus of the country as well as distribution of growth (Barney, 2011). Banks channel funds from depositors to investors hence linking economic players of the nation. Commercial banks are instrumental to nation building through services they offer such as loan grants, safe custody of funds, exchange of foreign currency and promoting both local and international transactions (Capone, 2010).

For this reason, studies seeking to improve commercial banks performance have increased tremendously (Barney, 2011; Capone, 2010; Chandler & McEvoy, 2010; Cook & Heiser, 2011). Commercial banks operate in the premise of generating income to cover for their operational costs accrued in the course of duty (Capone, 2010). This means that banks must optimally perform to ensure that profit supersedes costs in order for the future of the bank to remain positive and improve stakeholders' confidence and foster country economic growth.

Two fold factors that affect the performance of commercial banks are internal factors and external factors (Chandler and McEvoy, 2010). External factors are stochastic factors that determine individual bank's output (Danny, 2014). External factors are sector-wide or country-wide factors which are beyond the control of the company and affect the profitability of banks. Such factors include as interest rates, inflation, and political stability among others (Barney, 2011). "These factors are beyond the control of a bank's management representing events outside the influence of the bank" (ibid).

Internal factors however, are within banks ability to manage and manipulate. Depending on how they are managed, internal factors will affect individual bank performance positively or negatively. Capone (2012) list these internal factors as capital size, credit portfolio, labour productivity, and state of information technology, risk level, management quality, bank size, ownership among others. This study focuses on internal factors. To be specific, this study will seek to determine how liquidity management, capital strength, operational efficiency and cost affect commercial banks performance.

1.1.1 Internal factors influencing performance

Internal factors are individual bank characteristics which affect the banks performance. These factors are basically influenced by internal decisions of management and the board (Capone, 2012). Cook and Heiser (2011) explain that internal factors are within the mandate of the commercial banks to manipulate to perform and these factors are unique in every bank. Some of the example of internal factors includes capital size, size of deposit liabilities, size and composition of credit portfolio, interest rate policy, labour productivity, and state of information technology, risk level, management quality, bank size, ownership and the like (Chandler and McEvoy, 2010). Other factors are assets management, leverage ratio, operational efficiency ratio, portfolio composition, and cost (Danny, 2014).

Kithinji (2010) explains that internal factors are not static in nature. The author adds that while these factors are within the control of commercial banks to manipulate, they are dynamic in nature and requires require review or assessment in order to respond to any eventuality. This position is shared by Ngetich (2011) who further elucidates that bank internal factors could be influenced by external factors such as economic, social and political stability in the country and therefore must be carefully assessed in that respect.

Ohkubo (2012) opine that how banks internal factors are managed forms and build their identity in the market. “A bank can be known by its customers to be efficient, customer

focused and friendly or risk averse and slow in decision making (Ibid). Nzioka (2007) concluded that while profit is the ultimate goal of commercial banks and all the strategies designed and activities performed thereof are meant to realize this grand objective, the success or failure depends on how internal factors to the bank are managed to realize this sole objective.

1.1.2 The performance of commercial banks in Kenya

Commercial banks in Kenya are classified into three different groups on the basis of the value of bank's assets. Group one commercial banks an asset base of more than Ksh. 40 billion. The group two is commercial banks with asset base between Ksh. 10 billion to Ksh. 40 billion. The third and last group is banks with asset base of less than Ksh.10 billion (Kithinji, 2010).

Okore (2011) states that there are eleven commercial banks in tier group one, eleven commercial banks in tier group two and twenty three commercial banks in tier group three comprising a total of 45 commercial banks. As far as total assets in the banking sector are concerned, commercial banks in tier group one constitutes seventy eight percent, tier group two constitutes fourteen percent as tier three commercial banks constitutes eight percent (Migai, 2010). Currently, there are forty five fully certified commercial banks operating in the country (Central Bank of Kenya, 2015).

The overall financial performance of banks in Kenya in the last two decade has improved. However, commercial banks that structured their institutional factors to target and offer banking services to low end consumers such as Equity Bank and Kenya Commercial Bank have been performing better than banks that target high end market such as Barclays Bank (Danny, 2014).

Best performing commercial banks in the market have also been hailed to have fair credit policies to consumers, risk venture, decentralized management system to customers,

quick response to customer changing banking needs and strong effective customer relations management – which are all success related to effective management of internal factors (Central Bank of Kenya, 2015).

1.2 Statement of the Problem

Institutional internal factors play a very important role in the performance of commercial banks. There is relationship between internal factors and commercial banks performance. Ohkubo (2012) established that commercial banks with credit policies customers perceived favourable performed better than the ones that do not. Ongore (2013) also found that commercial banks with well designed management structure which responds to customers needs and complains as well as have developed close working relationship with depositors performed better than the ones that do not. It is therefore suffice to conclude that commercial banks performance and success is pegged on effective internal factors management.

A critical review of empirical studies indicates that there are foreign studies focused on effect of internal factors on commercial banks financial performance (Cook and Heiser, 2011). Further, Derbali (2011) established that there is a negative correlation between liquidity and commercial banks performance levels. In the case of Kenyan based studies, Ngetich (2011), Kithinji (2010) and Musyoki (2011) focused on internal factors on commercial banks financial performance but none of them paid attention to liquidity management, capital strength, operational efficiency and cost as their independent variables. Ongore (2013) focused on liquidity management, capital strength and management efficiency but did not incorporate cost as part of his variable. Furthermore, Ongore's work was so broad and covered also macroeconomic factors to commercial banks financial performance.

Liquidity management, capital strength, operational efficiency and cost are the major factors that affect commercial banks financial performance (Ohkubo, 2012). These are key variables that require effective management by the commercial banks in Kenya in order to

realize profits. As Capone (2012) opines, performance success in the banking industry rely on the ability of the individual bank to effectively and efficiently manage internal factors such as liquidity, capital, credits and operational efficiency. However, there is a dearth of studies on the effect of these factors on commercial banks' financial performance as most of the studies reviewed focus on macroeconomic factors. This study therefore seeks to fill this gap by determining how liquidity management, capital strength, operational efficiency and cost affect commercial banks performance in Kenya.

1.3 Research Objectives

1.3.1 General objective

The main objective of this study was to determine the effects of selected internal factors on performance of commercial banks in Kenya.

1.3.2 Specific objectives

These are the specific objectives this study sought to fulfill.

1. To determine effect of liquidity management on performance of commercial banks in Kenya.
2. To assess the effect of capital strength on performance of commercial banks in Kenya
3. To examine the effect of operational efficiency on performance of commercial banks in Kenya.
4. To ascertain the effect of cost on performance of commercial banks in Kenya.

1.4 Research Hypothesis

The study tested the following null hypotheses;

H1: Liquidity management has no effect on performance of commercial banks in Kenya.

H2: Capital strength has no influence on performance of commercial banks in Kenya.

H3: Operational efficiency has no effect on performance of commercial banks in Kenya.

H4: Cost has no effect on performance of public commercial banks in Kenya.

1.5 Justification of the Study

For commercial banks in Kenya to remain in operation, they must perform and be productive to earn profits that help them meet short term and long term goals and responsibilities. This study is therefore significant as it seeks to determine how selected internal factors such as liquidity management, capital strength, operational efficiency and cost affect the performance of commercial banks in Kenya. This will provide commercial banks in Kenya with informed decisions on how to improve their performances.

1.6 Limitations of the Study

Due to deadline posed on submission and completion of this study, time constraint was a major issue in this study. Availability of data was challenging as data for five years was sought and the time was barely enough to collect all the data required.

In order to undertake the research study, financial resources were required for coordinating activities, source for literature materials, printing and binding services among others. This research study was accomplished despite limited finance due to researchers' economic situation. While this may have adverse effect on study progression and outcome, the researcher sought to counter this through effective budgeting.

1.7 Basic Assumptions of the Study

This study assumed that there are specific internal factors that affect the performance of commercial banks in Kenya. It is based on this assumption that this study sought to establish the effect of liquidity management, capital strength, operational efficiency and cost on

performance of commercial banks in Kenya. It is also assumed that all factors remained constant from start to the end of the study.

1.8 Scope of the Study

This study sought to investigate the effects of selected internal factors on performance of commercial banks in Kenya. Independent variables were liquidity management, capital strength, operational efficiency and cost were used to assess the performance of commercial banks in Kenya. The target population was 42 operational commercial banks in Kenya. The study was undertaken for a period of six months from April 2015 to October 2015.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers the theoretical orientation which explains the relationship of neo-classical theory and efficient structure theory to the study. It also covers the empirical review which focuses on past studies that review the link between liquidity management, capital strength, operational efficiency and cost and performance of commercial banks. This section covers summary and research gaps as well as conceptual framework.

