THE RELATIONSHIP BETWEEN INTEREST RATE REGULATION AND FINANCIAL PERFORMANCE OF LISTED COMMERCIAL BANKS IN KENYA

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DECLARATION

This research project is my original work and has not been presented in any other institution.

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D61/83895/2016

This research project has been submitted for examination with my approval as the University supervisor.

Signature: _____   Date: _____

Mr. James Mwangi Karanja

DEDICATION

Dedicated to my mum Rasoah Khabakali, mum thank you for being such a good mother to me. To my dad, thank you for constantly reminding me of the value of education.

ACKNOWLEDGMENT

First to Our Father in Heaven, thank you Lord that I am here today.

I acknowledge the efforts of my supervisor James Mwangi Karanja for the support, review and guidance throughout the entire process.

My one and only brother Nyongesa for the encouragement and my wife Emily and Children for the sacrifice they put in while I was studying, am forever indebted to you.

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ABBREVIATIONS AND ACRONYMS

CBK   :   Central Bank of Kenya

MFI   :   Microfinance Institution

MPS   :   Market price per Share

NBFI   :   Non-Banking Financial Institutions

NSE   :   Nairobi Securities Exchange

ROI   :   Return on Investment

SPSS   :   Statistical Package for Social Sciences

ABSTRACT

Interest rate is essentially the price of deposits. Like the price of products and services in free markets, interest rate should be determined by the market. This causes the economy to run efficiently. However, like in other markets political agitation for interest rate control is ever present. Proponents of interest rate control argue that it allows the public to access loans and borrowing at affordable rates and thus increases investments and economic growth. Free markets economist argue that any price control leads to inefficient allocation of resources. Further, such controls the financial institutions (lenders), the consumers (depositors), and ultimately the entire economy. Bank profitability for instance may suffer, as they are unable to attain equilibrium (equal marginal revenue to marginal costs). However, those who argue that the use of interest rate control maintain that the borrowers would benefit while limiting the banks' profits. This study was aimed at establishing the nature of the relationship between interest rates regulation and the financial performance of banks in Kenya. The population of the study was all the listed commercial banks with the Nairobi Securities Exchange. A census sampling approach was employed to comprise all the ten listed commercial banks. The study utilized purely data that was secondary and was obtained from the database of the Central Bank of Kenya, NSE and the Banks' reports for a reporting period of five years (2013 to 2018). The quantitative analysis was performed using SPSS version 24. The study used both the descriptive statistics and the inferential analysis to analyze the data. Event analysis was also conducted to establish whether the commercial banks performance measures were statistically different from those before the interest rate regulation. The test for significance was undertaken using the Analysis of Variance (ANOVA) at both the 5% significant level and 95% confidence level. Following interest rate caps, the commercial banks have shifted their revenue sources in favor of non-interest income. The study recommends that the commercial banks come up with innovative products and services so as to limit their dependence on interest incomes. This is essential in ensuring that they are shielded against the negative impacts of the interest rate regulations as well as assuring of continued profitability regardless of the regulations. The study also recommended that the banks should also exploit operational efficiency so as to expand their financial performance and guard the shareholders capital.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Banks like all other business enterprises seek to maximize shareholder wealth. Therefore, banks must endeavor to make good financing, investing and operating decisions that assist towards the attainment of this goal. Banks however are unique, and this makes their balance sheets or statement of financial position significantly different from those of non – bank institutions. For instance, the bank's assets consist of chiefly loans and advances to their customers. Some of these loans and advances are long term while others are short term. Classifying loans and advances in terms of time frame is complicated due to their flows. Consequently, a bank's balance sheet does not contain the traditional classification of current and non-current assets (Okoth, 2014). Similarly, banks financing while comprising of liabilities and equity like other enterprises is also more complex. Banks liabilities mainly comprise of depositor claims, again some of which are short term while others are long term. In the balance sheet there is no distinction that is made between current and non-current liabilities (Tsuma & Gichinga, 2016).

A bank's operating results like those of other enterprises are reported on the statement of income comprehensive income statement. Since the main business of a bank is lending then the key revenue source is the interest income. The main cost of the bank is no doubt the cost of funds (deposits), which the bank utilizes to create assets in form of loans and advances (Ndubuaku, 2017). On the income statement, interest revenue and interest expense are reported together to yield net interest income (Ngugi, 2004). Thus, interest rate regulation is crucial determinant of commercial banks shareholders' wealth maximization objective since it affects net interest

income. Corb (2012) noted that interest rates have a significant effect on how the financial sector performed in a particular country.

The regulation of interest rates entails mechanisms aimed at ensuring that fair and reasonable rates of interest as charged by banks on the loans borrowed (IFC, 2013). It is an endeavor that is adopted widely so as to protect the welfare of the consumers. In Kenya, the law of interest capping was introduced and became operational in September, 2016. This was due to the increased concerns by the general public pertaining to high credit cost which acted as a limiting factor towards access of credit. Application of the capping law was anticipated to both increase the access to credit and also lower the cost of credit (CBK, 2016). Though the available theoretical framework provides an outline for enlightening on how interest rates are best controlled, the studies conducted have not been fully conclusive how interest rate regulation affects performance of the financial bodies (Shuremo, 2016; Kibobo, 2017, Ndubuaku, 2017).

The banking sector in Kenya has constantly witnessed increased rivalry as well as intensified competition from the microfinance institutions and other non-banking financial institutions (Tsuma, & Gichinga, 2016). These characteristics make it hard for the banks to easily achieve their intended shareholders' value creation objective. Further, with the introduction of interest regulation measures such as interest rate capping made through the Banking Amendment Act in 2016, most of the commercial banks have been seen to underperform (Central Bank of Kenya, 2016). This increases the concern as to the exact relationship that exist on rates of interest regulations and the financial performance of financial institutions.

1.1.1 Interest Rate Regulation

Interest rate regulation has been established and adopted by countries for varying reasons (World Bank, 2012). Spain in 2009 put in place interest caps so as to prevent the exploitation of its

consumers while the same report indicates that in Estonia, the purpose of the interest rate caps was to control over-indebtedness while the Netherlands aimed at reducing the tendencies of risk taking by the credit providers. Other developed countries have adopted a form of maximum level of interest rates cap such as USA, Germany and France. In these countries, interest rates cap dominated after the financial crisis in 2008 targeting predatory loaning practices and development of payday credit organizations (Miller, 2013).

In Kenya, interest rate regulations began post-independence period when the government introduced interest rate capping regimes and credit controls aimed at encouragement of investment and overall economic growth (Sambiri, 2014). Before 1991 lending interest rates on bank lending were set not higher than 16%. However, with the interest rate liberalizations in 1991, the determination of interest rates was left to market forces and rose steadily reaching up to 32% in April 1994. This period was characterized by high implicit costs of credit (CBK, 2018). The period between 1992 and 2015 was also characterized by macroeconomic and financial instability. In addition, the capital market was also small and suffered from sluggish development.

Supporters of interest rate regulation argue that it is important in shielding the economy from high inflation and depreciation of local currency while maintaining the interest rates at a considerable level (IFC, 2013). It is a mechanism that has been adopted widely so as to protect the welfare of the consumers with over 40 countries developing it (Ndubuaku, 2017). The argument of introduction of interest rate regulation was to curb the prevailing high interest rates (The Banking Amendment Act, 2016) and thus stimulate financial and reduce monetary system rigidities that prevents the rate of interest from moving with market forces.

1.1.2 Interest Rate Capping

Interest capping refers to an interest regulatory measure aimed at ensuring uniform and fair interest rates on both loans and deposits (IFC, 2013). This has proven to be an essential tool in widely protecting the welfare of customers from exploitation by financial institutions. Currently, over 40 countries in both developing and developed countries have put in place interest capping measures (Miller, 2013). Spain in 2009 put in place interest caps so as to prevent the exploitation of its consumers while Slovak Republic, United Kingdom, Belgium and Poland hoped to protect the citizens from very high rates (World Bank, 2012).

In Africa, countries have also put in place interest capping measures such as Libya Morocco, Tunisia and Egypt Algeria who put in place interest rate caps mainly in the small financial sector where ceilings were set typically around 3-5% per month (World Bank, 2014). In West Africa, the part states recently joined to a loan cost farthest point of 27% per annum for microloans. Similarly, Zambia's in 2012 acquainted the caps to counter the apparent risks of over obligation and the significant expense of credit (IFC, 2013). The method of reasoning behind the control of the interest rates depended on the need to have a controlled monetary example that has extraordinary impacts to the general public.

In Kenya, the interest rate caps were introduced by the government so as to curb the prevailing high interest rates. This was first introduced in 2001 and later passed in 2016 (The Banking Amendment Act, 2016). The application of rate capping revived an old discussion over the fittingness of legal input to control bank loaning rates that are regarded by policymakers, to be unnecessarily high. The law was adopted in September 2016 which restricted banks from charging higher than 4% from the rate from central bank.

Capping of interest rates in Kenya is aimed to stimulate financial market towards equilibrium since it is the current banking and monetary system rigidities that prevents the rate of interest from falling as fast as equilibrium requires (Mbua, 2017).

1.1.3 Financial Performance

Wheelen and Hunger (2017) term financial performance to be outcomes or results of a given process as measured against given objectives and goals of the organization. This entails the efficiency in operational variables such as quality, flexibility, delivery and scheduling. It is a subjective measure of how the organization utilizes its resources in generation of revenue and accomplishment of the objectives of the firm (Irungu, 2013). Financial performance therefore acts to indicate the relative profitability of an organization to its total assets which acts to measure of the success of the firm financially.

Financial performance measurement is important in enabling the managers to gauge the current financial position of the organization (Namisi, 2002). This allows the management to evaluate the specific actions that are required to be undertaken towards the survival of the firm and the ability of fulfill the financial obligations. Measurement of performance can be done by the creditors, investors, or management (Chenn, 2011). Proper financial performance analysis helps in forecasting the growth and productivity of the organization.

The detailed fiscal summaries for banks are fairly not the same as most organizations that financial specialists analyze. As indicated by Sun, Mohamad and Ariff (2017, Net interest pay is generally inclusive of the spread between the interest accrued from loans and the interest that is paid out to investors. Since banks get interest on their loans, their benefits are gotten from the spread on the ratio they pay for their deposits and the ratio they procure or get from borrowers. The study used net interest income for the measurement of financial performance in the banks.

