EFFECT OF INTEREST RATE CAPPING ANNOUNCEMENT ON STOCK RETURNS OF COMMERCIAL BANKS LISTED AT THE NAIROBI SECURITIES EXCHANGE

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

DECEMBER, 2018

DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

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D61/6170/2017

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

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ACKNOWLEDGEMENT

I would like to acknowledge my family for their support and encouragement during sleepless nights as I worked hard to make my project a success. I also acknowledge my lecturers at the University of Nairobi who enriched me with a lot of knowledge throughout the academic period. In a special way I would like to acknowledge my able supervisor Dr. Winnie Nyamute for her dedication, guidance and tireless support throughout the project.

DEDICATION

I dedicate this work to the Almighty God and to my entire family for their support and encouragement throughout my studies.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF ABBREVIATIONS

AR	Abnormal Returns
CAPM	Capital Asset Pricing Model
CAR	Cumulative Abnormal Returns
CBK	Central Bank of Kenya
CBR	Central Bank Rate
CMA	Capital Market Authority
KCB	Kenya Commercial Bank
NSE	Nairobi Securities Exchange
SCAR	Standardized Cumulative Abnormal Returns

ABSTRACT

In Kenya, the bill to cap interest rates was announced on 28th July 2016 and assented into law on the 24th August 2016. This move in regulating interest rates saw the introduction of interest rate capping on lending rates at 4.0% above the Central Bank Rate (CBR) and a floor on the deposit rates at 70% of the CBR. There have been arguments that interest rate capping restrictions could result in alternative lending by the financial institutions such as lending to government and or absolute withdrawal from specific locales such as rural areas or expensive market segments or rural areas when the capping becomes unprofitable. The study sought to find out the consequence of the interest rate capping announcement on stock returns of commercial banks quoted at the Nairobi Securities Exchange. The secondary data used for analysis in this study was gathered from the Nairobi Securities Exchange in regard to the 11 commercial banks listed. The study was an event analysis of the announcement of the Interest Rate Capping law on 28th July 2016. The study analyzed the reaction of stock returns of 11 listed commercial banks 30 days before the announcement of the law and 30 days after the announcement of the law. Analysis of the data was done with the aid of Microsoft's Excel (2010). T-test was carried out to establish the significance of the interest rate capping announcement on stock returns. The study found out that only 18.18% reacted negatively to the interest rate capping announcement. All the other (81.82%) banks reacted positively. The study further established that seven commercial banks (63.64%) recorded negative abnormal returns while four commercial banks (36.36%) recorded positive abnormal returns in reaction to the announcement of the interest rate capping law. However, none of the abnormal returns were found to be statistically significant. Further, none of the abnormal returns recorded were greater than 1 or less than -1 implying that none of the investors benefited or lost abnormally as a result of the interest rate capping announcement. The study found out that there was a steady decrease in Cumulative Average Abnormal Returns of the commercial banks listed at the Nairobi Securities Exchange. This implies that the announcement of the interest rate capping legislation had a cumulative negative effect on the stock returns for commercial banks listed at the Nairobi Securities Exchange. This implies that although some banks did not react negatively to the interest rate capping announcement, the cumulative effect of the event had an adverse effect on the stock returns in the long run. The study found out that the interest rate capping announcement had a cumulative negative effect on the stock returns for commercial banks listed at the Nairobi Securities Exchange. The study therefore recommends that Central Bank of Kenya should reconsider and appeal the interest rate capping law as this is detrimental to the performance of commercial banks. The Central bank of Kenya should liaise with commercial banks to ensure that even if the interest rate capping law is abolished, the commercial banks do not exploit borrowers by charging exorbitant interest rates.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Loan pricing or interest rate is one of the most important factors considered by both the borrower and the lending institution in the process of lending decision. Banks cannot levy loan charges that are too low which will not be adequate to compensate the cost of deposit paid to depositors, general expenses and revenue loss from non-performing loan book. Likewise, they cannot levy too high charges that will not allow them to maintain relationship with their clients (Stiglitz & Weiss, 2001). Introduction of interest rate caps implies that commercial banks are limited on the level of interest rate they charge and this has a direct effect on their revenues which in effect may affect their stock prices. According to Yin and Yang (2013), changes in the central bank interest rate can affect individual bank's stocks by changing the expectation of future cash flows and the required rate of return.

This study was based on three theories, namely; the loanable funds theory of interest rates, the classical theory and the rational expectations theory. Loanable funds theory argues that determination of the interest rates spread is founded on the market forces of demand and supply of the loanable funds. The interest rates are determined as the level at which demand and supply for loanable funds are equal and this goes against interest rate capping. Classical theory posits that the economy is viewed as being able to regulate itself. As a result, it applies savings and investments to establish the equilibrium interest rate obtainable from the point where the investments and the savings curves intersect (Oost, 2002). The study is also based on theory of rational expectations which uses statistical tools to show that businesses and workers shape the economy by updating and interpreting information regarding the future of the

economy. Therefore, government monetary policies can be anticipated which affects those policies' outcomes (Chandra, 2008).

In Kenya, the bill to cap interest rates was assented to law on the 24th August 2016. This move in regulating interest rates saw the introduction of interest rate capping on lending rates at 4.0% above the Central Bank Rate (CBR) and a floor on the deposit rates at 70% of the CBR (CMA, 2016). There have been arguments that interest rate capping restrictions could result in alternative lending by the financial institutions such as lending to government and or absolute withdrawal from specific locales such as rural areas or expensive market segments or rural areas when the capping becomes unprofitable. The current study will investigate whether the capping of interest rates in Kenya has affected share returns of commercial banks in Kenya.

1.1.1 Interest Rate Capping Announcement

Interest rate is the cost incurred by a borrower for using money borrowed from financial institution or lender (Chovancova, 2001). An interest rate cap on the other hand refers to a ceiling advanced on interest rates (Villegas, 1982). It determines the highest interest rate that could be advanced on loans by banks. Interest rate capping is used by the government to regulate the financial sector. An interest rate cap can also be defined as interest rate that are acceptable to vary, but which can't exceed a declared interest cap. The interest rate can thus fluctuate up and down, but cannot at all go above the cap rate (Ariemba, Kiweu & Riro, 2015). Capping of interest rates indicates that, some lenders were restricted from issuing loans that attract a higher interest than the one accepted by law. This is mostly common when it comes to issues

of transparency, limited disclosure need as well as low financial knowledge (Miller, 2013).

The capping of interest rates is also essential in protecting the public from exploitation from lenders, as well as protecting public interest through provision of affordable loans, thereby increasing investment and income flow. Also, the capping of interest rates is an avenue of considering all parties in lending, including low-income customers, hence a fight of social harm (OFT, 2010). Although it is theoretically easy, there is a large disparity in the ways or methods that the government initiates the capping of interest rates limits in loans. Many states are basing their own strategy on the religion related rules while others are using the flexible approaches that suit their economy. Some are just assumptions like, for instance no loans with interest rates exceeding say, 40% interest per annum, or 3% per month, instead of introducing a rigid rate that seem to be discriminative as well as exploitative. The sense of this is that, capping of interest rates with a rigid rate, also impact the economy at large extends, hence reducing the surplus that is commonly used for investments (Helms & Reille, 2004).

1.1.2 Stock Returns

The yield obtained by an investor over a specific period of time is referred to as the stock return. This phenomenon is closely associated to the stock prices. The ability of a market to effectively incorporate new information regarding stock prices thus making the firm's stock prices accurate and stable determines its strength (Mwangi & Mwiti, 2015). The level of output and investment of a firm can be measured using stock returns since stock returns can be used to predict future discount rates and cash flows. Both governments and investors utilize stock returns while deriving investment

decisions. Investors of different financial capacity are able conduct investments in the stock market as long as they are able to get a return that is higher than their cost of capital (Wang, 2012).

The availability of adequate market information and the effectiveness and efficiency of stock in the allocation of shares and equities is determined by stock returns. Changes in stock prices create some form of uncertainty for the investors which influence the stocks' demand and supply (Taofik & Omosola, 2013). Shares and stock markets react to any prize-shaping information, relevant for future market development (Širucek, 2013). Firms with higher stock returns are more profitable and thus they generally contribute to economic growth (Aliyu, 2011). Therefore, stock markets returns' uncertainties is a fundamental aspect of the aggregate economy since unstable economic growth trends makes consumption and investment difficult (Erdugan, 2012).

Stock returns are mostly measured using the stock market indexing. The performance of a specific stock is shown by fluctuations in its stock price. Just like a rise in stock prices indicates positive stock performance while a decrease shows declining performance, a higher stock index marks a better performing market or sector, as compared to a lower stock index (Daferighe & Sunday, 2012). In Kenya, several indices are used in the calculation of stock returns. The oldest (since 1964) is NSE 20 share index which is occasionally reviewed to reflect the accurate picture of stock market performance.

1.1.3 Interest rate Capping Announcement and Stock Returns

Traditional asset pricing theories declare that the cost of an asset is same as the present value of the future cash flows consequential from the asset (Masila, 2010). Changes in the central bank interest rate can affect individual bank's stocks by changing the expectation of future cash flows and the required rate of return (Yin & Yang, 2013). They argued that an increase in the central bank interest rate signals a contradicting financial rule to the market and leads to an expectation of less cash inflow in the upcoming. At the same time, the shareholders' required rate of return increases, as the increase in the central bank interest rate increases market interest rates and returns in bond. It is also expected that a decrease in the central bank interest rate should have the opposite effect (Uddin & Alam, 2009).