2.2 Theoretical Orientation

A theoretical framework is a collection of interrelated concepts, like a theory but not necessarily so well worked-out (Kothari, 2004). Peil (2003) explains that theoretical framework guide research, determine what things to measure, and what statistical relationships to look for. Theoretical framework is obviously critical in deductive, theory-testing sorts of studies (Mugenda and Mugenda, 2003). In those kinds of studies, the theoretical framework must be very specific and well-thought out. This study used neo-classical theory and efficient structure theory to support the study.

2.2.1 *Neo-classical theory*

Technical efficiency is derived from its neo-classical theory of a firm which assumes profit maximizing behaviour. A bank can technically be inefficient for technical reasons due to poor training or poor human capital levels of managers and subordinates. Diffusion of new technology is not instantaneous and some banks may lag behind others in the acquisition and utilization of new technology. Due to further training and update of capital, the bank can move towards efficient frontier (Honohan, 1997). As Derbali (2011) posits, the X-inefficiency is not caused by the variability of skills or the time variability of technology diffusion but by the use and organisation of such skills and technology.

The production approaches recognize that bank is producer of diversified financial services. The services are for depositors and borrowers and include not only intermediation services, but also rather other financial services that can be charged from non-interest earning account (Makiyan, 2003). In the same approach, the number of deposits and loan accounts added to the number of financial transaction logged over a period of time can be taken as the appropriate definition of output and the input is purely labour and fixed assets. Thus, total costs would only cover operational costs and interest costs are excluded (De Grauwe, 2008).

The bank efficiency tends to produce results using the intermediation approach. This is because balance sheet and income account data is more readily available than what can be required for production approach. Economists generally accept the principle of rational focused when analyzing banks utilizing the neo-classical theory of the firm (Bonfim, 2009). Approaches of such kinds make it possible to use traditional economic measures of efficiency thus inputs, outputs, cost constraints among others.

Though, in reality, commercial banks operate under uncertainty and imperfect information. This signifies that commercial banks should not be assessed on the basis of traditional efficiency measures alone and that assessing the overall performance requires assessing both efficiency and risk factors. In this study, operational efficiency was deemed to be one of the main determinants of efficiency. This align with the neo-classical theory which elucidates that commercial bank may be technically inefficient for technical reasons such as poor training or poor human capital levels of managers and subordinates, or because of the use of inferior or outdated technology (De Grauwe, 2008).

2.2.2 Efficient structure theory

Efficient structure theory was first coined by Demsetz in 1973 as an alternative to explanations put forward by market structure-performance in relationship to efficiency hypothesis (Bibow, 1995). The hypothesis posits banks which operate more efficiently than

its competitor's gain much higher profits due to low operational costs. Consequently, the differences at the level of efficiency can create unequal distribution of position within the market and an intense concentration. The fact that efficiency holds market structure and performance, the positive relationships between the two may seem superficial (Aver, 2008).

As a key factor of competitiveness, efficiency nowadays receives multidimensional interests based on the coexistence of well-defined capacities and skills making up an inter-related set which cannot be minimized nor neglected for value of one or the other (De Grauwe, 2008). It therefore follows that the bank should be skilled in five knowledge sets, and has the talent to reinforce the training process and the relational network. The bank should also master sense of prediction and selection and rely on human capital (Derbali, 2011). It cannot go without saying that the cost shrinking is no more the objective itself and in that organizations are seeking adjustment of costs to quality and to products volumes in order to be efficient.

Honohan (1997) view of efficiency hypothesis holds that market share is a proxy for efficiency. The scholar opines that efficiency hypothesis prevails when a substantial positive correlation between market share and profitability is signalled. The approaches implicitly assume that higher market concentration is the main source of market power. Ongore (2013) however criticizes this approach contrary considering that direct source of market power is in the domination of participants over the individual market which is independent of the ultimate sources of such a domination thus thereby the emergence of the relative market power (RMP) hypothesis. In unique, commercial banks with large market share and diversified products might exert their market power to determine prices and make profits. To that effect, under the RMP hypothesis, individual market share can accurately determine market power and market imperfections. Put in the banking perspective, this hypothesis elucidates that those commercial banks which operates more efficiently than their competitors

gains higher profits resulting from low operational costs. Such banks also hold significant market share.

2.3 Empirical Review

Empirical review deals with the critical analysis of past studies that have been carried out regarding internal factors on performance of commercial banks. The discussion below critically evaluates the selected internal determinants that influence commercial banks performance.

2.3.1 Liquidity management

Liquidity is measured as ratio of cash and cash equivalents over total assets (Aver, 2008). High liquidity allows commercial bank to avoid costly borrowing of funds when the need for cash arises. However, in addition, Bonfim (2009) elucidates that there is also an opportunity cost that commercial banks incur as a result of not investing the cash available to generate returns. Consequently, the sign could appear to be positive.

According to Bibow (1995), insufficient liquidity is one of the main reasons of commercial banks fail. However, despite that, holding liquid assets offer an opportunity cost of higher returns. Aver (2008) found a positive substantial link between bank liquidity and performance. In times of instability though, commercial banks may choose to increase their cash holding to mitigate risks. Unlike Bibow (1995), Derbali (2011) concluded that there is a negative correlation between liquidity and commercial banks performance levels.

Honohan (1997) opine that adequate level of liquidity is positively related to commercial banks profitability. The common financial ratios that reflect liquidity position a commercial bank as Honohan holds it are customer deposit to total asset and total loan to customer deposits. However, other researchers use different financial ratio to measure liquidity. For example, Kithinji, (2010) uses cash to deposit ratio to measure the liquidity level of banks Malaysia. However, a study undertaken in China and Malaysia established that

liquidity level of commercial banks had no relationship with the performances of banks (De Grauwe, 2012).

Musyoki (2011) explains that liquidity risk indicator is measured by bank net loans to total assets or a percentage of assets that comprise the loan portfolio. The author posits that high ratios could be an indicative of better bank performance due to possible increase in interest income. However though, very high ratios can also reduce liquidity and increases the number of marginal borrowers that default. This is considered as bank activity mix and important proxy for overall level of risk undertaken by banks to the extent that different sources of income are characterized by different costs and volatility (Bonfim, 2009).

Irsova and Havranek (2010) study of banks in (80) countries established that those with relatively high non-interest earning assets are in general less profitable. This shared by Capone (2012) that explains that commercial banks that rely on deposits for their funding are also less profitable out of the fact they require extensive branch network, and other expenses that are incurred in administering deposit accounts. For that reason, the effect to bank performance of this variable could be mixed.

Cook and Heiser (2011) posits that commercial banks performance is affected by banks internal factors which relate to the specific characteristics such as bank size, capital adequacy, liquidity risk and cost and so on. Juma (2014) explains that depending on how banks managers their internal factors, such factors can lead to bureaucracy, prolonged decision making and cost escalation that hinder effective performance of commercial banks.

2.3.2 Capital strength

According to Cook and Heiser (2011), capital is one of the banks specific factors that have effect on its performance. Chandler & McEvoy (2010) define capital as the amount of own fund available to support the bank's business and act as a buffer in case of adverse situation. Commercial banks capital creates liquidity for the bank as a result that deposits are most

fragile and prone to bank runs. Furthermore, it is explained that the greater the bank's capital, the reduction in chances of distress (Athanasoglou et al. 2005). This is not without drawbacks though, it induce weak demand for liability and the cheapest sources of fund. Capital strength is the level of capital required by commercial banks to enable them overcome the costs, market risks and operational risks they are exposed to and absorb potential loses and protect the bank's debtors (Chandler and McEvoy, 2010).

Several studies indicate that commercial banks with higher levels of capital perform better than their counterparts with poor capital strength (Barney, 2011). Capone (2010) postulate that there is a positive relationship between a greater equity and performance among commercial banks. Cook and Heiser (2011) similarly indicate a positive link between equity level and commercial banks performance. Chandler and McEvoy (2010) support the prior finding of positive relationship between capital/asset ratio and bank's earnings.

Danny (2014) explains that capital strength is measured on the ground of capital adequacy ratio. Capital strength ratio indicates the internal strength of the commercial bank to withstand losses during crisis. Barney (2011) puts it; capital strength ratio is directly proportional to resilience of the bank to crisis situations. This also has a direct effect on the performance of commercial banks in determining its expansion to risky but profitable ventures (Nzioka, 2007).

