ANALYSIS OF FACTORS INFLUENCING THE PROFITABILITY OF LISTED COMMERCIAL BANKS IN KENYA

BY

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JULY, 2017
DECLARATION

This research project is my original work and has not been submitted before any other academic institution for any award.

Signature: _______________________________ Date 28/1/14

This research project was submitted for examination with my approval as the University Supervisor.

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I am thankful and grateful to the almighty God for his strength, grace and protection throughout my studies.

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I also recognize the good supportive team I have had with all my friends.

I recognize the efforts and dedication of my lectures throughout my studies.

I humbly extend my gratitude and appreciation to you all. I feel privileged to share the success of my work with you all.
DEDICATION

To my parents; Patrick and Victoria Aminga who are my daily reminders that I can be whatever I want to be in this life. May the almighty always protect and bless you.
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<tr>
<td>CAPM</td>
<td>Capital Asset Pricing Model</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>CDS</td>
<td>Central Depository Settlement</td>
</tr>
<tr>
<td>CRB</td>
<td>Credit Reference Bureau</td>
</tr>
<tr>
<td>MFBs</td>
<td>Micro-finance Banks</td>
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<td>MRP</td>
<td>Money Remittance Providers</td>
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<td>NSE</td>
<td>Nairobi Securities Exchange</td>
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ABSTRACT

Commercial banks financial performance in Kenya is an important subject given the significant role the banks play in the economy. With the number of banks increasing over the years and competition for customers increase, an analysis of what factors influence banks’ financial performance is important to the banks as this can aid them in ascertaining the determinants of performance and by extension know the areas to improve in order to perform better. This study was designed to analyze the factors influencing the profitability of listed commercial banks in Kenya. In order to achieve the objectives of this study, the research was designed as an explanatory study. The population was all the 11 listed commercial banks by December 2016. All the banks were used in the study. A ten year secondary data from 2008 to 2016 was collected from Banking Survey and the Central Bank of Kenya. Descriptive analysis, correlation analysis and regression analysis were used to perform the data analysis. Significance was tested at 5% level. The study found that inflation rate was negatively correlated with ROA while capital adequacy, asset quality, management efficiency, liquidity management and GDP growth rate had a positive influence on ROA. Inflation rate had a negative effect on ROA. It was noted that the independent variables accounted for 77.79% of the variance in ROA and were all significant at 5% level of confidence. The model had a good fit. The study concluded that all the determinants tested in this study had a significant influence on the financial performance of commercial banks in Kenya. The study recommends that there is need for commercial banks to improve their performance in terms of their ROA. The study also recommends that banks should ensure that they have enough quality assets since asset quality was found to be the most significant factor of banks’ productivity.
CHAPTER ONE

INTRODUCTION

1.1 Background of the study

According to the Banking Act of Kenya Cap 488 Sec 2 subsection 1, a commercial bank is defined as a company which carries on, or proposes to carry on, banking business in Kenya. A commercial bank, according to the Act raises funds by collecting deposits from members of the public, businesses and consumers via checkable deposits, saving deposits, and time (or term) deposits (CBK, 2014). It employs the money by lending (making loans) to businesses and consumers at its own risk. It also buys corporate bonds and government bonds. Its primary liabilities are deposits and primary assets are loans and bonds. Commercial banking can also refer to a bank or a division of a bank that mostly deals with deposits and loans from corporations or large businesses (corporate banking), as opposed to normal individual members of the public (retail banking) (CBK, 2014).

Commercial banks play a vital role in the economic resource allocation of countries. They channel funds from depositors to investors continuously. They can do so, if they generate necessary income to cover their operational cost they incur in the due course. In other words, for sustainable intermediation function, banks need to be profitable. Beyond the intermediation function, the financial performance of banks has critical implications for economic growth of countries (Abera, 2012). Good financial performance rewards the shareholders for their investment. This, in turn, encourages additional investment and brings about economic growth. On the other hand, poor banking performance can lead to banking failure and crisis which have negative repercussions on the economic growth (Abreu, 2012).
Thus, financial performance analysis of commercial banks has been of great interest to academic research since the Great Depression of the 1940’s. The performance of commercial banks can be affected by internal and external factors (Athanasoglou et al, 2011). These factors can be classified into bank specific (internal) and macroeconomic variables. The internal factors are individual bank characteristics which affect the bank's performance. These factors are basically influenced by the internal decisions of management and board. The external factors are sector wide or country wide factors which are beyond the control of the company and affect the profitability of banks (Azizi and Sarkani, 2014).

As at 31st December 2015, the banking sector comprised of the Central Bank of Kenya, as the regulatory authority, 43 banking institutions (42 commercial banks and 1 mortgage finance company), 8 representative offices of foreign banks, 12 Microfinance Banks (MFBs), 3 credit reference bureaus (CRBs), 15 Money Remittance Providers (MRPs) and 80 foreign exchange (forex) bureaus. Out of the 43 banking institutions, 40 were privately owned while the Kenya Government had majority ownership in 3 institutions. Of the 40 privately owned banks, 26 were locally owned (the controlling shareholders are domiciled in Kenya) while 14 were foreign-owned (many having minority shareholding). The 26 locally owned institutions comprised 25 commercial banks and 1 mortgage financier. Of the 14 foreign-owned institutions, all commercial banks, 10 were local subsidiaries of foreign banks while 4 were branches of foreign banks. All licensed microfinance banks, credit reference bureaus, forex bureaus and money remittance providers were privately owned. In a country where the financial sector is dominated by commercial banks, any failure in the sector has an immense implication on the economic growth of the country. This is due to the fact that any bankruptcy
that could happen in the sector has a contagion effect that can lead to bank runs, crises and bring overall financial crisis and economic tribulations (CBK, 2014).

Despite the good overall financial performance of banks in Kenya, there are a couple of banks declaring losses (Oloo, 2011). Moreover, the current banking failures in the developed countries and the bailouts thereof motivated this study to evaluate the financial performance of banks in Kenya. Thus, to take precautionary and mitigating measures, there is direct need to understand the performance of banks and its determinants.

This study utilized CAMEL approach to check up the financial health of commercial banks. There is also a need to include the macroeconomic variables. Thus, these study incorporated key macroeconomic variables (Inflation and GDP) in the analysis. Moreover, this study examined whether ownership identity has influenced the relationship between bank performance and its determinants (Uyen, 2011).

1.2 Statement of the problem

A well-functioning and profitability banking industry is important for the growth of the economy. In the 2014CBK report on bank performance, it was noted that a number of listed financial institutions struggled to reach profitability. It was further indicated that banks are now facing a number of challenges that have brought their profitability under pressure but did not specifically and conclusively indicate or cite what the factors are (CBK, 2015). It is therefore essential to carry out the study on specific factors that influence profitability of listed commercial banks.

The project sought to research into the main factors influencing profitability and survival of the commercial banking industry in Kenya, hence the basis of the study.
1.3 Research questions

The main objective of the study was to identify the determinants and effects of bank-specific characteristics and macroeconomic variables on profitability performance of Kenyan listed commercial banks.

The research sought to answer the following research questions:

i. What are the trends of performance of Kenya’s listed commercial banks?

ii. What are the factors that influence profitability of Kenya’s listed commercial banks?

iii. What is the relationship between bank size and profitability of Kenya’s listed commercial banks?

iv. How can performance of Kenya’s listed commercial banks be enhanced?

1.4 Significance of the study

The study sought to establish the underlying factors responsible for domestic commercial banks performance in Kenya. It is paramount given the recent reforms of the commercial banking sector. The study provides insight for bank owners and policy makers, on factors that determine bank performance and efficient utilization of resources, for sustainable competitiveness. The study therefore contributed to more understanding of the factors that have an impact on commercial bank performance in Kenya. Commercial banks in Kenya have to review the way they have been conducting business by understanding factors that have great impact on bank performance which is essential for survival and also useful in sustaining profitability in the dynamic and competitive business.