Since interest rate capping often distort the market by creating biases, financial institutions avail loan services more easily to low risk clients which creates inefficiencies in the process of financial mediation. Ramsey (2013) views this discrimination as a barrier to equitable provision of financial assistance because of risk. However, despite this interest rate capping measures, financial institutions could venture into other income generating sources including non-funded income and cost reductions. Interest rate capping restrictions results in adoption of other forms of lending by the financial sectors including lending to the government or withdrawal from expensive market segments or rural segments to reduce operating costs (Helms & Reille, 2004).

Diamond and Rajan (2006) holds that the cost of borrowing is reduced by low interest rate, which in turn drives the investment activities and high consumer durables

purchase. Banks may also ease lending policy given an expectation that economic activities will strengthen, thereby boosting spending power by businesses and households. Low interest rate may trigger investing into stocks, raising households' financial assets. The impact of this may be increased consumer spending, making firms' investment projects more attractive. The main concern for the empirical analysis arises from the fact that banks heterogeneously react to changes in monetary policy. These varied responses by commercial banks emanate from their diverse balance sheet dynamics. There are therefore other mechanisms that play an important role in influencing bank's lending activities despite change of policy on interest rate such as liquidity levels and bank size (Bolton & Freixas, 2006).

1.1.4 Commercial Banks in Kenya

The Central Bank of Kenya defines a commercial bank as a business which carries out, or intends to conduct banking activities in Kenya. Commercial banking business involves accepting deposits, giving credit, money remittances and any other financial services. The industry performs one of the very important role in the financial sector with a lot of emphasizes on mobilizing of savings and credit provision in the economy. According to the Bank supervision yearly Report (2017), industry comprises of Central Bank as the regulatory authority. The industry also has 1 mortgage finance and 42 commercial banks. Among the 42 commercial banks in the country 30 are locally owned banks, 9 microfinance banks and 14 foreign owned. Among the 42 commercial banks that we have in the Kenyan banking sector only 11 of the 42 are listed at the NSE.

Over the last decade, Kenya has faced a rapid growth of banks loan levels as a result of the adoption of new technology and financial innovation. This has led to the introduction of new products and services which has increased accessibility, flexibility and convenience of banking products and service (Irungu, 2013). The banking sector is governed by the Banking Act including Prudential Guidelines. In Kenya, banking sector plays a vital role in financial sector, mainly with respect to saving mobilization and provision of credit (Were & Wambua, 2013). The monetary policy adopted has a significant effect on banks' market value and most of banks' specific factors that have an effect on stock returns of banks are current earnings, future earnings, stock price, sources of capital and returns on capital and target capital structure (Lilian, Mungai & Eddie, 2014).

Interest rate capping in Kenya was announced on 28th July 2016 and this aimed to place a cap on lending rates at 4.0% above the Central Bank Rate (CBR) and a floor on the deposit rates at 70% of the CBR. Following the announcement of this capping, there was a significant fall in share prices of listed banks in the NSE which affected the 20 share index, the 25 share index and the all share index. On the first day of trading after the bill was announced, the Nairobi Securities Exchange 20 Share Index lost 152.92 points (4.4%) to hit 3,309.76 as the market recorded one of the major force. Banks stocks led the decline as their share prices went down by up to 11 percent. The All Share Index similarly dropped by 5% to from 146.48 to 139.14 while the NSE 25 Share Index fell by 3 points to close the day at 3,913.93 (Maloba, 2016).

1.2 Research Problem

The query as to whether change in interest rates influences the stock markets has been widely studied equally in academic and document circles and there are supporters and rivals of interest rate capping. Proponents argue that the introduction of interest rate ceilings protect the public interest through ensuring a reasonable and fair interest rate advanced on loans. On this context, interest rate caps could also be beneficial in the sense that it limits credit access to some low-income and impaired consumers, since they mitigate social harm (OFT, 2010). Bernanke and Kuttner (2005) also support this view by arguing that since prices charged for credit can be anticompetitive and arbitrary and thus higher than the actual lending cost, lower interest rate capping allows lenders to operate. Alternatively, opponents argue that financial liberalization results to potential gains in terms of efficiency in investment resources' allocation. Galindo, Weiss and Schiantarelli (2007) argue that financial liberalization such as credit controls' reduction improves the efficiency of investment in most instances leading to growth of the affected firms.

In Kenya, Interest rate capping was announced on 28th July 2016 and this was a proposal to cap on lending rates at 4.0% above the Central Bank Rate (CBR) and a floor on the deposit rates at 70% of the CBR. Following the announcement of this capping, there was a significant fall in share prices of listed banks in the NSE which affected the 20 share index, the 25 share index and the all share index. Banks shares led the turn down as their prices dropped 11 percent. The stocks that comprised of Diamond Trust Bank, Kenya Commercial Bank (KCB) and Cooperative Bank, which dropped from the investigative 20 share index, were on an open drop as fears over the interest law extended at the bourse (Aligonby, 2016). The current study will

investigate whether interest rate capping has an effect on stock returns of commercial banks.

Despite interest rate capping being one of the mostly researched topics in the field of finance (Uddin & Alam, 2009), the question as to whether interest rate capping announcement affects stock returns still remains unresolved (Osamwonyi & Evbayiro-Osagie, 2012). Nkwoma (2014) established that deregulation of interest rates in the Nigerian bank sector increased bank lending, which meant a high-profit margin for the banks. Amarasignhe (2015) utilized a granger causality test in Sri Lanka and found that there exists a negative relationship between the interest rates and stock prices of listed companies. Nodeng, Rosenboom and Wang (2013) established the impact that government intervention on US stock performance during times of financial crisis. The found that bank capital provisions by the government had a positive impact on the performance of borrowing companies.

Locally, Kiseu (2017) conducted a study on the effect of interest rate capping on the amount of credit issued by commercial banks in Kenya. Kimunge (2017) conducted a study to determine the effect of interest rate capping on stock returns at the Nairobi securities exchange and found that the capping had a significant effect. However, the study by Kimunge focused on interest rate capping following the implementation date while the current study will focus on interest rate capping announcement date and stock returns. The study attempted to answer the research question, what is the effect of interest rate capping announcement on stock returns of commercial banks listed at the Nairobi Securities Exchange?

1.3 Objective of the Study

The objective of this study was to establish the effect of interest rate capping on stock returns of commercial banks listed at the Nairobi Securities Exchange.

1.4 Value of the Study

Discoveries of this research are aimed at adding knowledge of the EMH with respect to the effect of interest rate capping. The findings of this research were used as reference in future in the field of EMH and possibly provide possible research gaps. Efficient markets are a factor that investors consider while evaluating possible investment portfolios. The study findings provide investors with knowledge that assist them in making sound and informed investment decisions. It may provide knowledge that enable them adjust their portfolio taking into account interest rate capping and thus maximize their returns.

The results of the research are of great importance to the future researchers, since it can be a point of reference. The findings might also be significant to scholars and researchers, in identifying the research gaps on the related topics of the study as well as reviewing of the empirical literature to institute further areas of research.

To government and organizations such as the Capital Markets Authority and the Central Bank, in the formulation and implementation of policies and regulations governing monetary policies and interest rates to ensure stable rates so as to promote economic growth and reduce its spiral effects on the economy. This will contribute to the advancement of monetary development and improvement the economy.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The aim of this chapter is to review theories that form the foundation of this study. In addition, previous empirical studies that have been carried before on this research topic and related areas are also discussed. The other sections of this chapter include determinants of stock returns, conceptual framework showing the relationship between study variables and a literature review summary.

2.2 Theoretical Framework

Theoretical framework provides a foundation for understanding the theoretically expected relationship among the study variables and in this case interest rate capping and stock returns. The theories selected for this study are the loanable funds theory of interest rates, classical theory and rational expectations theory.

2.2.1 Loanable Funds Theory of Interest Rates

This theory was developed by Fry (1995) and it argues that in the theory of the loanable funds, there is an assumption that the interest rates charged usually are subject to determination by two market forces which are the supply of loanable funds and demand for credit. This theory focuses more on interest rates determination and long term interest rates explanation.

Loanable fund is the money the investors and entities in the economy have saved and intend to lend it to the potential borrowers. By the use of market demand and supply for loanable funds, the theory explains the interest rates on loans in the market. The

supply for the loanable funds comes from the economic entities, government and individuals who opt not to spend but to save money for investing. Investors lending at an interest rate here is one way of investing. The demand for the loanable funds comes from the individuals and business who wants to finance their businesses and investments such as purchase of assets that increase in value with time e.g. Land. As a result, borrower's choice to finance their investments through acquiring the credit facilities creates the demand for the loanable fund (Rocha, 1986).