The capital level of commercial banks in this study is explained by a ratio of total equity over total assets – *capta*. Well capitalized commercial banks have lower perceived risk and as per finance theory, should produce lower returns (Okore, 2011). Contrary, commercial banks with a higher level of capital are perceived as having a safety net just in case of liquidation. This is supported by Danny (2014) that explains that banks insured from bankruptcy also enjoy a lower cost of capital contributing to their performance. According to Migai (2010), well-capitalized bank has more flexibility to pursue emerging opportunities

and deal with unpredicted losses and thus become more profitable. Thus, capital to assets ratio is an endogenous internal variable for determining commercial banks performance (Kithinji, 2010).

As Chandler and McEvoy (2010) elucidates, the environment in which commercial banks in Kenya operates is so volatile and dynamic hence requires continuous review of internal factors to improve performances. Furthermore, some of commercial banks specific performance determinants such as capital, liquidity and credit management carry with them a lot of risks that entail that commercial banks must be strategic in their management approach to remain efficient and productive (Okore, 2011).

2.3.3 Operational efficiency

Operational efficiency is another key internal factor that influences commercial banks performance. Operational efficiency is represented by different financial ratios such as total asset growth, loan growth rate and earnings growth rate (Cook & Heiser, 2011). However, suffice to say, this is one of the complexes subject to capture with financial ratios. Furthermore, operational efficiency in managing operational expenses is another dimension for management quality. Performance of management is often illustrated qualitatively through subjective evaluation of management systems such as organizational discipline, control systems, quality of staff and so on (Jason, 2006).

Migai (2010) posit that the capability of management to deploy resources efficiently in income maximization and reducing operating costs is always measured based on financial ratios. One such ratio used to measure management quality is the operating profit to income ratio (Kithinji, 2010). According to Bonfim (2009), the higher the operating profits to total income the more the efficient management is relating to operational efficiency and income generation. The other vitally important ratio is the expense to asset ratio. The operating expenses ratio to total asset is negatively associated with performance. Management quality

thus, determines the level of operating expenses and in turn affects performance (Athanasoglou et al., 2005).

Bonfim (2009) explain that efficiency not only improve profits, but could lead to market share gains leading to increased concentration so that the result of a positive relationship between concentration and profits could spurious result due to correlations with other variables. Derbali (2011) however contrary argue that increased concentration is not the result of managerial efficiency, but reflects increasing deviations from competitive market structures which lead to monopolistic profits.

Honohan (2012) indicate that operating inefficiencies appears to be the core determinant of high bank spreads in Sub Saharan economies. Naceur and Omran (2014) also found out that administrative and other operating costs affect the prevalence of high spreads of commercial banks. Musyoki (2011) established positive relationship between better quality management and performance in Kenyan commercial banks. This internal variable could therefore have a positive or negative impact on commercial banks performance. Positive effect will translate to better quality management at reduced costs while negative effect translates to higher inefficiency levels at higher costs.

Nasieku, Kosimbei and Obwogi (2013) studied intermediation efficiency and how it influenced productivity of commercial banks in Kenya. The study applied the Data Envelopment Analysis (DEA) which is a non-parametric approach to analyze intermediation efficiency in the commercial banking sector. Moreover, Malmquist Productivity Index (MPI) was applied to measure productivity growth of commercial banks in Kenya. The study established that efficiency increase by commercial banks was observed in 2008. This was in form of cost-cutting and application of technology. However, in 2009, commercial banks reported a decline in efficiency due to increase in nonperforming loans which was due to Kenya's 2007/2008 post election violence. and increase in non-performing loans in 2009

after the crisis caused a more sustained decline in bank efficiency. It is also found that in 2009 there was high technological improvement in the banking industry with large banks showing increase in technological innovations by the largest percentage as compared to medium and small banks. Nonetheless the large decline in bank output in the same period resulted into a decline in bank productivity. In general the results show that though the banks in Kenya have a high efficiency score they need to improve in their scale of operations so as to be fully efficient. The study established that during the study period, commercial banks increased in their total productivity which coincided with technological development over the study period.

2.3.4 Costs

As banks operate, they incur costs in form of administrative costs, transaction costs, opportunity costs among others (Musyoki, 2011). A study by Musyoki (2011) investigating the impact of cost management on the financial performance of commercial banks in Kenya established that commercial banks that reduced their costs of operation, have efficient management structure and have better working credit policies performed well compared to banks loaded with management inefficiencies and bureaucracy.

Another study by Ngetich (2011) focusing on the empirical analysis of the commercial banks efficiency and performance in Kenya concluded that banks with effective and efficient management, credit lending policy, credit portfolio, labour productivity, information technology, risk and quality management could perform twice better than banks where such internal factors are poorly managed or not aligned with organization goals and objectives

Makiyan (2003) observe the banks costs of operation determine their level of performance. "Costs influences the expenses which cut the on the profitability of a firm. Thus costs negatively affect banks profitability and performance" (Bonfim, 2009). Ngetich (2011)

explains that for commercial banks in Kenya to be able to realize significant performance in their operations, they must device ways of cutting costs while maximizing how to improve profitability.

Kithinji (2010) explains that in the wake of high cost of doing business for financial institutions, only banks that nurture good management skills and expertise to cut down on the cost will realize a boost in their performance. Migai (2010) adds that issues such as lean management, flat organization structure, organization culture and individual institutional policies determine whether a bank performs or not in the banking sector in Kenya. This is supported by Musyoki (2011) that established that commercial banks in Kenya with lean organization structure, unbloated workforce and capable to make timely financial decisions were the best performance in the Kenyan financial market.

Banks operating costs as percentage of its profits are expected to have a negative correlation with performance. In the literature, the level of operating expenses is viewed as an indicator of the management's efficiency. For example, Ongore (2013) in his study concluded that operating costs have a negative effect on profit measures despite their positive effect on net interest margins. The inclusion of bank expenses into the performance is also supported by Ngetich (2011) and Kithinji (2010) who find a link between bank performance and expense management.

2.4 Summary and Research Gaps

From past studies reviewed, it is evident point out that several scholarly works on the determinants of bank performance in various parts of the world had been undertaken. However, the limitations of past studies were that most of the studies relied on panel data set which only 17 focused on one specific variable (e.g. Bonfim, 2009; Derbali, 2011; De Grauwe, 2012) as opposed to the current study that established the effect of four bank specific characteristics.

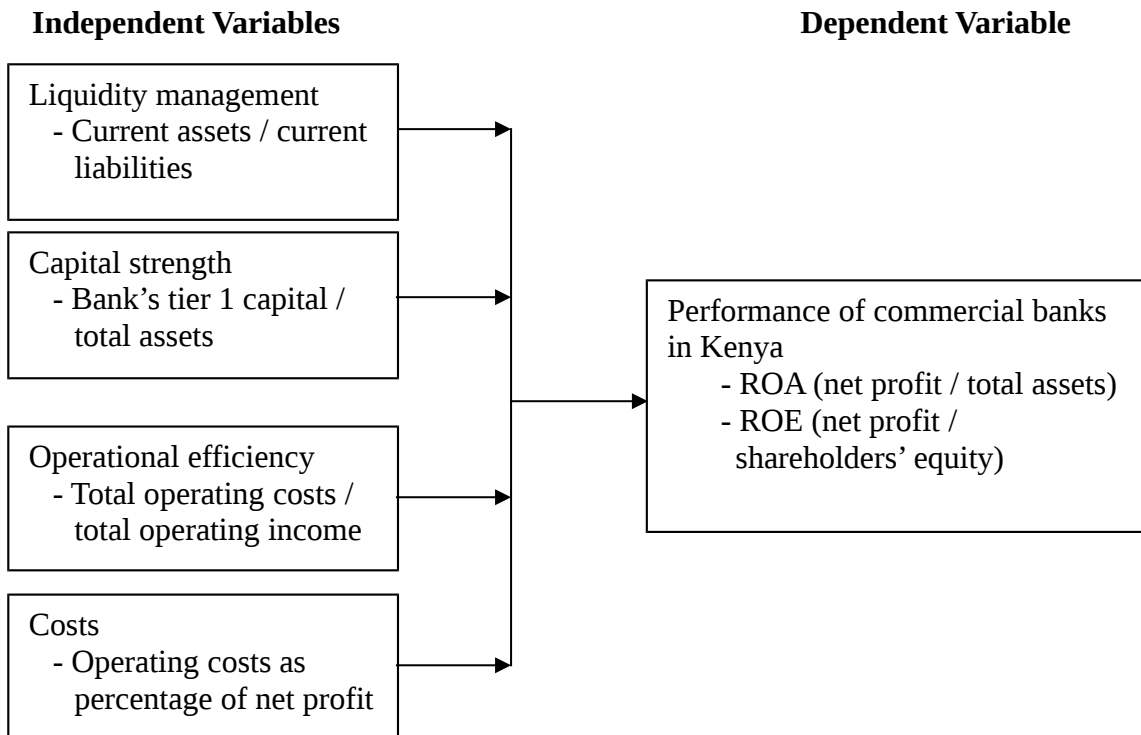
Moreover, other previous studies such Barney (2011), Chandler and McEvoy (2010) and Ongore (2013) have focused on macroeconomic variables and their effect on performance of commercial banks. The current study focused on bank specific factors since these are better determinants of variability in performance as they are diverse among the different commercial banks.