The study findings sought to present basis for the regulatory authorities to find a solution to persistent poor performance of domestic commercial banks and the appropriate course of action
has to be taken to strengthen the commercial banking sector in Kenya. In general, the study contributes to existing knowledge on factors responsible for bank performance and serves as a basis to provide measures and policy formulation for stakeholders and to embark upon bank specific factors in order to enhance the quality of bank services in Kenya.

1.5 Scope and delimitation of the study

This study on the factors influencing the profitability of listed commercial banks profitability in Kenya focused on performance of listed commercial banks, purposely to establish the key underlying internal and macroeconomic factors responsible for the listed commercial banks performance in Kenya.

The research covered the period between 2008 and 2016 given that much of the activities in the banking sector have taken place within the period with the emergence of new banks, increase in demand for credit and credit facilities, and a general economic expansion.

Banks are distributed all over the country but due finance and time constraints the study will only be conducted in Nairobi city. The study was restricted to factors influencing profitability of listed commercial banks in Nairobi City.
1.6 Conceptual framework

A conceptual framework is used in research to outline possible courses of action or to present a preferred approach to an idea or thought (Mackau, 2003). It can be defined as a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation. An independent variable is one that is presumed to affect a dependent variable (Dale, 2001). It can be changed as required, and its values do not represent a problem requiring explanation in an analysis, but are taken simply as given. The independent variables in the study were bank specific variables, macroeconomic variables and enhancing banks’ performance. The dependent variable was profitability of commercial banks.

**Independent variables**

- **Bank specific variables**
  - Capital adequacy
  - Asset quality
  - Liquidity management
  - Operational cost efficiency
  - Income diversification
  - Bank Size

- **Macroeconomic variables**
  - GDP growth rate
  - Inflation rate

- **Performance enhancement**
  - Improved productivity by workforce

**Dependent variable**

- Bank profitability
  - Return on Assets (ROA)

**Intervening factor**

Size of bank

(Source: Researcher’s): Figure 1.1 analyzing the relationship between dependent and independent variables
1.7 Operationalization of Variables

The various study variables were operationalized as shown on Table 1.1

Table 1.1 Operationalization of Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measurement</th>
<th>Symbol</th>
</tr>
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<tbody>
<tr>
<td>Financial Performance</td>
<td>Income/Equity</td>
<td>ROE</td>
</tr>
<tr>
<td></td>
<td>Income/Assets</td>
<td>ROA</td>
</tr>
<tr>
<td>Capital Adequacy</td>
<td>Total equity/total assets</td>
<td>CA</td>
</tr>
<tr>
<td>Asset Quality</td>
<td>Non-performing loans/gross loans. Higher ratio indicates poor quality.</td>
<td>AQ</td>
</tr>
<tr>
<td>Operational Cost</td>
<td>Operating costs/net operating income. Higher ratio indicates inefficiency.</td>
<td>CE</td>
</tr>
<tr>
<td>Gross Domestic Product</td>
<td>GDP growth rate</td>
<td>GDP</td>
</tr>
<tr>
<td>Bank Size</td>
<td>Logarithm of total assets</td>
<td>SIZE</td>
</tr>
<tr>
<td>Liquidity</td>
<td>Current assets/Total deposits</td>
<td>LIQ</td>
</tr>
<tr>
<td>Income Diversification</td>
<td>Income from individual sources/total income. Higher ratio indicates low income diversification.</td>
<td></td>
</tr>
<tr>
<td>Annual inflation rate</td>
<td>The rate of inflation</td>
<td>AIR</td>
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</table>

1.8 Organization of the study

The remainder of the study is set as follows;

Chapter two presents review of both theoretical and empirical literature on factors affecting performance of commercial banks. This is followed by chapter three which describes and explains the methodological approach used in the study. Chapter four includes presentation, discussion and interpretation of empirical data while chapter five presents the summary, conclusions and recommendations.
CHAPTER TWO
LITERATUREREVIEW

2.1 Theoretical Review

2.1.1 Bank Profitability Hypothesis

Various profitability theories have evolved over the years to establish the existence or inexistence of a link between market structure and profitability. The traditional microeconomic concept founded in neoclassical economics popularly known as ‘theory of the firm’ states that firms exist and make decisions to maximize profits. Based on the traditional assumption, researchers have come out with a great deal of testable predictions on the behavior of profit maximizing firms upon which the performance of industries can be derived. A countless number of theories are modeled to explain performance and profitability of commercial banks, however according to Rasiah (2012); the Structure Conduct Performance (SCP) has gained prominence among them besides its criticisms. Other theories include Efficient-Structure Hypothesis (ESH) and Expense-Preference (EPH) Hypothesis.

2.1.2 Structure Conduct Performance (SCP) Hypothesis

Mason (1939) initially proposed the structure-conduct-performance (SCP) hypothesis and Bain (1951) subsequently modified it. The SCP hypothesis is based on the proposition that: when a few firms have a large percentage of market shares, this fosters collusion among firms in the industry. The possibility of collusive behavior increases when the market is concentrated in the hands of a few firms, and the higher the market concentration ratio, the higher will be the profitability performance of the firms (Johnson, 2014). The SCP hypothesis assumes a positive
correlation between the degree of market share concentration and the firm’s performance and due to monopolistic or collusive reasons, irrespective of efficiency, the firms in a concentrated market will make more profit than firms in a less concentrated market (Lloyad-Williams et al, 1994 cited in Johnson, 2014).

2.1.3 Efficient – Structure Hypothesis (ESH): 

The Efficient-Structure Hypothesis (ESH) is argued by some researchers as an outcome of traditional Structural-Conduct Performance hypothesis (Aguirre et al, 2008), however it was hypothesized as a challenge and alternative to the SCP by its main proponents [Demsetz (1973), and McGee (1974)]. The ESH asserts that firms that are scale and managerially efficient eventually increase their size and market concentration because of their ability to generate higher profits (Demsetz, 1973). The driving force behind the process of gaining a large market share is the efficiency of the firm. The most efficient firms will gain market share and earn economic profits (Samad, 2008). Various empirical studies have been conducted on the ESH. According to Rasiaah (2012), Smirlock (1985) was the first to apply the ESH in the banking sector in USA and found evidence of no relationship between concentration and profitability, but rather between bank market share and bank profitability. He stated that market concentration is not a random event but rather the result of firms with superior efficiency obtaining a large market share. Other researchers such as Gillini et al, (1984), and Evanoff and Fortier (1988) tested the two competing hypotheses, SCP and ESH, and found that firm-specific efficiency was a factor for explaining the profitability in the United States banking industry. Presently, SCP and ESH are popular theories of explaining efficiency in firms (Malprat, 2013)
2.1.4 Expense – Preference Hypothesis (EPH)

The Expense Preference theory was developed as an extension to the ‘theory of the firm’ (Blair and Placone, 1988). The theory posits that firms’ managers maximize utility rather than profit and that managers have a positive preference for expenditures on items such as staff size, office furnishings, and the luxuriousness of the firm's premises (Luo, Tan and Xia, 2014). The circumstances that make such behavior possible are the separation of ownership from control and imperfections in goods and capital markets (Luo, Tan and Xia, 2014). The hypothesis has been tested extensively in the savings and loan, banking, and utility industries (Huang, 2015). Huang (2015) found that size of staff, wage and salary expenditures in banking increased with monopoly power in the US and that indicated the existence of expense-preference behavior. He therefore concluded that number of employees of banks in markets which exhibited monopoly power were higher than the banks in a competitive environment.

From the above theories, it is possible to conclude that bank performance is influenced by both internal and external factors. According to Athanasoglou et al.,(2011) the internal factors include bank size, capital, management efficiency and risk management capacity. The same scholars contend that the major external factors that influence bank performance are macroeconomic variables such as interest rate, inflation, economic growth and other factors like ownership (Ongore and Kusa, 2013).

