

**THE EFFECT OF REGULATIONS ON FINANCIAL PERFORMANCE OF
COMMERCIAL BANKS IN KENYA**

BY

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DECLARATION

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

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TABLE OF CONTENTS

ACKNOWLEDGEMENT	iii
DEDICATION	iv
LIST OF TABLES	vii
LIST OF FIGURES	viii
ABBREVIATIONS	ix
ABSTRACT	x
CHAPTER ONE: INTRODUCTION	1
1.1 Background of the Study.....	1
1.1.1 Regulations	2
1.1.2 Financial Performance	3
1.1.3 Regulations and Financial Performance.....	4
1.1.4 Commercial Banks in Kenya	5
1.2 The Research Problem	7
1.3 Research Objective	10
1.4 Value of the Study	10
CHAPTER TWO: LITERATURE REVIEW	11
2.1 Introduction.....	11
2.2 Theoretical Review	11
2.1.1 Micro Prudential Regulation.....	11
2.2.2 Macro Prudential Regulation	13
2.3 Determinants of Financial Performance.....	14
2.3.1 Capital Adequacy	14
2.3.2 Asset Quality.....	14
2.3.3 Management Efficiency	15
2.3.4 Liquidity Management.....	15
2.3.5 Macroeconomic/External Factors	15
2.4 Empirical Literature Review	16
2.4.1 Global Studies.....	16
2.4.2 Local Studies.....	18
2.5 Conceptual Framework	20
2.6 Summary of Literature Review	20

CHAPTER THREE: RESEARCH METHODOLOGY.....	22
3.1 Introduction.....	22
3.2 Research Design.....	22
3.3 Population of the Study.....	22
3.4 Sample and Sampling Design	22
3.5 Data Collection Techniques.....	23
3.6 Data Analysis Techniques.....	23
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION.....	26
4.1 Introduction.....	26
4.2 Response Rate.....	26
4.3 Data Validity	26
4.4 Descriptive Statistics.....	26
4.5 Correlation Analysis	33
4.6 Chi Square Test and Hypothesis Testing	34
4.7 Discussion of Research Findings	38
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS	40
5.1 Introduction.....	40
5.2 Summary of Findings.....	40
5.3 Conclusion	40
5.4 Recommendations.....	41
5.5 Limitations of the Study.....	41
5.6 Suggestions for Further Research	42
REFERENCES.....	43
APPENDIX 1: LIST OF COMMERCIAL BANKS	47

LIST OF TABLES

Table 1. Core capital to RWA ratio

Table 2: Core capital to total deposit liabilities ratio

Table 3: Total capital to RWA ratio

Table 4: Return on assets ratio

Table 5: Return on equity ratio

Table 6: Return on capital ratio

Table 7: Credit risk ratio

Table 8: Liquidity ratio

Table 9: Interest coverage ratio

Table 10: Capital adequacy

LIST OF FIGURES

Fig 1. Core capital to RWA ratio

Fig 2: Core capital to total deposit liabilities ratio

Fig 3: Total capital to RWA ratio

Fig 4: Return on assets ratio

Fig 5: Return on equity ratio

Fig 6: Return on capital ratio

Fig 7: Credit risk ratio

Fig 8: Liquidity ratio

Fig 9: Interest coverage ratio

Fig 10: Capital adequacy

ABBREVIATIONS

CAR	- Capital Adequacy Ratio
CBK	- Central Bank of Kenya
DTM	- Deposit Taking Microfinance Institutions
EBIT	- Earning Before Interest and Tax
EMEs	- Emerging Market Economies
GDP	- Gross Domestic Product
ICR	- Interest Coverage Ratio
KSH	- Kenya Shilling
MS	- Microsoft
NBFI	- Non Bank Financial Institutions
NPL	-Non Performing Loan
OXERA	- Oxford Economic Research Associates
PCA	- Prompt Corrective Action
ROA	- Return on Assets
ROE	- Return on Equity
RWA	- Risk Weighted Assets
SEC	- Securities and Exchange Commission
USA	- United States of America

ABSTRACT

The objective of this study was to determine if there is a relationship between regulations and financial performance. Regulations is the independent variable while financial performance is the dependent variable. Financial performance is measured using financial ratios such as return on capital, return on equity, return on assets, credit risk, liquidity ratio, interest coverage ratio, core capital to total risk weighted assets ratio, total capital to total risk weighted assets ratio and core capital to total deposit liabilities ratio. This study also analyses capital adequacy. The population of study is the 43 commercial banks in Kenya and the period of study is between 2010 and 2015. Three years before the reviewed prudential guidelines for banks of 2013 came into effect and three years after. Chi square test of independence was used to analyze the relationship between the two variables. The test was carried out on each of the ratios and the findings were that there is no relationship between regulations and financial performance of commercial banks. Most of the banks have been able to comply with the minimum capital requirement and the government must continue to ensure that there is compliance of the stipulated guidelines in order to ensure the stability of the banking sector in Kenya. This will enable Kenya as an economy avoid financial crises. The CBK will also be able to discover struggling banks and provide remedial measures to manage them before they collapse and depositors lose their money. The finance ratios suggest a thriving banking sector that is profitable. This study did not factor in macroeconomic factors that may affect the financial performance of commercial banks and these may be helpful in a similar study in the future that also analyses a longer period of time.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Since the 1980's the financial sector in most western countries has been going through the process of deregulation, whereby their governments either removed or reduced state regulations that were governing financial institutions, (Kumbhakar, Lozano-Vivas, KnoxLovell & Hassan 2005). This is because policy makers are convinced that deregulation is the only way they can increase the efficiency and performance of these institutions. These policies aim at increasing banks competition on prices, products and territorial rivalry. This process of deregulation has however led to mixed consequences. Good for some countries and bad for others for instance the deregulation of Norwegian banks gave them the permission to set their own lending rates as well as the amount of money they could lend out. The results have been very favorable for them while in India and USA this has not been the case.

Two theories were originated in 1979 by the Cooke committee namely micro prudential regulation and macro prudential regulation, Clement (2010). According to the micro prudential regulation, banks finance themselves using government insured deposits which while it helps to reduce bank runs, it creates a moral hazard problem because it leads to the management of banks taking too many risks because they know that the government will cover any losses they make. Micro prudential regulation requires banks to take prompt steps to restore their capital ratio if losses occur. This is referred to as Prompt Corrective Action, (Hanson, Kashyap, Stein 2011). Central banks enforce capital regulations. The macro prudential theory aims at reducing as much as possible the

financial impact that is felt in the economy when many commercial banks decide to sell their assets at the same time in order to cover their losses especially when the assets are similar for example real estate, Hanson et al. (2011). The result would be a significant reduction in the market price of the assets. This was experienced in the United States of America during the global financial crisis of 2007 and 2008. Commercial banks will also cut back on lending which will increase the cost of borrowing. This theory is presumed to be applicable to all deposit takers, insured or not. Regulators are therefore required to monitor the activities of all financial institutions in order to eliminate any activities that can cause damage to the economy.

There are 43 licensed commercial banks in Kenya according to the CBK. There is only one mortgage finance company namely Housing Finance Company of Kenya. The CBK has enforced strict regulations on financial institutions. However unlike in the American market, Kenya's banks seem to be growing very fast over the past few years in spite of strict regulations. According to the Monthly Economic Review of November 2015 by the CBK, the balance sheet saw an increase in terms of total assets from Ksh 3,168.7 billion in November 2014 to Ksh 3,626.9 billion in November 2015. This is a 14.5 percent increase.

1.1.1 Regulations

Financial regulations are the laws that have been put in place by the state to govern financial institutions, Agborndakaw (2010). The Financial Times (n.d.) have a similar definition and describe regulations as laws that govern the activities of all financial

institutions. Agborndakaw (2010) says that these regulations aim at maintaining orderly markets, licensing the providers of financial services, enforcing applicable laws as well as prosecuting cases of market misconduct, protecting clients and investors and promoting the stability of the financial system. These regulations are promulgated by government regulators as well as international groups. The government regulator in Kenya is the CBK.

According to a report by OXERA of September 2006, financial regulations can be measured by looking at the growth in the financial sector and this is done by comparing financial performance before new regulations came into effect and the performance after. They are also measured by using surveys that show growth in market outcomes which are as a result of regulation. International comparisons can also be used. These enable you analyze the outcomes in various countries that are comparable but that have different regulatory structures.

1.1.2 Financial Performance

The financial dictionary defines growth as the increase in the value of an investment over a period of time. According to the CBK, commercial banks have been doing well in terms of growth in revenue and assets over the past few years. According to the monthly economic review of November 2015, the balance sheet for the banking sector grew from Ksh 3,168.7 billion to Ksh 3,626.9 billion in the period between November 2014 and November 2015. This is a 14.5 per cent growth.

