

**EFFECT OF INTEREST RATE CAPPING ON
FINANCIAL PERFORMANCE OF COMMERCIAL
BANKS IN KENYA**

HILDAH WANJIRU MAINA

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DECLARATION

I, Hildah Maina hereby declare that this is my original work and has not been submitted for presentation and examination for any award of degree in this university or any other university.

Signature Date.....

Hildah Wanjiru Maina

D61/77397/2015

This research project has been submitted for examination with my approval as University of Nairobi supervisor

Signature Date.....

Dr. Winnie Nyamute

Senior Lecturer, University of Nairobi

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DEDICATION

I dedicate this project to my parents Mr. and Mrs. Maina for their sacrifice in educating me and for teaching me the discipline and values of hard work. I also dedicate this work to my family, my loving husband, Simon my dear son, John Paul, daughters, Tiffany and Precious.

I love you and may Almighty God continue to shower you with everlasting blessings. This work is dedicated to the Almighty God for guidance and good health to complete this task. My special thanks go to my siblings Janet and Sospeter for their encouragement and support.

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ABBREVIATIONS AND ACRONYMS

CBK	Central Bank of Kenya
DTMB	Deposit Taking Microfinance banks
IFCAT	Fisher's Classical Approach Theory
LPT	Liquidity Preference Theory
RETIR	Rational Expectations Theory of Interest Rates
ROA	Return on Assets
ROE	Return on Equity
SPSS	Statistical Package for Social Sciences

ABSTRACT

The rate of interest is a key factor that drives the growth of the economy and bank performance. Interest rate is one of the important tools utilized by central bank of Kenya to regulate inflation and bolster economic development. Capping of interest rate is a mechanism used by government to regulate the finance sector. This study was set out to determine the effect of interest rate capping on Kenyan commercial banks' financial performance. The study adopted a descriptive research design to establish hypothetical relationship that exists between variables as supported by Irving Fisher's classical and approach theory that anchor this study. The populations for this study include 42 commercial banks that were operational in the study period. Monthly secondary sources of data were used for 15 months, from December, 2014 to September, 2018. This data was obtained from annual reports of CBK. Data analysis was done using descriptive statistics and paired t-test and the study found that upon capping of interest rates the performance of commercial banks declined significant as revealed by ROA. However, capital adequacy and customer deposits increased after capping of interest rates. Operational efficiency decreased by a small margin while lending rates increased greatly. Similarly, quality of loans improved moderately; this was a consequence of effective implementation of credit policies by commercial banks. It was deduced that lending rates and quality of loan demonstrated significant differences before and after capping. However, capital adequacy, operational efficiency, ROA and customer deposits revealed insignificant differences. This study recommends the need to do away with capping of interest rates. This is because, it has impacted negatively on commercial banks, as a consequence lending for private companies has deteriorated. Majority of Kenyans particularly low income earners cannot access bank lending and this has led to increased borrowing costs. The research was limited to a descriptive type of research design that establishes the nature of existing relationships amongst variables without establishing the 'cause and effect' relationships amongst variables. There is need to explore the long-term effects of interest rate capping and its effect on commercial banks' financial performance to determine whether capping should be maintained or removed.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Interest caps are likely to result to bias and this may fuel financial institutions to focus on low risk customers in lending which brings about inefficiencies in processes of financial intermediation (Dominic, 2010). Ramsey (2013) indicates that discrimination in provision of credit facilities might result into a situation where those in great need of financial assistance get locked out in accessing credit since they are regarded as risky. Financial institutions can still maintain their profitability even after introduction of interest rate caps by tapping other income sources such as non-funded incomes and cutting costs (Garman & Grable, 2012).

Theories anchoring this study include Irving Fisher's Classical Approach Theory (IFCAT), Liquidity Preference Theory (LPT) and the Rational Expectations Theory of Interest Rates (RETIR). IFCAT opines that the firm has to make the best decision on whether to save or investment (Gonner, 2001). LPT notes that change in interest rates is as a result of forces of demand and supply. Davidson, (1978) this theory is useful in determining the level of interest rate in an economy. RETIR maintains that the culture of saving and consumption is dictated by the nature of available information. Jones and Roley, (1983) note that fluctuation of economic factors such as inflation affects interest rates (Hardouvelis, 1994).

In the year 2015 the Kenya Government enacted the law to cap the interest rates from all the financial lending banks in Kenya. This legislation has brought effect in all of commercial banks. Interest rate caps, is in a way a kind of state control in the financial sector. Lately, economies that adopt interest rate caps have declined since most economies are considering having liberal financial policies (CBK, 2016).

1.1.1 Interest Rate Capping

Capping of interest rate could be defined as a ceiling which is placed on interest rate. It is the highest rate that a bank can subject to its customers through loans, Villegas (1982), in Kenya it stands at 14%, CBR. This implies that the lending rate is linked to the deposit rate by the government. The action by the government aims at controlling the spread that banks and MFIs change in transactions involving lending and borrowing. Protection of consumers against unfair business activities is among the major roles played by the government. This is mainly achieved through limit on total price of loans; the banks are unable to increase arrangements and other costs of borrowing due to the limit. The interest cap restricts the ability of lenders to implement price discrimination. This aggravates the issue of adverse selection as some businesses might be offered expensive credit for riskier ventures than others.

One of the major reasons for introducing interest rate caps was the protection of consumers against unreasonably high interest rates. The other reason for the use interest rate caps was to promote prosecution of exploitative and misleading lenders. Interest rate caps also help protect the public interest by ensuring that interest rates charged on loans are fair and reasonable. In addition, the interest rate caps help determine the credit limit for consumers thus avoiding social harm (OFT 2010). However, it is crucial to understand that lenders would still operate profitably even if the interest rate cap was set low because credit prices are often anticompetitive and unpredictable.

1.1.2 Financial Performance

According to Pandey (2004) financial performance is accomplishing a task using limited resources and costs. Return on total equity (ROE) and return on total assets

(ROA) are the primary measures used in determining the performance of commercial banks. In addition to assessing performance, the variables are used in predicting trends in market structures as well as any other areas where the bank's profitability level is useful in decision making (Penman, 2007). To gain insights about a company's financial performance, banks rely on accounting and financial ratios. The ratios also indicate the link between variables such as assets, market value, investment, revenue, profit and the number of employees.

According to Petersen and Kumar, (2010), through financial performance review, a financial institution can set strategies in the short-run and long-run through forecasting investments in future and analysis of performance patterns. To sustain financial stability, growth of assets and profit projections in which financial analyst uses audited annual reports for prediction, there is need to do an analysis in financial performance so as to have a clear view of the bank's financial performance position.