As per the theory, determination of the interest rates spread is founded on the market forces of demand and supply of the loanable funds. The interest rates are determined as the level at which demand and supply for loanable funds are equal. According to research by Claeys and Vander (2008), loanable funds theory explains the determinants of interest rate spread, this is because if people do not save with the banks, there is insufficient supply of the loanable funds and the banks will not be able to lend or give credit facilities to the borrowers. As a result, there will be higher demand for the credit facilities than the supply of the loanable funds. This high demand leads to banks charging high interest rates. This has a resultant effect of widened interest rate spread. The loanable funds theory assumes that there is existence of a perfect competition within the market such that, neither a borrower nor the lender can determine the prices of the securities. Also, it assumes there exist free mobility of the funds in the market.

2.2.2 Classical Theory

The classical theory of the interest rates determination significantly relate to the classical theory of the economics. According to the classical theory, the economy is

viewed as being able to regulate itself. As a result, it applies savings and investments to establish the equilibrium interest rate obtainable from the point where the investments and the savings curves intersect (Oost, 2002).

In the economy, individuals with surplus cash save their money in the banks as savings. This fund is available for borrowing by the economic entities that use the fund to invest in order to generate more income that will be saved in the banks as savings. If the savings exceed investments, it implies there is excess savings of the money than the investments. As a result, the interest rates drop until the borrowers can access the fund cheaper. Conversely, if the level of savings is less than the investments, the level of the interest rates will rise until it reaches the equilibrium point which is the point where the savers find the incentive or the reward to keep their money in the bank (Gelos, 2006).

When the interest rates increase, the savings in the economy increases due to the reward associated with the increased interest rate on savings. Additionally, as the rate of interest charged decreases, the cost that is carried in the borrowing also increases leading to investments. When the savings increases, the lending rates decline which lead to increased investments from the ease of access of the money at a lower interest rate (Grenade, 2007).

2.2.3 Rational Expectations Theory

The theory of rational expectations by Lucas 1970) applied arithmetical techniques to demonstrate the ways in which enterprises can maneuver their business strategies on the improvement their financial stability through the interpretation of figures to

predict the future economic trend. Since governments policies are prone to changes within the short time possible, the prediction of the future economic outcome can be anticipated. Lucas applied the rational expectations theory to dismiss a number of orthodox financial statements of the 1970s, particularly the theories of British economist John Maynard Keynes and the efficiency of government involvement in the financial system. It could consist of the money in form of short term investments, the coins and notes currency, safe assets, cash and bank balance held in the savings and currents accounts. The economy of a country is affected by the money in supply and therefore the monetary authority has to regulate the amount in circulation through the monetary policies. This difference the idea that government rule manipulates the resolution of people in the financial system (Madura, 2010).

According to Lucas study, the rational expectations theory has two main parts; the old hypothesis that depression is self-corrective. The moment people starts hoarding money, it becomes very difficult to know that the recession has occurred. Immediately the individuals recognizes this recession, they intend to fear and the market quickly gain strengths. At this scenario, the manufacturers intend to lower prices to enhance a larger market share, and the workers also reduce their wages to please the employer, making the purchasing power of the shilling to grow. The part is that, the government involvement can only vary from ineffectualness to damage. This then means, that no change that the government can make if the businesses have not cut prices of their commodities to let the economy to take its corrections. Keynesians are then robbed of the argument that may be the central bank may be helpful in speeding upturn, but not making it happen (Madura, 2010). This theory is related to this study as it explains

how government policies such as monetary policy are ineffectual in influencing profitability and returns.

2.3 Determinants of Stock Returns

Stock returns have been a major concern for stock market investors, in that it directly affects the wealth they hold. Key factors that are believed to play a part in the overall performance of stock markets are as follows:

2.3.1 Company News and Performance

According to Dehuan and Jin (2008), firms' performance affects returns of stocks at the stock exchange. In a study to investigate association between company performance (Yield on Equity, return on asset, profit margin, earning per share, changes in sales, as well as total asset turnover and stock revenues of the top accomplishing stocks registered on Shanghai stock exchange, Dehuan and Jin (2008) discovered that each of the variables is expressively linked with prices of the stock in the year prior to the disaster. But, in the crisis period the company performance have no descriptive authority toward stock price program.

Uddin and Aram (2009) examined the association of microeconomic aspects with the price of stock by using multiple regression equations. This study discovered a noteworthy linear connection among market yield as well as certain microeconomic aspects like net asset price per share, dividend proportion and earnings per share of bank renting, as well as insurance businesses. He also discovered that non-linear association amongst the variables is unimportant at ninety five percentage level of connotation.

Fisher (2009) determined the association between British stock returns and other dissimilar measurable variables. It displayed the effect of dividends, uncirculated profits, as well as company magnitude on stock revenues taken from 5 cross-sectional examples of equities cited on the London Stock Exchange between the period 1949 and 1957. Al-Shubiri (2010) examined the connection of microeconomic aspects with the stock value by use of multiple as well as simple regression examination. Fourteen profitable banks of Amman Stock Exchange, for the period 2005-2008, were nominated for the research. The research discovered highly positive noteworthy connection between the stock market price as well as NAV for each share. It also discovered negative noteworthy link on loaning interest rate and inflation.

2.3.2 Market Sentiments

Muriuki (2013) noted that market sentiment entails the sensibility of market contestants, independently as well as communally. This possibly is the annoying class since we know it is substantial disapprovingly, but we start to comprehend it. Market sentimentality is normally personal, unfair and fixed. For instance, it is possible to make a concrete verdict concerning a stock's forthcoming development predictions as well as the future might even authorize your forecasts, nonetheless temporarily the market may shortsightedly dwell on a single piece of newscast that keeps the stock theatrically high or low.

Market sentimentality is being discovered by the comparatively new arena of social money. It begins with the supposition that social money are actually not effectual more time, and this inadequacy could be elucidated by thinking and other communal disciplines. The notion of applying communal science to economics was completely

legalized when Daniel Kahneman, was awarded the Economics 2002 Nobel Memorial Prize. Numerous of the thoughts in interactive business approve noticeable doubts: that stakeholders tend to exaggerate data which emerge effortlessly to mind; that numerous stakeholders respond with superior pain to losses than with preference to equal gains; and that shareholders tend to carry on in an error (Muriuki, 2013).

2.3.3 Exchange Rates

This is the rate at which one currency is being converted into another currency (Mohan & Chitradevi, 2014). Changes in exchange rate influence commodity prices, which consequently creates competition between the domestic and foreign producers. A rise in the domestic currency's value increases the price of domestic goods compared to the foreign goods which shifts demand to foreign goods from domestic goods. An appreciation of currency in a county that is dependent on exports reduces her exports' competitiveness which negatively influences the domestic stock market (Kirui, Wawire & Perez, 2014).

A rise in the currency of a country lowers the imported goods' cost, which encourages the production of inputs in the market of the emerging economies (Kuwornu, 2012). Accordingly, the depreciation of the domestic currency against foreign currencies, under elastic demand reduces the price of exports thus increasing the volume of the exports of the country (Kuwornu, 2012). The micro economic perspective holds that foreign exchange rate affects the value of the firm whereas the macro -economic perspective holds that if affects the economy as a whole. As such, the volatility of exchange rate volatility affects the financial sector of country, precisely the stock market (Obura & Anyango, 2016).

2.3.4 Inflation

Tucker (2007) in his works describes inflation as the overall increment in the standard price level of services or goods in any given economy. Inflation is referred to as an overall increment in the level of prices and not specifically in relation to a unit of a given product or service. Sloman and Kevin (2007) in their research paper expound that inflation could take the form of either demand pull inflation which is brought about by the increase in demand of goods or the form of cost push inflation. The demand-pull inflation arises due to a general increase in the overall demand in the market which in return results to the raising of prices and partially increases of the output in a given economy. Cost push inflation is brought about by a rise in the levels or cost of production which may affect the firms thus resulting in the companies charging the consumers more (Hendry, 2006).

Higher inflation rates lead to higher prices for consumers which tend to slow business and reduce earnings for firms. Higher prices also tend to trigger a higher interest rate regime. Fama (1981) argued that inflation would have a negative correlation with real economic activity, which in turn would have a positive association to market performance. Thus, the stock index should be negatively correlated with the anticipated price level, with short-term interest rates serving as the proxy similar to the International Fisher Effect.

2.3.5 Interest Rates

The interest rate is defined as the savings' price arising due to the loanable funds' demand and supply (Obura & Anyango, 2016). Both the interest and income are correlated. It basically seeks to ensure efficient resource utilization and help in the

mobilization of financial resources (Osoro & Ogeto, 2014). The annual in which the lender charges the borrower to enable the borrower to advance a loan and demonstrated as a percentage of the sum of the loaned amount is referred to as interest rate.

2.3.6 Money Supply

Money supply comprises of the legal tender of a country and all other liquid instruments flowing in the economy at a particular point in time. It could consist of the money in form of short term investments, the coins and notes currency, safe assets, cash and bank balance held in the savings and currents accounts. The economy of a country is affected by the money in supply and therefore the monetary authority has to regulate the amount in circulation through the monetary policies (Osamwonyi, 2003).

2.4 Empirical Review

There are numerous empirical studies both locally and internationally to support the association between interest rates and stock returns, but these studies have produced mixed results.