1.1.4 Interest Rates Regulation and Financial Performance

Interest rates regulations have been established to offer protection to consumers from over exploitation and usury (OFT, 2010). The regulations also help protect the interest of the public through ensuring that they access to credit from the financial institutions at reasonable interests' rates while discouraging and prosecuting the deceptive lenders. According to Miller (2013) the interest regulations aim to create transparency and uniformity on how the banking institutions conduct their operations with other parties. Interest rates regulations are thus formulated in ensuring the safe and sound operation of financial institutions (CBK, 2018).

The interest rates regulations may be used for a range of reasons such as economic and political but most of them intend to facilitate enhanced financial inclusion to the public as well provide support to specific segments of the economy (Corb, 2012).However, the studies conducted have pointed out that the influence of these interest rate regulations to the financial institution tends to vary. Proponents of these interest regulations base their arguments on its relevancy in the economy and thus cannot fail notion (Sambiri, 2014). This is largely because failure of the banks would result in severe economic consequences.

While some scholars found a positive and significant effect on the performance of the finacial institutions, others established a negative to no effect at all brought about by the interest rates regulations (Miller, 2013; Okoth, 2014; Karine, 2014). Further, according to Khan and Sattar, (2014) over implementation of these regulations may discourage supply of funds to the financial institutions thus encouraging informal mechanisms. This raises the need to establish a balance that will ensure that interest rate regulation do not distort the financial market or diminish the performance.

1.1.5 Listed Commercial Banks in Kenya

In Kenya, banks are governed by the Banking Act (CAP 488) and the Companies Act (CAP 486) that regulates how the banks conduct their operations and supported with the specified prudential guidelines .As at 31st December 2017, the overall number of banking institutions in Kenya was 43 out of these, 24 of the banks were owned locally of which 6 had government participation. While for the foreign companies, 4 are branches of foreign owned banking firms and 10 are locally incorporated subsidiaries (CBK, 2017). However, only 10 out of the 42 banking organizations trade at the NSE up to date.

With the current advancement in technology, these services are now more diversified and easily accessed. However, as a result of the volatile dynamics of the banking sector, any slight change in the macro-economic environment is prone to affect how the banks perform to a great extent (Okafor, 2011). As such, the Kenyan banking system has experienced major structural and regulatory turbulences which pose a threat to the survival of most of the commercial banks (Idowu & Ogundipe, 2012). This was largely experienced in 2016 when the Banking Amendment Act was signed into law, introducing an era of interest rate capping and controls (CBK, 2017). The interest cap requires that the finance related organizations pay least interest rate of 70% of the principal CBK base rate per deposits held accounts earning interests (The Banking Amendment Act, 2016).

Implementation of interest rate capping was followed by numerous banks reporting losses and dip in the interest income raising concerns that interest rate regulation was the cause of the dwindling commercial banks financial performance (Kavwele *et al,* 2017). The banking industry in Kenya also has statutory minimum liquidity requirement which is maintained at 20%. This is meant to guarantee that banks can meet the cash needs of the depositors and thus maintaining customer

confidence on the order in the financial sector (CBK, 2018). The banking industry regulations further extend to corporate governance and transparency where banks are required to make public quarterly financial statements (CBK, 2018).

1.2 Research problem

Interest regulation is aimed at ensuring rising interest rates are curbed thus protecting the consumers from over exploitation by the financial institutions (World Bank, 2012). This has seen interest regulations gain popularity in the recent past by both the developing and developed states with over 76 countries around the world adopting various interest regulation measures (Helms & Reille, 2014). However, the regulators in enacting interest regulation have hardly considered the need for commercial banks to create wealth for shareholding in a highly regulated industry. In Kenya, the interest rates were seen not to be competitive and moving with market forces (Okoth, 2014). This resulted in the government of Kenya and the CBK to put in place measures to address this market volatility and boost confidence in the financial market sector and economy with the interest rate regulations being the main one. Though this was hypothesized to stabilize the interest rate levels and improve the economy in the long run, most of commercial banks performance dwindled after implementation of interest rate controls (Kavwele, 2018).

Empirically, the studies conducted have not been conclusive in describing the influence of regulations made to the interest rates and how the financial institutions performed financially. Leaven (2003) established that incorporation of financial liberation measures such as removal of interest caps positively impacted on the accessibility to finance by small enterprises. Haye (2013) further linked interest rate control to be one of the main determinants of how the banks performed. Kathomi, Kimani, and Kariuki (2017) established that interest rates changes by the government affected in a positive way the sustainability of financial institutions. Mbai (2006) also indicated

that in scenarios whereby the interest rates are managed prudently, there is significant reduction in the exposure to risk which enables improvement in the net income. However, Ndubuaku *et al* (2017) found out that interest regulations had no significant impact on how the banks performed.

This shows that though the direction and nature of relationship between financial performance and interest rate regulation is not well established by the available literature, the studies that have been done assert that stability of the interest rates influence commercial banks' financial performance. Understanding the relationship that exist is important in fostering improved performance of this financial sector that play a major role in the economy growth in the country. Thus this study aimed to find out what was the relationship of capping the interest rate on the financial performance of the commercial banks that trade with the Nairobi Securities Exchange.

1.3 Research Objective

The objective of the study was to determine the relationship between interest rate regulation and financial performance of listed commercial banks in Kenya.

1.4 Value of the Study

To the commercial banks, the findings of this study provide information to guide their management decisions following interest rate capping in Kenya so as to enable a strong banking industry. It will equip them with the necessary knowledge for taking the essential action to protect the performance of their organizations.

To the policymakers and the government regulators, the findings of the study will enable them make informed decisions concern the role played by interest rate regulations on the operations of financial institutions. This will enable them to make more informed decisions on these regulations and policies that are conducive on how the financial sector performs.

The study will also be significant to the investors as it will give insights regarding impact of interest rate caps. Particularly, it will enable them to be knowledgeable onto how the interest rate regulations impact on the returns. This will help them in making better and well-informed decisions. The study will also be of great significance to the researchers and scholars who would with to add to the existing literature pertaining to interest rate regulations and performance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section reviews the theoretical review and review of the empirical literature pertaining to interest rate regulations and financial performance both from the local and international perspective. It formed a basis on which the entire study was conducted.

2.2 Theoretical Review

The study was informed by three theories namely Price Theory, Loanable Funds Theory and Classical Theory of Interest. These theories have been used to explain the expected association amongst the variables under study.

2.2.1 Price Theory

The theory is associated to Adam Smith (1776) who observed that in any particular commodity there exists a relationship between supply and demand. Therefore, according to this theory, the price for a certain service or product is influenced by its demand supply. Hence, the optimal market price is attained when the benefit accrued by the sellers' cost of marginal operations meets that of the consumers in demand of the product/service. The theory thus supports the forces of supply and demand in determining the price/value of a product or service (Maigua & Mouni, 2016).

Thus, according to price theory, interest charged on loans and paid on deposits represents the price for the credit/deposit. Thus, the price charged on the loan and paid on deposits should be determined through the market dynamics of supply and demand. Therefore, price theory, interest controls are not necessary since they interrupt the rules of market forces. The theory makes the

assumption that organizations will operate in perfect markets where the only factors affecting the price of goods and services is demand and supply. This may not hold in banking sector where banks may collude in setting the interest rates to charge on loans and pay on deposits in saving accounts.

2.2.2 Loanable Funds Theory

Loanable funds theory is credited to Robertson and Ohlin (1930). The theory recognizes that the supply and demand of funds that are loanable are the determinants of interest rate. This theory points out that investment speculation and dissaving are the fundamental factors that affect loanable funds. There is need therefore to assess and compare the expected returns to the rate of investment before making an investment decision. The demand for loanable funds and the price at which the investors are willing to pay will have an inverse relationship.

According to Robertson and Ohlin (1930), hoarding affects the demand of funds that are offered for lending and thus out rightly determines whether the investors will have access to liquidity requirements. This theory is essential since constraints imposed on the management of assets of banks will ultimately affect their revenue streams which will directly impact on the returns on assets and equity.

2.2.3 Classical Theory of Interest.

The Classical Theory was developed by Kimberly (1776). This theory states that interest rates are main factor influencing the level of investment and the willingness to save and thus ensuring that an equilibrium is sustained between savings and level of investment. Scholars like Cassel, Flux and Marshal were great proponents of this theory. They emphasized that the classical theory of

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interest should assume the investment level as the demand and the savings as the supply and the interest rate as the price of the resources being invested.

The proposition of the theory to the study is that a country's interest rates are influenced by consumer' supply and demand, thus interest regulations may not be necessary. Indeed reduced demand for money by the market will translate to reduced interest rates and vice versa. Also, the higher the rate of interest, the lower the asset price with certain expectations and the increased demand for money (Heijdra &Van der Ploeg, 2002). Based on this theory, the Central Bank sets the specific interest rates so as to control the price of financial assets through demand of money which in turn influences the rate of transactions made by the consumers.

2.3 Empirical Literature Review

Various studies have been undertaken both in developing and developed countries trying to determine the influence of regulations of interest rates on performance of banks. To begin with, Ngetich and Wanjau (2011) conducted a study to establish the effect that interest rates had on non-performing assets of commercial banks operating in Kenya. Data was analyzed through quantitative statistics. The study established that increase of rates of lending and lowering of the deposits interest rates among investor was caused to a great extent by interest rate spreads. The study was however not able to clearly determine existence of interest regulations imposed on the commercial banks.

Khan and Sattar (2014) evaluated the effect of control of interest rates on banks' profits. The study used a case study approach focusing on four significant business banks in Pakistan. Connection between the factors was resolved utilizing the Pearson relationship strategy and information deciphered utilizing enlightening insights. The examination discovered that the interest rates changes because of interest rate controls extensively influenced the banks' interest salary. This

implies that the interest rate adopted by the banks was dependent to the monetary regulation policy placed. The study made the recommendation that countries take significant roles in regulating the interest rate spread. The study however was not able to distinguish the direction of relation between the interest rate regulations and performance.

Udeh (2015) study used a "case study approach focusing on Zenith Bank and data obtained from the published financial reports for a period of 2005 to 2012. T-test statistics and Pearson Correlations were employed in data analysis and testing of hypotheses of the study. The study found that most of the monetary policies had minimal and insignificant influence on the profits of financial institutions in Nigeria". The study was not specific as to whether the monetary policy investigated also included the interest control tools. Mndeme (2015) conducted a study on 'the net interest income on the banking returns of banks in Tanzania. The study set up that net interest salary affected fundamentally on the profits of the business banks. However, moderating variables such as competition, improved technology and regulations also played a big role on how the commercial banks performed". The study however was not distinct on existence of interest rate regulations imposed on the financial banks in Tanzania.