1.1.3 The Relationship between Interest Rate Capping and Financial Performance

Commercial bank activities are mainly and to a great extent intermediation services whereby they act as a bridge between the money institutions and the investors. Bank financial performance is due to the interest rates laid upon the borrowed funds, appreciation and money transfers (Hoand & Saunders, 2001). Banks also pay interest money to the savings and dividends to the shareholders hence the difference is the rate spread within a given time of trading. The increasing spread on the credits and savings the higher the objectivity of the bank can be accomplished (Tran, 2013). Many scholars who related the two variables says for any financial institution to remain profitable it must establish a positive spread and minimize the operational cost and transactions in credit facilities and deposits.

Currently many banks are experiencing very low number of deposits hence making a significant effect on the spread especially the key player of the industry. Benston and Smith (2009) concludes that operational expense is the 5 key aspect in which every bank should minimize in order to get high returns at the end of every trading period. Institutions can purchase large numbers of securities, subdivide them in small portions then sell them at a low cost but very high profit margin hence maintain very high profitability level (Hoand & Saunders, 2001. Ngugi (2004) explains that interest impacts directly on financial performance and overall economy, borrowing at high interest rate discourages is discouraging to borrowers, it results negatively on the investment and through multiplier effects savings decline and this impacts negatively on bank's performance and vice versa when lenders lend money to borrowers at low interest rates. It can be concluded that the rates of interest impacts positively on the financial performance and negatively based on the fluctuation of interest rates.

1.1.4 Commercial Banks in Kenya

Kenya's banking industry is made up of 43 financial institutions (39, banks and 1 mortgage financial institution) having private ownership and controlling interest by Kenya government in other banks (3), out of these 39 banks, 24 consists of private ownership including 1 mortgage institution have a local ownership (majority shareholders are from Kenya), while fifteen have foreign ownership (CBK, 2016). Commercial banks are regulated and licensed according to the Banking Act provisions and Regulations including the prudential guidelines. As major players in the banking industry, commercial banks are subjected to regulatory obligations that govern their prudential position and their market conduct to safeguard financial system stability (CBK, 2016).

Central Bank of Kenya (CBK) has a role to maintain liquidity, solvency and effective functioning of a market-based financial system. CBK conducts regular review of the banking sector laws and regulations to ensure that they are relevant to the working environment. These involve the Banking Act (488) and CBK Act (cap 491). Commercial banks have faced an incredible growth as a result of adoption and use of banking technologies, change in customer needs and stiff competition. Financial performance of commercial banks is affected by various environmental changes such as regulations and technological changes. Bill on interest rate caps got approval by President Uhuru Kenyatta, on 24th August, 2016. The goal of this bill was to amend section 33A of Banking Act by introducing a new section (33B), as a guide for interest ceiling. Through warning borrowers to be keen on interest they get on deposits and effects of these on financial institutions that lend, and provide high interest rates than the one stipulated by the law. Section 33b(1)(b) of the Banking Amendment Bill stipulate that a Kenyan who holds a savings account with any bank can easily get a predetermined rate of interest on deposits with CBR. This clause stipulates that the minimum interest rate which a bank is obligated to pay on savings deposits at 70%, base rate as provided by CBK. This implies that considering CBR at 10%, the minimum interest payable on savings account is 7% while maximum rate of interest on loans is 14% which constitutes 400 basis points which exceeds CBK (Aligonby, 2016).

The primary goal of this legislation is to control banks from setting high rates of interest on loans and low rates of interests on deposits. More specifically, the law maintains that none of the banks provides a loan with a charge exceeding 400, basis point as rate of interest over and above the set base rate by CBK.

1.2 Research Problem

Samuelson (2011) contends under normal circumstances banks increase their profitability with the increase in interest rates. Interest in the rates of interests increases the bank's income from interest and this impact on the bank's financial performance and its overall performance. Zarruk (2008) argues that an increase in the rates of interest affects the entire system of banking since it a significant effect on loans which is one of the primary bank assets. However, the sensitivity of a bank's assets and liability is an accurate measure of how fluctuations in the rates of interest volumes impact on the banking sector.

Following capping of interest rate by CBK; stakeholders in the banking sectors have been affected. Commercial banks are now forced to look for more innovative ways to compensate for the loss of interest income from loans (CBK, 2016). Few banks have made great strides to reinvent themselves and remain competitive and relevant in the banking sectors in order to survive. For example Commercial bank of Kenya has recently launched a digitized product (CBK loop) that allows customers to conduct their banking transactions without necessary visiting the bank. Some banks are adopting strategies such as downsizing to minimize operational costs and retain their profits.

Wensheng et al., (2003) explored the contribution of interest rates on performance in the banking sector and the results concluded that there was a significant connection between the two variables. Garman and Grable (2012) explored the impact that interest rates had on performance and concluded that rates of interest impacted greatly

on performance of firms in Holland. Ashim and Ranjula, (2013) found that interest rates influence commercial banks' performance.

Kipng'etich (2012) explored the contribution that interest rate had on financial performance of Kenyan banks and the results realized that there was a significant association between the rate of interest and financial performance. Karimi (2015) tested the link between interest rate lending and commercial bank's financial performance in Kenya and a positive connection was found present between financial performance and interest income. Ndichu (2016) tested the link between spread of interest rates and financial performance of deposit taking microfinance banks and the results depicted that spread of interest rates was significantly linked to financial performance.

Although studies (Kipng'etich, 2012; Karimi, 2015; Ndichu, 2016), have been done on interest rates and financial performance a limited emphasis has been given on the effect of rate of interest on commercial banks' financial performance. Considering that this regulation is relatively new, the investigator finds it worthwhile to establish the effect that rate of interest caps have on commercial banks' financial performance by findings an answer to the question:: What is the effect of interest rate capping on financial performance of commercial banks in Kenya?

1.3 Research Objective

The objective of this study was to determine the effect of interest rate capping on financial performance of commercial banks in Kenya.

1.4 Value of the Study

Policy makers might utilize the findings realized in this study in setting policies that enable commercial banks to easily adopt and comply with capping regulations. This

will give room for more borrowers to access credit facilities and expand their businesses. This might impact positively on the economic growth.

The study builds the understanding on the contribution of interest rate capping on the commercial bank's financial performance. Management of commercial banks will appreciate the impact that capping has in enabling customers to borrow money and prevent low income earners who are perceived to be risk in accessing credit. This study will be useful to policy makers in regulating the hidden charges that makes loans more expensive even after capping.