2.4.1 Global Studies

The work of Capera, Murcia, and Estrada (2011) registered a depressing relationship between preventive restrictions on interest rates as well as financial depth in 18 countries in Latin America for the period 1980–2008. In Nicaragua, for example, the use of an interest maximum caused microfinance institutions to decrease loans and provoked many of these foundations to abscond rural areas, as a result of high cost of

production and rate of perils. They mitigated this situation by skyrocketing fees and other levies to arrest the situation since capping. In the case of Colombia, small firms are suffering due to high cost of transacting. However, currently, they are privileged since interest rates were capped, hence can now lend their products like microcredit. In Bolivia, when maximum interest rate was introduced in 2004, licensing of lending investments also went down.

Zaman et al., (2013) conducted a study to determine the impact on interest rate on the profitability of commercial banks in Pakistan. A sample of 20 banks operating in Pakistan and listed in Karachi Stock formed the study. The study design was cross-sectional, and the data sources included the indexed Karachi stocks based on return, audited financial reports of the banks, publications of the State Bank of Pakistan, Press publications, and media reports. The outcome of the study confirmed that interest rate, deposit with the other banks, investment, and loans. It was established the interest rate (a key tool of monetary policy) has a significant impact on the profitability of banks. An increase in interest rates causes a higher lending rate more than the deposit rate, which results in profit because the bank spread is high. A reduction in the interest rate causes the deposit rate to move faster than the lending rate, which keeps the bank spread low.

Teker and Alp (2014) investigated the causality relation between stock market and the rates of interest in Turkey, Brasil, China and Hungary. The study findings revealed that fundamental relationship, direction varies involving maturities and states such that the Hungary market showed causal relation between the stock market and rate of interest while the China market predicated a low causal relation. However, the

findings established that apart from Brazil, each returns on stock market are Granger cause of 3-month T-bill rates and the causality relationship of T-bonds between countries' indices returns is few, apart from Hungary.

Shrestha and Subedi (2015) examined determinants of stock market performance in Nepal. The study used the multiple linear regression model to analyse data. The study findings established that stock market performance responded absolutely to price rises and growth in money, and depressingly to rate of interest. In addition, the study established that accessibility of liquidity and low rates of interest inspire stock market performance.

Amarasinghe (2015) in the study, active association involving interest rates and stock price: Empirical Evidence from Colombo Stock Exchange utilized monthly data for a seven year period spanning 2007 – 2013 using all share price index data and interest rates. Granger Causality tests and regression analysis were conducted on the data after stationary tests using Augmented Dickey Fuller Tests. The study found that a significant correlation is present between interest rates and stock exchange prices. A depressing affiliation was there between the two variables in Colombo stock exchange. As the interest rates rose, the stock prices and returns declined. The context of this study was different from the current study.

2.4.2 Local Studies

Kiseu (2017) conducted a study on the effect of interest rate capping on the amount of credit issued by commercial banks in Kenya. The study period covered three quarters before and after the capping law came into effect. Descriptive and inferential statistics

was employed in the study. The findings were that the interest rate control did not significantly affect how the commercial banks issued their loans. Although the study did find that some banks contracted their loans books after the law came into effect, such were not enough to shift the ground for the whole industry. However, it was also found that the growth of the credit was not drastic as the policy makers would have projected and only grew by 0.2% more as compared to pre-capping period.

Murimi (2017) conducted a study on the effect of interest rate capping on retail credit growth on Kenya commercial banks. The population of the study was all the 43 banks in Kenya. A bivariate regression analysis was used to establish the link between retail credit growth and capping of interest rates. The findings of the study indicate that interest rate charged by commercial banks significantly affects credit growth. Introduction of interest rate capping interferes with the market and hinders financial institutions from offering loan products to those at the lower end of the market.

Othigo (2017) carried out a study on the impact of interest rate capping announcement on the stock returns of listed commercial banks in Kenya. The researcher utilized an event study methodology with an event window of 40 days and an estimation period of 30 days. Data was collected from NSE and NSE25 index was used as the benchmark for market prices. Using the market model ordinary least square regression and a 95% significance level, it was established that all financial institutions underperformed the market by registering negative CARs apart from KCB and Standard Chartered which exhibited negative CARs on the first day post the event. It was therefore concluded that interest rate capping has a significant negative effect on share returns.

Mbua (2017) investigate the effects of the recent capping of interest rates by the CBK on the listed bank's shares at the NSE of Kenya. The study adopted an observational research design and checklists were used for data collection. The correlations between the various variables were established using inferential statistics. This study used a small population of eleven banks listed on the NSE and a census was conducted. Considering the lending rates made by investors on deciding whether to invest in bank shares, the study established that a negative correlation exists between lending rates and stock prices in third and fourth quarter of 2015 and a positive one between lending rates and stock prices in third and fourth quarter of 2016. Upon effecting interest rate cap, the banks' share prices significantly dropped and this shows that interest rates significantly influence the decision on whether to invest in bank shares or not.

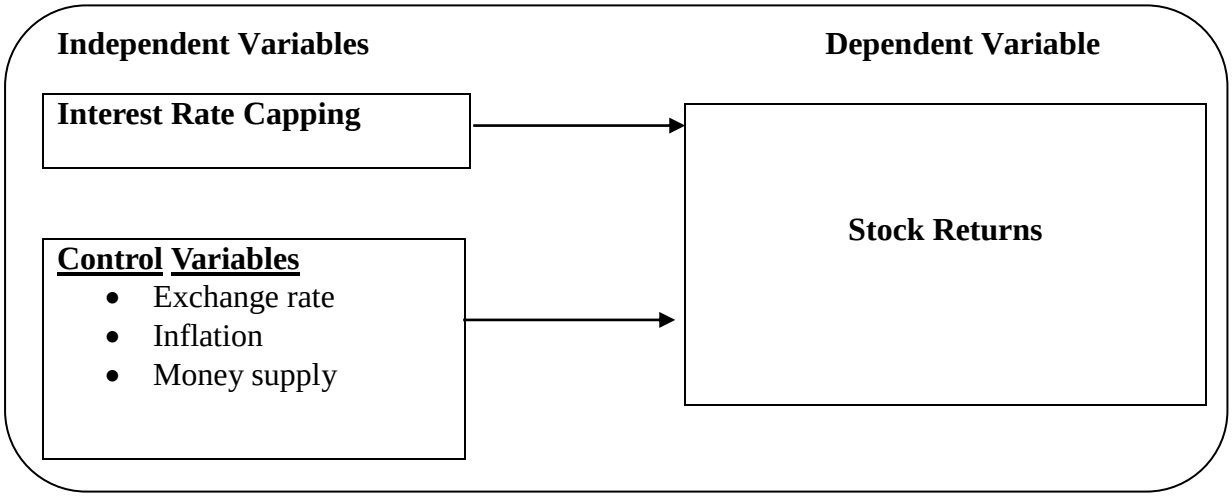
Kimunge (2017) conducted a study to determine the effect of interest rate capping on stock returns at the Nairobi securities exchange. The study was an event analysis of the coming to law of Interest Rate Capping law on 14th September 2016. The study analyzed the reaction of stock returns of 11 listed commercial banks 30 days before the law came to action and 30 days after the law came to action. Analysis of the data was done with the aid of Microsoft's Excel (2013). T-test was carried out to establish the significance of interest rate capping on stock returns. The study found out that only 18.18% (Kenya Commercial Bank and CFC Bank) reacted negatively to the interest rate capping. All the other (81.82%) banks reacted positively. Further, the study found out 7 (63.64%) commercial banks recorded negative abnormal returns while 4 (36.36%) commercial banks recorded positive abnormal returns in reaction to

the interest rate capping law. However, none of the abnormal returns were found to be statistically significant.

2.5 Conceptual Framework

The expected relationship between the study variables is best explained using a conceptual model. The conceptual model developed below shows how interest rate capping and stock returns of commercial banks in Kenya are related. The independent variable is interest rate capping while stock returns is the dependent variable. The control variables characterized here are exchange rate, inflation and money supply.

Figure 2.1: Conceptual Model



Source: Researcher (2018)

2.6 Summary of the Literature Review

This chapter has focused on the theories that form the foundation for this study. The theories discussed here are namely; the loanable funds theory of interest rates, classical theory and rational expectations theory. The chapter has also focused on some of the factors that are expected to determine stock returns of commercial banks.

There have been previous studies carried out either in this area and/or related areas and their findings have been discussed under empirical review. There are no local studies done on the effect of interest rate capping announcement on stock returns of commercial banks listed at the NSE. Although Kimunge (2017) conducted a study, the study focused on interest rate capping following the implementation date while the current study will focus on interest rate capping announcement date and stock returns using an event study methodology covering all the 11 banks listed at the Nairobi securities exchange.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

In order to determine the effect of interest rate capping on stock returns of commercial banks listed at the NSE, a research methodology is methodology is necessary to outline how the research will be carried out.

3.2 Research Design

The method used to carry out research is known as a research design. This study adopted an event-study methodology which is premised on Efficient Market Hypothesis. The theory was advanced by Fama, Fisher, Jensen and Roll (1969) and states that within a resourceful marketplace charges for commodities adjust promptly to information as they become available to the market. Event studies evaluate stock returns to establish the influence of events like mergers, acquisitions, corporate news, and new stock issues among others, on stock returns. It specifically examines what happens to the stock return, prior to, during and after the event.