Financial performance of commercial banks is measured by evaluating its capital adequacy. This is done by ascertaining if the banks have complied to the minimum statutory capital requirement of one billion shillings. It is also evaluated by computing the core capital to total risk weighted assets (RWA) ratio, total capital to total RWA ratio and core capital to total deposit liabilities ratio. Financial performance is also measured by evaluating the liquidity ratio as well as the credit risk. The interest coverage ratio measures a bank's ability to meet its interest on debt obligations as and when they fall due. Investment ratios such as return on equity (ROE), return on capital and return on assets (ROA) are also used to establish the financial performance of a bank, (Understanding Financial Ratios, 2015).

1.1.3 Regulations and Financial Performance

According to the micro prudential and the macro prudential theories there is a correlation between regulations and financial performance in financial institutions. These theories state that regulations must be put in place and enforced even though this may cause a bank to shrink its assets or seek fresh capital from the stock market. The theories aim at achieving economic stability and protecting tax payers' interests. This may have the effect of slowing down the financial performance of commercial banks (Hanson et al., 2011).

The global economic recession of 2008 has taught us that there is a need to regulate financial institutions, (Sherman, 2009). The case of USA brings forward the relationship between financial regulations and financial performance. Before 2007 USA had been deregulating their financial sector which saw tremendous growth of the financial

institutions only that the growth could not be sustained and the whole industry crushed. Since the financial crisis they have introduced regulations to bring about economic stability and as a result the growth of financial institutions including banks has slowed down, KPMG (2014). Forbes Insights carried out a survey in the country between June and July 2013. Based on this, KPMG came up with a report that states that the new regulations have constrained revenue growth and profitability options. Another survey was carried out in Europe and it has been observed that new regulations on banking businesses have decreased profitability, below the 2007 peaks, (Chiarella, Harle, Neukirchen, Poppensieker & Raufuss, 2011). Therefore, surveys have confirmed the theory.

1.1.4 Commercial Banks in Kenya

As per the CBK, there are 43 licensed commercial banks in Kenya and 1 mortgage finance company. The Monthly Economic Review of November 2015 prepared by the CBK shows that the banking sector has grown in its financial performance. Gross loans grew from Ksh 1,948.4 to Ksh 2,260.2 billion between November 2014 and November 2015. This is a 16 percent growth. The deposit base increased from Ksh 2,279.8 billion to Ksh 2,553.8 billion in the same period of time, which is a 12 percent growth. Deposits were the main components of the balance sheet making up 70.4 percent of the total liabilities. Core capital increased from 402.5 billion to 460.3 billion while total capital increased from 473.2 billion to 552.1 billion in November 2015. Profitability grew by 14.4% in pretax profits from Ksh 20.1 billion to Ksh 23.0 billion in the period between February 2014 and February 2015.

The CBK enforces regulations as per the Banking Act (cap 488). The objectives of these regulations according to the CBK are to protect the depositors and reduce the risk of disruption of the banks activities due to a harsh operating environment for the banks that can result in massive bank failures. The regulations also aim at avoiding banks being used for criminal purposes such as money laundering. Regulations also protect banking confidentiality credit allocation. This enables credit to be directed to favored sectors in order to provide the best customer service.

Mwega (2014) states that there are four minimum capital requirements that all banks are expected to meet and they are a core capital to total risk weighted assets ratio of 8 percent, a core capital to total deposit liabilities ratio of 8 percent, a total capital to total risk weighted assets of 12 percent and a minimum core capital of Ksh 1 billion.

As earlier discussed in the introduction, the monthly economic review of November 2015 by the CBK, shows that the balance sheet for the banking sector grew from Ksh 3,168.7 billion to Ksh 3,626.9 billion between November 2014 and November 2015. This is an increase of 14.5 percent. The NPL to assets ratio decreased from 22.6 percent in 2001 to 4.3 percent in 2007. As at December 2013 the ratio averages 5 per cent. This shows that the banks' asset quality has improved through the years. The ROE and ROA have also increased since 2002, Mwega (2014).

1.2 The Research Problem

The research problem is to ascertain the effect of regulations on the financial performance of commercial banks in Kenya. Do regulations influence the growth of commercial banks or not. Implementing financial regulations is a major challenge for many countries especially the EMEs but in the long run they contribute to the strengthening of banking systems (Sinha, Kumar & Dhal 2011). Some aspects of regulation can be oriented towards these countries achieving their development objectives without having to sacrifice prudent regulation and financial sector stability considerations. Sinha et al. (2011) further state that there is a lack of unanimity among economists on how relevant finance is to the growth of an economy. However, the financial crisis of 2008 proved that it is necessary to have a stable financial system as it will have a positive impact on equity and growth. Typically, one would expect regulations to improve efficiency and lower any risk of a financial crisis. Many critics have argued that regulations interfere with the efficiency of the market while those advocating for regulation like Sinha et al (2011), have argued that if regulations are well designed and managed then they can make markets more efficient and equitable in terms of their outcomes. When we analyze the history of the banking sector in Kenya for example, we find that government interference has been present. This study will determine what effect it has had on the financial growth of the commercial banks.

The context of this study is the commercial banks in Kenya. Regulation is costly and may impede the rapid growth of financial institutions. However, in the Kenyan market the CBK assures that there are strict regulations on commercial banks. At the same time, we

have seen their rapid growth. For example, the profits before tax for equity bank for the last five years, as per the banks financial statement for the year ending 31st December 2015, have grown from 12.8 billion in 2011, 17.4 billion in 2012, 19 billion in 2013, 22.36 billion in 2014 to 23.96 billion in 2015. This has been the trend for many banks and NBFIs.

KPMG prepared a report in 2014 based on a survey that had been conducted by Forbes Insights between June and July 2013 in the United States after the financial crisis of 2008 and their observation that financial institutions were finding it very difficult to comply with new regulations that had been imposed. The survey showed that there was a reduction in profits as a result of regulations. Vianney (2013) carried out a study in Rwanda. He observed that there was no relationship between regulations and the financial performance of commercial banks in Rwanda. Chiarella et al. (2011) in a survey conducted by McKinsey and Company observed that new regulation on corporate banking businesses in Europe had resulted in significant reductions in credit costs and profits had decreased remaining well below the 2007 peaks. Brownbridge (1996) conducted a study in Nigeria in which he investigated the effects of deregulation which had started in 1986. He concluded that it increased the financial fragility of even the most well managed banks.

Mwega (2014) carried out a study in the Kenyan financial sector. He states that Kenya does not have very strict regulations. He concluded that regulations in the financial sector have strengthened the banking sector over the last ten years, in terms of customer service,

products offered, profitability and stability. Gudmundsson, Kisinguh & Odongo (2013) conducted a survey to investigate the role capital requirements play on competition and stability of banks. They found that there is a positive relationship between capital regulation and the improved performance of banks and financial stability. Mureithi (2012) carried out a study on the effect of financial regulation on financial performance of Deposit-Taking Microfinance institutions in Kenya. She concluded that regulations on DTMs have led to the improvement in their financial performance. There was an increase in the value of loans outstanding, total assets, profit and shareholders' equity of DTMs. Otieno (2012) carried out a study to evaluate the effect corporate governance has had on the financial performance of commercial banks in Kenya. He found that corporate governance does indeed play a role in the stability and good performance of a bank.

As per the international studies, regulations have resulted in a decline in the financial performance of financial institutions except for Rwanda where there seems not to be any relationship between the two variables. In the local studies, regulations have resulted in an increase in the profitability of financial institutions even though the regulations are not as strict in Kenya as they are in the developed countries like USA. The various studies show that there is a lack of clarity on what the true impact of regulations is and this has led to the research question: What is the effect of regulations on the financial performance of commercial banks in Kenya?

1.3 Research Objective

The objective of this study is to establish the effect of regulations on the financial performance of commercial banks in Kenya.

1.4 Value of the Study

This study will contribute to proving theory right or wrong. The findings will enable us to test the correctness of the micro prudential regulation theory and the macro prudential regulation theory. By establishing the effect regulation has had on the growth of commercial banks it will help policy makers in formulating new policies in that they will be informed about the effect their policies will have on the banking sector and the economy as a whole. They will be able to ascertain which aspects of regulation can be geared towards the accomplishment of development goals without compromising on prudent regulation and the stability of the financial sector, Sinha et al. (2011). They will also know how they can supplement development objectives with other well designed financial sector policies. In practice commercial banks will be well informed on the effect of regulations on their growth. It will inform their individual policy formulation in light of new regulations that will enable them to align the two in order to achieve their financial objectives.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this chapter the findings other researchers have obtained after carrying out their studies are summarized. It covers the theoretical and empirical literature review. This will facilitate in eliminating the possibility of duplication of work already done by other scholars. It will also provide the information that is already in existence on this particular area of study.

2.2 Theoretical Review

The micro prudential and macro prudential theories were originated in 1979 in the unpublished documents of the Cooke committee, Clement (2010) which was the precursor of the Basel Committee on Banking Supervision. It was not until the early 2000s that the theories started being promoted. This was due to a number of financial crises experienced in industrial and emerging market countries Hanson et al. (2011).