This research will contribute greatly to the existing literature in educating students on the theories that support interest rate and financial performance. They will widen their understanding on other factors that affect commercial banks' financial performance. The results obtained in this study might be utilized by researchers as a basis for future research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter gives a discussion of the literature in relation with the objective for this study. It covers a theoretical basis for this research, the factors affecting bank's financial performance and empirical studies.

2.2 Theoretical Framework

In this section, the study discusses theories anchoring this study that include Irving Fisher's Classical Approach Theory, Liquidity Preference Theory and The Rational Expectations Theory of Interest Rates.

2.2.1 Irving Fisher's Classical Approach Theory

Fisher (1911) put forward that the classical approach theory suggests that one can either consume or save their income. The former is undertaken when individuals believe that the best time to consume the income is at a future date as opposed to the current time. The conviction motivates the individuals to save more and consume less currently. Various factors influence the ability of individuals to save, among them, income level. It is common for individuals earning high income to save considerable amount. However, predictions on future income also influence the decision to save. The marginal propensity to save also affects decision on saving. In some cases, individuals interchange savings and consumption periods thus dictating the level of savings. The interchange in consumption and savings preferences may vary with the change in income level (Fisher, 1913).

In some cases, individuals gain monetary gains by lending their savings to other people; the compensation acts as a motivating factor for saving.

When the demand for savings from borrowers is high, the compensation, referred to as the interest rate, is positive. The level of interest rate in turn determines the willingness of the borrowers to invest; high interest rate discourages borrowing because it reduces profitability (Gonner, 2001). Johnson (1971) posits that borrowers mainly want to invest at the point where marginal benefits and obtained from the investments equates to the total cost incurred in interest. Interest rate may be defined from the lender's and the borrower's view. It is the cost incurred by borrowers and the benefit or compensation earned by lenders. The difference between nominal and real interest rates is well-documented. According to Fabozzi (1998), the former refers to the amount of money paid per unit of borrowed funds while the latter is the increase in consumption power over the life of a loan. Inflation in the economy is among the primary factors that bring about the difference in the two forms of interest. Fisher first developed the difference between the real and nominal interest rates caused by inflation rates. The rate of nominal rate is lower than the real rate during inflation and higher than real rate during deflation. Fisher further explains that in the long run, inflation only affects the nominal interest rate (Hicks, 1974).

Although Fisher's theory explains the major distinction between the real and nominal rates, it does not consider the various factors that influence interest rates. The Loanable Funds Theory that expounds Fisher's approach addresses the weaknesses of Fisher's theory. The theory considers factors affecting the rate of interest including bonds, government actions, cash investments, and actions by the banks. Even after incorporating all these factors, the conclusions are similar to the classical approach (Jonung, 1979).

2.2.2 Liquidity Preference Theory

This theory was first cited in the work of Keynes (1930); the liquidity preference model analyzes the changes in the interest rates trends resulting from the variations in the monetary supply and demand. This theory is helpful in determining the level of interest rates in a given economy. Based on the theory, the classification of assets is in either bonds or money. The need to carry out current transactions is the primary motive for holding money, while bonds are desired by individuals seeking to earn interest (Davidson, 1978). The theory views interest rate earned in holding bonds as the opportunity cost of holding money. In the event that they need to earn more money, they convert money into bonds. The opportunity cost of holding money reduces when the interest earned in holding binds reduces (Hicks, 1979).

In such cases, individuals prefer to hold cash as opposed to purchasing bonds. The desire to hold money diminishes when the interest earned in bonds increases. Based on the theory, it is evident that demand for money and interest rates has a negative correlation. Keynes suggests that the level of interest rates and money supply have no established relationship. The theory cites that the primary factors affecting demand for money and interest rates are price and income level. By increasing the income level in the economy, the demand for money rises due to the high liquidity of money (Hicks, 1989). Keynes (1937), states that one of the major responsibilities of central bank is the control of monetary base (MB). It refers to the money reserved and the one in circulation. Open market operations, discount lending by financial institutions and reserve requirements by banks are some of the tools used by the Central bank in the control of monetary base. Discount rate is a useful aspect in determining the interest rates in the economy because it influences the price of credit as well as the providing information on interest rates in the economy.

Various factors dictate the extent to which monetary supply increases with increase in monetary base. These factors include the level of required reservation, money multiplier, ratios for deposits and reserves (Keynes, 1973). Theoretically, the level of liquidity in the economy dictates the amount of interest rate by shifting the equilibrium. Low interest rates are observed when the level of liquidity increases due to large volume of money supply. In addition to the liquidity effect, the income effect also dictates the level of interest rates by influencing the aggregate demand that increases the demand for money. As a result, the level of interest rate increases. Price level effect also influences the amount of interest rate in the economy by increasing the demand for money. The price and income effect have similar influence on the rate of interest. It is likely to experience inflation when the level of production in the economy is at full employment. Based in Fisher's theory, the inflation increases the nominal interest rate (Garegnani, 1989).

2.2.3 The Rational Expectations Theory of Interest Rates

According to Shiller (1979) decisions concerning saving and consumption by individuals are influenced by the nature of information available. The rational expectations theory posits that the current spot rate is the most suitable way of predicting interest rates in the market. Further, the approach holds that unexpected information in circulation is the primary source of changes in interest rates because it influences individual decisions. Change in economic factors such as inflation also alters the current interest rate. To consider the nature of available information better, it is crucial to incorporate both the rational expectations and the loanable funds theory (Sargent, 1979).

Although the rational expectations approach is effective in explaining the interest rates in the economy, it has some shortcomings. One of the primary limitations of the theory is that it is difficult to gather all the relevant information used in making economic decisions. Jones and Roley (1983) posit that it is difficult to accurately determine how the gathered information is used by the public on the basis of expectations. If individuals expect an increase in interest rate, they cut on borrowing thus lowering the rate of interest. If the rate is expected to drop, the rate of borrowing increases, leading to high interest (Hardouvelis, 1994).

2.3 Determinants of Financial Performance

There a myriad of factors that impact on financial performance of banks. These factors affect short-term and long-term financial performance of a bank. This study will look at the following determinants: customer deposits, loan quality, liquidity management and inflation.

2.3.1 Customer Deposits

According to Tariq and Usman (2014) bank deposits have a direct positive relationship with the profitability of a bank. Banks that have large deposits report higher levels of profitability compared to banks with low deposits. Ostadi and Monsef (2014) also found out that a rise in bank deposit results into improved bank profitability. It was discovered that when bank deposits increased bank capital also increased.