2.2 Bank Performance Indicators

Profit is the ultimate goal of commercial banks. All the strategies designed and activities performed thereof are meant to realize this grand objective. However, this does not mean that commercial banks have no other goals. Commercial banks could also have additional social and economic goals. However, the intention of this study is related to the first objective,
profitability. To measure the profitability of commercial banks there are variety of ratios used of which Return on Asset, Return on Equity and Net Interest Margin are the major ones (Obamuyi, 2013).

2.2.1 Return on Equity (ROE)

ROE is a financial ratio that refers to how much profit a company earned compared to the total amount of shareholder equity invested or found on the balance sheet. ROE is what the shareholders look in return for their investment. A business that has a high return on equity is more likely to be one that is capable of generating cash internally. Thus, the higher the ROE the better the company is in terms of profit generation. It is further explained by Abdullah, Parvez and Ayreen (2014) that ROE is the ratio of Net Income after Taxes divided by Total Equity Capital. It represents the rate of return earned on the funds invested in the bank by its stockholders. ROE reflects how effectively a bank management is using shareholders’ funds. Thus, it can be deduced from the above statement that the better the ROE the more effective the management in utilizing the shareholders capital (Diamond and Raghuram, 2012).

2.2.2 Return on Asset (ROA)

ROA is also another major ratio that indicates the profitability of a bank. It is a ratio of Income to its total asset (Abdullah, Parvez and Ayreen, 2014). It measures the ability of the bank management to generate income by utilizing company assets at their disposal. In other words, it shows how efficiently the resources of the company are used to generate the income. It further indicates the efficiency of the management of a company in generating net income from all the resources of the institution (Abdullah, Parvez and Ayreen, 2014). Dietrich and Wanzenried (2011), state that a higher ROA shows that the company is more efficient in using its resources.
2.2.3 Net Interest Margin (NIM)

NIM is a measure of the difference between the interest income generated by banks and the amount of interest paid out to their lenders (for example, deposits), relative to the amount of their (interest earning) assets. It is usually expressed as a percentage of what the financial institution earns on loans in a specific time period and other assets minus the interest paid on borrowed funds divided by the average amount of the assets on which it earned income in that time period (the average earning assets). The NIM variable is defined as the net interest income divided by total earnings assets (Ongore and Kusa, 2013).

Net interest margin measures the gap between the interest income the bank receives on loans and securities and interest cost of its borrowed funds. It reflects the cost of bank intermediation services and the efficiency of the bank. The higher the net interest margin, the higher the bank's profit and the more stable the bank is. Thus, it is one of the key measures of bank profitability. However, a higher net interest margin could reflect riskier lending practices associated with substantial loan loss provisions (Abdullah, Parvez & Ayreen, 2014).

2.3 Determinants of Bank Performance

The determinants of bank performances can be classified into bank specific (internal) and macroeconomic (external) factors (Okoth &Gemechu, 2013). These are stochastic variables that determine the output. Internal factors are individual bank characteristics which affect the banks performance. These factors are basically influenced by internal decisions of management and the board. The external factors are sector-wide or country-wide factors which are beyond the control of the company and affect the profitability of banks. The overall financial performance of banks in Kenya in the last two decade has been improving. However, this doesn't mean that all banks are profitable, there are banks declaring losses (Ollo, 2012). Studies have shown that
bank specific and macroeconomic factors affect the performance of commercial banks (Ifeacho & Ngalawa, 2014). In this regard, the study of Olweny and Shipho (2011) in Kenya focused on sector-specific factors that affect the performance of commercial banks. Yet, the effect of macroeconomic variables was not included.

Moreover, to the researcher's knowledge the important element, the moderating role of ownership identity on the performance of commercial banks in Kenya was not studied. Thus, this study will be conducted with the intention of filling this gap.

2.3.1 Bank Specific Factors/Internal Factors

As explained above, the internal factors are bank specific variables which influence the profitability of specific bank. These factors are within the scope of the bank to manipulate them and that they differ from bank to bank. These include capital size, size of deposit liabilities, size and composition of credit portfolio, interest rate policy, labor productivity, and state of information technology, risk level, management quality, bank size, ownership and the like.

CAMEL framework often used by scholars to proxy the bank specific factors (Ghazouani & Moussa, 2013). CAMEL stands for Capital Adequacy, Asset Quality, Management Efficiency, Earnings Ability and Liquidity. Each of these indicators is further discussed below.

2.3.1.1 Capital Adequacy

Capital is one of the bank specific factors that influence the level of bank profitability. Capital is the amount of own fund available to support the bank's business and act as a buffer in case of adverse situation (Athanasoglou et al, 2011). Banks capital creates liquidity for the bank due to the fact that deposits are most fragile and prone to bank runs. Moreover, greater bank capital reduces the chance of distress (Hadad, 2013). However, it is not without drawbacks that it
induces weak demand for liability, the cheapest sources of fund Capital adequacy is the level of capital required by the banks to enable them withstand the risks such as credit, market and operational risks they are exposed to in order to absorb the potential losses and protect the bank's debtors. According to Hadad, (2013), the adequacy of capital is judged on the basis of capital adequacy ratio (CAR). Capital adequacy ratio shows the internal strength of the bank to withstand losses during crisis. Capital adequacy ratio is directly proportional to the resilience of the bank to crisis situations. It has also a direct effect on the profitability of banks by determining its expansion to risky but profitable ventures or areas (Jha& Hui, 2014).

2.3.1.2 Asset Quality

The bank's asset is another bank specific variable that affects the profitability of a bank. The bank asset includes among others current asset, credit portfolio, fixed asset, and other investments. Often a growing asset (size) related to the age of the bank (Athanasoglou, 2011). More often than not the loan of a bank is the major asset that generates the major share of the banks income. Loan is the major asset of commercial banks from which they generate income. The quality of loan portfolio determines the profitability of banks. The loan portfolio quality has a direct bearing on bank profitability. The highest risk facing a bank is the losses derived from delinquent loans (Liu, 2011). Thus, non-performing loan ratios are the best proxies for asset quality. Different types of financial ratios used to study the performances of banks by different scholars. It is the major concern of all commercial banks to keep the amount of non-performing loans to low level. This is so because high non-performing loan affects the profitability of the bank. Thus, low non-performing loans to total loans shows that the good health of the portfolio a bank. The lower the ratio the better the bank performing (Memmel&Raupach,2014).
2.3.1.3 Liquidity Management

Liquidity is another factor that determines the level of bank performance. Liquidity refers to the ability of the bank to fulfill its obligations, mainly of depositors. According to Nyanga, (2012), adequate level of liquidity is positively related with bank profitability. The most common financial ratios that reflect the liquidity position of a bank according to the above author are customer deposit to total asset and total loan to customer deposits. Other scholars use different financial ratios to measure liquidity. For instance Obamuyi (2013) used cash to deposit ratio to measure the liquidity level of banks in Malaysia. However, the study conducted in China and Malaysia found that liquidity level of banks has no relationship with the performances of banks (Nzongang & Atemnkeng, 2016).

2.3.1.4 Operational Costs Efficiency and its effect on Profitability

Poor expenses management is the main contributors to poor profitability (Omondi, 2016). In the literature on bank performance, operational expense efficiency is usually used to assess managerial efficiency in banks. Osoro (2014) observed that the CIR of local banks is high when compared to other countries and thus there is need for local banks to reduce their operational costs to be competitive globally. Malcom and Weirner, (2014) examined the various factors that contribute to high interests spread in Kenyan banks. Overheads were found to be one of the most important components of the high interests rate spreads. An analysis of the overheads showed that they were driven by staff wage costs which were comparatively higher than other banks in the SSA countries.