The methodology is about investigating existence, or otherwise, of abnormal returns to companies from a specific event, in this case interest rate capping announcement. When interest rate capping is analysed vis a vis a firm's stock returns, the response of capital market to the event is established by assessing abnormal returns around the event day. Positive abnormal price movement of stocks would be registered around the event day should investors respond positively to the event, but if they don't then the abnormal stock price movement would be negative.

3.3 Target Population

Population entails an observation of interest within a whole set like groups or proceedings as described by (Burns & Burns, 2008). The population of the study comprised of all the 11 commercial banks listed at the Nairobi Securities Exchange.

3.4 Data Collection

Data was exclusively collected from a secondary source. It is always a regulatory requirement for firms listed at the NSE to report their values to the Capital Markets Authority (CMA). The data mainly related to stock returns of listed commercial banks and NSE 20 share index figures for related stocks on a daily basis, as tabulated and stored by the NSE, for the period around the selected event dates. The event period consisted of sixty one (61) days (30 days before and after the interest rate capping announcement).

3.5 Data Analysis

The data analysis used was quantitative in nature analyzed using the event study methodology. The event is the interest rate capping announcement in this case and the event day represents the day of the interest rate capping announcement and is denoted as t=0. The event window was 61 days broken as 30 days before the event date and 30 days after the event date i.e (+30, -30) days. The estimation period for the study was 30 days ahead of the occasion window as well as 30 days post-event period to avoid overlapping of data.

To fully measure the impact of an event, MaCkinlay (2009), indicates that normal and abnormal returns need to be calculated. “Actual returns are returns that would be

expected if the event does not occur while the abnormal returns are the actual returns minus the expected returns of the asset over the event window. In this study, the focus was to find out the effect of interest rate capping announcement on stock returns". The study used statistical methods to compute the abnormal returns (AR) from the daily data after which the results will be analysed to obtain the Cumulative Abnormal Returns (CAR).

3.5.1 Measuring Daily Movements

The daily stock output at one particular stage is the market model outstanding, computed by attaining the dissimilarity involving the stock definite price and the earlier price supported by the market for that time divided by the earlier price.

Stock Movement = (Actual stock price – Previous stock price)/ Previous stock price

Where the actual stock price is the average price of the lowest and highest stock price at a given day as expressed from the securities exchange.

The study used the NSE 20 share index as a benchmark to compute the expected returns for commercial banks listed in Kenya. Studies done by Wang and Tumurkhuu (2010), Bulkley and Herrerias (2005) and Jackson and Madura (2003) indicated that the market model was the most preferred and best tool. Abnormal returns (AR) will be computed using the market model to yield the CAR and SCAR.

3.5.2 Expected Returns

The following formula was used to calculate the expected returns

$$\mathbf{ER_{it} = \alpha_i + \beta_i R_{mt}}$$

Where

ER_{it} is expected returns on stock x at time period t.

R_{mt} is the returns in the market at time t.

α is a constant.

β (beta) is the security's price volatility relative to the overall market

The coefficients α and β for the market model are calculated using the ordinary least squares (OLS) regression based on historical price data of a stock and the market index during the estimation period. The Expected Return (ER) was estimated using the equation after the values of alpha and Beta are known.

3.5.3 Abnormal Returns

The information important for the event is then measured by determining the Abnormal Returns (AR) which is the difference between the actual and normal/expected rate of return. Abnormal returns (AR) were estimated using the following model;

$$\mathbf{AR_{it}=R_{it}–ER_t}$$

Where;

AR_{it} = Abnormal return of stock *i* at time *t*

ERit = Expected return of stock *i* at time *t*

Rit = Return of stock at time *t*

3.5.4 Cumulative Abnormal Returns

The cumulative abnormal returns were computed as:

$$\mathbf{CAR_{i,\,t}} = \sum_{t=1}^{n} \mathbf{AR_{it}}$$

Where;

CARi,t – cumulative abnormal return on stock ***i*** obtained in the event window *n*, ***n*** – The event window

3.5.5 Standardized Cumulative Abnormal Returns

Standardized cumulative abnormal returns (SCAR) was computed as:

$$\mathbf{SCAR_{iT}} = \frac{(\mathbf{CAR\ it})}{\sigma\ (\mathrm{CARit})}$$

Where;

σ (CARit) - The standard deviation of CAR's adjusted for forecast error.

T-test statistic was used to measure the statistical significance of the ARs and CARs, and SCARs reported during the event window at 5% significance level. T-test statistic assumes a normal distribution of data.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The study was an event analysis of the announcement of the Interest Rate Capping law on 28th July 2016. The study analyzed the reaction of stock returns of 11 listed commercial banks 30 days before the law was announced and 30 days after the law was announced. Analysis of the data was done with the aid of Microsoft's Excel (2013). T-test was carried out to establish the significance of interest rate capping on stock returns.

4.2 Reaction of Stock Returns to the Interest Capping Law Announcement

The study analyzed the reaction of stock returns of 11 listed commercial banks 30 days before the law was announced and 30 days after the law was announced on 28th July 2016. The section also discusses the abnormality of the stock returns and the cumulative abnormality.

The Expected Return was obtained by regressing the historical price data of a stock against the market index during the estimation period and employing the equation indicated in the subsequent page after the values of alpha and Beta are known.

$ERit = \alpha i + \beta i Rmt$

Where;

Rit = Return of stock at time *t*

Rmt = market return at time *t*

The values of the alpha and beta were obtained using the ordinary least squares (OLS) regression which utilised the following formula.

$$\beta = \frac{\sum R_t R_{mt} - (t * \bar{R}_t * \bar{R}_{mt})}{R_{mt}^2 - (t * \bar{R}mt)}$$

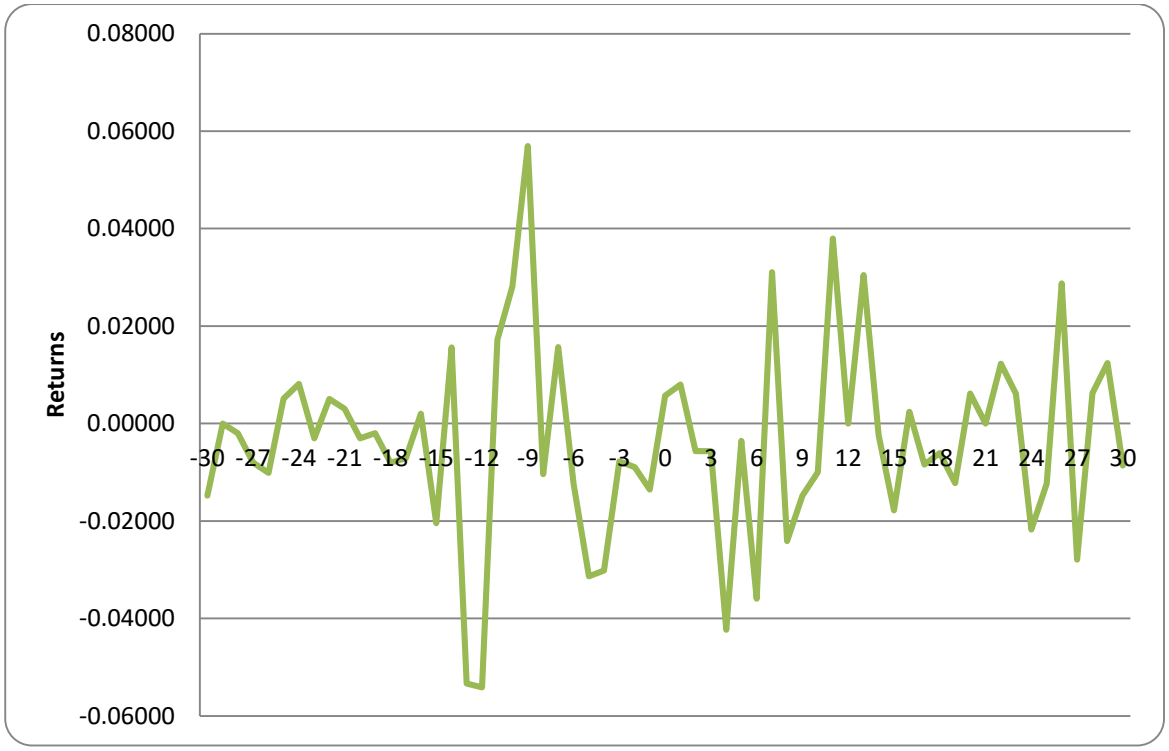
$$\alpha = \bar{R}_t - (\beta * \bar{R}_{mt})$$

4.2.1 Barclays Bank Limited Stock Returns

The reaction of Kenya Commercial bank Limited stock returns following interest rate capping announcement are as shown in figure 4.1 in the following page.

Barclays Bank Limited reacted erratically to the interest rate capping announcement. Overall, the reaction was positive as shown by an increase from an average stock return of -0.003934803 before to an average -0.002990517 after the event. The erratic reaction can be attributed to the uncertainty among the investors on the impact of the capping to the banks performance afterwards. The lowest return of -0.05417 was recorded 12 days before the event while the highest stock return of 0.05696 was recorded 9 days before the event.