2.1.1 Micro Prudential Regulation

According to this theory, Hanson et al. (2011), explain that banks use government insured deposits to finance themselves. This has the advantage of preventing bank runs. The Concise Encyclopedia of Economics defines a bank run as when depositors withdraw their money in large numbers due to the fear that a bank is failing and hence it will be unable to pay back their deposits in full and when they are needed. This however leaves the tax payer exposed and creates a moral hazard problem in that the insured deposits

create an environment that encourages banks' management to take enormous risks because they know that their losses will be covered by the tax payer when they arise. An important element of capital regulation is the principle of Prompt Corrective Action (PCA). This requires banks to take remedial measures immediately in order to restore their capital ratio when losses occur. Capital regulation is therefore carried out by central banks with the aim of protecting the deposit insurance fund and forcing banks to internalize their losses. It is a mitigation against moral hazard. This they do by either seeking fresh capital from the stock market or by shrinking their assets in order to absorb the losses.

According to Hanson et al. (2011) the critique on this theory is that when a regulator forces a bank in distress to restore its capital ratio, it is not concerned with whether the bank raises new capital or if it decides to sell some of its assets. No matter what the bank chooses to do, its probability of failure is reduced significantly. This indifference of the theory makes sense if one or a few banks in a market are in financial trouble because if such a bank decides to shrink its assets for instance by reducing on lending then the other banks can pick up the slack. Therefore, the market share is transferred from a small number of financial institutions which are in distress to stable ones. However, if many of them decided to shrink their assets simultaneously, this will have an adverse effect on the economy. Hanson et al. (2011) explain that if financial institutions decide to cut down on new lending, then firms will find credit to be very expensive and as a result reduce investment and employment. If on the other hand many banks decide to sell the same assets such as buildings, the prices of these assets can drop considerably as was

experienced in the USA after the 2008 financial crisis whereby the price of homes dropped sharply while credit became too expensive for most mortgage holders to pay and many people lost their homes. The end result is the further deepening of credit crunches.

2.2.2 Macro Prudential Regulation

Hanson et al. (2011), explain that this theory is characterized by “an effort to control the social costs associated with excessive balance sheet shrinkage of the part of multiple financial institutions hit with a common shock”. This theory addresses the issue of the financial burden that is placed upon an economy when many banks shrink their assets at the same time and also the reason these banks would not absorb the costs by raising fresh capital rather than reduce their assets or why they don’t ensure that they have a large capital base well in advance to enable them to withstand a shock.

As previously discussed, shrinking assets has two implications. When banks cut down on lending, credit becomes more expensive and as a result there would be a decline in employment and investment. Secondly, if many banks opt to sell the same illiquid assets such as mortgage-backed securities, their prices can drop drastically which would result in a worse credit crunch. This theory aims to counter balance these two tendencies, Hanson et al. (2011). This does not rely on the existence of deposit insurance. It is presumed that macro prudential regulation should apply to both the insured and noninsured deposit takers. Regulators therefore, need to monitor all the activities of financial institutions that can cause damage.

2.3 Determinants of Financial Performance

Ongore & Kusa (2013) classify the determinants of financial performance into micro economic (internal) factors and macroeconomic (external) factors. Micro economic variables are specific to each bank and they influence the bank's profitability. They vary from bank to bank and each bank is able to manipulate its micro economic factors while macro-economic factors are beyond the control of financial institutions

2.3.1 Capital Adequacy

A bank's capital enables it to have liquidity because customer deposits tend to be prone to bank runs. Capital adequacy protects a bank against credit, market and operational risks so that it can absorb any losses that may arise and protects debtors. They go on to explain that the adequacy of capital is judged on the basis of capital adequacy ratio (CAR). CAR is directly proportional to the resilience of the bank to crisis situations. It also has a direct effect on the profitability of banks by determining its expansion to risky but profitable ventures.

2.3.2 Asset Quality

These include credit portfolio, fixed and current assets and other investments. Loans, in most cases, generate the most amount of income for a bank. As a result, losses from non-performing loans pose the biggest risk to any bank. Banks must strive to keep non-performing loans as low as possible. This means that the smaller the ratio of non-performing loans to total loans, the healthier the portfolio of the bank.

2.3.3 Management Efficiency

Ongore & Kusa (2013) explain that management efficiency is often expressed qualitatively through subjective evaluation of the quality of employees, organizational discipline, management and control systems. Financial ratios such as expenses to assets ratio and operating profit to income ratio are used to measure management quality. Management is deemed to be efficient operationally and in terms of income generation when operating profits are higher than revenue.

2.3.4 Liquidity Management

Liquidity is defined as the ability of a bank to meet its obligations mostly of depositors, Ongore & Kusa (2013). There is a positive relationship between a sufficient level of liquidity and a bank's profitability. The level of liquidity of a bank is represented by the total loans to customer deposits ratio and the customer deposits to assets ratio.

2.3.5 Macroeconomic/External Factors

These include the Gross Domestic Product, macroeconomic policy stability, inflation, interest rate and political stability. When a country's GDP declines demand for credit also declines which causes the profitability of financial institutions to fall. When interest rates decline, their profitability drops as well because interest rates on loans decline, the reverse is also true. Inflation may influence interest rates. It can also affect an institution's operating expenses because the cost of supplies and personnel expenses go up during times of high inflation rates which reduces profitability. Political instability impedes the growth of an economy due to a reduction in investors. The uncertainty as far as security

is concerned leads to a slowing down of the economy and this in turn affects the profitability of financial institutions.

2.4 Empirical Literature Review

2.4.1 Global Studies

KPMG carried out a survey in the United States of America in 2013. This survey was carried out by Forbes Insights and it involved 910 executives at US-based multinational corporations, banks and asset management firms. The survey was geared towards outlining the measures that need to be taken to turn the perceived burden of regulations on transformation into opportunities. After the financial crisis of 2008 financial institutions have found it to be very expensive to comply with tighter regulations. The new regulations have hampered the growth of revenue and profitability. This survey shows that regulations reduce the financial performance of financial institutions.

Vianney (2013) conducted a study in Rwanda that was intended to ascertain the relationship between regulation and the financial performance of commercial banks in Rwanda. He adopted a descriptive research design which enabled him to examine the above stated relationship. His sample size was 10 commercial banks. His findings were that regulation is not a significant predictor of financial performance of commercial banks in Rwanda. He states that regulation is a key pillar of financial institutions operation and by extension to financial prosperity and stability. He recommended that the government of Rwanda should develop policy that will help banks to operate in a conducive environment and this can create financial stability of financial institutions in the country.

According to this study, regulations have no impact on the financial performance of financial institutions.

Barth, Caprio & Levine (2002) carried out a survey between 1998 and 2000 that was funded by the World Bank. The purpose of the survey was to investigate the relationship between bank regulations and supervisory practices and bank performance and stability. The survey was intended to collect information on bank regulations and practices in supervision for more than 107 countries. They used regression analysis in the survey. They concluded that there is a negative association between restricting the activities of a bank and its performance and stability as compared to when banks could freely diversify into other financial activities.

Brownbridge (1996) conducted a study on the impact of public policy on the banking system in Nigeria. His main focus was on commercial and merchant banks. Since 1986 Nigeria started the partial deregulation of its financial system which had significant effects on banking markets. The aim of this liberalization was to increase competition among banks as well as foster the efficient allocation of resources. This saw the easing of entry restrictions and some allocative controls were removed. This led to a rapid expansion in banks. Most of the federal government banks were privatized. Deregulation of controls was partial and inconsistent and as a result its impact was limited on the efficiency of resource allocation in banking markets. He concluded that the liberalization of entry requirements and interests increased the risk of financial instability in the late 1980s and early 1990s for all banks including those that were well managed. This was

due to the intense competition for deposits and forced nominal deposits and lending rates to go up. Therefore, deregulation although it was partial, had adverse effects on the banking industry and the economy at large.

2.4.2 Local Studies

Mwega (2014) carried out a case study in the Kenyan financial sector to investigate the potential tradeoff between regulation and stability of Kenya's financial sector. The study focused on the banking sector. The study adopted an empirical approach, entailing quantitative work and focused policy analysis. He states that finance aims at propagating economic activity and the main aim of regulations is maintaining financial stability and enhancing economic growth. There is need to be balanced because when great focus is placed on stability of the financial sector it can hamper growth while on the other hand if emphasis is placed on growth it might bring about a financial crisis in the future. He concluded that reforms in the financial sector over the last ten years have strengthened the banking industry. Better products are being offered to customers and there has been a great improvement in the quality of service. There has also been an increase in profitability and stability. Therefore, according to this study, regulations have led to an increase in profitability. He however states that Kenya has a lightly regulated financial system.