Kibobo (2017) investigated interest rates control and its effect on performance of banks in Kenya, taking a case study of Equity Bank. The established that interest control means such as placement of interest caps was not an efficient method in the long term and recommends the formulation of better policies. The study focused only at Equity Bank without taking into consideration other banks in the country and also was not able to establish the interrelations between the research variables. Kathomi, Kimani, and Kariuki (2017) researched the impact of rates of interest guideline on the manageability on institutions of microfinance (MFIs) using Nairobi County. An evaluation was led on all the 49 microfinance organizations in Nairobi County. Both optional and

essential information gathering methods were utilized by the investigation. The investigation built up that adjustments in interest rates by the administration influenced supportability of MFIs. The investigation was however centered around the microfinance foundations and subsequently the discoveries may not be summed up to the financial segment.

Ng'ang'a and Wanyoike (2017) examined the impact that interest rate control has on NSE returns. The objective populace of this examination comprised of all the 61 organization stocks. The NSE All Share Index was chosen as illustrative of the general stock costs. The discoveries were that interest rate control had an affected adversely on the NSE returns. Interest rate control was relied upon to improve financial exchange execution because of diminished interest rate however this was not the situation. The results could be because of decreased acknowledge accessibility as business banks advance less loans because of the apparent credit risk. The examination in this way suggests for expulsion of interest rate cap to stay away from the negative outcomes it has on the financial exchange performance.

Matundura (2018) study evaluated the effects of capping interest rate on returns of KCB. The research employed descriptive research design. The information was exposed to stationarity test and essential smoothening done. The various direct relapse Model was utilized. The relapse results demonstrated that interest rate regulation was adversely and factually identified with the bank's benefits at 5% level of centrality. The paper subsequently proposed that the legislature and banking establishments to prepare all the more long haul by joining the casual segment into the money related framework.

2.4 Summary of Literature Review

Interest rate regulation is important in any country as the financial institutions cannot be able to self-regulate themselves (Miller, 2013). The regulation measures may act as a useful mechanism

for strategic positioning the financial institutions as well as safe-guarding the interest of the consumers. Though the reviewed theories have indicated the need for interest rate regulation and provided a framework for integration in the financial institutions, the studies conducted have obtained inconsistent results. This shows that there is no simplicity in application of these theories in the organization. Most of the studies have mainly focused on the impacts brought about by interest rate fluctuation on the organizations' performance without the consideration of the regulations measures put in place. Additionally, "there is scarcity of recent studies conducted locally in Kenya especially on the listed commercial banks. This presents a knowledge gap which this study aimed to find out by determining the relationship of capping the interest rate on the financial performance of the commercial banks that trade with the Nairobi Securities Exchange".

2.5 Conceptual Framework

The conceptual Framework shows a graphical presentation of the study's variables. The conceptual framework of the study is as per Figure 2.1. The independent study variable will be the interest rate regulation measures as depicted by lending interest rate, interest on saving accounts, banking deposits levels, rate from the central bank (CBR) and 91-day Treasury bill rate.

Independent variable   **Dependent Variable**

Interest Rates Control

- Lending interest rate
- Interest on saving accounts
- CBK Rate (CBR)
- 91 Day Treasury bill Rate

Bank Performance

- Net Interest Income
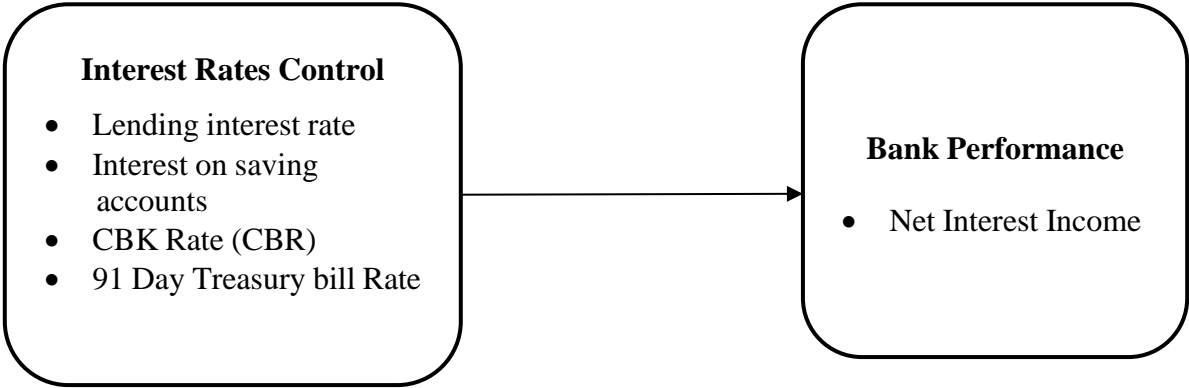
Source; Researcher 2019

Figure 2.1: Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology approach that was adopted by the study in collecting, analyzing and interpretation of data. The section outlines the research design to be used, the study population, data collection methods and the analysis techniques to be used.

3.2 Research Design

This study used the descriptive research design. This research design involves explaining a population in relation to important variables and the main emphasis is on the establishment of the study variables. The benefits of this research design are that it is simple and understandable as suggested by (Kothari, 2004). It also enables determination of a particular phenomenon at a particular time without minimal interferences hence the most appropriate for the study.

3.3 Population

The study population consisted of all the commercial banks listed at the Nairobi Securities Exchange. Particularly, there are ten banks that traded in the NSE in Kenya as January 2019 as shown in Appendix I and this is the population that was targeted. Due to the population being small, a census sampling approach was employed to comprise all the ten banks.

3.4 Data Collection

This study utilized purely secondary data. The data was obtained from the CBK database, NSE and the Banks' reports. This relates to data on interest rate control measures and the performance of the

listed banks. Data on the financial performance was "obtained from the published annual reports and company sources as well as CBK's banking supervision reports for years 2013 to 2018". The net interest income was used as the measure for financial performance of the listed commercial banks.

3.5 Data Analysis

Quantitative analysis was used to obtain information on the variables of the study. SPSS was used to analyze data quantitatively. "SPSS tool was chosen because of its clarity, preciseness, ease of understanding and interpretation. Quantitatively, information was presented in tables". The study used descriptive statistics and inferential analysis to describe the data. Event analysis was also conducted to establish whether the commercial banks performance measures were statistically different from those before the interest rate regulation.

3.5.1 Analytical Model

To the establish the regression association that exists between the study's variables, a regression model was used as follows;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

Y = Interest Income

X_1 = Lending Interest Rate

X_2 = Interest on Saving Accounts

X_3 = 91-Day Tbill

X_4 = Central Bank Rate

β_j Coefficients for the various independent variables

α- Constant

ε Error term

3.5.2 Significance Testing

The test for significance was undertaken using ANOVA. ANOVA is preferred as it enables comparison of means if groups and estimates of the variances. This enabled the determination of the sufficiency of the model in measurement of the association in the study variables. The level of significance value obtained was tested at both the 5% significant level.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter represents the analyis, findings obtained and interpretations of the study. Interest rate regulation commenced in September 2016 after parliament passed finance bill regulating lending and saving rates.

4.2 Descriptive Statistics

The section presented the trend analysis for the study variables which included net income from interests, total expense from interest and the interest income for the banks.

4.2.1 Trend for Commercial Banks Total Interest Income

The section presents the trends on total interest income for banks categorized in Tier I and 2 banks. Tier 1 banks included KCB bank, Co-op bank, Barclays bank, Equity bank and Standard chartered bank of Kenya for the year 2013 to 2018. The trends are presented in Figure 4.1 and Figure 4.2.
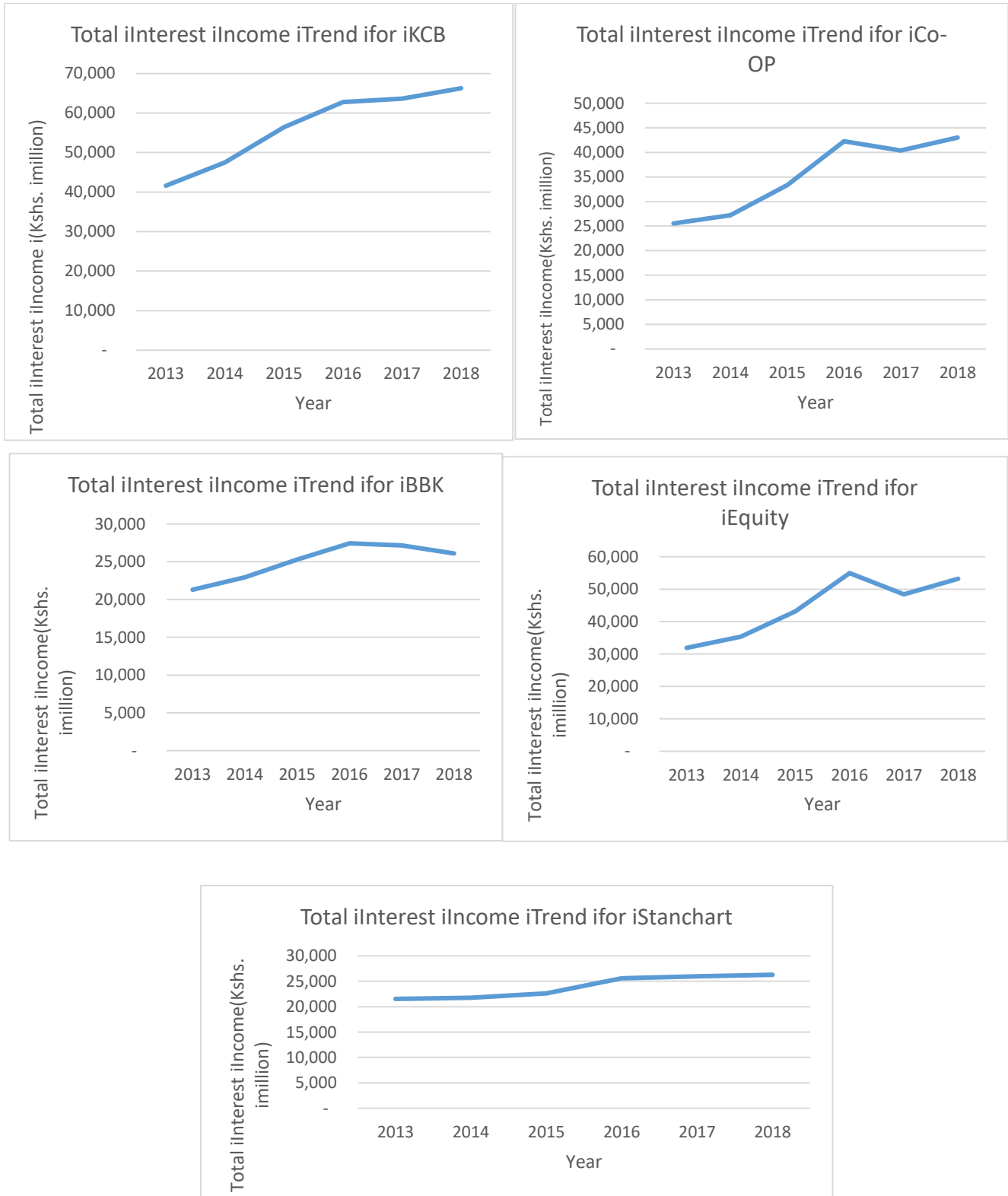
Figure 4.1: Tier 1 Commercial Banks Trend for Total Interest Income