Figure 4.1: Barclays Bank Limited Stock Returns



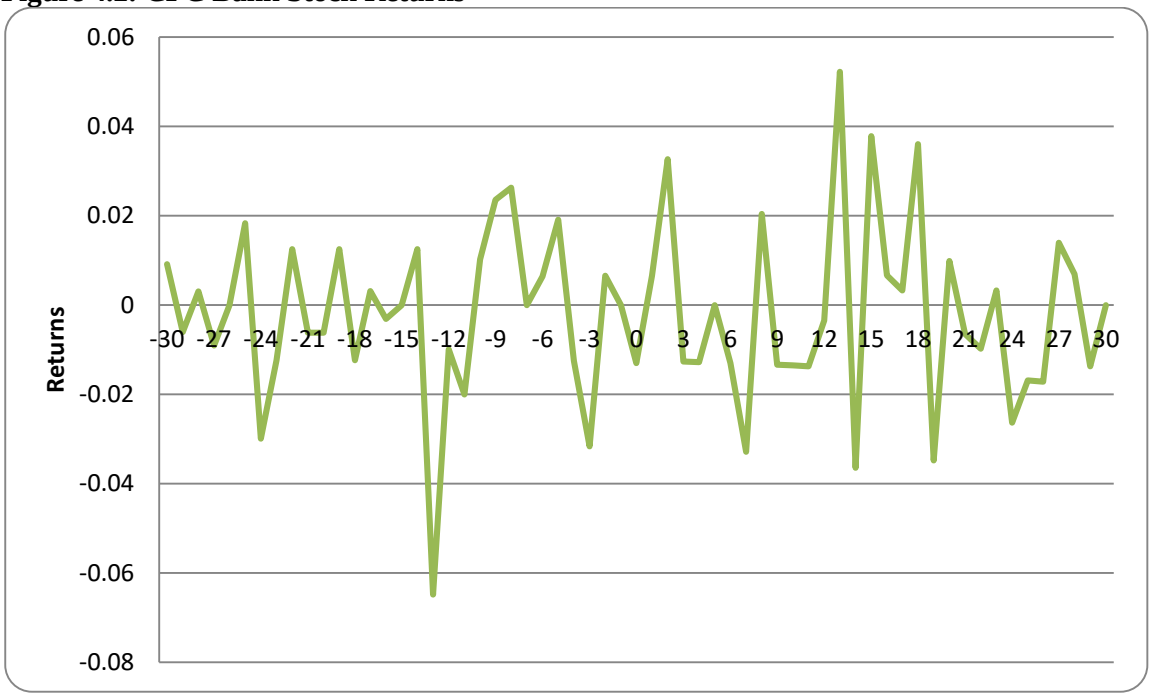
Source: Research Findings (2018)

4.2.2 CFC Bank Stock Returns

The results for the behaviour of CFC Bank Limited share prices are as shown in figure 4.2.in the subsequent page.

There were ups-and-downs in CFC Bank's stock returns before and after the interest rate capping announcement event. The overall reaction was negative. The average returns before the event decreased from -0.00060166 to -0.00322739 after the event. The lowest stock return for CFC Bank was -0.064814 and was recorded 13 days before the event while the highest stock return of 0.0522648 was recorded 13 days after the event.

Figure 4.2: CFC Bank Stock Returns



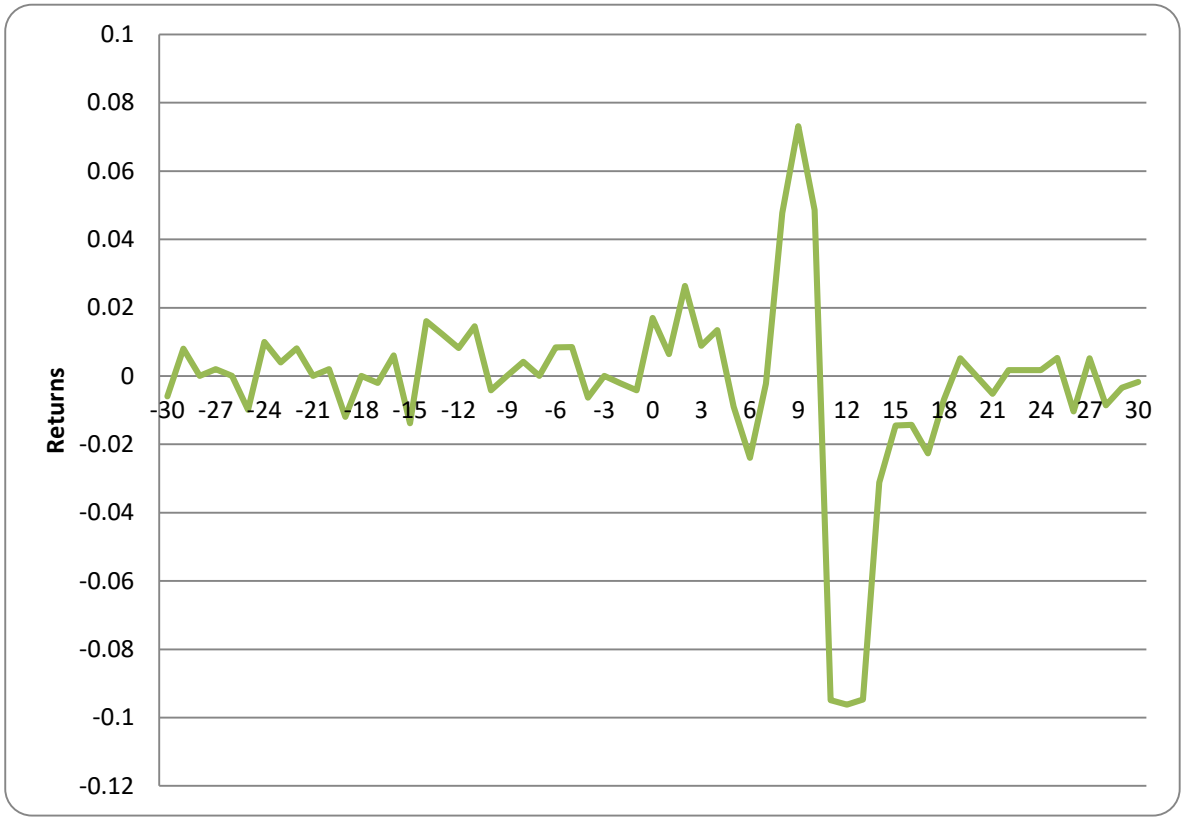
Source: Research Findings (2018)

4.2.3 Co-operative Bank Stock Returns

The results for the behaviour of Co-operative Bank stock returns following interest rate capping announcement on 28th July 2016 are as shown in figure 4.3 below.

Co-operative Bank recorded negative average stock returns before the event and positive average returns after the interest rate capping announcement event. The average stock return increased from an average of -0.001879879 before the event to 0.005692542 after the event. This amounted to an increase in average stock returns by 0.007572421. The highest stock returns of 0.07317was recorded 9 days after the event while the lowest stock return of 0.096234 was recorded 12 days after the event.

Figure 4.3: Co-operative Bank Stock Returns



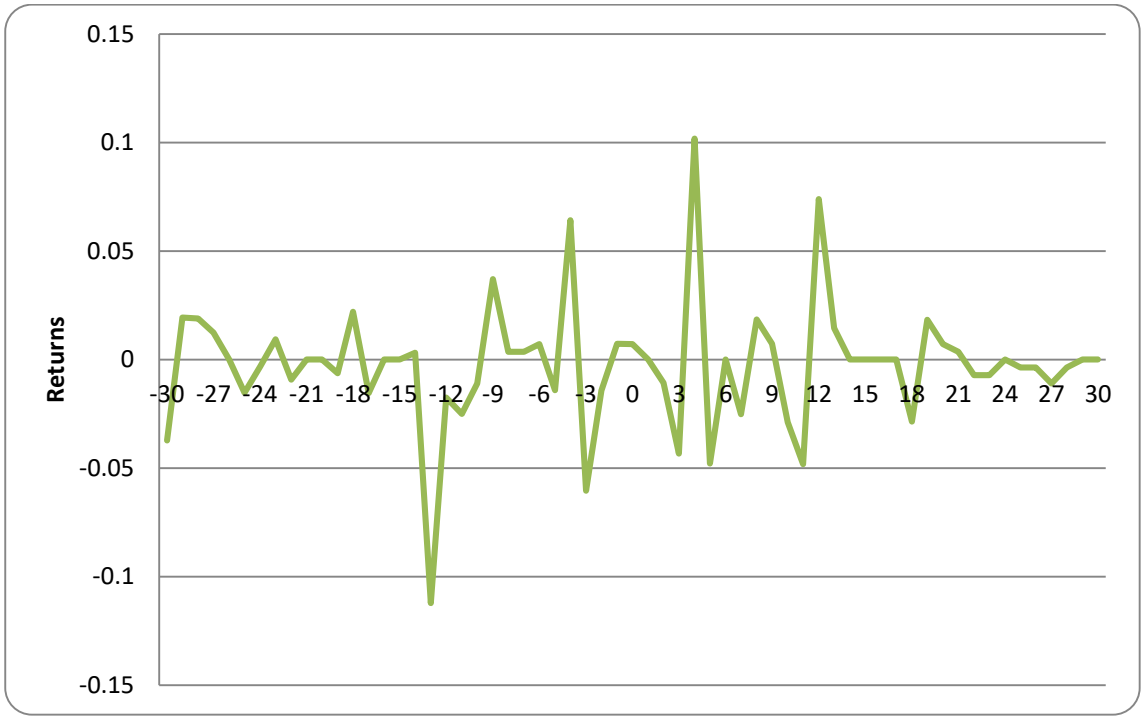
Source: Research Findings (2018)

4.2.4 Diamond Trust Bank Stock Returns

The results for the behaviour of Diamond Trust Bank Limited share prices during the event are as shown in figure 4.4 in the subsequent page.