Although the relationship between expenditure and profits appears straightforward implying that higher expenses mean lower profits and the opposite, this may not always be the case. The
reason is that higher amounts of expenses may be associated with higher volume of banking activities and therefore higher revenues (Staikouras & Wood, 2014). In relatively uncompetitive markets where banks enjoy market power, costs are passed on to customers; hence there would be a positive correlation between overheads costs and profitability (Flamini et al, 2009). Sangmi and Tabassum (2012) found a positive and significant impact of overheads costs to profitability indicating that such cost are passed on to depositors and lenders in terms of lower deposits rates/ or higher lending rates.

2.3.1.5 Size of the Bank

Bank size is generally assessed in terms the assets that a bank has. Although there is general agreement that statutory assets holding is necessary to reduce moral hazard, the debate is on how much assets are enough for a bank. Asset base for any bank is a key consideration for the regulators in order to reduce cases of bank failures, whilst bankers in contrast argue that it is expensive and difficult to obtain additional equity and higher requirements restrict their competitiveness (Koch, 1995). Beckmann (2007) argue that high asset base leads to low profits since banks with a high asset values are risk-averse, they ignore potential risky investment opportunities and as a result, investors demand a lower return on their capital in exchange for lower risk.

However Gavila et al., (2009) argue that, although assets are expensive in terms of expected returns, highly capitalized banks face lower cost of bankruptcy, lower need for external funding especially in emerging economies where external borrowing is difficult. Thus well capitalized banks with a high asset base should be profitable than those with a lower asset base and lower capitalized banks.
2.3.1.6 Diversification of Income and its effect on Profitability

Financial institutions in recent years have increasingly been generating income from “off-balance sheet” business and fee income. Suka, (2012) noted that the decline in interest margins, has forced banks to explore alternative sources of revenues, leading to diversification into trading activities, other services and non-traditional financial operations. The concept of revenue diversifications follows the concept of portfolio theory which states that individuals can reduce firm-specific risk by diversifying their portfolios (Kosmidou, 2012). However there is a long history of debates about the benefits and costs of diversification in banking literature. The proponents of activity diversification or product mix argue that diversification provides a stable and less volatile income, economies of scope and scale, and the ability to leverage managerial efficiency across products (Vong & Chan, 2012). Weersainghe and Ravinda (2013) noted that as a result of activity diversification, the economies of scale and scope caused through the joint production of financial activities leads to increase in the efficiency of banking organizations. They further argued that product mix reduces total risks because income from non-interest activities is not correlated or at least perfectly correlated with income from fee based activities and as such diversification should stabilize operating income and give rise to a more stable stream of profits (Anjichi, 2014).

The opposite argument to activity diversification is that it leads to increased agency costs, increased organizational complexity, and the potential for riskier behavior by bank managers. Mahalingam and Rao, (2014) mentioned that activity diversification results in more complex organizations which “makes it more difficult for top management to monitor the behavior of the other divisions/branches. They further argued that the
benefits of economies of scale/scope exist only to a point. The costs associated with a firm’s increased complexity may overshadow the benefits of diversification. As such, the benefits of diversification and performance would resemble an inverted-U in which there would be an optimal level of diversification beyond which benefits would begin to decline and may ultimately become negative (Herrick, 2014).

2.4 The Effects of Market Structural Factors on bank profitability

2.4.1 Ownership and its Effects on Profitability

Theisohn and Lopes (2013) argued that foreign banks usually bring with them better know-how and technical capacity, which then spills over to the rest of the banking system. They impose competitive pressure on domestic banks, thus increasing efficiency of financial intermediation and they provide more stability to the financial system because they are able to draw on liquidity resources from their parents banks and provide access to international markets. Beck and Fuchs (2014) argued that foreign-owned banks are more profitable than their domestic counterparts in developing countries and less profitable than domestic banks in industrial countries, perhaps due to benefits derived from tax breaks, technological efficiencies and other preferential treatments. However domestic banks are likely to gain from information advantage they have about the local market compared to foreign banks.

However the counter argument is that unrestricted entry of foreign banks may result in their assuming a dominant position by driving out less efficient or less resourceful domestic banks because more depositors may have faith in big international banks than in small domestic banks. They cream-skim the local market by serving only the higher end
of the market, they lack commitment and bring unhealthy competition, and they are responsible for capital flight from less developed countries in times of external crisis (Ndikumana, 2014)

2.4.2 Market Concentration and its Effect on Profitability

The market power theory, as it was discussed under bank performance theories, posits that the more concentrated the market, the less the degree of competition (Mirza, Bergland and Khatoon, 2016). They argue that high degrees of market share concentration are inextricably associated with high levels of profits at the detriment of efficiency and effectiveness of the financial system due to decreased competition. Secondly, since commercial banks are the primary suppliers of funds to business firm, the availability of bank credit at affordable rates is of crucial importance for the level of investments of the firms, and consequently, for the health of the economy (Patel & Chrisman, 2014). In situation of increased concentration, the possibility of rising costs of credits is reflected by a reduction of the demand for bank loans and the level of business investments. The effect multiplies many folds in as much as bank management capitalizes on the market share concentration factor (Busta, Sinani & Thomsen, 2014).

However there is a long held view that market power is necessary to ensure stability in banking. Banks that are profitable and well-capitalized are best positioned to withstand shocks to their balance sheet. Hence banks with market power, and the resulting profits, are considered to be more stable Schaeck and Cihák, 2014). Large banks with market power have typically been viewed as having incentives that minimize their risk-taking behavior and improve the quality of their assets.
2.5 **External Factors/ Macroeconomic Factors**

The macroeconomic policy stability, Gross Domestic Product, Inflation, Interest Rate and Political instability, are also other macroeconomic variables that affect the performances of banks. For instance, the trend of GDP affects the demand for banks asset. During the declining GDP growth the demand for credit falls which in turn negatively affect the profitability of banks. On the contrary, in a growing economy as expressed by positive GDP growth, the demand for credit is high due to the nature of business cycle. During boom the demand for credit is high compared to recession (Athanasoglou *et al.*, 2011). The same authors state in relation to the Greek situation that the relationship between inflation level and banks profitability is remained to be debatable. The direction of the relationship is not clear (Vong & Chan, 2012).

2.6 **Factors Considered When Determining Interest Rates**

An interest rate is the amount received in relation to an amount loaned, generally expressed as a ratio of shillings received per hundred shillings lent. However, a distinction should be made between specific interest rates and interest rates in general. Specific interest rates on a particular financial instrument (for example, a mortgage or bank certificate of deposit) reflect the time for which the money is on loan, the risk that the money may not be repaid, and the current supply and demand in the marketplace for funds available for lending (Rogers & Clarke, 2016). Interest rates never remain same they keep on changing because they depend on many factors such as; Inflation affect interest rates since the rates paid on most loans are fixed in the loan contract. A lender may be reluctant to lend money for any period of time if the purchasing power of that money will be less when it is repaid; the lender will, therefore, demand a higher rate
(known as an “inflationary premium”). Thus, inflation pushes interest rates higher; deflation causes rates to decline. Over time, as the cost of products and services increase, the value of money decreases. Consumers will therefore have to spend more money for the same products or services which had cost less in the previous year (Staikouras & Wood, 2014).

Operational costs, such as staff costs, for most commercial banks are high and this has a bearing on the determination of base lending rates. In particular, staff loans had, on one occasion, been explicitly included in the calculation of the base lending rate. This, it can be inferred that these loan costs were being passed directly onto clients. The high staff costs may be due to the fact that new banks entering the market have to “poach” staff from existing banks, therefore resulting in higher salaries which become sticky downwards (Smith, Davies & Chinzara, 2016).