Gudmundsson, Kisinguh & Odongo (2013) conducted a survey on the role of capital requirements on bank competition and stability. It was carried out over the period 2000 to 2011. They used the Lerner index as well as the Panzar and Rosse H-statistic to

measure the level of competition in Kenya's banking industry. They also used ROE to measure bank performance and stability. They found that an increase in core capital reduces competition up to a certain point after which competition starts to increase. This implies that its benefits start to be realized the moment consolidation in the banking sectors starts to take place. They concluded that there is a positive relationship supporting the evidence that capital regulation does improve the performance of banks and financial stability.

Mureithi (2012) carried out a study on the effect of financial regulation on financial performance of Deposit-Taking Microfinance institutions (DTMs) in Kenya. The research design used was descriptive survey method and cross sectional method. The target population was 6 DTMs in Kenya. She concluded that the supportive Deposit Taking Microfinance Regulations of 2008 led to the improvement in financial performance of DTMs. The regulations lead to increase in the value of loans outstanding, total assets, profit and shareholders' equity of DTMs. Hence regulations do have a positive impact on the profitability of commercial banks.

Otieno (2012) carried out a study on the effect corporate governance has on the financial performance of commercial banks in Kenya. His target population was the 44 commercial banks that were operational at the time. He used a cross sectional and analytical research design in his study. He used SPSS and Spearman correlation coefficient and multiple regression analysis to determine the magnitude of the relationship and prediction of financial performance respectively. He found that there is a positive relationship between

corporate governance and the stability and good performance of a bank. Corporate governance accounts for 22.4 per cent of the financial performance of commercial banks in Kenya.

2.5 Conceptual Framework

Literature review for this study has been done by using mostly online resources. It has covered studies and surveys that have been done in various parts of the world to show how regulations have affected the financial performance of commercial banks. The effects have been varied. Good in some places like Norway and bad in places like the United States of America and in other places like Rwanda there is no relationship between regulations and the financial performance of the commercial banks.

Finance ratios will be used to evaluate financial performance. Secondary data will be obtained from the CBK as well as the websites of the banks. The ratios will show financial performance three years before the revised prudential guidelines for banks came into effect on 1st of January 2013 as well as three years after. Therefore, the period of study is the six years between 2010 and 2015. This study will be able to ascertain the impact new regulation has had on the financial performance of the banks.

2.6 Summary of Literature Review

The micro prudential regulation theory states that financial institutions are funded by government insured fund which presents a moral hazard problem for managers. The security provided by the government entices them to engage in risky investments. Micro

prudential regulation ensures that the financial institutions are able to raise funds by either shrinking their assets or seeking fresh capital from the stock market to cater for the losses. The critique of this theory is that if a large number of financial institutions are in the same situation and they decide to shrink their assets at the same time, then this would have a negative impact on the economy. The macro prudential regulation theory does not rely on the existence of insured deposit. Regulators therefore, need to pay attention to all operations and activities through which financial institutions can cause damage, insured or not.

Surveys have been carried out in various countries. In the developed countries in Europe and USA regulations have adversely affected the financial performance of financial institutions. In Nigeria, the process of deregulation that started in 1986 led to an increase in the risk of financial fragility for even the well managed banks. In Rwanda there seems to be no relationship between the two variables while in Kenya regulations seem to be contributing positively to the financial performance of financial institutions according the case studies discussed above, although the regulations may not be very strict in Kenya.

There is no literature that shows a concise relationship between regulations and growth in financial institutions. It is not clear whether regulations bring about growth in the financial sector or not. For instance, the American example shows a negative correlation between regulations and growth of financial institutions while in Kenya there seems to be a positive correlation between the two variables. This project seeks to clarify what the relationship is between financial regulations and the growth of financial institutions.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methods that will be adopted by the study to obtain information on the effect of regulations on the financial performance of commercial banks in Kenya. It describes the research instruments that will be used in the study. It is therefore structured as follows: research design, population of the study, sample and sampling design, data collection techniques and data analysis techniques.

3.2 Research Design

This study will analyze the impact regulations have on the financial performance of commercial banks in Kenya. This study will therefore have a descriptive design. It will be analyzing the major bank regulations that have been introduced in Kenya in the recent years. It will explain what regulations these are and what effect they have had on the financial performance of the 43 commercial banks in Kenya. It will also explain why these regulations have the effect they do on the banks.

3.3 Population of the Study

The population of interest is the 43 registered commercial banks in Kenya. The study will use secondary data.

3.4 Sample and Sampling Design

This study will not use sampling since there are only 43 commercial banks that are registered by the Central Bank of Kenya. This number is small enough to analyze. The

study will analyze their financial performance three years before the new regulations were introduced and three years after so as to be able to compare the effect the regulations have had on the banks.

3.5 Data Collection Techniques

This study will use secondary data. Data will be collected from the Central Bank of Kenya, the financial statements of the commercial banks and from other sources where the banks' books of accounts have been recorded.

3.6 Data Analysis Techniques

CBK reviewed prudential guidelines for banks stipulated in the Banking Act of 2006. The new guidelines took effect on 1st of January 2013. This study will evaluate financial performance three years before and three years after the new regulations came into effect. Capital adequacy was reviewed under section 33 (4) of the Banking Act which gives authority to the CBK to issue guidelines to be adhered to by institutions for the purpose of maintaining an efficient and stable banking and financial system. The purpose of the guideline is to ensure that institutions maintain a level of capital that is adequate to protect its depositors and creditors. The minimum core capital under the 2006 guideline was 250 million shillings while under the 2013 guideline it is 1 billion shillings.

The 2006 guideline provided that institutions shall at all times maintain a core capital to total risk weighted assets of not less than 8 per cent. It also stated that the core capital to total deposit liabilities ratio shall not be less than 8 per cent. It also stated that the total

capital to total risk weighted assets shall not be less than 12 per cent. The 2013 guidelines state that institutions shall at all times maintain a minimum ratio of 8 per cent for core capital to total risk weighted assets ratio and core capital to total deposit liabilities ratio, and 12 per cent for the total capital to total risk weighted assets ratio. In addition to this, institutions are required to hold a capital conservation buffer of 2.5 per cent over and above the minimum ratios. This buffer should consist of high quality capital which should mainly be made up of, premium reserves, retained earnings and common equity, (CBK, 2013).

These ratios shall be computed as follows:

Core capital to total deposit liabilities = Core capital/total deposit liabilities x 100

Core capital to RWA = (Core capital/total risk weighted assets x 100) + 2.5%

Total capital to RWA = (Total capital/total risk weighted assets x 100) + 2.5%

The minimum core capital for each bank will be evaluated in addition to the above ratios.

The mean for each year will then be established and a test of difference will be carried out. Mean will be calculated as follows:

$$\bar{x} = \frac{\sum X}{N}$$

N

The following investment ratios will also be used and they will be computed as follows:

Return on Equity = Net Income/ Shareholders Equity

Return on Assets = Net Income/Average Total Assets

Return on Capital ratio = Earnings Before Interest and Tax/ Capital Employed

Credit risk will be calculated as follows:

$$\text{Credit Risk} = \text{Total Loans} / \text{Total Assets}$$

Liquidity ratio will be computed as follows:

$$\text{Liquidity ratio} = \text{Total Assets} / \text{Total Deposit}$$

Interest coverage ratio (ICR) shall be computed as follows:

$$\text{ICR} = \text{EBIT} / \text{Interest Expense}$$

The mean will be established for each year and a test of difference will be carried out to determine if the changes in profitability are significant. The Chi-square test of independence will be used to test if there is a relationship between regulations and financial performance. The test will be carried out at a 5 per cent level of significance.

Chi-square will be calculated as follows:

$$x^2 = \sum \left[\frac{(f_o - f_e)^2}{f_e} \right]$$

Where: x^2 = Chi-square

f_o = Observed frequency

f_e = Expected frequency

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the analysis and results of the study. The analysis is based on data collected from the Central Bank of Kenya on the forty-three existing commercial banks in Kenya as well as the banks' financial statements.

4.2 Response Rate

The Central bank of Kenya provided all the secondary data that was needed to carry out this research. Therefore 100 per cent of all the information required was provided.

4.3 Data Validity

Secondary data was obtained from the Central Bank of Kenya. This data was derived from the financial statements the banks have presented to the CBK from 2010 to 2015. This data can therefore be deemed to be accurate and reliable for analysis in this project.

4.4 Descriptive Statistics

After critically analyzing the data on the financial performance of the 43 commercial banks in Kenya, the following graphs represent the trend for the various ratios that were carried out.

The below graph shows the core capital to RWA ratio and it has been above the statutory minimum of 10 per cent including the capital conservation buffer of 2.5 per cent. However, this ratio declined between 2012 and 2015.