As shown in Figure 4.1, the total interest income trend for KCB bank presents a steep rise from the year 2013 to year 2016 when the interest capping was effected. However, there was a steady increase from the year 2016 to 2018. Cooperative bank trend rose from in 2013 to 2015 where there was a steep rise until the year 2016. The trend dropped significantly from 2016 to 2017 but slightly rose in 2018. Barclays bank had a steep rise from the year 2013 until 2016 where it dropped. Equity bank had a sharp rise from the year 2013 to the year 2016 where it recorded a steep drop but slightly rose in 2018. Standard Chartered bank had rising pattern from the year 2013 to the year 2016 where it stagnated towards 2018. Overall, the commercial banks under tier 1 recorded a general increase from the year 2013 until 2016. The decreasing trend was observed from the year 2016 to 2018.
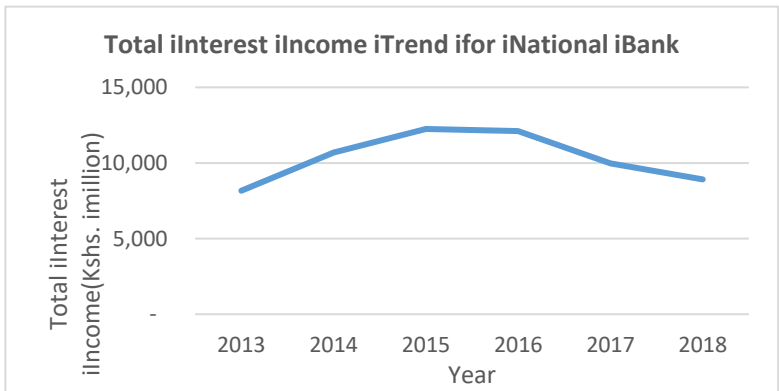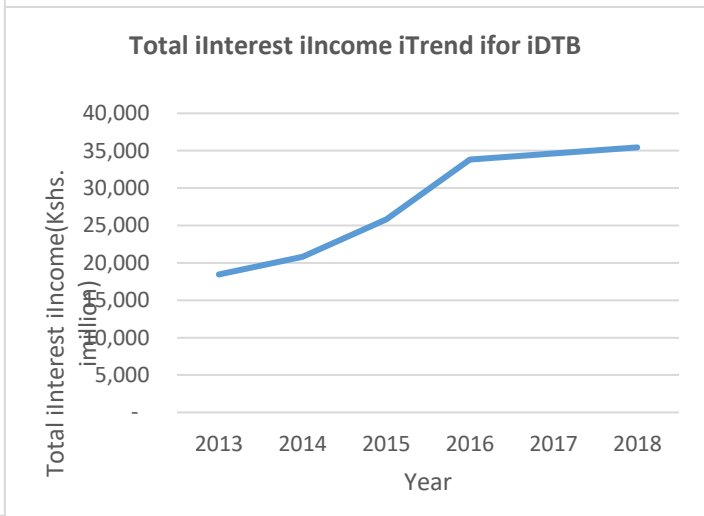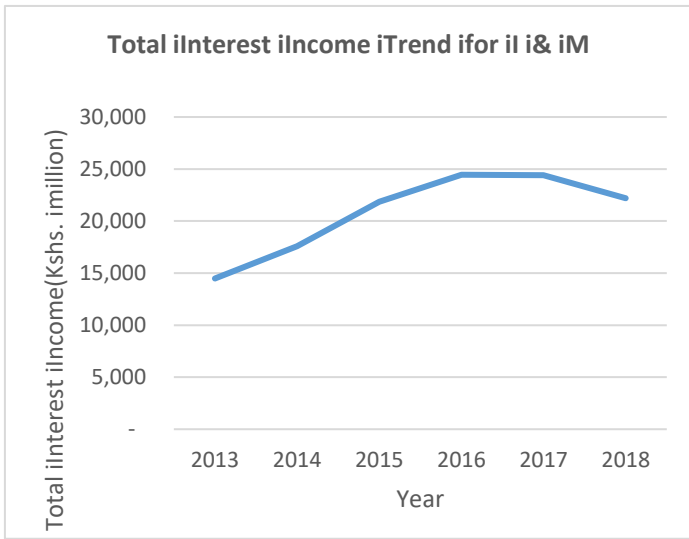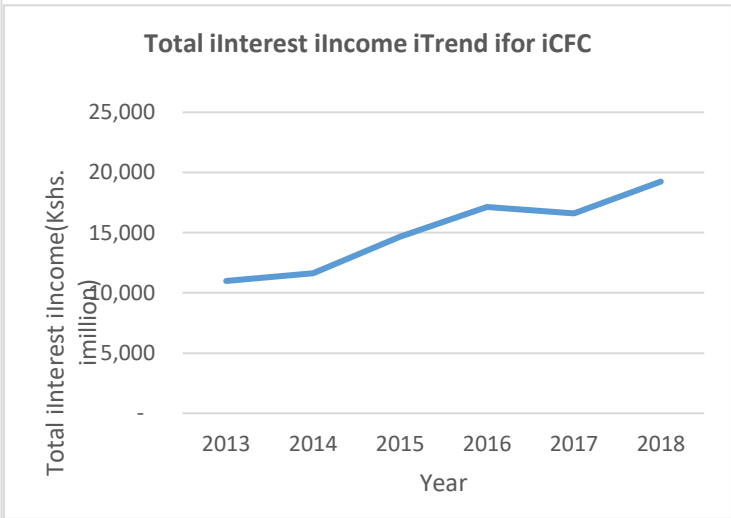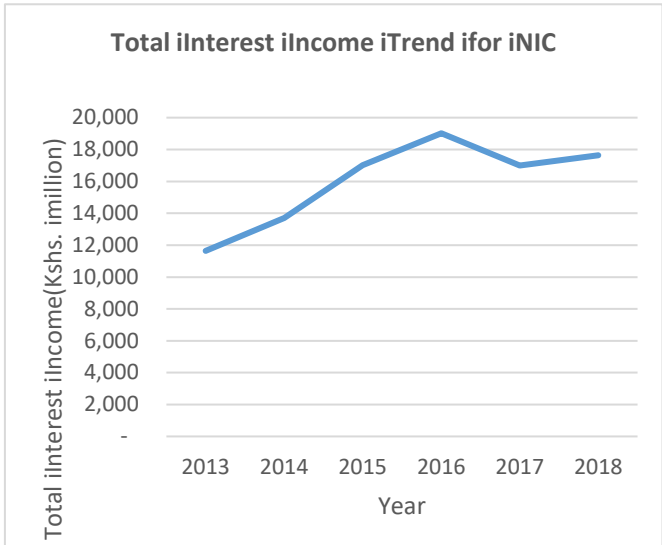
Figure 4.2: Tier 2 Commercial Banks Trend for Total Interest Income

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As shown in Figure 4.2, the total interest income trend for NIC bank presents a steep rise from the year 2013 to year 2016. DTB bank increased in 2013 to 2015 where there was a steep rise until the year 2016. I &M bank had a steep rise from the year 2013 until 2016 where it dropped. Stanbic Bank had a sharp rise from the year 2013 to the year 2016 where it dropped. National bank had an increasing trend from the year 2013 and 2015 but slightly dropped in 201 to the year 2016 where it recorded a steep drop. Overall, the commercial banks under tier 2 recorded a general increase in total interest income from the year 2013 until 2016 where interest rate capping was applied. The decreasing trend was observed from the year 2016 to 2018.

4.2.2 Trend for Commercial Banks Total Interest Expense

The section presents the trends on Total Interest expense for listed commercial banks Tier 1 banks for the year 2013 to 2018. The trends are presented in figure 4.3 and Figure 4.4.
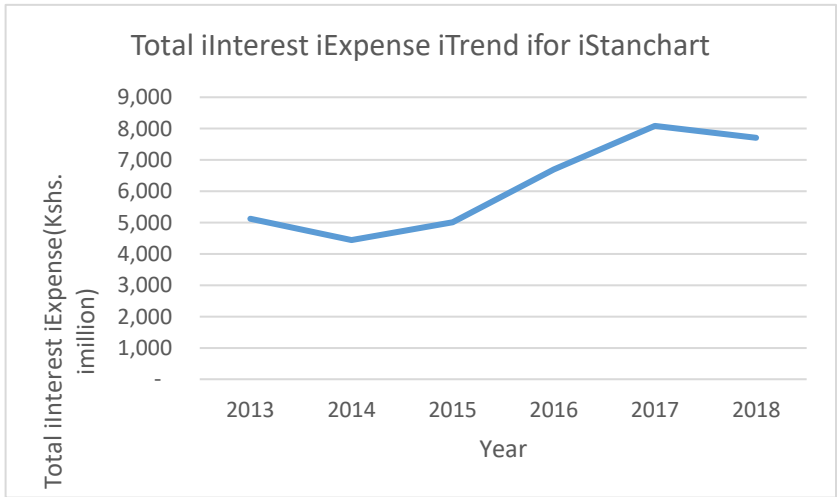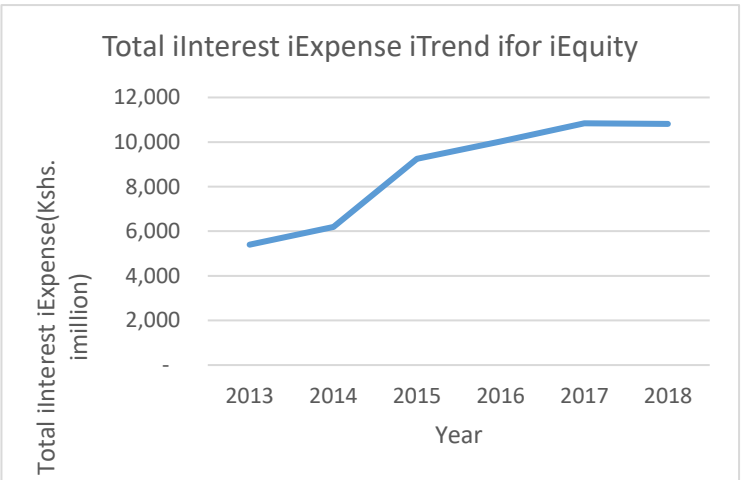
Figure 4.3: Tier 1 Commercial Banks Trend for Total Interest Expense