One of the government’s strategies to control the flow of money within its consumers is through the monetary policy. The money supply has a major effect on both the level of economic activity and the inflation rate. If the central bank wants to stimulate the economy, it increases growth in the money supply. The initial effect is to cause interest rates to decline but a larger supply of money may lead to an increase in expected inflation which will push interest rate up. If the central bank eases credit, interest begins to decline but interest rate increases again if the central bank tightens credit (Brissimis, Garganas & Hall, 2014). Inflation affect interest rates since the rates paid on most loans are fixed in the loan contract.
2.7 Causes of high interest rates and excessive bank charges

Macharia, (2015) indicates that high administrative costs are high as a result of the nature of the business, which involves charging high interest rates for making successful micro and small enterprise loans that are commercially sustainable. This is in line with Allred and Addams, (2013) who indicates that the major portion of a bank’s profit comes from the fees that it charges for its services and the interest that it earns on its assets. Therefore it clearly shows that banks are passing on their costs to customers, however implementation of interest rate controls in some countries discourage banks from entering micro-finance. The other possible reason for the high profitability in commercial banking business is the existence of huge gap between the demand for bank service and the supply as a result there is less competition and banks charge high interest rates. Clair(2014) reveals that properties in certain regions such as homes in coastal areas are more at risk of sustaining damage from floods and hurricanes. Some banks charge higher interest rates on secured loans if the collateral securing the loan is exposed to an above average risk of incurring damage. Takeover of one bank by another generally results in the public being assessed higher service charges for access to banking services, especially for access to checking account services, for conducting transactions through an ATM and for access to credit (Paczkowski et al, 2014)

2.8 Empirical literature

Dawood (2014) checked the Factors impacting profitability of commercial banks in Pakistan for the period of (2009-2012) listed in the stock exchange for the period of 2002 to 2011 using pooling data from commercial banks. He applied the pooling data regression model in which return on assets is dependent variable and internal and external
determinants have been used as independent variables. He has said in his research that loan to total assets, total equity to total assets have positive effect on profitability while on the other hand bank size and cost to income ratio have negative effect and economic growth and non-interest income to total assets have no effect.

Ani (2014) investigated the determinants of profitability of commercial banks in Nigeria for the period of ten years from 2001 to 2010 including the observation of 147 banks. Pooled ordinary least square was used to estimate the coefficient. Study finds that bank size does not increase the profit of any commercial banks in Nigeria. Greater capital-asset ratio increases the profitability of banks. SairaJavaid (2011) examined the profitability of top 10 commercial banks of Pakistan for the period of 2004-2008. Pooled ordinary least square has been used to check the impact of internal factors includes assets, loan, equity and deposits on the profitability of banks on dependent variable called Return on Asset (ROA). The study found that internal factors stated above did not affect the bank’s profitability. Bank size or total assets does not lead any profitability of commercial banks but equity and deposits have a significant influence on the profitability of commercial banks.

Jaber and Al-khawaldeh, (2014) analyzed the internal factors that impact on the profitability of the commercial banks listed in Amman Stock Exchange in Jordan for the duration of 2005-2011. The study constitutes that the cost-income ratio has a significant collide with the profitability of commercial banks in Jordan.

Lim, (2015) studied the profitability of the banks in Philippines for the period of 1990-2005. The outcome paints a picture that profitability factors have significantly impact on
bank profitability. The study also suggests that if the expense related behavior and credit risk increases the profitability of the banks operating in Philippines decreases and the non-interest income and capitalization both have the positive relationship with bank’s profitability. During the study undertaken the inflation increases the profit of the banks in Philippines decreases.

Dawood (2014) tried out the relationship between the bank specific characteristics and the profitability of the banks using the data of top fifteen commercial banks operating in the economy of Pakistan for the period of 2005-2009. This paper applies the Polled Ordinary Least Square method to look into the hit of assets, loans, equity, deposits, economic growth, inflation and market capitalization on major profitability blinkers like return on assets (ROA), return on equity (ROE), return on capital employed (ROCE) and net interest margin (NIM) one by one. The study constitute that both the internal and external factors have a solid influence on the banks profitability.

Chronopoulos, et al, 2015) tried out the determinants of profitability of the banks operating in US for the period of 1995-2007. The study undertook the internal and external factors affecting the profitability of banks in US economy. The study found that there is a negative relationship between the capital ratio and profitability which affirms the belief that banks are working most carefully and dismissing potentially profitable trading chances. The cost advantages due to the bank size do not impact on the profitability of the banking industry of US.

Bukhari (2012) analyzed the internal and external factors that effect on the profitability of 11 commercial banks operating in Pakistan for the period of 2005-2009. The study uses
the regression analysis to implicate the result with the hypothesis. The findings from this research paper are that internal factors impact the profitability of the commercial banks whereas external factors do not impact.

Ali (2011) analyzed the profitability factors impacting on the profit of the 22 commercial banks both public and private working in Pakistan for the period of 2006-2009. The study used the descriptive statistics, correlation and regression analysis. Return on assets (ROA) and return on equity (ROE) have been used as dependent variables and on the other hand internal and external factors have been used as independent variables. The results show that when the economic growth increases the profitability increases. And on the other side when the credit risks increases the profitability decreases.

Almazari (2014) probed the internal and external factors of banks profitability of Turkey for the period of 2002-2010. In this study the return on assets (ROA) and return on equity (ROE) both are the dependent variables and the function of internal and external factors. Profitability increases when the non-interest income and asset size increases. And real interest rate in the external factors has positive effect on profitability.

Madishetti and Rwechungura (2013) analyzed the profitability determinants of Tanzania commercial banks for the period of 2006-2012. Internal determinants use the variables like liquidity risk, credit risk, operating efficiency, business assets and capital adequacy and external determinants use the variables GDP growth rate and inflation rate. All of these variables are independent. The study found that internal variables determine the bank’s profitability whereas external factors do not influence the profitability of commercial banks.
Eljelly (2013) studied the determinants of profitability of Islamic banks operating in Sudan. This study found that only the internal factors have the substantial impact on the profitability of the commercial banks. Cost, liquidity and the size of the banks have the positive relationship with the bank profitability. Macroeconomic or external factors have no substantial impact on profitability.

Al-Tamin et al., (2005) examined the profitability of Islamic and conventional banks in Gulf Cooperation Council (GCC) countries for the period of 1997-2004. He analyzed both the internal and external factors impacting on the profitability of Islamic and conventional banks.

This study showed that asset quality of the conventional banks is better than others. Interest free lending impact on the profitability of the Islamic bank and total expenditures impact on the profitability of the conventional banks operating in the GCC countries negatively.

Alpera and Anbar (2011) analyzed the internal and external factors of the commercial banks of Turkey for the period of 2002-2010. The study shows that non-interest income and bank size have the positive impact on the bank profitability. And on the side of the macroeconomic or external factors only the real interest rates impact on the profitability of the commercial banks positively.

Vong and chan (2006) analyzed the impact of internal and external factors on the profitability of Macao banking industry for the period of 15 years. This study found that high capitalization leads to the high profitability and size of the bank increases the profitability its mean banks are enjoying the benefit of economies of scale. And on the
other hand loan loss provision impact on the profitability of the Macao banking industry unfavorably.

The discussion in the literature review affirms a strong relationship between the bank’s profitability and the internal and external factors impacting the profitability of the banks.

2.9 Literature gap

From the studies reviewed, it is evident that several research works on the determinants of bank profitability in various parts of the world have been carried out. However, the short coming of these reviews is that they give a generalized overview. For instance, a study done by Okoth on Determinants of financial performance in Kenya; he generally analyzed factors that affect the financial performance of commercial banks only within the confines of the CAMEL approach which generally limits the focus of the study to four bank specific factors and also the research only focuses on sectoral factors as opposed to both internal and external factors. Basically, the effect of both internal and external factors on bank profitability is not significantly and comprehensively covered. This study bridges this gap by seeking to analyze and explain in detail how the specific bank internal and external factors influence listed commercial bank profitability and come up with a relevant conclusion.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research methodology that will be used in conducting the study. It specifically addresses: research design, target population, sample and sampling techniques, data collection instruments, procedure for data collection, data analysis techniques and presentation of findings.