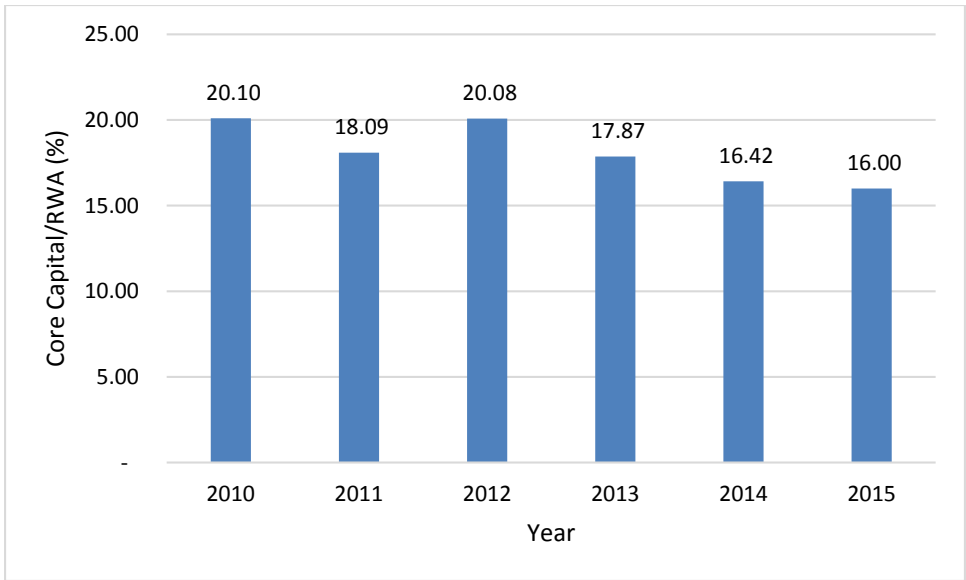


Fig. 1

The below graph shows the core capital to total deposit liabilities ratio and it has been above the statutory 8 percent. Apart from a decline in 2011, it had been increasing but then in 2015 there was a slight decline.

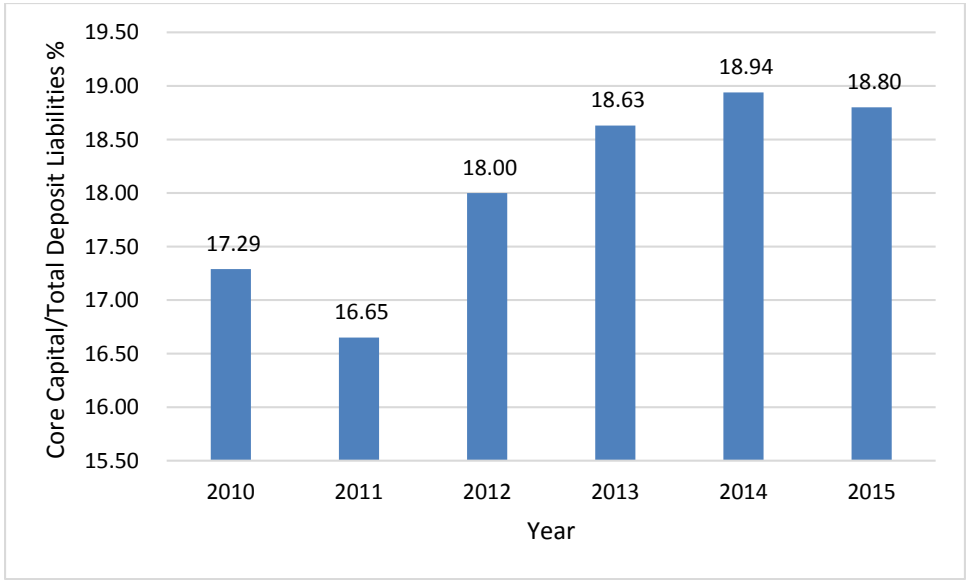


Fig. 2

The graph below shows the total capital to RWA ratio and it has also been above the statutory minimum of 14.5 percent including the capital conservation buffer of 2.5 per cent.

Just like the ratio discussed above, there was a decline between 2012 and 2015.

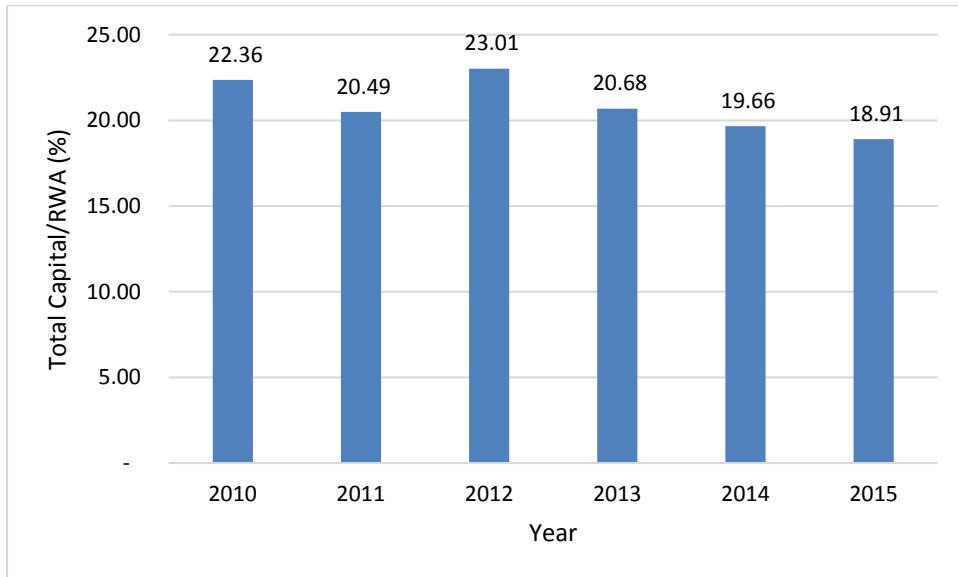


Fig.3

Below is a graph representing return on assets ratio. There has been a steady decline in ROA between 2012 and 2015.

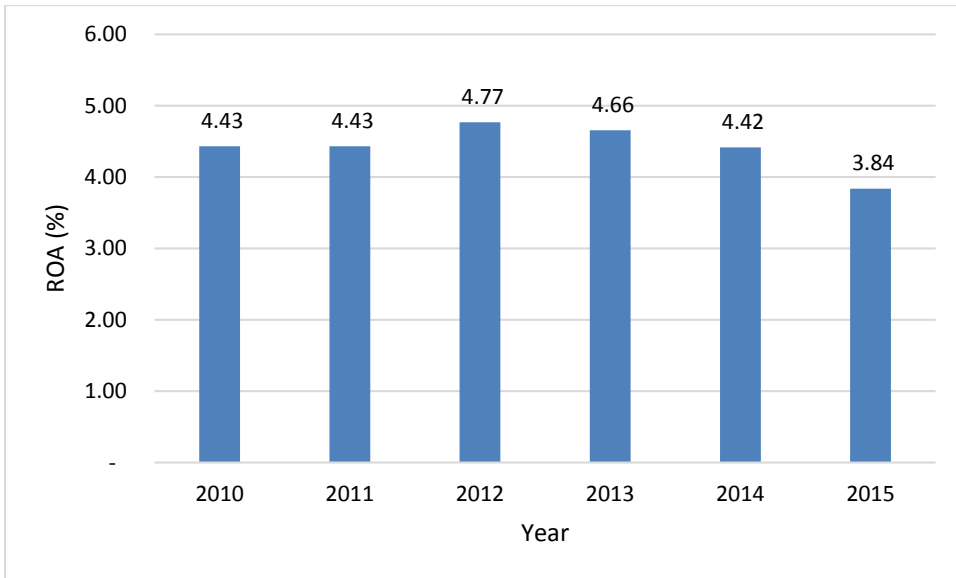


Fig. 4

The graph below represents the return on equity ratio. At a glance, there has been a decline on this ratio from 2011 to 2015.

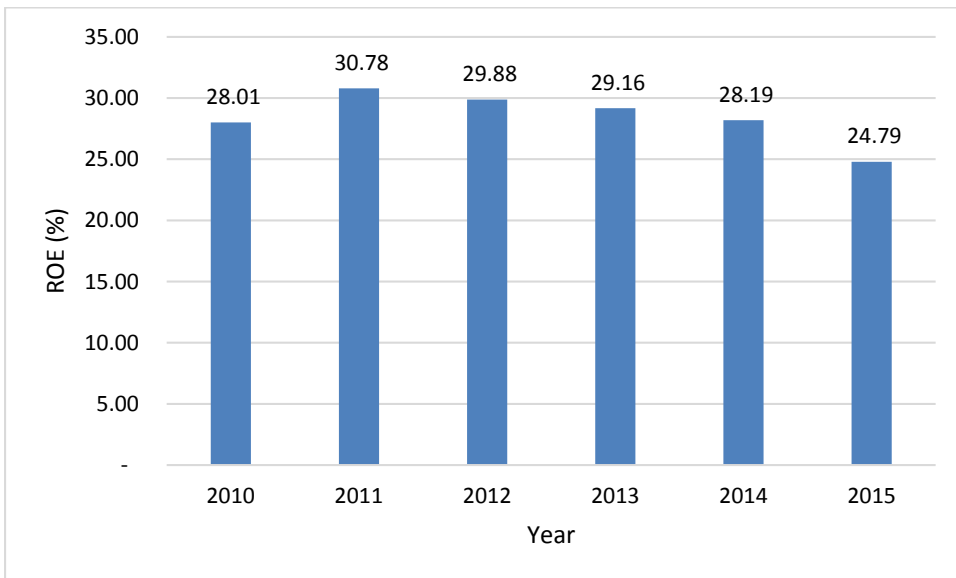


Fig. 5

Return on capital ratio is represented by the graph below. Between 2010 and 2012 there was a significant growth year after year. Then there was drastic decline in 2013 and then minimal growth till 2015.