As shown in Figure 4.3, the total interest expense trend for KCB bank presents a steep rise from the year 2013 to year 2015 when it decreased sharply until year 2017 and slightly rose in 2018. Cooperative bank trend rose in 2013 to 2015 where there was a steep rise until the year 2015. The trend dropped slightly from 2016 towards 2018. Barclays bank had a steep rise from the year 2013 until 2016 where it dropped. Equity bank had a sharp rise from the year 2013 to the year 2016 where it recorded a steep drop but rose towards 2018. Standard Chartered bank had a decreasing trend from 2013 to 2014 and it increased from the year 2015 to the year 2017 but dropped in 2018.
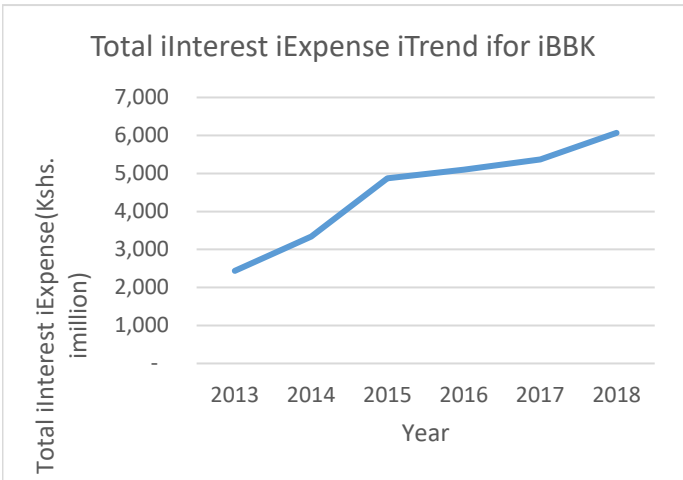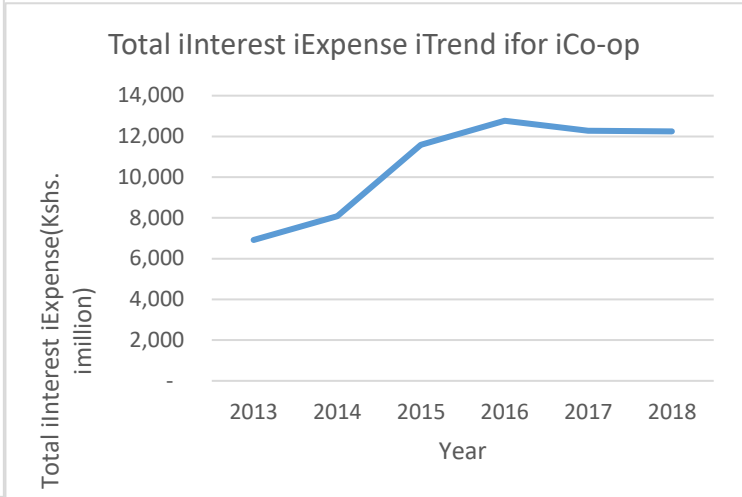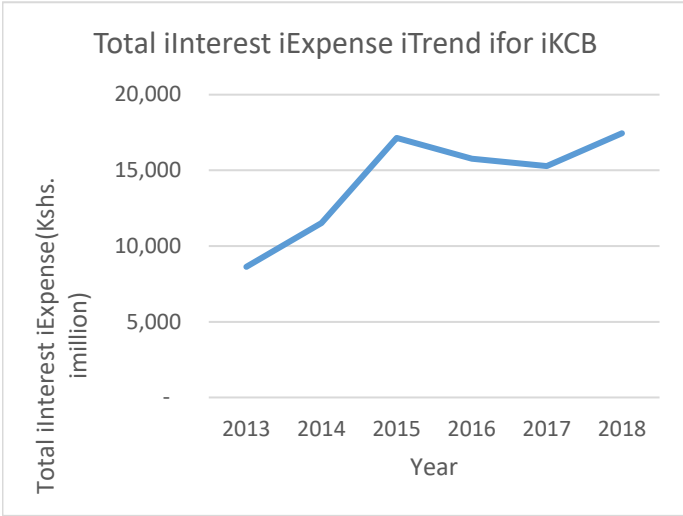
Figure 4.4: Tier 2 Commercial Banks Trend for Total Interest Expense

As shown in Figure 4.4, the total interest expense trend for NIC bank presented a steep rise from the year 2013 to year 2015 when it decreased steadily until year 2017. CFC had a slight drop from between 2013 and 2014 and then a sharp rise from the year 2014 to the year 2016 then a slight drop to year 2017 and rose in 2018. I & M had a steep rise from the year 2013 until 2015 where it recorded a steady drop. National bank had an increasing trend from 2013 to 2015 and it increased from the year 2015 to the year 2018.

4.2.3 Trend for Net Interest Income

The section presents the trends on net interest income for listed banks that were categorized tiers. The trends are presented in figure 4.5 and Figure 4.6.
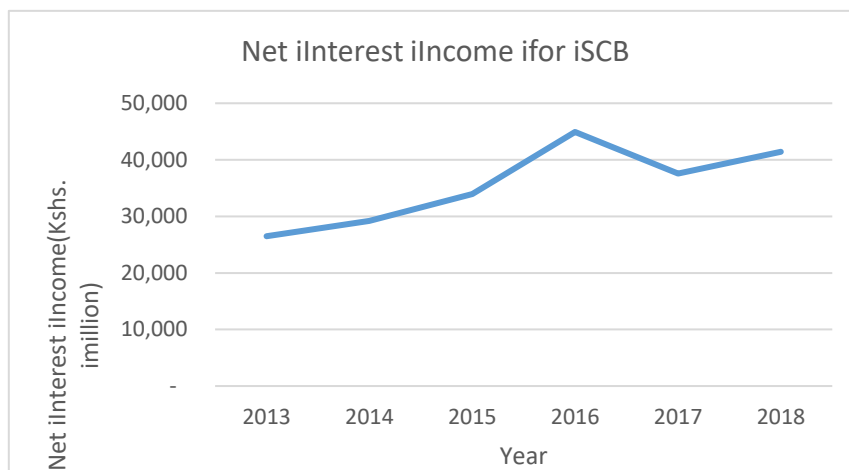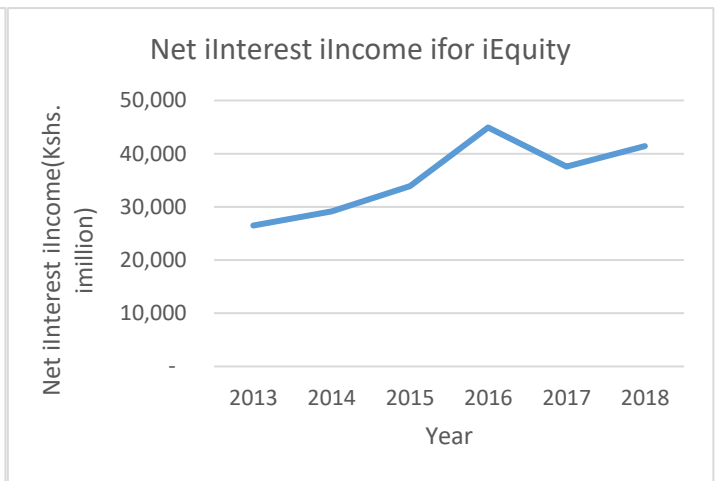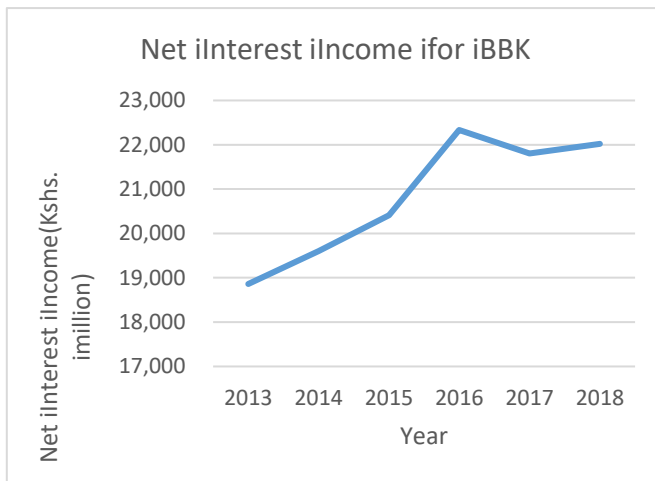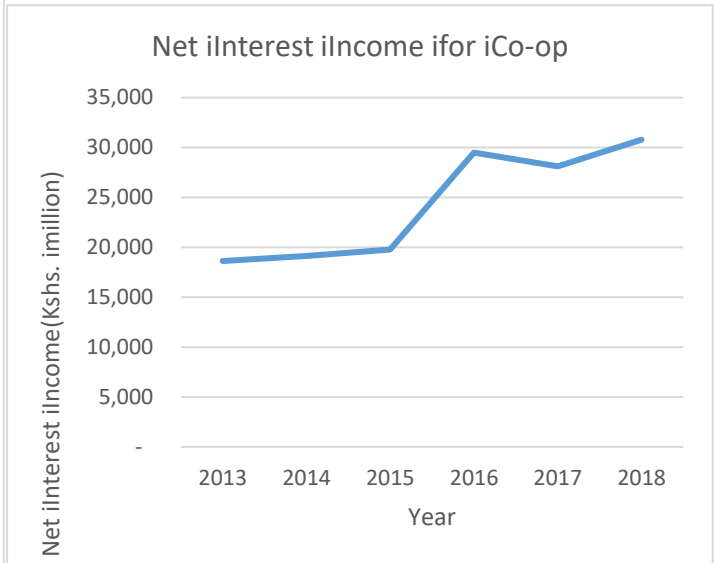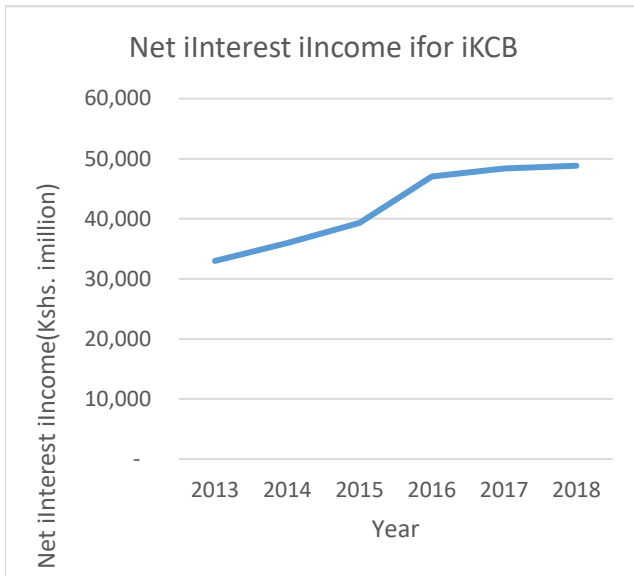
Figure 4.5: Tier 1 Commercial Banks Trend in for Net Interest Income