An increase in bank capital in turn created an opportunity for banks to generate more income through increased loan facilities among other services. Eventually, the banks experienced an increase in the level of profit. Therefore, an increase in deposits led to an increase in profit levels. Aladwan (2015) also asserts that bank despites have a direct positive relationship with the level of profitability of banks. Accordingly, an

increase in the value of bank deposits leads to increased revenue generating activities for banks further enhancing their profit levels. In contrast, a study conducted by Rahaman and Akhter (2015) revealed that bank deposits affected firm profitability negatively. A conclusion was drawn that over dependence on time deposits and savings deposits led to a decline in earnings. Banks that documented high time deposits got lower profits and this led to a negative connection between bank deposits and firm profitability.

2.3.2 Loan Quality

Gizaw, Kebede and Selvaraj (2015) loan quality could be measured in terms of provisions for loan loss and non-performing loans. The findings of the study revealed that loan quality has a direct positive relationship with profitability of banks. High quality loans bring forth higher levels of profits as compared to poor quality loans whereby the quality of loan is determined by the risk-level of customers receiving loans. When loans are extended to customers with low credit rating, the banks end up generating low profit levels due to high loan default rates.

Staikouras and Wood, (2011) also found out that loan quality has a positive impact on the profitability of banks. The research established that the manner in which loans are managed has a great influence on the profitability of banks. Loans are considered to be of high quality when they are extended to people with high credit rating. Such loans bring forth high levels of profit for the banks are compared to poor quality loans. Therefore, on the basis of the aforementioned two research studies, loan quality has a strong positive correlation with the profitability of banks. Rahaman and Akhter (2015) established that loan quality the management expertise exhibited in managing loans has an insignificant impact on the profitability of banks.

2.3.3 Liquidity Management

Rasiah (2010) notes that banks are expected to maintain a minimum level of liquid assets. This is intended to ensure that the banks are liquid to be able to meet their financial obligations. Banks assume a status of high liquidity to consolidate enough funds to be able to possess other liquid assets to raise funds efficiently from other sources so that they can meet their financial commitments on time. Commercial bank regulators expect commercial banks to hold a certain level of liquid assets. This is aimed at ensuring that commercial banks have adequate liquidity to deal with bank runs.

A bank becomes liquid if it is able to accumulate enough cash and its ability to raise fund from different sources to meet its financial obligation on time. When a bank is faced by financial difficulties, it might be forced to raise more funds through the process of borrowing or disposing some liquid assets which might create an impression to investors that the bank could be disposing bad assets. Thus, attract lower prices for liquid assets which might expose the bank to loss of income from the sale of liquid assets (Rasiah, 2010).

2.3.4 Inflation

Inflation is defined as a rise in general prices of goods and services which lowers the purchasing power. Inflation rate is controlled by the rate of interest rate. Interest rate affects the ability of an individual to purchase residential property. This affects the cost of mortgage rates and financing that in turn affects property. This rate has an impact on the return on substitute investments and changes in price (Alper & Anbar, 2011). Inflation minimizes the value for money making it difficult for individuals to afford a living. This might have an impact on growth of an economy. Waseem et al. (2014) assessed the influence of inflationary trends on bank's performance in

Pakistan. It was found that inflation led to an increase in ROA of Islamic commercial banks. There was a positive link among inflation and performance of bank.

2.4 Empirical Studies

In a study by Wensheng et al., (2003), the level of interest rate shocks impacts performance of the banking sector. For example, an increase in the Hong Kong dollar risk premium influences the profitability of banks in terms of asset quality. The effect was explained by an increasing spread between the US dollar and Hong Kong dollar interest rates. The effect on the quality of assets in turn affects the net interest margin and the provisioning charges. Empirical data for the period between 1992 and 2002 reveals that rise in risk premium decreases the net interest margin. The response is because the variation in risk premium has a greater effect on interest rate charged on deposit compared to the lending interest rate. During the period of study, variations in domestic along with the US interest rate had minimal impact on the margin. This narrowed down on shocks of interest rates however this study is explicitly looking at how capping of interest rates affects commercial banks' financial performance.

Kipng'etich (2012) investigated the effect of interest rates on the financial performance of commercial banks in the Kenyan finance sector. The study used regression models; financial performance of banks and interest rates represented the independent and dependent variables respectively. The return on equity was used as the tool for measuring the profitability of commercial banks. The study relied on published reports from sources dating between 2006 and 2010 for collection of secondary data. In analyzing the findings, the regression model was used to determine how return on equity relates to interest rates. Data analysis revealed that financial performance of commercial banks in Kenya and interest rates had a positive correlation.

The findings imply that the banks need to manage their interest rates prudently to benefit from the variations in interest rates. Further, the financial institutions should manage other factors that influence their profitability effectively. This study limited itself to the spread of interest rates and how it impacted on commercial banks' ROA as opposed to interest rate capping.

In their study, Garman and Grable (2012) investigated the variations in performance of agricultural farms with changes in interest rates. The study, which was conducted in Amsterdam, Holland, indicated that financial performance of the firms and interest rates has an inverse correlation. The study relied on credible secondary based on the currency; it was only collected from sources within 5 years from 2008. Regression model was used in analyzing the data, leading to conclusion that when the interest rates were low borrowers borrowed more money to make investments since the cost of borrowing was low. This study was carried out in a different context (agricultural sector) other than the banking sector.

Interest rates on borrowing affects the rates of non-performing loans, according to a study conducted by Dominic (2010) on Kenyan deposit taking micro finance institutions. The researcher used regression analysis, a cross sectional and descriptive survey research design to investigate the relationship between average non-performing loans (Dependent variable) and average borrowing interest rate (Independent variable). The results obtained from the model shows that non-performing loans of DTMBs in Kenya have significant positive connection on interest rate on borrowing. However, since the relationship is insignificant we conclude that borrowing interest rates by DTMBs does not necessarily improve the financial performance. This study limited itself to borrowing and non-performing loans while

the current study is investigating the effect that interest rate capping has on commercial banks' financial performance.

Njoroge (2013) did an evaluation regarding interest rate effects on listed firms' financial performance in NSE. A descriptive type of research design was employed to detect relationships amongst variables, in a population of 50 listed firms. Secondary data in the study was collected between the period of 2008 and 2012. For accuracy and high credibility, the study relied on data from financial statements of firms as well as financial and economic publications from the Central Bank of Kenya. The causal research design was employed to assess the nature of variables in the study, that is, financial performance of the firms and interest rates. The study used regression model to analyze data, leading to the conclusion that statistically significant connection exist between the variables under investigation. This study was done in a different context (listed firms) while the current study focuses purely on commercial banks.