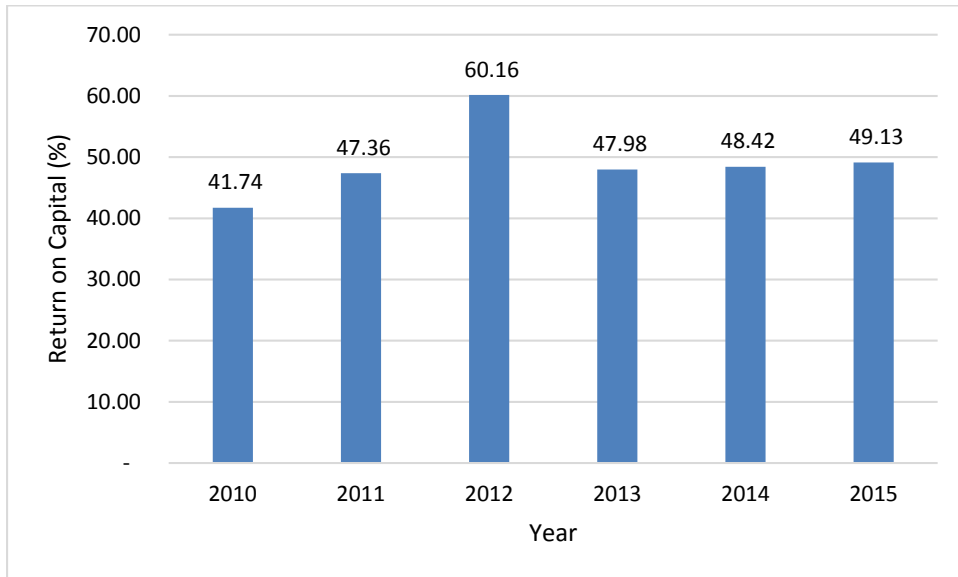


Fig. 6

Credit risk ratio measures if a bank has enough assets to cover the loans held by customers. There was a decline from 56.66 per cent in 2011 to 55.30 per cent in 2012. However, there was a steady increase between 2012 and 2015.

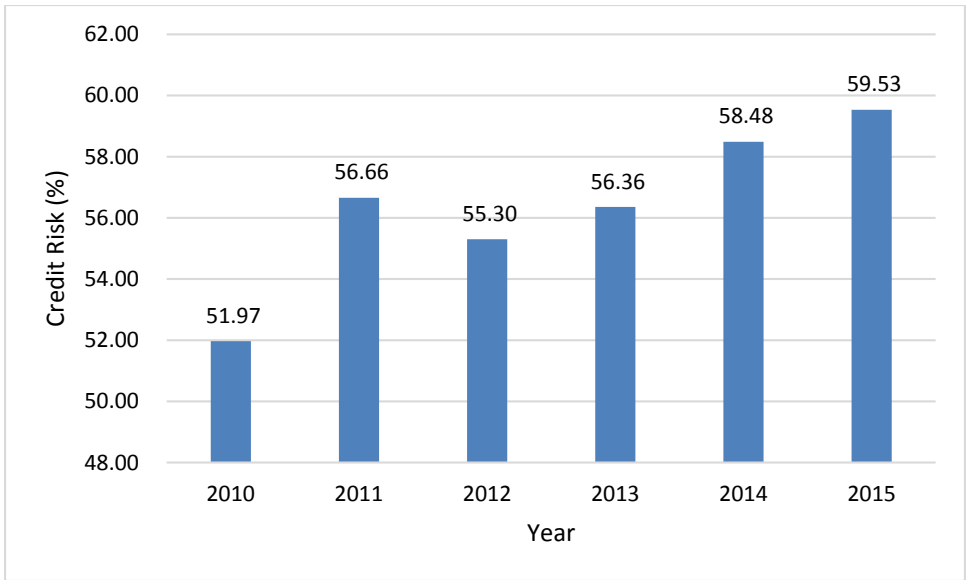


Fig.7

The graph below shows the steady decline in the interest coverage ratio between 2010 and 2012 and 2013 and 2015. This ratio determines how easily a bank can pay interest on outstanding debt. There was a growth of 53.66 per cent between 2012 and 2013.

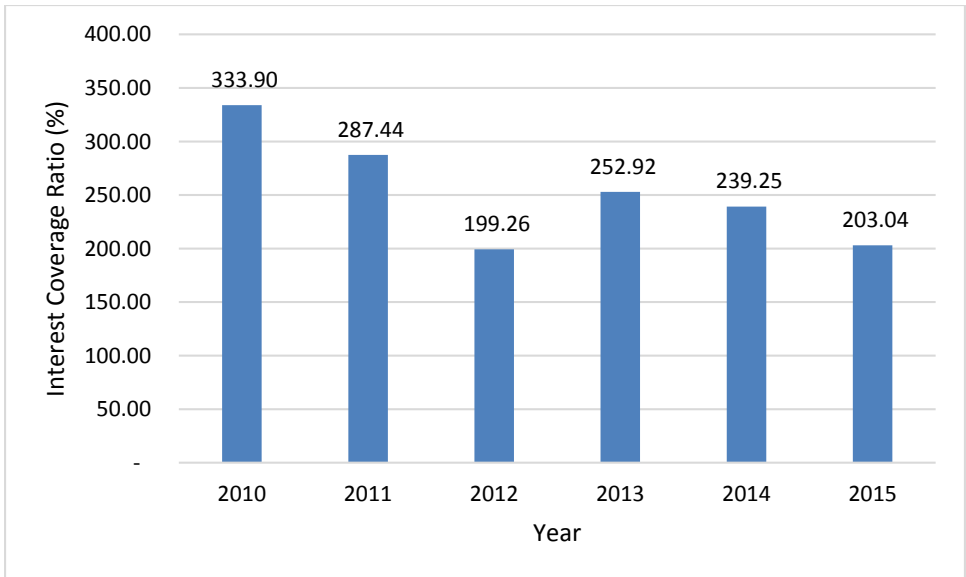


Fig. 8

The liquidity ratio as demonstrated in the below graph had been increasing steadily between 2010 and 2012, then there was a sharp increase in 2013 followed by a sharp decline in 2014.

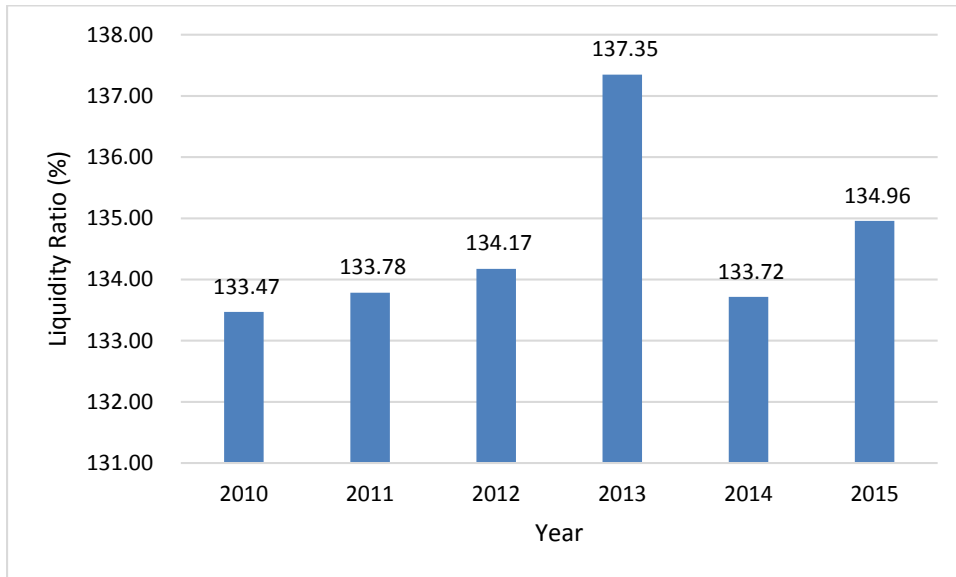


Fig. 9

The below graph is an analysis of capital adequacy. The Y axis represents the amount of core capital over and above the statutory minimum of one billion shillings. This figure has been increasing steadily over the years. For the years 2010, 2013 and 2014, only one bank in each of the years did not comply with the statutory minimum.