Lastly, previous studies reviewed had differing findings. For instance Aver (2008) found a positive substantial link between bank liquidity and performance while Derbali's (2011) study established a negative correlation between liquidity and commercial banks performance levels. Such differing findings necessitate a study in the Kenyan context to establish how internal factors in a bank influence its performance.

2.5 Conceptual Framework

A conceptual framework is a chart that explains the main things to be studied in conception. It provides the idea on establishing the relationship between the dependent and independent variables. It provides the primary model that provides the basis on deciding on the research question and objectives, and methodology to be followed in order to solve the phenomenon under investigation (Kothari, 2004). The conceptual framework that guided this study is presented in Figure 1.

FIGURE 1
Conceptual Framework



The performance of commercial banks in Kenya relies on how banks manage its internal independent factors such liquidity management, capital strengths, operational efficiency and costs. The study sought to establish the effects of organizational internal factors on performance of commercial banks in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the procedure that was followed in carrying out the study. It contains the research design, the target population, sample selection, data collection, variable measurement, data analysis techniques and statistical tests.

3.2 Research Design

Descriptive research design was used in the study. Descriptive research design describes data and characteristics about the phenomena as they exist. Descriptive studies generally take data and summarize it in a useable form. This was appropriate for the study as it sought to describe the internal factors of the commercial banks and relate these factors to performance. According to Mugenda and Mugenda (2003), the method appropriately enables the researcher to analyze the objectives tentatively and also the validity and reliability of the results is increased.

3.3 Population

Target population in the study includes the commercial banks in Kenya. There were 42 operational commercial banks in Kenya as of June 2015 (Central Bank of Kenya, 2015). All the 42 commercial banks that had been registered and regulated by the central bank of Kenya were considered in the study.

3.4 Sampling Technique

The study used a census approach to pick all the 42 commercial banks in Kenya since the population was not large. The census method was applied since the population was small ($n < 100$). Mugenda and Mugenda (2003) notes that when the population of study is not large, there should be no sampling applied as this would increase sampling error. They therefore observe that sampling should not be applied for populations with less than 100 members.

3.5 Data Collection

Secondary data was collected for the 42 banks for five years (2010 – 2014). Data relating to current assets, current liabilities, Tier 1 capital, total assets, total operating costs, total operating income and profit level for the 42 commercial banks was sought. This data was gathered from capital markets authority, Central Bank of Kenya reports, annual financial statements of commercial banks and the websites of the commercial banks.

3.6 Measurement and Operationalization of Variables

The independent variables in the study were liquidity management, capital strength, operational efficiency and costs. Liquidity in the study was measured using the current ratio which is derived by dividing current assets with current liabilities. Capital strength was measured using the ratio of tier 1 capital to total assets. Operational efficiency was measured using the Cost to Income ratio (total operating costs / total operating income). Costs were measured with a ratio of total costs to net profit. Two measures of performance were applied: ROA and ROE. Return on assets is indicated by net profit as a percentage of total assets while ROE is net profit as a percentage of shareholders' equity. This is as indicated in Table 1.

TABLE 1
Operationalization of Variables

Variable	Measurement
Liquidity management	Current assets / current liabilities
Capital strength	Bank's tier 1 capital / total assets
Operational efficiency	Cost to Income ratio (total operating costs / total operating income)
Costs	Operating costs as percentage of net profit
Performance	ROA (net profit / total assets) ROE (net profit / shareholders' equity)

3.7 Data Analysis

The reviewed empirical studies and theories indicate that bank specific internal factors can have an influence on performance. To establish the effect of internal factors on performance of commercial banks, the study applied either pooled ordinary least squares (OLS) regression which combines both time series and cross-sectional factors in the model or the panel regression model. To determine which of the two models was appropriate for the data, Breusch-Pagan LM test was used.

Beck and Katz (2005) noted that in data that has observations across space and over time panel data model or Pooled OLS can be applied. The advantage of pooled OLS regression in the current study was that it captures not only the variation of what emerges through time or in commercial banks, but the variation of these two dimensions simultaneously.

The pooled OLS regression equation is:

$$Y = \beta_0 + \beta_i X_{it} + e_{it} \dots\dots\dots(i)$$

Where

Y – Represents performance of commercial banks in Kenya (ROE and ROA).

X_{it} – Represents the independent variables

e – Was error term

The panel data regression model has either the random effects (RE) and the Fixed effects (FE). A Hausman test was conducted to establish the best model to use for the data between the fixed or random effects model. The fixed effects model of the panel analysis method assumes that all or some of the explanatory variables are correlated and hence assumes that there are effects that are time independent which may have correlation with one

or all of the independent variables or regressors. This therefore assumes different intercepts for each entity but constant gradient for each regression line for all the entities under consideration. However, the model assumes that though the intercept for the different entities may be different, the intercepts do not vary significantly over the study period.

The equation for the fixed effects model becomes:

$$Y_{it} = \alpha_i + \beta_i X_{it} + u_{it} \dots\dots\dots(ii)$$

Where

α_i = (i=1....10) intercept for each entity.

Y_{it} is the dependent variable (ROA) where i = bank and t = time.

X_{it} represents independent variables (liquidity management, operational efficiency, capital strength and cost).

B_i is the coefficient for the IV,

u_{it} is the error term

Conversely, the random effects model allows for individual effects. It assumes that the independent variables and entity specific effects in the model are independent and are not correlated with each other. This model therefore allows the entity specific effects to play a role as independent variables.

The equation for the random effects model becomes;

$$Y_{it} = \alpha + \beta X_{it} + u_{it} + \varepsilon_{it} \dots\dots\dots(iii)$$

Where

α is the unknown intercept for all banks.

Y_{it} is the dependent variable (ROA) where i = bank and t = time.

X_{it} represents independent variables (liquidity management, operational efficiency, capital strength and cost).

β is the coefficient for the IV,

u_{it} is the between-entity error

ε_{it} is the within-entity error

Before analyzing the data using the Pooled Ordinary Least Squares or panel data model, there were diagnostic tests that were done including test for multicollinearity, serial correlation and heteroscedasticity. These tests were conducted to ensure that the data was fit for the regression model selected and hence the estimators and coefficients were reliable. Further, quality and reliability of the data was ensured by only applying data from audited financial statements or from reports published by CBK, CMA or the NSE.