Diamond Trust Bank stock returns reacted positively to interest rate capping announcement by increasing from a 30-day average of -0.001003333 before the event to a 30-day average of 0.001420109 after the interest rate capping event. The lowest rate of -0.11215 was recorded 13 days before the event while the highest stock return of 0.101886 was recorded 4 days after the event.

Figure 4.4: Diamond Trust Bank Stock Returns



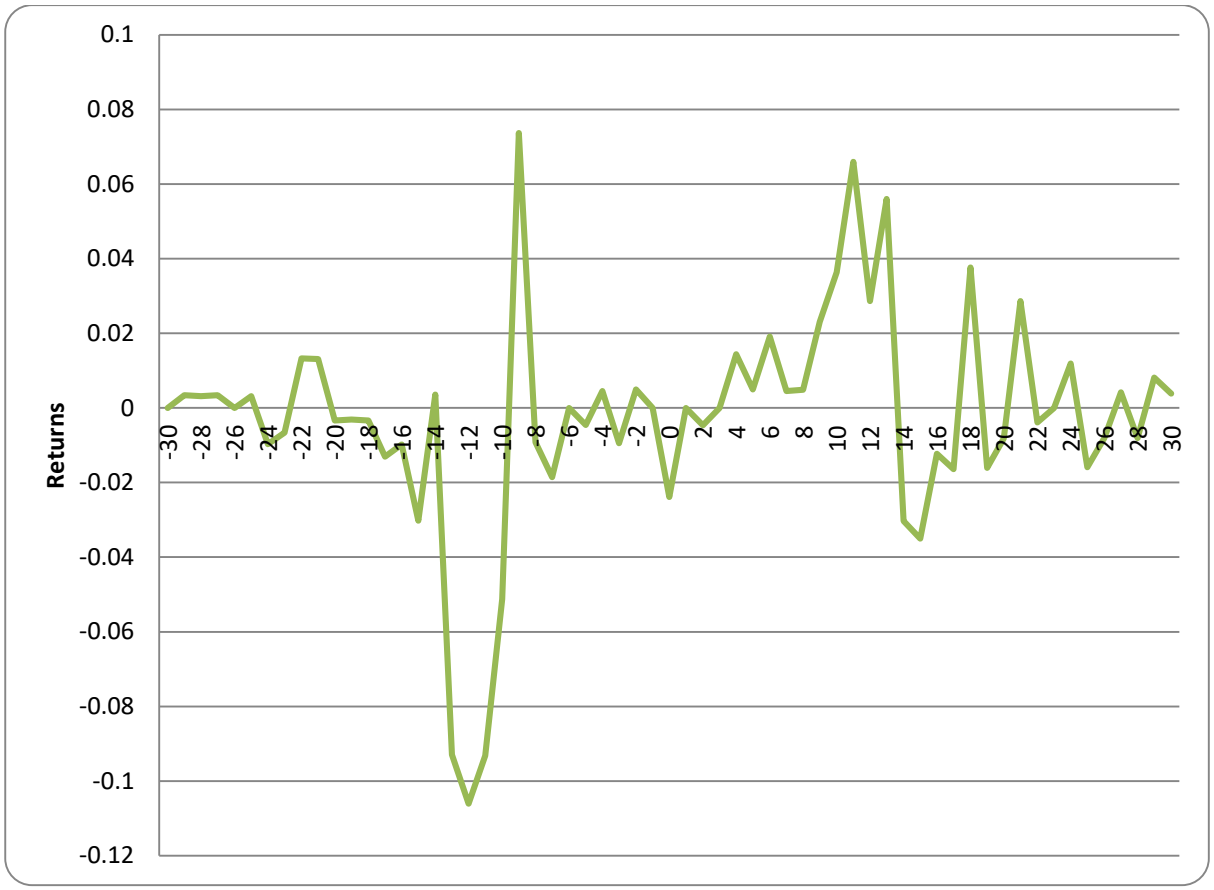
Source: Research Findings (2018)

4.2.5 Equity Bank Limited Stock Returns

The behaviour of Equity Bank Limited stock returns following interest rate capping announcement on 28th July 2016 are as illustrated in Figure 4.5 in the following page.

The stock returns of Equity Bank Limited reacted positively to the interest rate capping announcement event. This was evidenced by the difference of 0.016262 between the average stocks returns of -0.010282258 before the event and 0.005980161 after then event. Sharp reaction was recorded on the 12th and 9th day before the event and the 11th day after the event. The highest stock return of 0.07368 was recorded 9 days before the events while the lowest stock return of -0.10606 was recorded 12 days before the event. On the event day, Equity Bank Limited recorded a negative stock return of -0.023882.

Figure 4.5: Equity Bank Stock Returns



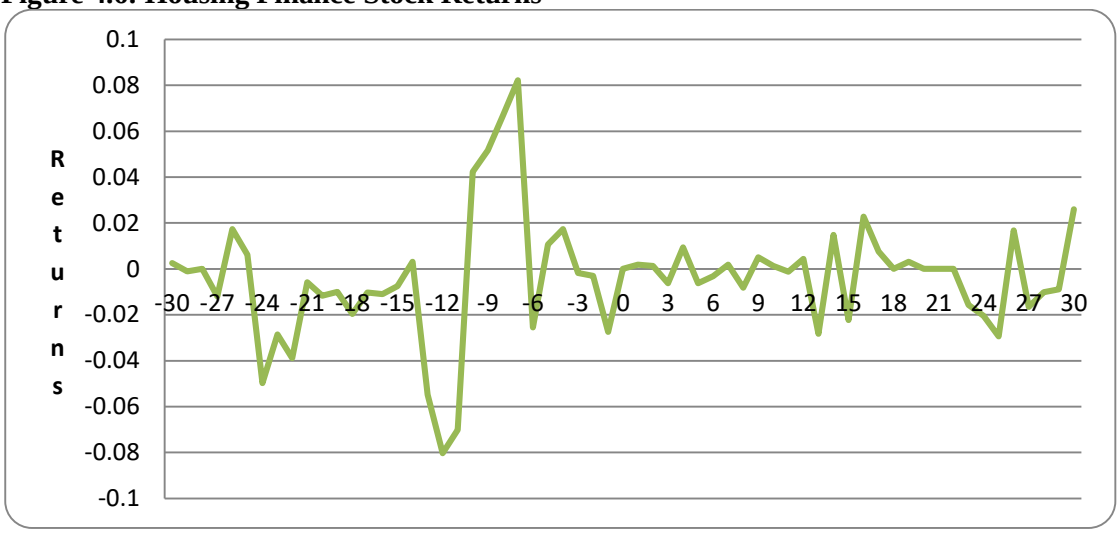
Source: Research Findings (2018)

4.2.6 Housing Finance Stock Returns

The results for the behaviour of Housing Finance share prices are as shown in figure 4.6 below.

Housing finance reacted positively to the interest rate capping announcement event. The average returns increased from an average of -0.004901338 before the event to an average of -0.001118803 after the event. The lowest stock return of -0.0802631 were recorded days the event while the highest stock return of 0.082236 was recorded on the 7th day before the event day.

Figure 4.6: Housing Finance Stock Returns

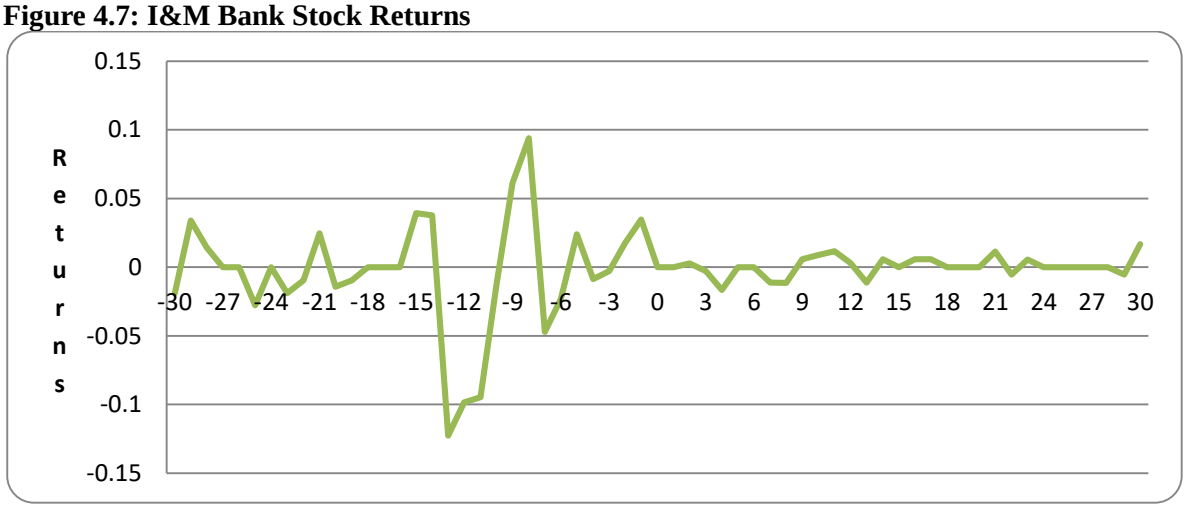


Source: Research Findings (2018)

4.2.7 I&M Bank Stock Returns

The results for the behaviour of I&M Bank share prices to interest arte capping are as shown in figure 4.7 below.