Ashim and Ranjula, (2013) investigates the effects of high interest rates by commercial banks in improving profitability, altering the company's mission, and reducing the repayment rates. For six years from 2003, instrumental variables (IV) were employed to investigate the endogeneity issues. The study relied on data collected from global database of 310 commercial banks in 71 countries. The findings indicate that the commercial banks' ROA influenced by interest rates. The rates also affect the loan repayment rates. Kar and Swain (2014) did an investigation of whether commercial bank's interest rates had an impact on financial performance. A sample involving 50 banks were utilized and data was analyzed with the help of regression analysis. A regression model was used and findings of the analysis indicated there was a positive connection amid interest rates and financial performance of microcredit

firms. These studies (Ashim and Ranjula, 2013; Kar and Swain, 2014) were done in global settings whose situations are dissimilar.

2.5 Conceptual Framework

This study hypothesizes that interest rate caps recorded a significant effect on commercial banks' financial performance in Kenya.

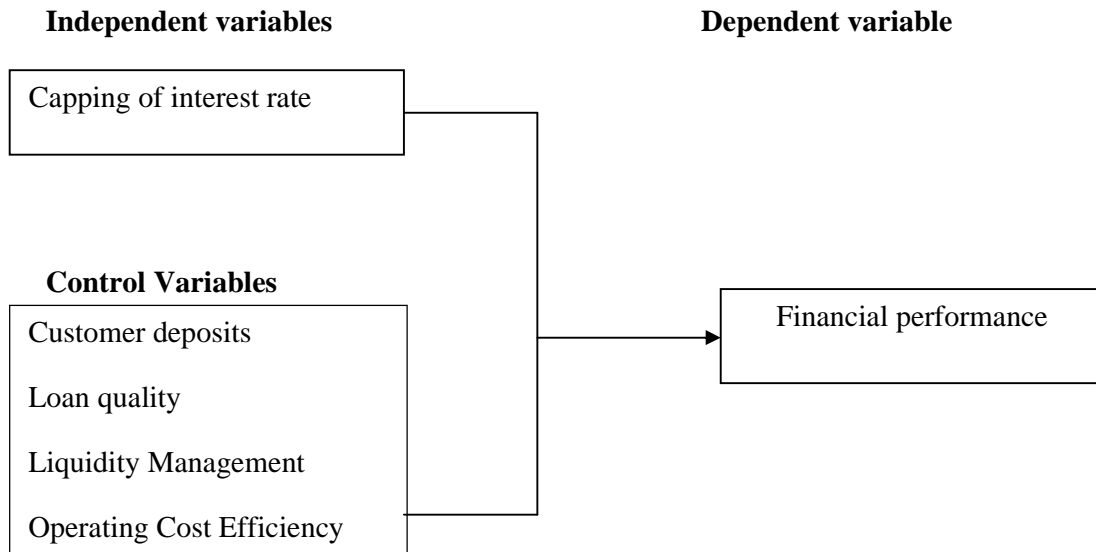


Figure 2.1: Conceptual Framework

2.6 Summary of the Literature Review

While researches have been executed globally, within the region and locally, majority of the studies have looked at the effect that rates of interest have on commercial banks' ROA (Kipng'etich, 2012; Ashim and Ranjula, 2013; Njoroge, 2013; Kar and Swain, 2014). Some have looked at the determinants of financial performance (Garman & Grable, 2012) and few others have explored how the borrowing affects non-performing loans (Dominic, 2010).

This study has also been supported by theories that anchor this study including empirical studies (Wensheng et al., (2003; Kipng'etich, 2012; Garman et al., 2012;

Dominic, 2010; Njoroge, 2013) showing existence of a relationship amid the rate of interest and financial performance. A narrow focus has been given to the effect of interest rate capping on financial performance in the context of Kenyan commercial banks. Considering that interest rate capping is a recent regulation in the banking sector in Kenya, the study finds it worthwhile to explore its effect on financial performance of commercial banks.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

A research methodology was applied to address research hypothesis. Other sub-topics discussed under this chapter include the research design, research population, collection of data and analysis.

3.2 Research Design

A descriptive kind of a research design was employed. The choice of this design is because it is useful in collecting and analyzing data including determining the current and existing conditions that might be present under the object of research (Kothari, 2005). With a descriptive design, the researcher was able to establish a hypothetical relationship between variables. In this case, the study is striving to find out whether capping of interest rate affects commercial banks' financial performance in Kenya. Ndichu (2015) applied a descriptive design to find out if there was a relationship between variables. This design enabled the researcher to ascertain the relationships that exists between interest rate capping and ROA. Descriptive statistics was useful in establishing whether there was a major change in ROA, bank deposits, loan quality, liquidity and inflation after capping of interest was effected.

3.3 Study Population

A population is a group of items that possess similar features under investigation (Mugenda, 2003). These items must meet a certain criteria to be studied. Currently, there are 40 commercial banks that are licensed to work and operate in Kenya by CBK as at 30th June, 2018 (Appendix I). Banks that are under statutory management via a receivership manager, and others that were acquired during the study period

were not considered in the analysis since they did not give a true picture of the state of affairs about their performance. This population was small hence no sampling.

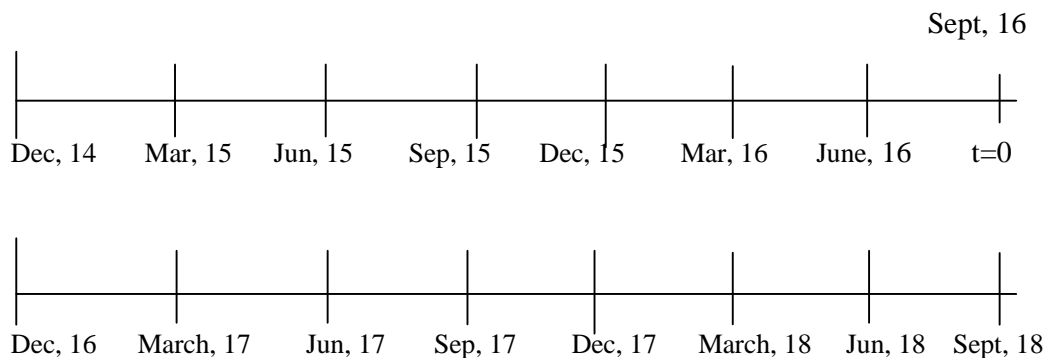
3.4 Data Collection

Secondary data was utilized for this study. This data was derived from CBK annual reports and financial statements. Kothari (2005) defines data collection a systematic approach used to gather and assess information from various sources to achieve a clearer picture of the field of interest. The advantage of using this form of data is because it was considered easy to access and verifiable. Hence, the researcher was in a position to examine the results and predict future possibilities and trends. The study covered a duration spanning for 5 years (2013-2017).