CHAPTER FOUR

FINDINGS AND DISCUSSION

4.1 Introduction

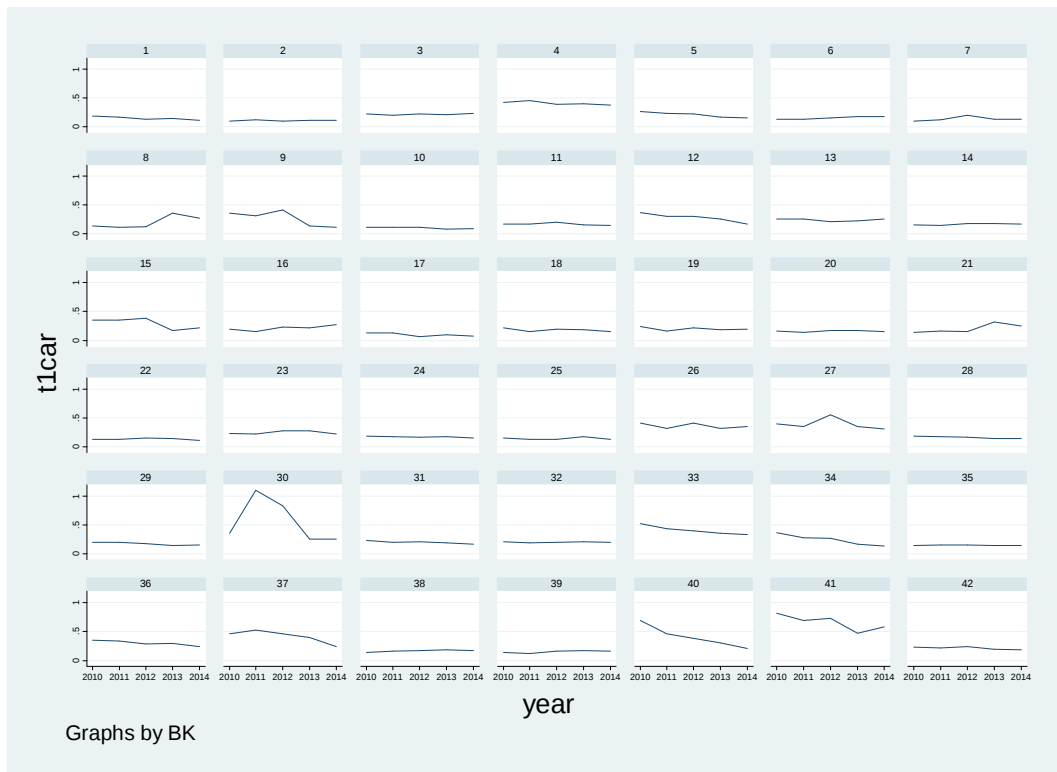
This chapter presents the results of the study based on the objectives and research hypotheses presented. It analyzes the variables involved in the study and estimates their relationship. In the first section, data description and analytical procedure is presented. The analysis of data through the selected model and the discussion of the results are then presented. The purpose of the study was to determine the effects of internal organization factors (liquidity, capital strength, efficiency and costs) on the performance of 42 commercial banks in Kenya.

4.2 Descriptive Statistics

In this section, descriptive analysis is performed on each variable using Stata statistical software. The trend line for the six variables namely tier 1 capital asset ratio (T1CAR), liquidity ratio (LR), Operating cost to operating income ratio (CIR), operating cost to net income ratio (OCNPR), ROA and ROE were computed for the five year period for each company. Figures 2 to 7 present the trend lines for the six variables under study. These trend lines provide a clear indication of the changes that took place over the five years for the 42 banks. The trends were used to provide a comparison of the 42 banks and also indicate the presence of time related fixed effects.

Results presented in Figure 2 have trend lines for the tier 1 capital to asset ratio for the 42 banks (BK). The figure indicate that most of the commercial banks had this ratio almost constant over the years except some significant changes over the years for banks 8, 9, 30, 37, 40 and 41. These results indicate that most of the banks had almost similar trend lines indicate that there were insignificant time related fixed effects that occurred during the study period.

FIGURE 2
Trend of Capital to Asset Ratio



Results presented in Figure 3 indicate that the trend lines for cost to income ratio for the 42 commercial banks for the five year period. The figure indicates that cost to income ratio did not have significant changes for most of the banks except banks 16, 17 and 41 which experienced significant increase in year 2013 and a decrease in 2014. The presence of insignificant changes during the period under study indicated that there were not significant time related fixed effects that came into play during the study period of 2010 – 2014.

FIGURE 3
Trend Lines for Cost to Income Ratio

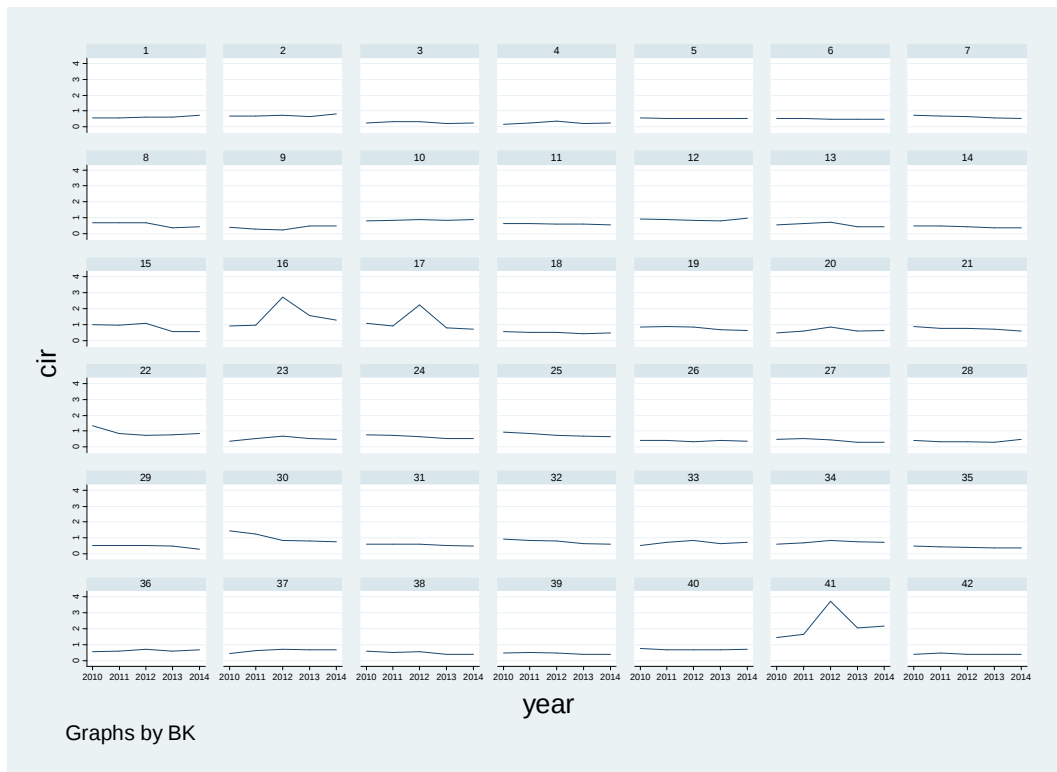
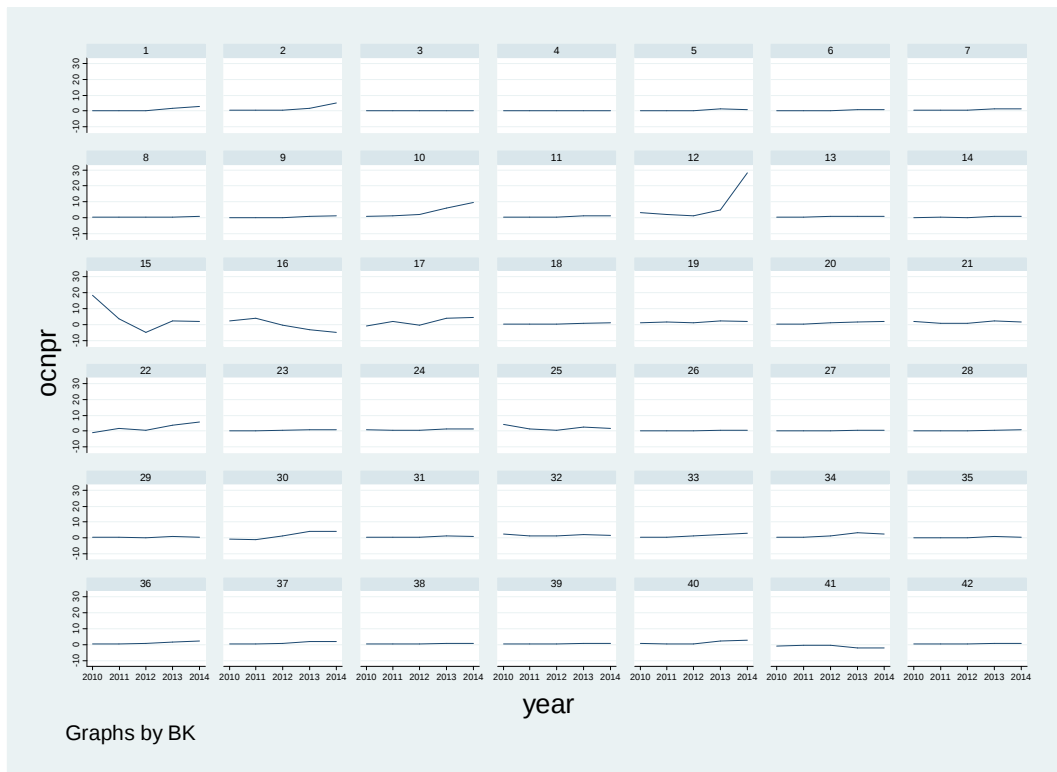