As shown in Figure 4.5, the interest income trend for KCB bank presents a steep rise from the year 2013 to year 2016 when the interest capping was effected. However, there was a stagnation from the year 2016 to 2018. Cooperative bank rose in 2013 to 2015 where there was a steep rise until the year 2016. The trend dropped significantly from 2016 to 2017 but rose in 2018. Barclays bank had a steep rise from the year 2013 until 2016 where it dropped and slightly rose in 2018. Equity bank had a sharp rise from the year 2013 to the year 2016 where it recorded a steep drop and slightly rose in 2018. Standard Chartered bank rose in 2013 to the year 2016 where it recorded a steep drop. The commercial banks under tier 1 recorded a general increase in 2013 until 2016. The decreasing trend was observed from the year 2016 to 2018.
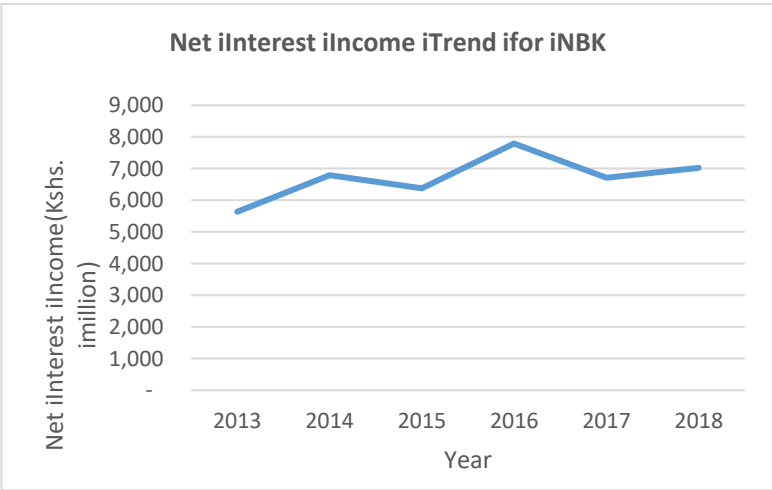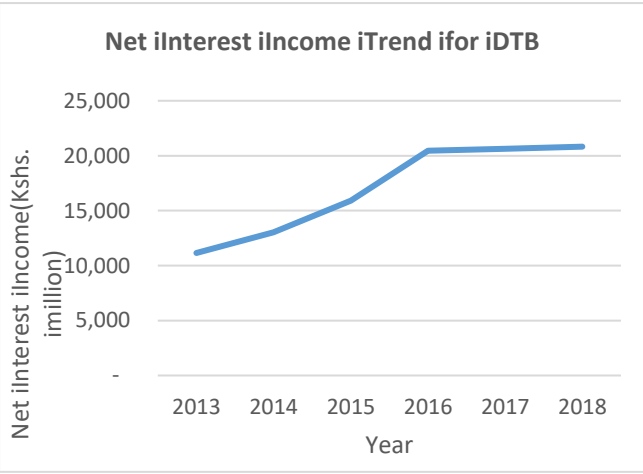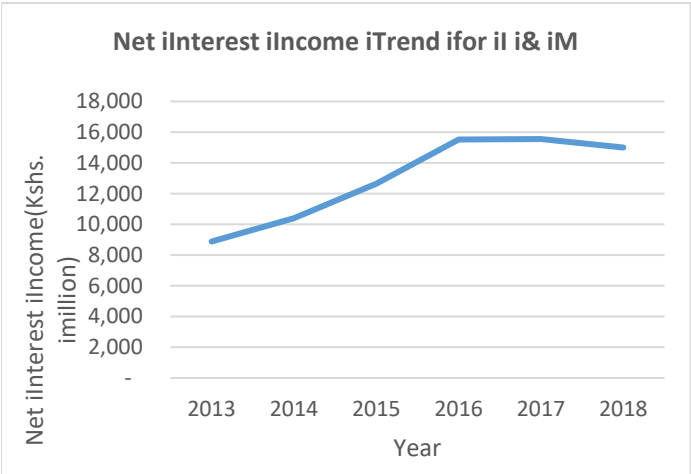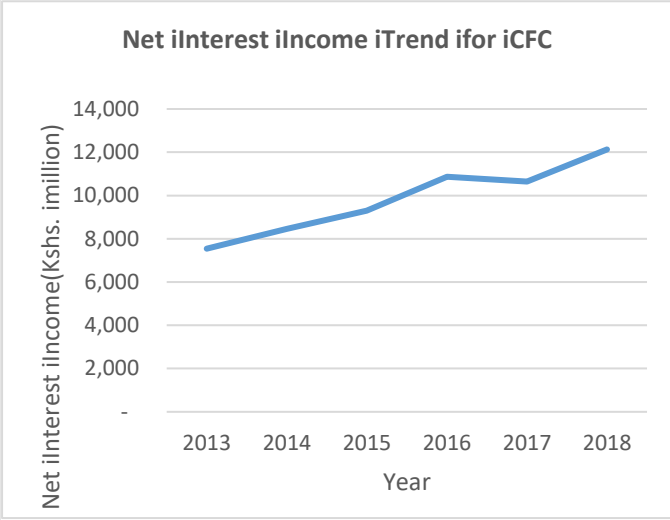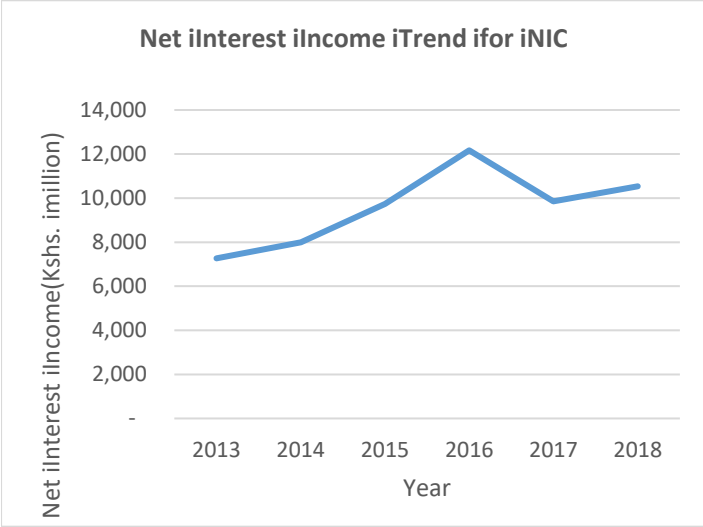
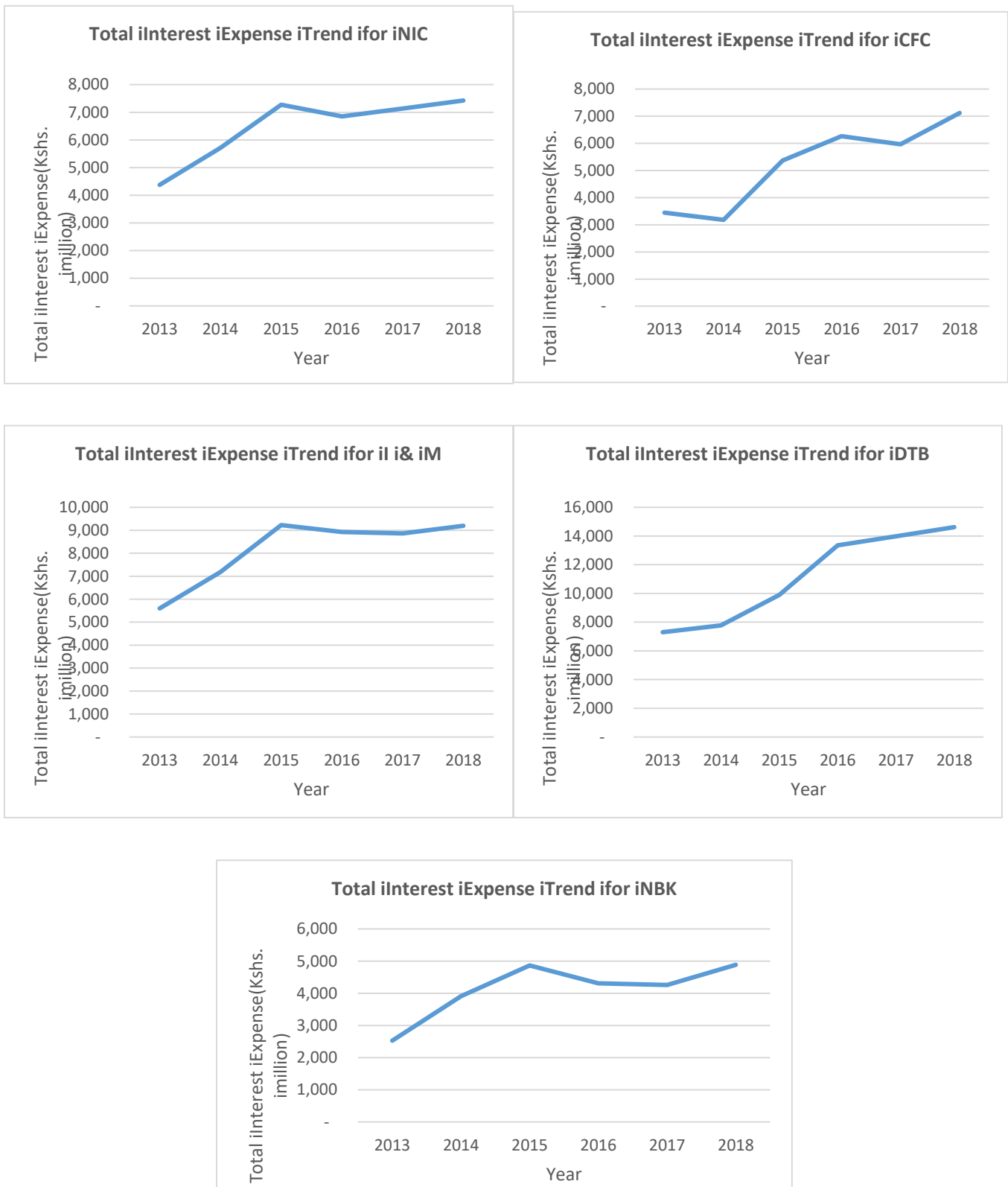**Figure 4.6: Tier 2 Commercial Banks Trend for Net Interest Income**