3.5 Data Analysis

This type of research is quantitative in nature and thus descriptive statistics was used. Capping of interest rate was dealt with as an event, and thus attributes of an event study approach were used. The event day is when capping of interest rate was effected, and this will be denoted by $t=0$.

Any change in independent variables (ROA, bank deposits, loan quality, liquidity and inflation) as depicted in the financial statements in the five quarters before and after capping was analyzed and the results were compared. These two periods were statistically tested using t-test assuming 5% significant level.



CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

Descriptive statistics helps the researcher to visualize data and thus data can be presented in a manner that is more meaningful for easy interpretation. Descriptive analysis helps the researcher to generalize the population. The chapter gives a discussion of the diagnostic tests involving statistical assumptions of regression analysis and descriptive statistical results of interest rate caps and financial performance.

4.2 Descriptive Statistics

Descriptive statistics entails measures of mean, standard deviation, maximum, minimum and skewness. Mean is defined as a central value of a set of numbers. Mean measures central tendency that is used to describe typical values in a set of values. Standard deviation refers to the spread of values in a sample. Skewness measures symmetry or lack of it (symmetry).

Table 4.1: Descriptive Statistics

Capping	Variable	Mean	Std. Deviation	Skewness	Maximum	Minimum
0	ROA	0.038	0.003	-1.468	0.061	0.021
0	Capital adequacy	0.228	0.014	-0.112	0.248	0.205
0	Customer deposits	52767.506	2882.364	-0.348	55610.490	49104.226
0	Operation efficiency	0.630	0.045	0.518	0.712	0.580
0	Lending rates	16.653	1.024	0.336	18.147	15.573
0	Asset quality	0.110	0.015	0.353	0.128	0.093
1	ROA	0.027	0.005	-0.223	0.053	0.019
1	Capital adequacy	0.245	0.016	-0.166	0.264	0.213
1	Customer	53563.820	3247.304	0.015	58755.958	48153.647

	deposits					
1	Operation efficiency	0.604	0.032	-0.589	0.638	0.543
1	Lending rates	13.554	0.199	-0.904	13.687	13.230
1	Asset quality	0.184	0.055	-0.004	0.235	0.128

The results in the above Figure 4.1, shows that before capping of interest rate, commercial banks recorded the highest ROA of 0.061 and a minimum of 0.021 with the lowest standard deviation of 0.003. After interest rate capping, ROA recorded a significant decline where the highest value was recorded at 0.053 and the lowest value at 0.019 with a minimal standard deviation of 0.005 implying this situation applied to most commercial banks.

Capital adequacy increased after interest rate capping; banks held higher levels of capital adequacy during this period (0.264). The mean value of capital adequacy before interest rate capping was 0.228, after capping it was 0.245. These imply that capital adequacy increased with a significant margin after capping of interest rates.

Prior capping of interest rate, the mean value of customer deposits was KES.52,767.506. Customer deposits increased with a margin of KES.6,506.264. After capping of interest rate, the mean value of customer deposits was KES. 53,563.820 and deposits increased with a margin of KES. 10,602.311. This was an indication that customer deposits increased because banks were forced to provide at least 70% of CBK rate to savings that were held in bank current accounts.

Prior to interest rate capping, the mean value of operational efficiency was 0.630. Operational efficiency increased with a significant margin of 0.132 during this phase. However, after capping, the mean value of operating efficiency declined to 0.604 with a slight increase in margin of 0.095 which signaled a significant decline in operational efficiency of commercial banks after capping.

Prior capping of interest rates, the lending rates was 16.653, after capping, the lending rates declined significantly to a mean of 13.554. During this period, an insignificant increase in lending rate was recorded, with a small margin of 0.457.

Before interest rate capping, the mean value of loan quality was 0.110, it rose from 0.093 to 0.128 this was attributable to failure by commercial banks reluctance to vet borrowers. This resulted to an increase in non-performing loans. After capping, loan quality increased significantly from 0.128 to 0.235. This is attributable to a reduced number of loan defaulters since commercial banks are more vigilant and only provide loans to credit worth customers.

4.3 Paired T-test

A paired T-test is applied to compare two means of population where there are two samples; the observation from one sample is compared to observations in another sample. This test is carried out to determine the observations before-and-after on similar study variables. Paired t-test was conducted to establish whether any difference existed among variables under investigation prior and after capping.

Table 4.2: Paired T-test

Variable	Estimate	Statistic	P.value	Conf.Low	Conf.High
ROA	0.001	0.380	0.715	-0.005	0.007
Capital adequacy	-0.010	-1.257	0.249	-0.029	0.009
Customer deposits	-796.315	-0.430	0.680	-5174.663	3582.034
Operation efficiency	0.026	1.766	0.121	-0.009	0.062
Lending rates	3.100	7.755	0.000	2.154	4.045
Loan quality	-0.074	-3.200	0.015	-0.129	-0.019

$H_0: \mu_{after} = \mu_{before}$ i = ROA, Capital Adequacy, Customer Deposits,

Operational, Loan Quality, Lending rates

$H_0: \mu_{after} \neq \mu_{before}$

The results depict that two variables were statistically significant in the two periods (pre-capping and post-capping), they include lending rates and loan quality whose p-values were as follows: 0.000 and 0.015, respectively.

These two values recorded the highest differences in terms of value within in the two periods (1.891 & 0.110, respectively). Interest rate capping led to significant decline in loan defaulters since many commercial banks increased borrowing costs making it difficult for low income earners and credit unworthy customers to gain access to loans and credit facilities. It was further revealed that ROA, operational efficiency, customer deposits and capital adequacy were insignificant in the two periods. Their p-values included (0.715, 0.249, 0.680 & 0.121, respectively). These variables were not affected by capping of interest rates.

4.4 Discussion of Findings

The findings revealed that prior to interest rate capping, commercial banks attained better returns on assets of 0.061. These results are consistent to Ng'ang'a (2017) who found that prior to capping of interest rates commercial banks performed better. After capping, the findings showed that commercial banks attained significant decline in performance; the highest value of ROA was 0.053. In line with these findings is the observation by Murimi (2017) who concluded that commercial banks performance declined significant after interest rate capping.