3.2 Research design

A Quantitative research design was used because it had been employed by Ayele (2012) while studying determinants of private commercial banks profitability in Ethiopia. It also helps to analyze the relationship between the drivers of profitability and return on assets, testing and validating already constructed theories about how and why phenomena occur and it allows one to more credibly establish cause-and-effect relationships.

3.3 Target population

3.4 Sample and Sampling techniques

Given that there were only 11 listed commercial banks, sampling was not necessary. The research study covered all the listed commercial banks.

3.5 Data Collection Instruments and Procedures

The study employed secondary data. The data was collected from the Central Bank of Kenya and Banking Survey 2016 for the period 2008-2016. The banking Survey is an annual publication that publishes annual financial statement of all banks in Kenya covering a period 10 years, while the Central Bank of Kenya publishes annually, major financial indicators of the sector.

3.6 Data Presentation and Analysis

The collected data was thoroughly examined and checked for completeness and comprehensibility. The data was then summarized, coded, tabulated and analyzed using both descriptive statistics and inferential statistics. Descriptive statistics contain discrete numeric data (Mugenda and Mugenda, 1999). Descriptive statistics include frequency tables, distribution diagrams, percentages and measures of central tendency such as mean, mode and standard deviation will be derived. The analyzed data was used to summarize findings and describe the population of the study.

3.6.1 Analytical Model

The study adopted a panel data regression model. The equation was as follows;

\[ Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \beta_6 X_{6it} + \beta_7 X_{7it} + \beta_8 X_{8it} + \epsilon \]

Where: \( \alpha \) = constant

\( Yi \) = Banks profitability.
$\beta_1, \ldots, \beta_n = \text{betas for each factor.}$

$X_1$-$X_6$ are the factors influencing profitability. They include:

- $X_1 = \text{Capital adequacy}$
- $X_2 = \text{Asset quality}$
- $X_3 = \text{Liquidity management}$
- $X_4 = \text{Operational cost efficiency}$
- $X_5 = \text{Income diversification}$
- $X_6 = \text{GDP growth rate}$
- $X_7 = \text{Inflation rate}$

$i = \text{The number of listed commercial banks (from the first to the eleventh)}$

$t = \text{Time period in years (2008-2016)}$

$\epsilon = \text{Error term with a significance level of 5\%}$

### 3.6.2 Test of Significance

T-test was used to determine a possible relationship between the dependent variable and each independent variable in isolation.

### 3.7 Testing for Moderation

To establish the effect of bank size as a moderating variable as an influence of profitability in listed commercial banks, or determine whether it was simply an explanatory variable, the following steps-wise regressions were to be estimated. First, Model (3.1) was estimated as the base model to determine the relationship between the dependent variable and the independent variable. Second, Model (3.2) which included bank size as a moderating variable was estimated.
\[ Y = \beta_0 + \beta_1 X + \beta_2 MO + \varepsilon \] ................................................................. (3.2)

Where;

\[ Y \text{= profitability of listed commercial banks} \]

\[ X \text{=factors influencing profitability} \]

\[ MO \text{=bank size} \]

Finally, Model 3.3 was estimated to give the direction and effect of the moderator on the independent variable and its total effect on the dependent variable.

\[ Y = \beta_0 + \beta_1 X + \beta_2 PP + \beta_3 X^{*} PP + \varepsilon \] ................................................................. (3.3)

Where,

\[ XBS\text{=factors influencing profitability}^{*} \text{ Bank size (Interaction term)} \]

If bank size was significant when introduced into Model (3.1), then this would explain the first condition of a variable being explanatory where all variables should be significant (Mackinnon et al., 2007). Model(3.2) was estimated where products of bank size and factors influencing profitability were used to estimate the moderating effects. If the coefficients in Model (3.2) are not significant and bank size in Model (3.3) is significant, there is no moderating effect. Thus, bank size is just an explanatory variable.
Table 3.2 Decision-making for moderation

<table>
<thead>
<tr>
<th>Model 3.2</th>
<th>Model 3.3</th>
<th>Total effect</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>β₁ is not significant</td>
<td></td>
<td>-</td>
<td>No overall effect to moderate</td>
</tr>
<tr>
<td>(p&gt;0.05)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>β₁ is significant</td>
<td>β₂ is not significant</td>
<td>-</td>
<td>Moderating variable is an explanatory variable</td>
</tr>
<tr>
<td>(p&gt;0.05)</td>
<td>(p&gt;0.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>β₁ is significant</td>
<td>β₂ is significant</td>
<td>β₃</td>
<td>Moderating variable has a moderating effect</td>
</tr>
<tr>
<td>(p&gt;0.05)</td>
<td>(p&gt;0.05)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source; Whisman and MacClelland, 20005

Table 3.3 indicates that in case moderation is significant, the coefficient (β₃) of the interaction term (Factors influencing profitability*Bank size) in Model 3.3 would yield the strength and direction of the moderating variable.
CHAPTER FOUR

PRESENTATION, DISCUSSION AND INTERPRETATION OF EMPIRICAL FINDINGS

4.1 Introduction

This chapter presents the discussion and interpretation of the study findings. Specifically, it covers trends of performance of Kenya’s listed commercial banks, factors that influence profitability of Kenya’s listed commercial banks and how performance of Kenya’s listed commercial banks can be enhanced.

4.2 Trend of performance of Kenya’s listed commercial banks

The study sought to establish the trend of performance of the listed commercial banks in Kenya. Secondary data was collected from the banks’ financial statements and reports for the years between 2008 and 2016. The study collected data on Return on Assets which was measured as the amount of net income returned as a percentage of total assets. The findings were as shown on Figure 4.2.
Figure 4.2 Trend of performance of Kenya’s listed commercial banks

Figure 4.2 reveals that ROA ranged from 0.10 to 0.17. From Figure 4.2 it can be observed that there was intermittent performance of banks in terms of ROA between 2008 and 2016, with the highest growth rate being recorded between 2010 and 2011. This may be perhaps explained by the presence of favourable economic growth environment prevailing at that time. This agrees with Ali (2011) who observed that when economic growth increases profitability also increases.
4.3 Inferential Statistics

4.3.1 Model Summary

Coefficient of determination (R square) explains the extent to which change in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable that is explained by the independent variables. From the study findings, the six independent variables studied (that is, capital adequacy, asset quality, bank size, liquidity management, GDP growth rate and inflation rate), explain 77.79% of variance in listed banks profitability as represented by the $R^2$. This means that other factors not studied in this research contributed 22.21% of variance in the dependent variable.

Table 4.3 Model summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R</th>
<th>Std. Error of the Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.882a</td>
<td>.7779</td>
<td>.756</td>
<td>0.0221</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), capital adequacy, asset quality, bank size, liquidity management, operational cost efficiency, income diversification, GDP growth rate and inflation rate

b. Dependent Variable: Profitability of listed commercial banks.

4.3.2 ANOVA (Analysis of Variance)

Analysis of Variance (ANOVA) consists of calculations that provide information about levels of variability within a regression model and form a basis for tests of significance. From the study findings on Figure 4.3, the significance value is 0.012 which is less than
0.05, thus the model is statistically significant in predicting how capital adequacy, asset quality, management efficiency, liquidity management, operational cost efficiency, income diversification, GDP growth rate and inflation rate influence profitability of listed commercial banks in Kenya. The F statistic was significant (as it was =7.32) and this showed that the model had a good fit.

**Figure 4.3 ANOVA (Analysis of Variance)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>12.768</td>
<td>6</td>
<td>3.192</td>
<td>7.32</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>55.808</td>
<td>128</td>
<td>.436</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>68.576</td>
<td>134</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), capital adequacy, asset quality, bank size, liquidity management, operational cost efficiency, income diversification, GDP growth rate and inflation rate.

b. Dependent Variable: Profitability of listed commercial banks.