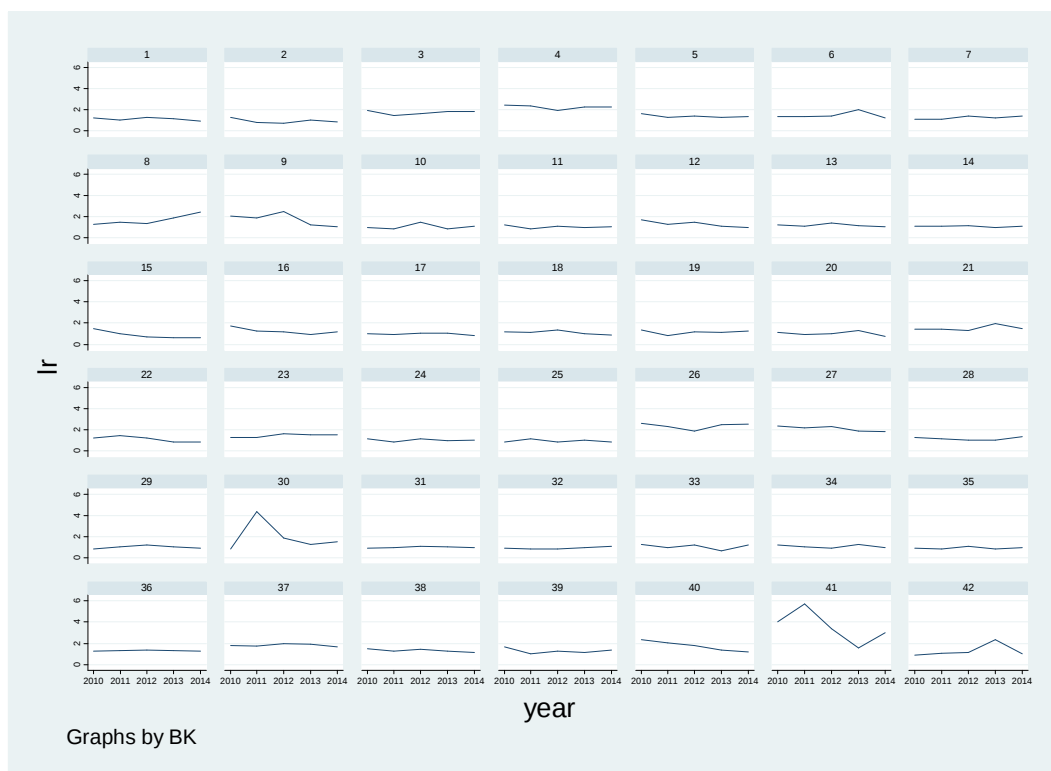
Figure 4 presents results on the trend line of operating costs as a ratio of net profit for the 42 commercial banks. The trend lines indicate that this ratio also remained relatively constant over the years with only significant changes over the period for a few banks. These banks that experienced significant changes include banks 10, 12, 15, 16 and 17. Similarly, the findings indicate that there were insignificant time related fixed effects that came into play as no significant changes are observed among most of the banks.

FIGURE 4
Trend for Operating Cost to Net Profit Ratio



Results in Figure 5 presents trend lines for the 42 commercial banks from 2010 to 2014. The results indicate that the liquidity levels for the banks were relatively stable except for significant fluctuations observed for banks 30, 41 and 42. This suggests insignificant time related fixed effects among the commercial banks for the five years.

FIGURE 5
Trend for Liquidity Ratio for 5 Years



Results presented in Figure 6 indicate that the trend lines for ROA for the 42 commercial banks for the five year period. The figure indicates that ROA relatively decreased for most of the banks over the five year period. However, the trend lines are smooth except for banks 9, 16, 17, 41 and 42.

FIGURE 6
Trend Lines for ROA

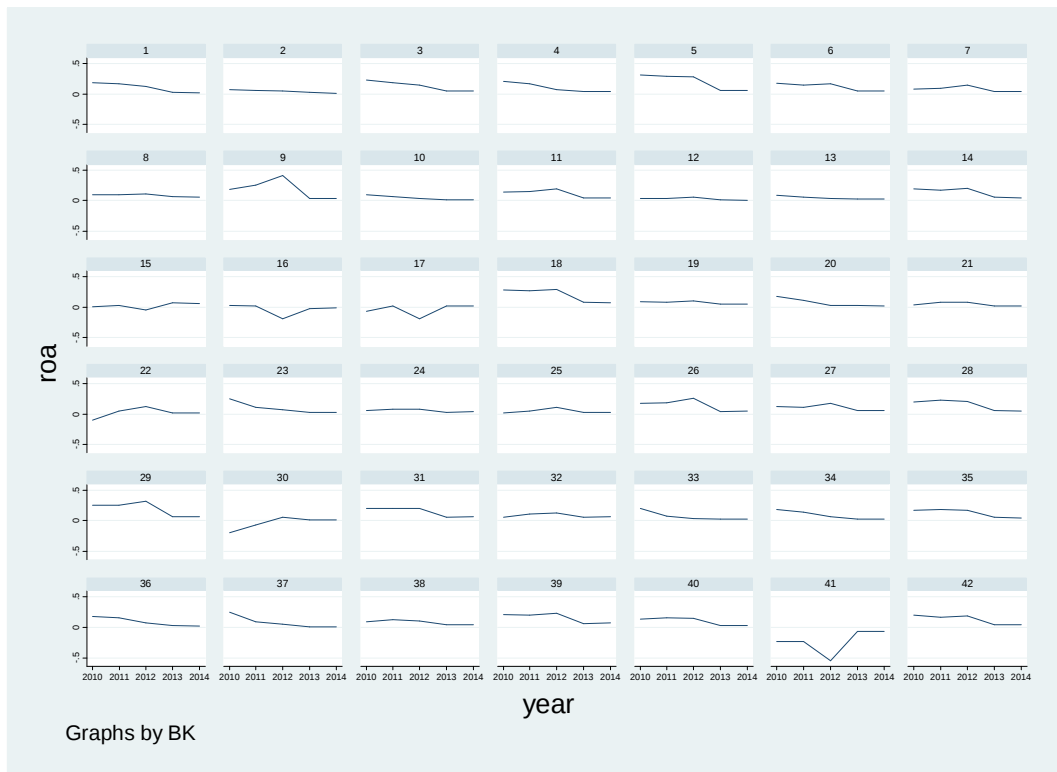
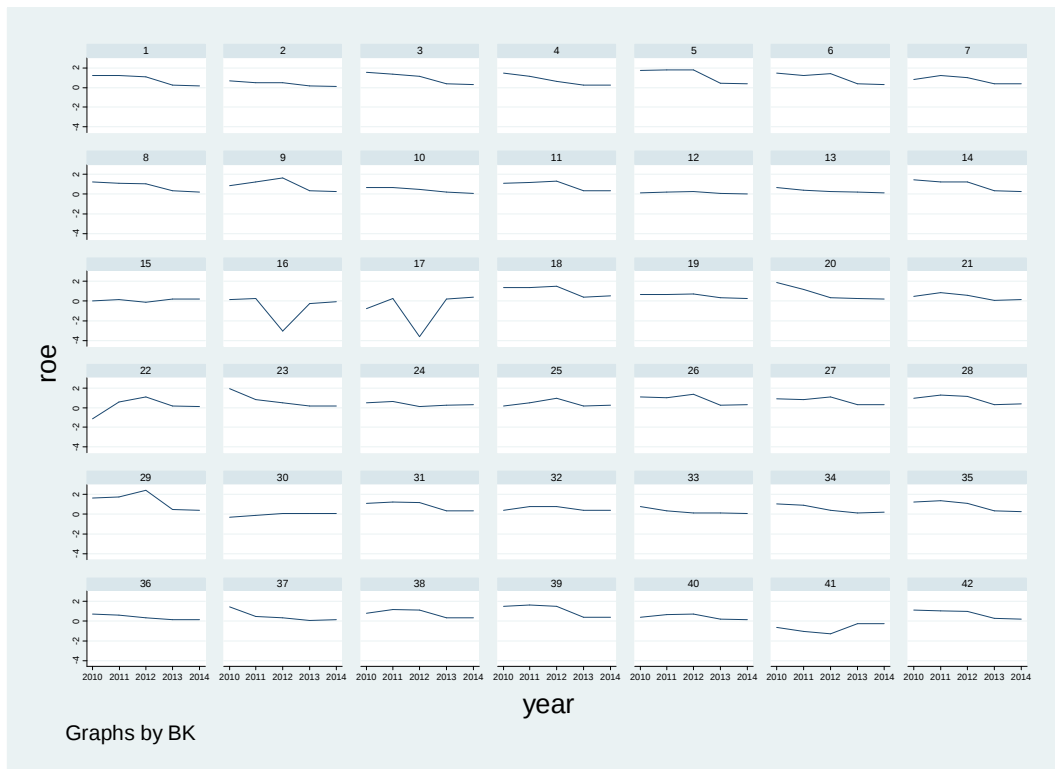


Figure 7 have trend lines for the 42 banks for ROE fro 2010 to 2014. The figure indicate that most of the commercial banks had this ratio almost constant over the years except some significant changes over the years for banks 17, 18, 20, 22 and 29. The trends indicate insignificant time related fixed effects that came to play to influence ROA.