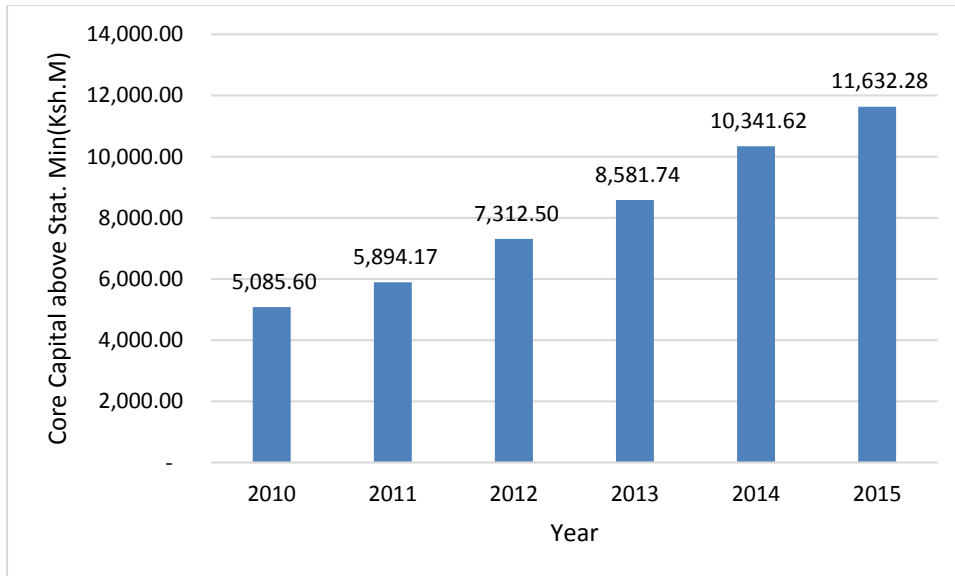


Fig. 10

4.5 Correlation Analysis

Chi-square has been calculated as follows:

$$x^2 = \sum \left[\frac{(f_o - f_e)^2}{f_e} \right]$$

Where: x^2 = Chi-square

f_o = Observed frequency

f_e = Expected frequency

MS excel was used to conduct this test and p values were obtained. The null hypothesis is that there is no relationship between regulations and the financial performance of commercial banks in Kenya while the alternate hypothesis is that there is a relationship.

4.6 Chi Square Test and Hypothesis Testing

A chi square test was carried out for all the ratios and the tables below represent the data analyzed and the P values obtained.

Table 1. Core capital to RWA ratio

Year	Observed Values	Expected values
2010	20.10	18.09
2011	18.09	18.09
2012	20.08	18.09
2013	17.87	18.09
2014	16.42	18.09
2015	16.00	18.09
Total	108.56	
Expected Value	18.09	
P value formulae	{=CHISQ.TEST(B2:B7,C2:C7)}	
P value =	0.974401998	

Source: Secondary data 2016

Table 2: Core capital to total deposit liabilities ratio

Year	Observed Values	Expected Values
2010	17.29	18.05
2011	16.65	18.05
2012	18.00	18.05
2013	18.63	18.05
2014	18.94	18.05
2015	18.80	18.05
TOTAL	108.31	
Expected Value	18.05	
P value formulae	{=CHISQ.TEST(B2:B7,C2:C7)}	
P value	0.998698132	

Source: Secondary data 2016

Table 3: Total capital to RWA ratio

Year	Observed Values	Expected Values
2010	22.36	20.85
2011	20.49	20.85
2012	23.01	20.85
2013	20.68	20.85
2014	19.66	20.85
2015	18.91	20.85
Total	125.12	
Expected Values	20.85	
P Value formulae	{=CHISQ.TEST(B2:B7,C2:C7)}	
P value	0.988424549	

Source: Secondary data 2016

Table 4: Return on assets ratio

Year	Observed Values	Expected Values
2010	4.43	4.42
2011	4.43	4.42
2012	4.77	4.42
2013	4.66	4.42
2014	4.42	4.42
2015	3.84	4.42
Total	26.54	
Expected Values	4.42	
P value formulae	{=CHISQ.TEST(B2:B7,C2:C7)}	
P value=	0.999761618	

Source: Secondary data 2016

Table 5: Return on equity ratio

Year	Observed Values	Expected Values
2010	28.01	28.47
2011	30.78	28.47
2012	29.88	28.47
2013	29.16	28.47
2014	28.19	28.47
2015	24.79	28.47
Total	170.81	
Expected Value	28.47	
P Value formulae	{=CHISQ.TEST(B2:B7,C2:C7)}	
P value=	0.979512277	

Source: Secondary data 2016

Table 6: Return on capital ratio

Year	Observed Values	Expected Values
2010	41.74	49.13
2011	47.36	49.13
2012	60.16	49.13
2013	47.98	49.13
2014	48.42	49.13
2015	49.13	49.13
Total	294.79	
Expected Values	49.13	
P Value formulae	{=CHISQ.TEST(B2:B7,C2:C7)}	
P Value =	0.595009219	

Source: Secondary data 2016

Table 7: Credit risk ratio

Year	Observed Values	Expected Values
2010	51.97	56.38
2011	56.66	56.38
2012	55.30	56.38
2013	56.36	56.38
2014	58.48	56.38
2015	59.53	56.38
Total	338.30	
Expected Values	56.38	
P Value formulae	{=CHISQ.TEST(B2:B7,C2:C7)}	
P Value =	0.986965687	

Source: Secondary data 2016

Table 8: Liquidity ratio

Year	Observed Values	Expected Values
2010	133.47	134.57
2011	133.78	134.57
2012	134.17	134.57
2013	137.35	134.57
2014	133.72	134.57
2015	134.96	134.57
Total	807.45	
Expected Values	134.57	
P Value formulae	{=CHISQ.TEST(B2:B7,C2:C7)}	
P Value =	0.999910371	

Source: Secondary data 2016

Table 9: Interest coverage ratio

Year	Observed Values	Expected Values
2010	333.90	252.64
2011	287.44	252.64
2012	199.26	252.64
2013	252.92	252.64
2014	239.25	252.64
2015	203.04	252.64
Total	1,515.81	
Expected Values	252.64	
P Value formulae	{=CHISQ.TEST(B2:B7,C2:C7)}	
P Value =	0.00	

Source: Secondary data 2016

Table 10: Capital adequacy

The table below shows the annual average capital amounts above the statutory minimum of 250 million shillings between 2010 and 2012 and 1 billion shillings between 2013 and 2015.

Year	Core Capital Above Statutory Minimum (Ksh. M)	Rate of Increase in Capital %
2010	5,085.60	
2011	5,894.17	15.90
2012	7,312.50	24.06
2013	8,581.74	17.36
2014	10,341.62	20.51
2015	11,632.28	12.48

Source secondary data 2016

4.7 Discussion of Research Findings

The P values obtained are as follows: Core capital to total risk weighted assets ratio yielded a value of 0.9744, core capital to total deposit liabilities ratio yielded a value of 0.9987

while total capital to total risk weighted assets ratio yielded a value of 0.9884. The P value for return on assets ratio was 0.9998 while for return on equity ratio it was 0.9795. Return on capital ratio had a P value of 0.595 while credit risk ratio had 0.987. Liquidity risk ratio yielded a P value of 0.9999 and interest coverage ratio a value of 0.00.

The above P values for all the ratios except the interest coverage ratio leads us to accept the null hypothesis that there is no relationship between regulations and the financial performance of commercial banks in Kenya. The interest coverage ratio yielded a P value of zero which is assumed to be a rounding off by MS excel. This being a zero value has not yielded a result that can be used to either accept or reject the null hypothesis.

In the analysis of capital adequacy, 100 per cent of the banks in 2011, 2012 and 2015 fully complied with the minimum capital requirement. In 2010, 2013 and 2014, 97.62 per cent complied. The amount of capital in the banks has been increasing steadily over the last six years as shown in table 10. At a glance there seems to be no relationship between bank regulations and the growth of capital otherwise we would have seen a major increase from 2012 to 2013 when the minimum requirement was increased from 250 million to 1 billion shillings. The high levels of capital in the commercial banks are indicative of a stable banking sector.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the findings of this study and draws a conclusion based on those findings. It also provides recommendations as well as explains the limitations of this study. It also offers suggestions for further study.

5.2 Summary of Findings

The purpose of this study was to establish the relationship between regulations and the financial performance of commercial banks in Kenya. Finance ratios were carried out to measure the financial performance between 2010 and 2015. A chi square test of independence was carried out to determine the relationship between the two variables. Eight out of the nine ratios analyzed yield P values that cause us to accept the null hypothesis that there is no relationship between regulations and financial performance of commercial banks in Kenya. After evaluating capital adequacy, the same conclusion was arrived at since the levels of capital in the banking sectors has been increasing steadily over the 6 years that were being studied.