### 4.3.3 Regression analysis results

**Table 4.4 Coefficient of Correlation**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients B</th>
<th>Std. Error</th>
<th>Standardized Coefficients Beta</th>
<th>t statistic</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>6.182</td>
<td>.826</td>
<td></td>
<td>7.484</td>
<td>.0000</td>
</tr>
<tr>
<td>Asset quality</td>
<td>0.764</td>
<td>1.25</td>
<td>0.518</td>
<td>0.611</td>
<td>.0068</td>
</tr>
<tr>
<td>Capital adequacy</td>
<td>0.810</td>
<td>.938</td>
<td>0.573</td>
<td>0.864</td>
<td>.0014</td>
</tr>
<tr>
<td>Liquidity management</td>
<td>0.661</td>
<td>1.56</td>
<td>0.464</td>
<td>0.424</td>
<td>.0261</td>
</tr>
</tbody>
</table>
Operational Cost

<table>
<thead>
<tr>
<th>Operational Cost efficiency</th>
<th>0.601</th>
<th>1.43</th>
<th>0.571</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income diversification</td>
<td>0.591</td>
<td>1.29</td>
<td>0.432</td>
</tr>
<tr>
<td>GDP growth rate</td>
<td>0.567</td>
<td>0.234</td>
<td>0.045</td>
</tr>
<tr>
<td>Inflation Rate</td>
<td>-0.476</td>
<td>0.205</td>
<td>0.142</td>
</tr>
</tbody>
</table>

Based on the regression results on Table 4.3 above, the study’s regression model became;

\[ Y = 6.182 + 0.764X_1 + 0.810X_2 + 0.661X_3 + 0.601X_4 + 0.591X_5 + 0.567X_6 + 0.489X_7 - 0.476X_8 + \varepsilon \]

According to the equation above, taking all factors (that is, capital adequacy, asset quality, liquidity management, management efficiency, operational cost efficiency, income diversification, GDP growth rate and inflation) constant at zero, the profitability of the listed banks would be 6.182. The equation also shows that the eight study variables namely capital adequacy, asset quality, liquidity management, operational cost efficiency, income diversification, size of the bank, GDP growth rate and inflation had a positive influence on the level of the listed banks profitability with coefficients of 0.764, 0.810, 0.661, 0.609, 0.601, 0.591, 0.567, 0.489 and -0.476 respectively.

At 5% level of significance and 95% level of confidence, asset quality had a 0.0068 level of significance; capital adequacy had a 0.0014 level of significance, liquidity management had a 0.0261 level of significance, operational cost efficiency had 0.0261 level of significance, income diversification had 0.0321 level of significance, GDP growth rate had a 0.0201 level of significance, size of the bank had 0.0342 level of
significance while inflation rate had a 0.0255 level of significance implying that the most significant factor is capital adequacy followed by asset quality, liquidity management, income diversification, operational cost efficiency, GDP growth rate, size of the bank and inflation rate, respectively.

4.4 Interpretation of the findings

The study findings showed that there was a significant positive relationship between asset quality and banks profitability ($\beta=0.764$ and P value < 0.05). Therefore, a unit increase in asset quality leads to an increase in banks profitability by 0.764.

Findings further showed that there was a significant positive relationship between capital adequacy and banks profitability ($\beta=0.810$ and P value < 0.05). Therefore, a unit increase in capital adequacy would lead to an increase in banks profitability by 0.810.

Results of the study showed that there was a significant positive relationship between liquidity management and banks profitability ($\beta=0.661$ and P value < 0.05). Therefore, a unit increase in liquidity management would lead to an increase in banks profitability by 0.661.

Further, there was a significant positive relationship between operational costs efficiency and banks profitability ($\beta=0.601$ and P value < 0.05). Therefore, a unit increase in the operational costs efficiency would lead to an increase in banks profitability by 0.601.

Also, there was a significant positive relationship between income diversification and banks profitability ($\beta=0.591$ and P value < 0.05). Therefore, a unit increase in the income diversification would lead to an increase in banks profitability by 0.591.
The study also discovered that there was a significant positive relationship between GDP growth rate and banks profitability ($\beta=0.567$ and P value < 0.05). Therefore, a unit increase in GDP growth rate would lead to an increase in banks profitability by 0.567.

Also, there was a significant positive relationship between the size of the bank and banks profitability ($\beta=0.489$ and P value < 0.05). Therefore, a unit increase in the size of the bank would lead to an increase in banks profitability by 0.489.

Finally, the study showed that there was a significant negative relationship between inflation rate and banks profitability ($\beta=-0.476$ and P value < 0.05). Therefore, a unit increase in inflation rate would lead to a decrease in banks profitability by 0.476.

This study found statistically significant effects of the factors studied on the performance of banks. This is in agreement with the findings by Madishetti (2013) who analyzed the profitability determinants of Tanzania commercial banks for the period of 2006-2012. Internal determinants used were liquidity risk, credit risk, operating efficiency, quality of assets and capital adequacy and external determinants use the variables GDP growth rate and inflation rate. The study found that internal variables determine banks’ profitability.

This is further supported by the findings of Olweny and Shipho (2011) who found that bank specific factors (capital adequacy, asset quality, liquidity, and operational cost efficiency) significantly influenced bank profitability. However, they disagree with the findings by Saira Javaid (2011), who examined the profitability of top 10 commercial banks of Pakistan for the period of 2004-2008 and found that internal factors including assets, management, liquidity, income diversification, efficiency in operational costs and working capital did not have an influence on the profitability of banks (ROA).
These results may perhaps be attributed to the way the data analysis was carried out in this study. While the previous study used individual data from each of the banks (cross-sectional approach), the present study used aggregated data for all the banks for each year (a longitudinal approach). Secondly this study was done in Kenya while the previous study was carried out in Pakistan, where there economic realities may be different.

4.4.1 The moderating effect of bank Size

To test the moderating effect of the bank size on the profitability of listed commercial banks in Kenya, two regression models were used as recommended by Whisman and MacClelland (2005). In the first model (3.5), other factors influencing profitability were regressed. However, in the second model (3.6), other factors and the interaction of bank size were regressed on profitability. The regression analysis results were presented in Table 4.5

Table 4.5 Model summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
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</table>

* a. Predictors: (Constant), capital adequacy, asset quality, liquidity management, operational cost efficiency, income diversification, GDP growth rate and inflation rate

b. Predictors: (Constant), X1-X<sub>3</sub> and bank size
The results in Table 4.28 (a) show that adjusted $R^2 = 0.323$. This implies that bank size explains the 32.3% of the variation in profitability and 67.7% is explained by variables not fitted in the model.

**Table 4.6 Analysis of variance statistics**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
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<tr>
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<td>6</td>
<td>3.192</td>
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<td>.012</td>
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<tr>
<td>1 Residual</td>
<td>55.808</td>
<td>128</td>
<td>.436</td>
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<tr>
<td>Total</td>
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<td>134</td>
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<tr>
<td>2 Regression</td>
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<td>7</td>
<td>1.392</td>
<td>4.006</td>
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<td>Total</td>
<td>68.586</td>
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</table>

Predictors: (Constant), capital adequacy, asset quality, liquidity management, operational cost efficiency, income diversification, GDP growth rate and inflation rate

In addition, the results in Table 4.6 indicate that the regression model with interaction term is statistically significant at $F(7,127) = 4.006$ and $P=0.000$. 

41
Table 4.7

<table>
<thead>
<tr>
<th>Coefficients&lt;sup&gt;a&lt;/sup&gt;</th>
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<td>Model</td>
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<td>(Constant)</td>
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<td>Liquidity management</td>
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<tr>
<td>GDP growth rate</td>
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<tr>
<td>Inflation Rate</td>
</tr>
<tr>
<td>Product of other factors and bank size</td>
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</tbody>
</table>

<sup>a</sup> Dependent Variable: Profitability of listed commercial banks

Results in Table 4.7 in Model 3.5 represents interaction between other factors influencing profitability and bank size. Moreover, the change in coefficient of determination (R change=0.124, F change=1.491 and p value=0.000) reveals that there is significant moderating effect of bank size on the profitability of listed commercial banks.

\[ P = 6.206 + 0.227 \text{SCMP} + 0.249 \text{SSP} + \epsilon \] (3.5). 