FIGURE 7
Trend of ROE for 5 years



4.3 Correlations Analysis

The study assessed the degree of association between the variables to indicate whether there were any two independent variables that were highly correlated with each other. A correlation coefficient of 0.8 or above for any two independent variables is an indication of multicollinearity. Table 2 shows correlation of the variables. The results indicate that there was a strong positive relationship between ROA and ROE ($r = 0.872$; $p < 0.05$) and also a strong relationship between liquidity (LR) and capital strength (T1CATR) ($r = 0.749$; $p < 0.05$). The results also indicate strong negative relationships between Cost to income ratio and ROA ($r = -0.685$; $p < 0.05$) and cost to income ratio and ROE ($r = -0.632$; $p < 0.05$). However, an analysis of the relationship of the independent variables did not indicate any strong multicollinearity.

TABLE 2
Correlation Matrix

		T1CAR	CIR	OCNPR	LR	ROA	ROE
T1CAR	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	211					
CIR	Pearson Correlation	.279**	1				
	Sig. (2-tailed)	.000					
	N	211	211				
OCNPR	Pearson Correlation	-.156*	.015	1			
	Sig. (2-tailed)	.024	.833				
	N	211	211	211			
LR	Pearson Correlation	.749**	.210**	-.161*	1		
	Sig. (2-tailed)	.000	.002	.019			
	N	211	211	211	211		
ROA	Pearson Correlation	-.175*	-.685**	-.126	-.195**	1	
	Sig. (2-tailed)	.011	.000	.068	.005		
	N	211	211	211	211	211	
ROE	Pearson Correlation	-.145*	-.632**	-.123	-.117	.872**	1
	Sig. (2-tailed)	.035	.000	.074	.089	.000	
	N	211	211	211	211	211	211

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

4.4 Post Estimation Diagnostic Tests

The model estimated was subjected to diagnostic test to test whether it was fit for regressions analysis. First, any linear regression model assumes homoscedasticity where all variance of residuals are assumed to remain constant. To test for homoscedasticity was done using modified wald test. This test is based on the Null hypothesis that the variances for the error terms are constant against the alternate hypothesis that the variances of errors are a function of one or many variables under study. The results of the modified wald test for the two models (ROA and ROE) are presented in Table 3. These results indicate that there was evidence of the presence of heteroskedasticity for the two models ($p < 0.05$).

TABLE 3
Modified Wald Test for Groupwise Heteroskedasticity (Standard)

Model	Dependent variable	χ^2- value	p-value
1	Return on Assets	15.87	0.0017
2	Return on Equity	9.85	0.0039

To correct the problem of heteroskedasticity, robust errors were used instead of standard errors. This resulted to correction for heteroscedasticity as indicated in Table 4 ($p > 0.05$).

TABLE 4
Modified Wald Test for Groupwise Heteroskedasticity (Robust)

Model	Dependent variable	χ^2- value	p-value
1	Return on Assets	1.91	0.2812
2	Return on Equity	0.85	0.4184

Another test performed on the data was to test the presence of serial correlation. The data indicated serial correlation as observed in Table 5 ($p < 0.05$).

TABLE 5
Serial Correlation Test Using Woodridge Drukker

Dependent Variable	F-value	p-value
ROA	27.218	.0000
ROE	19.650	.0003

The serial correlation was corrected using the Cochrane-Orcutt procedure which was able to correct the problem as indicated in Table 6 ($p > 0.05$).

TABLE 6**Serial Correlation Test Using Woodridge Drukker (Transformed)**

Dependent Variable	F-value	p-value
ROA	2.191	.5618
ROE	0.916	.6511

4.5 Panel Data Analysis

The analysis of the data using either the pooled OLS or panel model followed. However, before the model was selected, the study used the Breusch-Pagan Lagrange multiplier to establish whether there were differences among the commercial banks. Presence of differences would lead to selection of panel data model while homogeneity in the commercial banks would lead to selection of POLS. Results in Table 7 indicate that the pooled OLS was not appropriate for the data ($p < 0.05$).

TABLE 7**Breusch-Pagan Lagrange Multiplier Test for Entity Differences**

Dependent Variable	ChiBar ²	P > ChiBar ²
ROA	162.21	.0000
ROE	124.71	.0000

Secondly, a test of cointegration of the data was done. This was to test whether the data was cointegrated or stationary. The Johansen Cointegration test was conducted. First, the automatic optimal lag length for each variable was estimated using Schwarz Information Criterion (SIC). Further, Rank test was used to determine the existence of Cointegration between the variables. The null hypothesis for this test is that there is no Cointegration among the variables. The results presented in Table 8 indicate that the null hypothesis could

not be rejected 5% level of significance. Three cointegrating relationships were observed implying existence of long-run relationship.

TABLE 8
Johansen Cointegration Test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	Critical Value _{0.05}	Prob.**
None *	0.968403	138.1972	47.85613	0.0000
At most 1 *	0.505590	38.01078	29.79707	0.0045
At most 2 *	0.397152	17.58346	15.49471	0.0239
At most 3*	0.095376	4.906854	3.841466	0.0482

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

After establishing that there was some relationships among the variables, that POLS was not considered appropriate. The panel data analysis model using either the fixed effects or the random effects model was considered to analyze the data for the 41 commercial banks. However, before the model was run, Hausman test was conducted to establish which of the two panel data models (FE or RE) was appropriate. The test results for both the ROA and ROE model are presented in Table 9. The test results in Table 9 indicated that fixed effects model was more appropriate for the data than the random effects model ($p < 0.05$).

TABLE 9
Hausman Test Results

Dependent Variable	Chi ²	P > Chi ²
ROA	11.79	.0190
ROE	9.92	.0417

Lastly before running the fixed effects model, the study tested whether there were time fixed effects which necessitate inclusion of time fixed effects. The results presented in Table 10 indicate that all the dummies for the years were zero and hence no time fixed effects were required in this case ($p > 0.05$).

TABLE 10
Test for Time Fixed Effects

Dependent Variable	F-value	p-value
ROA	3.611	.2194
ROE	1.187	.4582

The panel data regression model (FE) was run for both ROA and ROE. The model for ROA was first run with results as indicated in Table 11. The model was statistically significant ($F = 12.81$; $p < 0.05$). This indicated that at least one of the independent variables was not equal to zero and hence could provide a statistically significant prediction for return on assets. The results further indicated that cost to income ratio ($\beta = -.1522$; $p < 0.05$) and liquidity ratio ($\beta = -.0431$; $p < 0.05$) were significant negative predictors of ROA. These findings show that increase in cost to income ratio and liquidity levels would result to reduction in profitability of the bank. However, tier 1 capital to assets ratio had significant positive effect on profitability (ROA) ($\beta = .2852$; $p < 0.05$) indicating that increase in capital strength would have a positive effect on profitability. The results established no significant effect of operating costs as a ratio of net profit on profitability ($\beta = -0.0028$; $p > 0.05$).

TABLE 11
Fixed Effects Panel Regression on Return on Assets

Fixed-effects (within) regression				Number of obs = 210		
Group variable: Bank				Number of groups = 42		
R-sq:	within = 0.2381			Obs per group: min = 5		
	between = 0.6367			avg = 5.0		
	overall = 0.4430			max = 5		
				F(4, 164) = 12.81		
Corr (u _i , Xb) = 0.1774				Prob > F = 0.0000		
ROA	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
T1CAR	.2852486	.0860664	3.31	0.001	.1153076	.4551896
CIR	-.1522303	.023905	-6.37	0.000	-.1994315	-.1050292
OCNPR	-.0028698	.0022528	1.27	0.205	-.0073181	.0015785
LR	-.0431271	.0179919	-2.40	0.018	-.0786527	-.0076016
_cons	.1783135	.0267819	6.66	0.000	.1254317	.2311953
sigma_u	.04702469	(fraction of variance due to u _i)				
sigma_e	.0711546					
rho	.30399101					
F test that all u _i =0:	F(41, 164) = 1.33			Prob > F = 0.1085		

The FE panel model of internal bank factors on ROE provided results as presented in Table 12. The results provide consistent results with the results on the FE panel regression of the internal factors on ROA. These results indicated that the overall model was statistically significant ($F = 13.04$; $p < 0.05$) indicating that at least one of the independent variables was not equal to zero. These findings hence suggested that at least one of the independent variables could significantly influence ROA.