As shown in Figure 4.6, the net interest income trend for NIC bank presented a steep rise from the year 2013 to year 2016. The trend stagnated from 2016 to 2017. I &M bank had a steep rise from the year 2013 until 2016 where it dropped until 2018. CFC had a sharp rise from the year 2013 to the year 2016 where it recorded a decreasing trend but rose in 2018. National bank had an up and down trend from the year 2013 to 2018. The commercial banks under tier 2 recorded a general rise from 2013 until 2016. The decreasing trend was observed from the year 2016 to 2018.

4.3 Diagnostic Tests

The study conducted out different tests to make sure that the postulations of Classical Linear Regression Model (CLRM) are not contravened and to select the appropriate models for investigation in the event that the CLRM postulations are violated. The pre-estimation tests conducted in this case are the normality test, multicollinearity and normality tests. Each of them is discussed in the subsequent sections.

4.3.1 Multicolinearity Test

Multicollinearity tests was was done using Variance Inflation Factor (VIF). According to Field (2009) values more than 0.2 for Tolerance and values less than 10 for VIF means that there is no multicollinearity. The findings obtained are presented by Table 4.1.

Table 4.1: Multicolinearity Results

	Colinearity Statistics	
	Tolerance	**V.I.F**
(Constant)		
Lending Interest Rate	0.769	1.300
Interest on Saving Accounts	0.928	1.078
91-Day Tbill	0.730	1.371
Central Bank Rate	0.890	1.123

Source: Research. Data, 2019

As shown in Table 4.1, the results of Lending Interest Rate had a tolerance value of 0.769 and VIF of 1.300, Interest on Saving Accounts had a tolerance value of 0.928 and a VIF value of 1.078, 91-Day Tbill had a tolerance value of 0.730 and a VIF value of 1.371. Lastly, Central Bank Rate had a tolerance value of 0.890 and a VIF value of 1.123 and thus revealed that there was no multicollinearity since all the values for tolerance were above 0.2 and VIF were less than 10.

4.3.2 Normality Test

Normality test was done as is as shown by Table 4.2.

Table 4.2: Normality Test

	Skewness	**Kurtosis**
Net Interest Income	1.025	0.243
Lending Interest Rate	0.429	-0.997
Interest on Saving Accounts	0.197	-0.573
91-Day Tbill	1.565	1.039
Central Bank Rate	0.500	-1.018

Source: Research. Data, 2019

The results obtained show that net interest income had a "Skewness of 1.025 and Kurtosis of 0.243, Lending Interest Rate had a Skewness of 0.429 and Kurtosis of -0.997, Interest on Saving Accounts had a Skewness value of -0.254 and Kurtosis value of -1.626, Lending Interest Rate had a Skewness value of 0.197 and Kurtosis value of -0.573, 91-Day Tbill had a Skewness value of 1.563 and Kurtosis value of 1.039 while Central Bank Rate had a Skewness value of 0.500 and Kurtosis value of -1.018". Thus the data was normal.

4.4 Correlation Analysis

Correlation analysis was conducted and the findings are portrayed in Table 4.3

Table 4.3: Correlation Output

	Net Interest Income	Lending Interest Rate	Interest on Saving Accounts	91-Day Tbill	Central Bank Rate
Net Interest Income	1.000				
Lending Interest Rate	.592**	1.000			
	0.000				
Interest on Saving Accounts	.316*	0.099	1.000		
	0.014	0.452			
91-Day Tbill	.439**	.457**	0.253	1.000	
	0.000	0.000	0.051		
Central Bank Rate	-.476**	-.267*	-0.153	-.278*	1.000
	0.000	0.039	0.244	0.032	

The results in show that lending interest rate (r=0.592, p= 0.000) "had a positive and significance relationship with Net Interest Income. Interest on Saving Accounts (r=0.316, p=0.014) had a positive and significance relationship with Net Interest Income. 91-Day Tbill (r=0.439, p=0.000) had a positive and significance relationship with Net Interest Income. Lastly, Central Bank Rate (r= -0.476, p=0.000) had a negative and significance relationship with Net Interest Income".

4.5 Regression Analysis

Regression was undertaken so as to "determine the relationship that existed between interest rate regulation and the financial performance of listed commercial banks in Kenya". Lending interest rate, interest on saving accounts, 91-Day Tbill and central bank rate were found to be suitable variables in analyzing financial performance. The R square was 0.514. This means that lending interest rate, interest on saving accounts, 91-Day Tbill and Central Bank Rate explain 51.4% of the variations in the dependent variable.

Table 4.4: Model Fitness

Model	R	R^2	Adjusted R^2	Std. Err
1	.717a	0.514	0.479	8479.4622
a Predictors: (Constant), Central Bank Rate, Interest on Saving Accounts, Lending Interest Rate, 91-Day Tbill				

Source: Research Data, 2019

The results in Table 4.5 gives the outcomes on the examination of the variations (ANOVA). The results indicated that the model was significant at 0.000.

Table 4.5: ANOVA

	Squares Sum	d.f	Square Mean	F	Sign.
Regression	4180836698	4	1045209174	14.537	0.000
Residual	3954570347	55	71901279.04		
Total	8135407045	59			

Source: Research Data, 2019

Regression coefficient measure of the average functional relationship between two or more variables. The regression of coefficients results are shown in Table 4.6.

Table 4.6: Regression of Coefficients

	B	Std. Error	Beta.	t	Sign.
(Constant.)	17400	13158.507		1.322	0.192
Lending Interest Rate	1853	445.225	0.446	4.164	0.000
Interest on Saving Accounts	1413	687.71	0.201	2.056	0.045
91-Day Tbill	352	381.545	0.102	0.923	0.360
Central Bank Rate	-3168	1059.805	-0.298	-2.990	0.004

Source: Research Data, 2019

The fitted model was:

$Y = 17400 + 1853X_1 + 1413X_2 + 352X_3 - 3168X_4$

Regression results in Table 4.6 shows that lending interest rate was positively related with β of 1,853 and p-value of 0.000 to net interest income. Interest on saving accounts rate had a β of 1,413 and p-value of 0.045 to net interest income. 91-Day Tbill had a β of 352 and a p-value of 0.360 to net interest income. Lastly, Central Bank Rate had a β value of -3168, and a p-value 0.045 to net interest income. This implies that "an increase lending interest rate, interest on saving accounts, 91-Day Tbill led to an increase on the net interest income while an increase in central bank rate lend to a decrease in net interest income".

4.6 Event Analysis

Event analysis was used to establish whether interest rate regulation had significant effect on banks performance in Kenya. Financial performance, central bank rate, lending rate, 91-day T-bill and savings rate prevailing in 2014 and 2015 was compared to those prevailing in 2017 and 2018; two years after and before introduction of interest rate regulation. The event year, 2016 was excluded in event analysis as presented in Table 4.7.

Table 4.7: Event Analysis

		Sum of Squares	df	Mean Square	F	Sig.
Net Interest Income	Between Group	184562682.1	3	61520894.03	0.422	0.738
	With in Group	5245815171	36	145717088.1		
	Total	5430377853	39			
Lending Interest Rate	Between Group	0.005	3	0.002	6.013	0.002
	With in Group	0.009	36	0		
	Total	0.014	39			
91DayTbill	Between Group	4.929	3	1.643	0.827	0.488
	With in Group	71.559	36	1.988		
	Total	76.488	39			
Central Bank Rate	Between Group	0.269	3	0.09	0.071	0.975
	With in Group	45.675	36	1.269		
	Total	45.944	39			

Source: Research Data, 2019

The findings as shown in Table 4.7 indicated that only lending interest rate ($p=0.002<0.05$) was significantly different after interest rate regulation. Financial performance ($p=0.738>0.05$) had no significant difference after interest rate regulation. This meant that financial performance of listed commercial banks prior to introduction of interest rate regulation was not significantly different with the banks financial performance after introduction of interest rate regulation. Further, 91DayTbill ($p=0.488>0.05$) had no significant difference after interest rate regulation. Lastly, the central bank rate had no significant difference after interest rate regulation. Financial performance was therefore the same after introduction of interest rate regulation. Thus, "interest rate regulation did not have a significant effect on financial performance of listed commercial banks in Kenya".

4.7 Discussion of Research Findings

The study sought to determine the relationship between interest rates regulation and the financial performance of banks. Correlation results showed that "lending interest rate, interest on saving

accounts, net interest income and 91-Day Tbill had a positive and significance effect with net interest income. Only central bank rate showed a negative and significance effect with Net Interest Income".

Lending interest rate, interest on saving accounts, 91-Day Tbill and Central Bank Rate were found to be "satisfactory variables in explaining banks financial performance. ANOVA results indicated that the outcomes of the general model was statistically significant. Regression of coefficients results revealed that lending interest rate (β=1,853, p=0.000) had a positive and significant effect with net interest income. Interest on saving accounts rate (β=1,413, p=0.045) had a positive and significant effect with net interest income. 91-Day Tbill (β=352, p=0.360) had a positive and but insignificant effect with net interest income. Lastly, Central Bank Rate (β= -3168, p=0.045) had a negative and significant effect with net interest income. This implies that an increase lending interest rate, interest on saving accounts, 91-Day Tbill led to an increase on the net interest income while an increase in central bank rate lend to a decrease in net interest income".