Capital adequacy increased after capping was effected. This was attributable to reduced levels of bank's risk of insolvency from losses that emanated high rates of loan defaulters. After capping the mean value of capital adequacy increased significantly from 0.228 to 0.245. These findings are consistent to the views of Meja (2017) who found that capital adequacy increased after capping. Before interest rate

capping, average customer deposits was KES. 52,767.506. Upon capping, customer deposits slightly increased to 53, 563.820. Consistent to these findings is the views of Othigo (2017) who discovered that customer deposits increased after capping.

Banks were compelled to offer at least 70% of CBK rate to savings held in bank accounts, this also led to an increase in customer deposits. Operational efficiency of commercial banks declined with a slight margin from 0.630 to 0.604 after interest rate capping. The findings are consistent to Ng'ang'a (2017) who found that commercial banks' level of operational efficiency declined after capping was effected. Lending rates declined with a significant margin after capping was effected, the mean value of lending rates before capping was 16.653, after capping it declined to 13.554. These findings are consistent to Meja (2017) who revealed that lending rates declined significantly after capping.

The results further showed that the quality of the loan increased from a mean of 0.128 to a mean of 0.235 upon capping. This was largely attributed to vigilance by commercial banks in ensuring that borrowers were credit worthy and met the required criteria. These findings are supported by the observations made by Kashyap and Jeremy (2004) who founded that non-performing loans declined after interest capping was effected.

Paired t-tests results discovered that lending rates and loan quality had significant differences before and after capping. These results are in line with the observations of Meja (2017) who found that loan quality and lending rates attained significant differences prior and after capping. ROA, customer deposits, capital adequacy and operational efficient had insignificant differences. In view of this is a study by Murimi

(2017), who found that ROA and operational efficiency had insignificant differences before and after capping.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes output of diagnostic tests, descriptive and inferential statistics as well as their interpretations. This summary is in line with the objective of this study which was to determine the effect that interest rate cap had on commercial banks' financial performance in Kenya. Sections that have been discussed under this chapter are as follows: conclusion, recommendations, limitations and areas for further investigation.

5.2 Summary of Findings

Before capping, commercial banks were more profitable and recorded higher returns on assets (0.061). However, when interest rate caps were introduced, commercial banks performed poorly as demonstrated by average ROA, which was declined to 0.053 from 0.062. These results abide with the views of Ng'ang'a (2017) concluded that interest rate caps impacted negatively on bank performance.

It was also noted that capital adequacy increased after capping; this was as a result of minimized risk levels of bank insolvency. When capping was effected, the average value of capital adequacy increased to 0.245 from 0.228. These observations are in with the findings of Meja (2017) who established that capital adequacy increased after capping.

Customer deposits increased with a little range after capping. The average amount of customer deposits prior capping was KES. 52, 767, 506 after capping, the amount increased to KES. 53, 563, 820. The findings contradict the findings by Staikouras and Wood (2011) who indicated that customer deposits declined after introduction of interest rate caps.

The findings demonstrate that operational efficiency by commercial banks decreased with a small margin of 0.026 upon capping of interest rates by commercial banks. These findings conform to the observations of Meja (2017) who found that commercial banks level of operational efficient declined when capping was effected.

Lending rate decreased with a huge margin when capping was effected. The average rate of lending of commercial banks before capping was 16.653 but when capping was introduced, lending rates declined to average of 13.554. These results are supported by (Meja, 2017; Ng'ang'a, 2017). Average quality of the loan increased from 0.128 to 0.235 upon capping. This is attributed to effective adoption of credit policies by commercial banks as an innovative means to deal with interest rate capping. Consistent with these findings is a study by Kashyap and Jeremy (2004) that pointed out a significant decline in non-performing loans following the introduction of interest rate caps.

Paired t-test results indicate that lending rates and loan quality attained significant differences prior and after capping. These observations are supported by Meja (2017) who established that the quality of loans and rates of lending had significant differences before and after capping of interest rates.

It was further discovered that ROA, customer deposits, operational efficiency and capital adequacy recorded insignificant differences in the study period. In view of

this, a study by Murimi (2017) discovered that operational efficiency and customer deposits attained insignificant differences prior and after capping.

5.3 Conclusion

This study concludes that after interest rate capping commercial banks have significantly declined in performance as demonstrated through ROA; this have impacted negatively on overall bank performance. Capital adequacy of commercial banks has improved thus lowering the risk of insolvency from loan defaulters. Similarly, customer deposits increased with a small margin after capping; this was attributable to CBK directive towards commercial banks, to offer 70% CBR to savings held by commercial banks. On the other hand, operational efficiency declined with a slight margin while lending rates declined with a huge margin. Loan quality improved as a result of strict implementation of credit policies by commercial banks that ensured that only credit worthy customers qualified for loans.

The study further concluded that lending rates and loan quality showed significant differences prior and after capping of interest rates. Customer deposits, operational efficiency, financial performance and capital adequacy showed insignificant differences during the study period.

5.4 Recommendations

The researcher recommends removal of interest rate cap. This is because so far, it has impacted negatively on banks since they cannot price risk to SMEs effectively while the cap is still in place. As a consequence, private sector lending has significantly declined from 9.3%, 2016 to 2.4% 2017. Most Kenyans are unable to access bank lending and this has resulted to increased cost of borrowing.

Interest rate capping resulted into a huge decline in interest income from loans. Thus, commercial banks should invest more in research and development as well as modern technology to remain competitive in the market, and cope with evolving customer needs. This will attract more customers resulting into more sales and improved financial performance.

5.5 Limitations of the Study

The researcher took all the necessary precautions to counter limitations below. However, in research it is impossible to completely deal with these limitations. The study used secondary sources of data; which comprised of general purpose reports that are historical and easy to manipulate. This kind of data may not be accurate and reliable and thus could impact negatively on the quality and reliability of findings.

The research used a descriptive research design accompanied by research questions. The major shortcoming for this research is that although it was able to establish the direction and the nature of existing relationships between variables, it was not able to establish the 'cause and effect' relationship amongst variables.

This study utilized a descriptive form of research design because it had clearly a specified research question. The limitation of this design is that it cannot detect causality amongst variables. Although the study established the nature of relationships amongst variables, it did not establish the causal effects amongst variables.

This study spans for a period of five years; it is advisable for future researchers to do a longitudinal study that covers for a period of say, 20 years. This way, the researcher will be able to establish the nature of existing relationships between the variables accurately.