Where:

\[ P = \text{Profitability} \]

\[ \text{OF} = \text{Other factors affecting profitability of listed banks} \]
BS = Bank size

\( \varepsilon \) = error term

In Model 3.5, Supply chain management practices is statistically significant at \( \beta = 0.426 \), \( t = 2.520 \); \( p = 0.001 \), suggesting that there is a relationship between bank size and profitability that could be moderated.

\[
P = 6.206 + 0.368 \text{OF} + 0.249 \text{BS} - 0.187 \text{OF} \times \text{BS} + \varepsilon \ ........................................ (3.6).
\]

Where:

\( P \) = Profitability

\( \text{OF} \) = other factors influencing profitability

\( \text{BS} \) = bank size

\( \varepsilon \) = error term.

The regression results in Table 4.7 for model 3.6 reveal that at 5% level of significance, the coefficients are statistically significant, with other factors at \( \beta = 0.368 \); \( t = 2.108 \); \( p = 0.000 \), profitability at \( \beta = 0.249 \); \( t = 1.466 \); \( p = 0.015 \), and the interaction term at \( \beta = -0.187 \); \( t = 1.221 \); \( p = 0.003 \). This results concur with decision criteria on Table 3.3 on Chapter Three that bank size has a moderating effect on the profitability of commercial banks listed at the NSE.
4.5 Enhancing the Performance of Kenya’s listed commercial banks

Having evaluated the factors that had an influence on the profitability of the commercial banks, the study endeavored to find out how such performance could be enhanced. Based on data from the regression model as observed in the previous section, the study discovered a significant positive relationship between capital adequacy, liquidity management, operational costs efficiency, income diversification, GDP growth rate, the size of the bank and profitability. Further the study found a significant negative relationship between inflation rate and banks’ profitability.

This implied that in order for banks to remain profitable, they had to scale up the bank specific factors i.e. capital adequacy, liquidity management, operational costs efficiency, income diversification, GDP growth rate and the size of the banks. It further implies that if banks are to be profitable, then the rate of inflation must be brought down to its minimum.

These findings agree with Olweny and Shiphoe (2011) who found that banks specific factors (capital adequacy, asset quality, liquidity, and operational cost efficiency) significantly influenced bank profitability. However they disagree with the findings by Saira Javaid (2011), who examined the profitability of top 10 commercial banks of Pakistan for the period of 2004-2008 and found that internal factors including assets, management, liquidity, income diversification, efficiency in operational costs and working capital did not have an influence on the profitability of banks (ROA).
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusions and recommendations of the study.

5.2 Summary of Key Findings

The study revealed that there was intermittent performance of banks in terms of ROA between 2008 and 2016, with the highest growth rate being recorded between 2010 and 2011. This may be perhaps explained by the presence of favourable economic growth environment prevailing at that time.

This study found statistically significant effects of the factors studied on the performance of banks.

The study findings showed that there was a significant positive relationship between asset quality and banks profitability ($\beta=0.764$ and $P$ value $<0.05$). Therefore, a unit increase in asset quality leads to an increase in banks profitability by 0.764.

Findings further showed that there was a significant positive relationship between capital adequacy and banks profitability ($\beta=0.810$ and $P$ value $<0.05$). Therefore, a unit increase in capital adequacy would lead to an increase in banks profitability by 0.810.

Results of the study showed that there was a significant positive relationship between liquidity management and banks profitability ($\beta=0.661$ and $P$ value $<0.05$). Therefore, a unit increase in liquidity management would lead to an increase in banks profitability by 0.661.
Also, there was a significant positive relationship between management efficiency and banks profitability ($\beta=0.609$ and P value $< 0.05$). Therefore, a unit increase in the management efficiency would lead to an increase in banks profitability by 0.609.

Further, there was a significant positive relationship between operational costs efficiency and banks profitability ($\beta=0.601$ and P value $< 0.05$). Therefore, a unit increase in the operational costs efficiency would lead to an increase in banks profitability by 0.601.

Also, there was a significant positive relationship between income diversification and banks profitability ($\beta=0.591$ and P value $< 0.05$). Therefore, a unit increase in the income diversification would lead to an increase in banks profitability by 0.591.

The study also discovered that there was a significant positive relationship between GDP growth rate and banks profitability ($\beta=0.567$ and P value $< 0.05$). Therefore, a unit increase in GDP growth rate would lead to an increase in banks profitability by 0.567.

Finally the study showed that there was a significant negative relationship between inflation rate and banks profitability ($\beta=-0.476$ and P value $< 0.05$). Therefore, a unit increase in inflation rate would lead to a decrease in banks profitability by 0.476.

5.3 Conclusions

The study concluded that there was intermittent growth in the performance of banks in terms of ROA between 2008 and 2016, with the highest growth rate being recorded between 2010 and 2011. This was explained by the presence of favourable economic growth environment prevailing at that time.

The study concluded that banks’ internal factors significantly influenced profitability. Such factors included capital adequacy, asset quality, liquidity management, management
efficiency, operational cost efficiency and income diversification. An increase in any of these factors translated into more profitability.

Macro-economic variables i.e. GDP growth and Inflation also had an impact on the banks’ productivity. Higher GDP growth led to more productivity while lower inflation led to increased productivity.

**5.4 Recommendations**

The study recommends that there is need for commercial banks to improve their performance in terms of ROA. The trend has been intermittent in performance on this front and therefore the need to maintain an upward trajectory.

The study recommends that banks should ensure that they have enough quality assets since asset quality was found to be the most significant factor of banks’ productivity.

The government should also try to tame inflation so that the commercial banks can have a healthy operating environment which ensures profitability.

**5.5 Limitations of the Study**

This study focuses on commercial banks. Therefore, results are applicable only to commercial banks and any attempt to generalize findings to other firms outside this scope should be approached with care.

Secondly, the study focused on determinants of financial performance of banks as a concept. The interpretation of these results should therefore be limited to the concept and by extension to the model used in the study.
Lastly, this study is country specific to Kenya. The study therefore suffers from the limitation of country specific studies. The results are therefore applicable only to Kenya and any attempt to generalize findings to other countries should be approached with care.

5.6 Suggested Areas for Further Research

This study can be replicated in other industries to establish what the determinants of firm performance are. Thus studies can be done in other sectors of the economy such as manufacturing sector to determine the firm specific factors that influence their performance. There is also need to carry out the same study in the banking industry in Kenya while employing a different model and approach in order to compare the results. This is for purposes of generalization.
REFERENCES


Appendix I Listed Commercial Banks at the NSE

List of commercial banks listed in the Nairobi Securities Exchange as at 31st December 2016.

1. Barclays Bank Ltd

2. CFC Stanbic Holdings Ltd

3. Co-operative Bank of Kenya Ltd

4. Diamond Trust Bank Kenya Ltd

5. Equity Bank Ltd

6. Housing Finance Co Ltd

7. I&M Holdings Ltd

8. Kenya Commercial Bank Ltd


10. NIC Bank Ltd

11. Standard Chartered Bank Ltd

(Source, NSE 2017)
Appendix II: Data Analysis Output from SPSS

Summary Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
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<th>Mean</th>
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Source: (CBK, 2017)
Appendix III: Data Capture Template

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<tr>
<td></td>
<td>(Total equity/total assets)</td>
<td>Non-performing loans/gross loans</td>
<td>(Log of Total Assets)</td>
<td>(Current assets / Total deposits)</td>
<td>(Operating costs/net operating income)</td>
<td>(Income from individual sources/total income)</td>
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