Results on the test of the significance of individual variables indicated that cost to income ratio ($\beta = -1.1681$; $p < 0.05$) and liquidity ratio ($\beta = -.3215$; $p < 0.05$) were significant negative predictors of ROE. These findings suggest that increase in cost to income ratio and liquidity levels would result to reduction in profitability to shareholders of the bank. However, tier 1 capital to assets ratio had significant positive effect on profitability (ROE) ($\beta = 1.6234$; $p < 0.05$) indicating that increase in capital strength would have a positive effect on profitability to shareholders of the banks. The results established no significant effect of

operating costs as a ratio of net profit on profitability to bank shareholders ($\beta = -0.0142$; $p > 0.05$).

TABLE 12
Fixed Effects Panel Regression on Return on Equity

Fixed-effects (within) regression				Number of obs = 210		
Group variable: Bank				Number of groups = 42		
R-sq:	within = 0.2413			Obs per group: min = 5		
	between = 0.5880			avg = 5.0		
	overall = 0.3896			max = 5		
				F(4, 164) = 13.04		
Corr (u _i , Xb) = -0.1259				Prob > F = 0.0000		
ROA	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
T1CAR	1.623434	.6154964	2.64	0.009	.4081154	2.838753
CIR	-1.168072	.1709543	-6.83	0.000	-1.505627	-.8305164
OCNPR	-.0141789	.016111	-0.88	0.380	-.0459906	.0176329
LR	-.3215066	.1286673	-2.50	0.013	-.5755646	-.0674487
_cons	1.395535	.1915286	7.29	0.000	1.017355	1.773715
sigma_u	.2952998	(fraction of variance due to u _i)				
sigma_e	.50885611					
rho	.25192942					
F test that all u _i =0:	F(41, 164) = 1.29			Prob > F = 0.1329		

4.6 Discussion of Findings

4.6.1 Effect of efficiency on performance

The study results established that cost to income ratio had significant negative effect on ROA ($\beta = -.1522$; $p < 0.05$) and ROE ($\beta = -1.1681$; $p < 0.05$). These results indicate that banks that are more efficient are expected to be more profitable than the less efficient banks. Cost to income ratio is a measure of efficiency where a high ratio depicts inefficiency with a lower one depicting efficiency. These findings concur with the neo-classical theory of the firm (Honohan, 1997) which indicates that profit maximizing firms are more efficient. This theory indicates that efficiency is derived from effective training, high human capital levels of managers and subordinates and the diffusion of new technology into the firm's processes and activities. This theory is supported by the study findings that commercial banks that were

observed to be more efficient were also more profitable. Similarly, the current study finding concur with the efficient structure theory by Demsetz (1973) that banks which operate more efficiently than its competitor's gain much higher profits due to low operational costs. The study findings on the positive effect of efficiency on profitability is also supported by prior studies by Bonfim (2009) and Musyoki (2011) who had established a positive relationship between better quality management and performance in banks. The study also concurs with the findings by Nasieku et al. (2013) that bank efficiency fuelled by cost cutting and adoption of new technology enhances productivity of the banks.

4.6.2 Effect of liquidity on performance

The study findings showed that liquidity ratio had significant negative effect on ROA ($\beta = -.0431$; $p < 0.05$) and ROE ($\beta = -.3215$; $p < 0.05$). High liquidity levels were seen to hamper profitability as it limited the assets available to the bank to generate profit. The current study findings are contrary to the findings by Bibow (1995) and Aver (2008) who found a positive substantial link between bank liquidity and performance. However, other studies such as Irsova and Havranek (2010), Derbali (2011) and Capone (2012) who all found a negative effect of liquidity on profitability. Specifically, Capone (2012) noted that commercial banks that have very high liquidity are less profitable out of the fact they tie a lot of funds in low returns current assets.

4.6.3 Effect of capital strength on performance

Furthermore, the study results indicated that tier 1 capital to assets ratio had significant positive effect on ROA ($\beta = .2852$; $p < 0.05$) and ROE ($\beta = 1.6234$; $p < 0.05$). These findings indicate that increase in capital strength would have a positive effect on profitability. This is because more capital is expected to provide the bank with more funds for investments. Moreover, the findings on the positive effect of capital strength on profitability are supported by earlier empirical studies such as Cook and Heiser (2011), Chandler & McEvoy (2010) and

Athanasoglou et al. (2005) who all established that capital strength positively influence profitability.

4.6.4 Effect of costs on performance

The results established no significant effect of operating costs as a ratio of net profit on ROA ($\beta = -0.0028$; $p > 0.05$) and ROE ($\beta = -0.0142$; $p > 0.05$). These results contrast the findings by Makiyan (2003) who observe that banks' costs of operation in relation to their net returns determine their level of performance. The study also has findings that contrast those by Ongore (2013), Ngetich (2011) and Kithinji (2010) who found that firms expenses as a percentage of their net profit was negatively related to their profitability.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This study aimed at analyzing the effect of internal organizational factors on the performance of commercial banks. This chapter provides the conclusions and recommendations that have been made in the study based on the study findings.

5.2 Conclusions

The study concludes that cost to income ratio has negative effect on both ROA and ROE of commercial banks in Kenya. Cost to income ratio is a measure of efficiency of the bank and thus a high cost to income ratio indicates inefficiency with a low cost to income ratio indicating efficiency. This leads the study to conclude that efficiency positively affects profitability and hence rejects the null hypothesis that operational efficiency has no effect on performance of commercial banks in Kenya.

Moreover, the study concludes that liquidity ratio negatively affects both ROA and ROE. These findings led to further conclusion that liquidity of the banks negatively affects their profitability. This led to rejection of the null hypothesis that liquidity management has no effect on performance of commercial banks in Kenya.

Further, the study concludes that tier 1 capital to assets ratio had significant positive effect on both ROA and ROE. This suggests that increase in capital strength would have a positive effect on profitability. The results hence lead to the rejection of the null hypothesis that capital strength has no influence on performance of commercial banks in Kenya.

Lastly, the study established no significant effect of operating costs as a ratio of net profit on both ROA and ROE. This indicates that costs in relation to the net income they generate have no significant effect on profitability of commercial banks. This therefore

provided no evidence to reject the null hypothesis that cost has no effect on performance of public commercial banks in Kenya.

5.3 Recommendations

The study results stress the need for improving capital adequacy, efficiency and reducing liquidity as a way to improve profitability. The positive impact capital adequacy variable indicates scale efficiency meaning that there is a potential for higher profits as the size of these banks increases. The study therefore recommends a well-defined policy framework for the management of capital adequacy requirements as banks would be more profitable if they increase their core capital.

Further, the study recommends careful analysis and management of liquidity as this is an aspect that is regulated by the CBK. Managers hence need to ensure that they are not at risk of falling below the CBK statutory limits but should stabilize their liquidity just above the required limit.

Lastly, the study recommends banks to optimize their use of resources to ensure that they efficiently utilize their resources and are less wasteful. This is expected to have a positive effect on their efficiency and hence positively influencing profitability and value.

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APPENDIX I

List of All Licensed Commercial Banks in Kenya

1. ABC Bank
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank
6. CFC Stanbic Bank
7. Chase Bank
8. Citi Bank
9. Commercial Bank of Africa
10. Consolidated Bank
11. Cooperative Bank of Kenya
12. Credit Bank
13. Development Bank of Kenya
14. Diamond Trust Bank
15. Dubai Bank
16. Eco Bank
17. Equatorial Commercial Bank
18. Equity Bank
19. Family Bank
20. Fidelity Commercial Bank
21. Fina Bank
22. First Community Bank
23. Giro Commercial Bank
24. Guardian Bank
25. Gulf African Bank

26. Habib Bank
27. Habib Bank AG Zurich
28. Housing Finance
29. I&M Bank
30. Imperial Bank of Kenya
31. Jamii Bora Bank
32. Kenya Commercial Bank
33. K-Rep Bank
34. Middle East Bank
35. National Bank of Kenya
36. NIC Bank
37. Oriental Commercial Bank
38. Paramount Universal Bank
39. Prime Bank
40. Standard Chartered Bank
41. Trans National Bank
42. United Bank of Africa
43. Victoria Commercial Bank