5.6 Suggestions for Further Research

It is worthwhile that future researchers should consider establishing long-term effect of interest rate capping on financial performance of commercial banks. This will help to determine whether capping ought to be maintained or lifted.

There is need for researchers to explore other factors that affect financial performance of commercial banks as opposed to capping of interest rates. This way, the researchers will be able to determine key factors that impact on commercial banks' financial performance.

Further investigation need to be done on the effect of interest rate capping on economic growth of the country with a specialised focus of critical economic sectors such as banking and manufacturing.

The current is mirrored on Kenyan commercial banks. A replica of this research should be carried out in financial institutions such as insurance companies. Finally, a replica of this study can be done in other countries within the region or internationally. Through this, the researcher will compare the findings obtained under this study and similar researches conducted outside this country.

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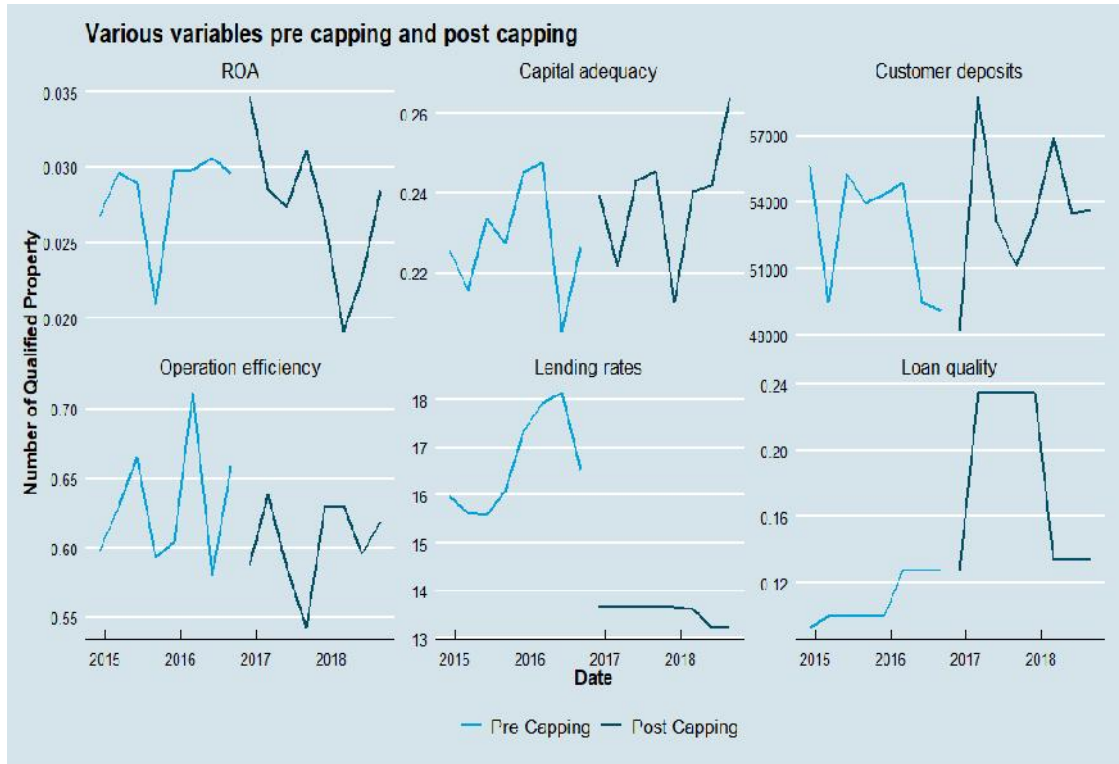
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APPENDICES

APPENDIX I: GRAPH



APPENDIX II: LIST OF COMMERCIAL BANKS

1. ABC Bank Kenya
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank Kenya
6. CfC Stanbic Holdings
7. Citibank
8. Commercial Bank of Africa
9. Consolidated Bank of Kenya
10. Cooperative Bank of Kenya
11. Credit Bank
12. Development Bank of Kenya
13. Diamond Trust Bank
14. Dubai Bank Kenya
15. Ecobank Kenya
16. Equatorial Commercial Bank
17. Equity Bank
18. Family Bank
19. Fidelity Commercial Bank Limited
20. First Community Bank
21. Guaranty Trust Bank Kenya
22. Guardian Bank
23. Gulf African Bank
24. Habib Bank
25. Habib Bank AG Zurich
26. Housing Finance Company of Kenya
27. I&M Bank
28. Jamii Bora Bank
29. Kenya Commercial Bank
30. K-Rep Bank
31. Middle East Bank Kenya
32. National Bank of Kenya
33. NIC Bank
34. Oriental Commercial Bank
35. Paramount Universal Bank
36. Prime Bank Kenya
37. Standard Chartered Kenya
38. Trans National Bank Kenya
39. United Bank for Africa
40. Victoria Commercial Bank

Source: CBK, 2018

APPENDIX III: ANALYZED DATA

Quarter	ROA	Capital Adequacy	Customer Deposits	Operation Efficiency	Lending Rates	Capping
12/1/2014	0.026841442	0.225999809	55610.49006	0.598123535	15.99	0
3/1/2015	0.02970787	0.215644603	49471.50806	0.629400585	15.62	0
6/1/2015	0.028965179	0.233851636	55297.80848	0.665572851	15.57333333	0
9/1/2015	0.020902274	0.227370099	53914.29592	0.592831402	16.08333333	0
12/1/2015	0.029748194	0.245098098	54396.08987	0.604152462	17.34666667	0
3/1/2016	0.029812668	0.247708762	54885.11906	0.711715545	17.92666667	0
6/1/2016	0.03065621	0.205282976	49460.50781	0.580004129	18.14666667	0
9/1/2016	0.029566347	0.226383232	49104.22573	0.659042452	16.54	0
12/1/2016	0.034664448	0.239401817	48153.64661	0.587688278	13.68666667	1
3/1/2017	0.028540327	0.221570717	58755.95766	0.638319796	13.65333333	1
6/1/2017	0.027379766	0.243055924	53120.71175	0.586054807	13.66	1
9/1/2017	0.031115037	0.245521618	51100.94406	0.542741835	13.68	1
12/1/2017	0.026559131	0.212779511	53285.22411	0.629630415	13.67666667	1
3/1/2018	0.019119858	0.240384765	56914.72415	0.630531396	13.60666667	1
6/1/2018	0.022776767	0.241786525	53497.54255	0.595528352	13.23666667	1
9/1/2018	0.028451723	0.264100509	53681.81048	0.619181468	13.23	1