Event analysis was conducted to compare the influence of the interest rate capping in 2016. Financial performance, central bank rate, lending rate, 91-day T-bill and savings rate prevailing in 2014 and 2015 was compared to those prevailing in 2017 and 2018; two years after and before introduction of interest rate regulation. The event year, 2016 was excluded in event analysis. The results revealed that only lending interest rate (p=0.002<0.05) was significantly different after interest rate regulation. Financial performance as measured by net interest income (p=0.738>0.05) had no significant difference after interest rate regulation. This meant that performance of banks prior to introduction of interest rate regulation was not significantly different with the performance of banks after introduction of interest rate regulation. Further, 91DayTbill (p=0.488>0.05) had no significant difference after interest rate regulation. Lastly, the central bank rate had no significant

difference after interest rate regulation. Financial performance was therefore the same after introduction of interest rate regulation. Thus, "interest rate regulation did not have a significant effect on financial performance of listed commercial banks in Kenya". This compares with Kibobo (2017) who also studied "the interest rates control and performance of commercial banks in Kenya, taking a case study of Equity Bank and established that interest control measures such as placement of interest caps was not an efficient method in the long term and recommends the formulation of better policies". While Matundura (2018) studied the effects of capping interest rate on returns of KCB and indicated that "interest rate capping was adversely and not detectably identified with the bank's benefits at 5% level of centrality".

Various studies conducted have also established similar negative and insignificant effect brought about by interest regulation on the performance of banks. This is in line with Khan and Sattar, (2014) who investigated effects of interest rate regulations and established that implementation of these regulations may discourage supply of funds the financial institution therefore encouraging informal mechanisms. This concurs with Shuremo (2016) who on a study on determinants of banks' productivity proof from banks in Ethiopia and discovered that as interest rate was negatively correlated to the financial performance of the banks. While Ndubuaku *et al* (2017) found out that interest regulations had no significant impact on how the banks performed.

Ngetich and Wanjau (2011) on a study on the "impact that interest rates had on non-performing assets of commercial banks operating in Kenya and established that increase of lending interest rates and lowering of the deposits interest rates among investor was caused to a great extent by interest rate spreads". Khan and Sattar (2014) on the "influence of control of interest rates on banks' profits and found out that the interest rates changes due to interest rate controls considerably affected the banks' interest income". This implied that the interest rate adopted by

the banks was dependent to the monetary regulation policy placed. Udeh (2015) "on a study on the effect of monetary policies on the performance banks operating in Nigeria and established that most of the monetary policies had minimal and insignificant influence on the profits of banks in Nigeria". Kibobo (2017) investigated interest rates control and performance banks, taking a case study of Equity Bank and found out that interest control measures such as placement of interest caps was not an efficient method in the long term and recommends the formulation of better policies.

Ng'ang'a and Wanyoike (2017) studied the impact that interest rate control has on NSE returns and found that interest rate control had impacted negatively on the NSE returns. "Interest rate control was relied upon to improve securities exchange execution because of diminished interest rate however this was not the situation. This was related with the diminished acknowledge accessibility as business banks advance less loans on the grounds that of the apparent credit hazard. Matundura (2018) on the impacts of capping interest rate on returns of KCB and discovered that demonstrated that interest rate capping was contrarily and factually identified with the bank's benefits at 5% level of significance".

However, on the contrary, Miller (2013) finds that the interest regulations aim to create transparency and uniformity on how the banking institutions conduct their operations with other parties hence a significant positive effect. "Khan and Sattar (2014) investigated the influence of control of interest rates on banks' profits and established that interest rates changes due to interest rate controls considerably affected the banks' interest income. Similarly, Mndeme (2015) did a study on the net interest income on the banking returns of commercial banks in Tanzania and found that net interest income regulation impacted significantly on the bank performance".

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents summary of the study findings guided by the objective of the study which was to determine the relationship between interest rates regulation and the financial performance of listed commercial banks. Conclusions and recommendations are also given for future action and research direction are also made.

5.2 Summary of findings

This study utilized purely secondary data to establish whether the regulation of interest had an impact on the banks performance in Kenya. "The data was obtained from the CBK database, NSE and the Banks' reports for a period of five years (2013 to 2018). The study used quantitative analysis techniques to obtain information on the study variables using SPSS. Event analysis was also conducted to establish whether the commercial banks performance measures were statistically different from those before the interest rate regulation". The test for significance was undertaken using the Analysis of Variance (ANOVA) at both the 5% significant level and 95% confidence level.

The study variables that were lending interest rate, interest on saving accounts, 91-Day Tbill and Central Bank Rate were "found to be satisfactory variables in explaining financial performance of listed commercial banks in Kenya Rsquare of 0.514%". Regression results showed that "lending interest had a positive and significant effect with net interest income. Interest on saving accounts rate had a positive and significant effect with net interest income. 91-Day Tbill had a positive and

but insignificant effect with net interest income. Lastly, central bank rate had a negative and significant effect with net interest income. This implies that an increase Lending interest rate, interest on saving accounts, 91-Day Tbill led to an increase on the net interest income while an increase in central bank rate lend to a decrease in net interest income".

On the influence of interest rate capping on financial performance of the listed banks, Event analysis showed that financial performance, central bank rate, lending rate, 91-day T-bill and savings rate prevailing in 2014 and 2015 was compared to those prevailing in 2017 and 2018; two years after and before introduction of interest rate regulation. The event year, 2016 was excluded in event analysis and results revealed that only lending interest rate was significantly different after interest rate regulation. Financial performance had no significant difference after interest rate regulation. This meant that performance of prior to introduction of interest rate regulation was not significantly different with the performance of commercial banks after introduction of interest rate regulation. Further, 91DayTbill had no significant difference after interest rate regulation. In addition, the central bank rate had no significant difference after interest rate regulation.

5.3 Conclusions

The regression analysis showed weak relationship between interest rate regulation and financial performance as measured by the net interest income. Even though the introduction of interest rate regulation, banks financial performance did not significantly change. The interest rate cap expedited some negative impacts the general economy, with the impacts more extreme in 2017 than in 2018. The study finds that the capping erodes the banks' ability to build capital buffers through retained earnings, hence vulnerable to shocks. Following interest rate caps, the income of the commercial banks have shifted their revenue sources in favor of non-interest income. However, some recuperation has been seen in 2018 with increments in development of credit to

the general financial development. What's more, market power control in the financial part is probably going to impact interest rate spreads, with the couple of enormous banks prone to have the advantage. All things considered, the law has for the most part prevailing with regards to cutting down interest rate spreads.

5.4 Recommendations

5.4.1 Recommendation to Practice

The study recommends that the commercial banks to come up with appropriate strategies in minimizing the negative effects of the interest rate regulations on performance maximizing noninterest revenues and managing their costs. Further the banks can shift their revenue sources in favor of non-interest income such as fees and revenues and foreign exchange. The study also recommends that the commercial banks to come up with innovation products and services so as to reduce the dependence towards interest rate incomes. This is essential in ensuring that they are shielded against the negative impacts of the interest rate regulations as well as assuring of continued profitability regardless of the regulations.

Lastly, banks should also exploit additional ways of improving the efficiency of operations so as to improve their financial performance and protect the shareholders capital. Commercial banks management are recommended to educate the investors on how they are managing post interest regulation profitability. This will boost investor confidence and reduce the negative effect of interest rate regulation on market performance of listed commercial banks as indicated by the share prices.

5.4.2 Recommendation to Policy

The study found that the interest rate regulation result in negative but not significant effect on the financial performance of the commercial banks. The study therefore recommends that the policy makers, mainly the CBK to conduct an evaluation on the efficiency and benefits of these interest rate regulation. This will enable the determination of whether the interest rate regulations and capping have achieved the intended outcomes as regards to the performance of the banks. It is also recommended that the Government of Kenya and CBK to revise the set policies on interest rate regulation to ensure that neither the banks nor the customers are negatively affected.

The study further recommends the government and other regulatory bodies such as the CBK to come up with favourable policies which will promote financial liberalization apart from interest rate regulation. This is important so as to boost the performance of commercial banks in Kenya which will in turn promote increased financial inclusion and investments. The economy of the country will also be improved through this as the sector contributes significantly to the GDP annually.

5.5 Limitations to Study

The study was limited by the research design employed whereby it only focused to the listed commercial banks in Kenya. This is despite their being other commercial banks not listed and financial institutions such as Microfinance Banks and SACCOs which are also affected by interest rate regulations. The findings thus obtained may not be an actual representation of the exact phenomenon in these other institutions due to the differences in organizational and financial structures in the firms.

The study was also limited to only four variables of interest regulation namely; Lending Interest Rate, Interest on Saving Accounts, 91-Day T-bill and Central Bank Rate which is not an exhaustive list of all the available interest regulation measures put in place by the Central Bank of Kenya on commercial banks in Kenya. The study was also limited by the data collection methods employed whereby only secondary data was utilized. In this regard, the accuracy and relevancy of the secondary data may not be fully guaranteed.

The study also used "net income interest as measures of the financial performance of the commercial banks despite the existence of other measures of financial performance such as price to earnings ratio which can be used in accessing the level of performance in the banks. Additionally, the study focused only on interest rate regulation as a main determinant of the financial performance of the banks. This is a limitation owing to the fact that there are other determinants of financial performance of the commercial banks such as exchange rates, GDP growth and market capitalization which were not considered in the study variables".

5.6 Suggestions for Further Research

The study thus makes several suggestions for further researcher on areas which emerged during the study and require further research. The study was also limited only to four variables of interest rate regulations by CBK namely lending interest rate, interest on saving accounts, 91-Day T-bill and central bank rate, it is therefore suggested that further studies be conducted while taking consideration other interest rate control measures not covered by the study. This will enable "comprehensive determination of the relationship that exists between the research variables. The study also suggests that future studies to be conducted using other data collection methods other secondary data such as through use of questionnaires and interviews to facilitate objectivity of the research findings".

The study also suggest studies to be conducted using different measures of financial performance other than net interest income used by the study to enable comparison of the study findings. The future studies should also consider other determinants of budgetary execution of the banks other than interest rates such as changes in the macro-economic environment, GDP growth, foreign remittances and market capitalization to foster full determinant of the financial performance determinants. Also, further studies to be conducted at a different time frame to establish whether the same phenomenon will be prevailing or changed.

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APPENDICES

Appendix I: Commercial Banks

1. KCB

2. Diamond Trust Bank

3. Equity Bank

4. CFC Stanbic Holdings

5. NIC Bank

6. Barclays Bank

7. Stanchart Bank

8. NBK

9. I &M Holdings

10. Co-op Bank of Kenya

Source: NSE (2019)