5.3 Conclusion

This study is important because it enables stakeholders know the effect regulations have on the financial performance of the banks which is important for decision making by the banks themselves, shareholders and the government. Understanding the relationship between the variables also helps the government in policy formulation as they will be able

to anticipate the effect new policy will have on banks. This study also shows that every market is different. In most western countries regulations have adversely affected the financial performance of banks. They have found it very difficult to comply with regulations and maintain high levels of profitability.

5.4 Recommendations

It is recommended that banks comply fully to the stipulated regulations and the Central Bank must ensure that all banks comply. This will have the effect of ensuring a stable banking sector which plays a big role in the economy. If this sector is stable the economy will thrive and financial crisis will be avoided in the country. Implementing strict regulations will also enable the regulator to discover banks that are struggling and provide remedial measures before they collapse and depositors lose their money.

5.5 Limitations of the Study

This study has had some limitations. The first is the fact that it was not possible for me to carry out a chi square test on capital adequacy. It yielded a P value of zero. Therefore, the conclusions drawn from it are based on my personal judgement and analyzing the pattern on the graph generated. Secondly the P value of zero obtained in capital adequacy and interest coverage ratio has not been useful in drawing a conclusion in this study. The P value has the limitation of not being able to tell the strength or size of an effect in a relationship between variables.

5.6 Suggestions for Further Research

The period of time used which is 2010 to 2015 in my opinion is not sufficient for such a study and I would recommend for a similar study to be conducted in future that covers more years. This might yield more objective results. I also recommend a study to be carried out that factors in macro-economic factors that can give information on the impact those factors have on the financial performance of commercial banks in Kenya. This would yield more objective results on the true impact of regulations on financial performance of banks.

REFERENCES

- Oxera (2006). *A Framework for Assessing the Benefits Financial Regulation*. A report for Financial Services Authority UK, 6-30.
- Agborndakaw, A. E. (2010). *Financial Regulations, Risk Management and Value Creation in Financial Institutions: Evidence from Europe and USA*. An Unpublished Research Project for Master of Science in Finance Mathematics Minor: Banking and Finance, University of Sussex.
- Barth, J. R., Caprio, G., & Levine, R. (2002). *Bank Regulation and Supervision: What Works Best?* National Bureau of Economic Research Working Paper No. 9323, 1-10.
- Brownbridge, M. (1996). *The Impact of Public Policy on the Banking System in Nigeria*. Institute of Development Studies article, 103-111.
- Central Bank of Kenya (2010). *Bank Supervision Annual Report 2010*, 38-45.
- Central Bank of Kenya (2011). *Bank Supervision Annual Report 2011*, 53-62.
- Central Bank of Kenya (2012). *Bank Supervision Annual Report 2012*, 65-74.
- Central Bank of Kenya (2013). *Bank Supervision Annual Report 2013*, 68-78.
- Central Bank of Kenya (2014). *Bank Supervision Annual Report 2014*, 57-67.
- Central Bank of Kenya (2015). *Bank Supervision Annual Report 2015*, 50-60
- Central Bank of Kenya (2015). *Monthly Economic Review*. November 2015 Report, 23-26.
- Central Bank of Kenya (1999). *Prudential Guidelines for Institutions Licensed Under the Banking Act*. 48-61.

- Central Bank of Kenya (2013). *Prudential Guidelines for Institutions Licensed Under the Banking Act. 70-92*
- Chiarella, D., Harle, P., Poppensieker, T., & Raufuss, A. (2011). *Global Corporate & Investment Banking: An Agenda for Change*. McKinsey & Company Article 1, 1-9.
- Drake, P.P. (n.d.). *Financial Ratio Analysis*. Online Article, 1-7.
- Equity Group Holdings Ltd. (2015). *Audited Financial Statements and Other Disclosures as at 31/12/2015*. Report, 1
- Financial Dictionary (2016). Online Financial Dictionary.
- Gudmundsson, R., Kisinguh, K. N. & Odongo, M. T. (2013). *The Role of Capital Requirements on Bank Competition & Stability: The Case of the Kenyan Banking Industry*. Kenya Bankers Association Centre for Research on Financial Markets and Policy Working Paper Series No.5, 1-8. Nairobi, Kenya Bankers Association.
- Hanson, S., Kashyap A. K. & Stein J. C. (2010). *A Macroprudential Approach to Financial Regulation*. Paper prepared for the Journal of Economic Perspectives, 1-6.
- Hanson, S.G., Kashyap, A. K. & Stein, J. C. (2011). *A Macroprudential Approach to Financial Regulation*. Journal of Economic Perspectives, 25, 3–28.
- Huang, Y. (2010). *Determinants of Financial Development*. University of Cambridge Research Paper, 1-7.
- Kaufman, G. G. (n.d.). *The Concise Encyclopedia of Economics. Bank Runs*. Article, 1.

- Kothari, C. R. (1984). *Quantitative Techniques* (3rd ed.). New Delhi: Vikas Publishing House PVT Ltd.
- KPMG (2013). *From Burden to Competitive Advantage. Regulatory Change and Transformation in Financial Services*. KPMG Transformation Survey, 3-5.
- Kumbhakar, S. C., Lozano-Vivas, A., KnoxLovell, C.A. & Iftikhar, H. (1999). *The Effects of Deregulation on the Performance of Financial Institutions. The Case of Spanish Savings Banks*. *Journal of Money Credit and Banking*, 33 (1), 3-5.
- Money-Zine.com (2015). *Understanding Financial Ratios*. (n.d.) Online Article.
- Mureithi, C. W. (2012) *Effect of Financial Regulation on Financial Performance of Deposit-Taking Microfinance Institutions in Kenya*. Unpublished MBA Research Project, University of Nairobi, School of Business.
- Mwega, F. M. (2014) *Financial Regulation in Kenya: Balancing Inclusive Growth with Financial Stability*. Working paper 407, 27-36.
- Ongore, V. O. & Kusa, G. B. (2013) *Determinants of Financial Performance of Commercial Banks in Kenya*. *International Journal of Economics and Financial Issues*, 3(1), 237-252.
- Otieno, F. M. (2012) *The Effect of Corporate Governance on Financial Performance of Commercial Banks in Kenya*. Unpublished MBA Research Project, University of Nairobi, School of Business.
- Piet C. (2010) *The Term 'Macroprudential': Origins and Evolution*. *Bank for International Settlements (BIS)*. BIS Quarterly Review Article March 2010, 59-62.

Sherman, M. (2009) *A Short History of Financial Deregulation in the United States*.

Centre for Economic and Policy Article, 3-5.

Sinha, A., Kumar, R. & Dhal, S. C. (2011) *Financial Sectors Regulation and Implications for Growth*. BIS Papers No. 62, 45-62.

Vianney, K. J. M. (2013). *The Relationship between Regulation and Financial Performance of Rwanda Commercial Banks*. Unpublished MBA Research Project, University of Nairobi, School of Business.

APPENDIX 1: LIST OF COMMERCIAL BANKS

1. African Banking Corporation Limited
2. Bank of Africa Kenya Limited
3. Bank of Baroda (K) Limited
4. Bank of India
5. Barclays Bank of Kenya Limited
6. CFC Stanbic Bank Limited
7. Charterhouse Bank Limited
8. Chase Bank (K) Limited
9. Citibank N.A Kenya
10. Commercial Bank of Africa Limited
11. Consolidated Bank of Kenya Limited
12. Co-operative Bank of Kenya Limited
13. Credit Bank Limited
14. Development Bank of Kenya Limited
15. Diamond Trust Bank Kenya Limited
16. Ecobank Kenya Limited
17. Equatorial Commercial Bank Limited
18. Equity Bank Kenya Limited
19. Family Bank Limited
20. Fidelity Commercial Bank Limited
21. First Community Bank Limited

22. Guaranty Trust Bank Ltd
23. Giro Commercial Bank Limited
24. Guardian Bank Limited
25. Gulf African Bank Limited
26. Habib Bank A.G Zurich
27. Habib Bank Limited
28. Imperial Bank Limited
29. I & M Bank Limited
30. Jamii Bora Bank Limited
31. Kenya Commercial Bank Ltd
32. Sidian Bank Ltd
33. Middle East Bank (K) Limited
34. National Bank of Kenya Limited
35. NIC Bank Limited
36. Oriental Commercial Bank Limited
37. Paramount Universal Bank Limited
38. Prime Bank Limited
39. Standard Chartered Bank Kenya Limited
40. Trans-National Bank Limited
41. UBA Kenya Bank Limited
42. Victoria Commercial Bank Limited
43. Housing Finance Company of Kenya Ltd

Source: Central Bank of Kenya (2016)