Figure 4.7: I&M Bank Stock Returns



Source: Research Findings (2018)

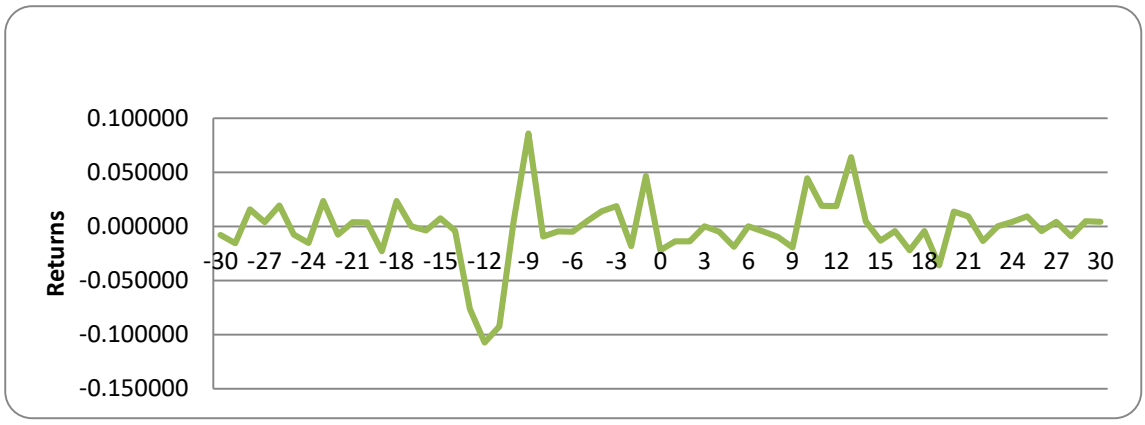
During the pre-event period, the average stock returns of I&M Bank were -0.004265546 while after the event, the average stock return were 0.000975375. This indicates that there was an increase in stock returns by 0.005240922 implying that the

reaction of I&M Bank stock returns was positive. The rate highest of 0.093939 was recorded on 8 days before the event while the lowest rate of -0.1227272 13 days before the interest rate capping event.

4.2.8 Kenya Commercial Bank Limited Stock Returns

The reaction of Kenya Commercial Bank Limited stock returns following interest rate capping are as shown in figure 4.8 in the subsequent page below.

Figure 4.8: KCB Stock Returns



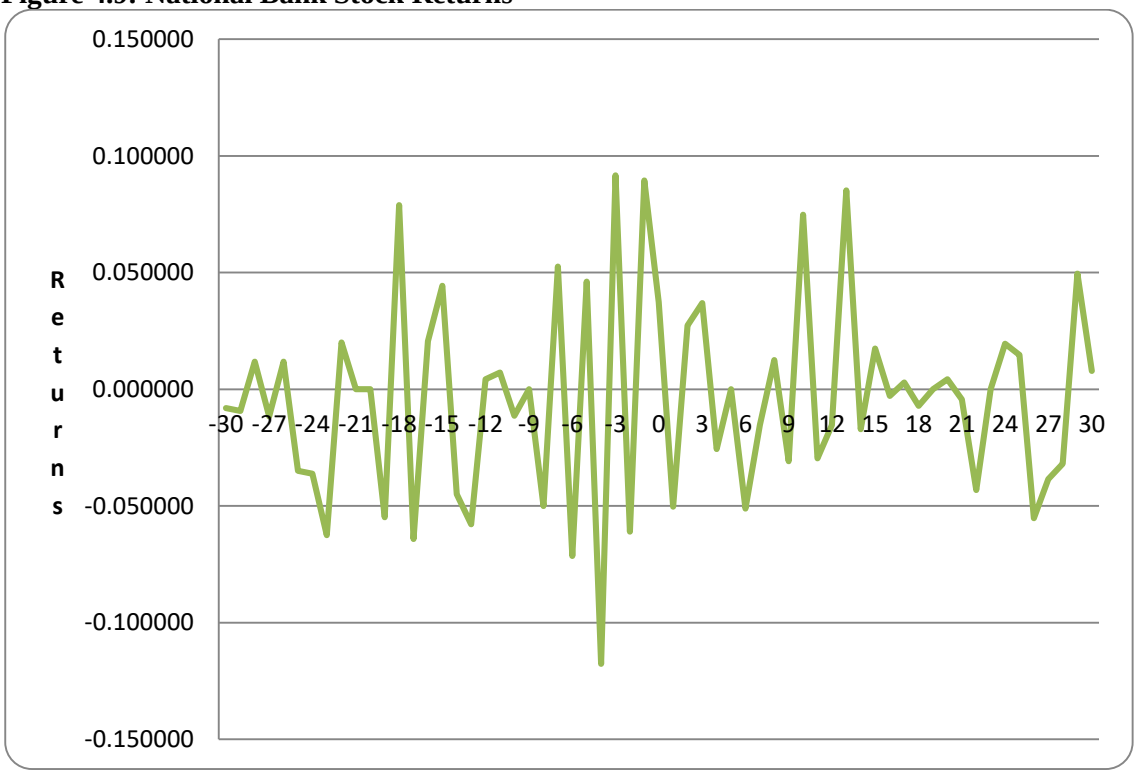
Source: Research Findings (2018)

The stock returns for Kenya Commercial Bank Limited reacted negatively to interest rate capping announcement. The 30 day average returns before the capping was 0.001707495 while the 30 day average stock return after the capping was -0.000387775. This creates a difference of -0.002095271 indicating a negative reaction due to the interest rate capping event. The lowest stock return of -0.10744 was recorded 12 days before the event while the highest stock return of 0.086074 was recorded 9 days after the event. However, the reaction of Kenya Commercial Bank Limited to interest rate capping announcement was not sharp.

4.2.9 National Bank Stock Returns

The behaviour of National Bank stock returns to interest rate capping are as shown in figure 4.9 below.

Figure 4.9: National Bank Stock Returns



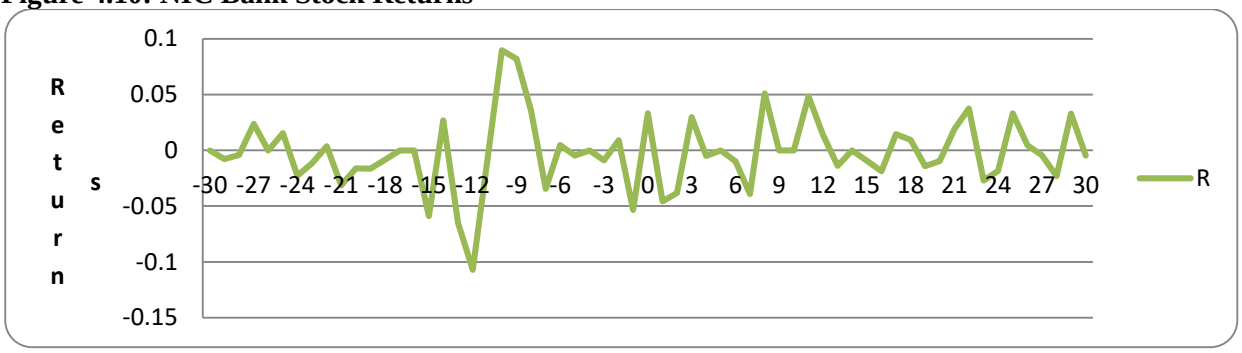
Source: Research Findings (2018)

National Bank stock returns also reacted very erratically to the interest rate capping announcement event. This shows that the share prices of National Bank were very sensitive to the event of interest rate capping. Overall, the reaction was positive as evidenced by an improvement from an average of -0.006252235 30 days before the event to an average of -0.002436387 after the event. The lowest stock return of -0.117647 was recorded 4 days before the event while the highest stock return of 0.091667 was recorded 3 days before the event.

4.2.10 NIC Bank Stock Returns

The reaction of NIC Bank stock returns following interest rate capping are as shown in figure 4.10 below.

Figure 4.10: NIC Bank Stock Returns



Source: Research Findings (2018)

The stock returns of NIC bank reacted positively to the interest rate capping announcement. The average returns increased from -0.003206337 before the capping announcement event to an average of 0.001969636 after the interest rate capping announcement event. The lowest stock return for NIC Bank was recorded 12 days before the event and stood at -0.10714 while the highest stock return of 0.089684 was recorded 10 days before the event.

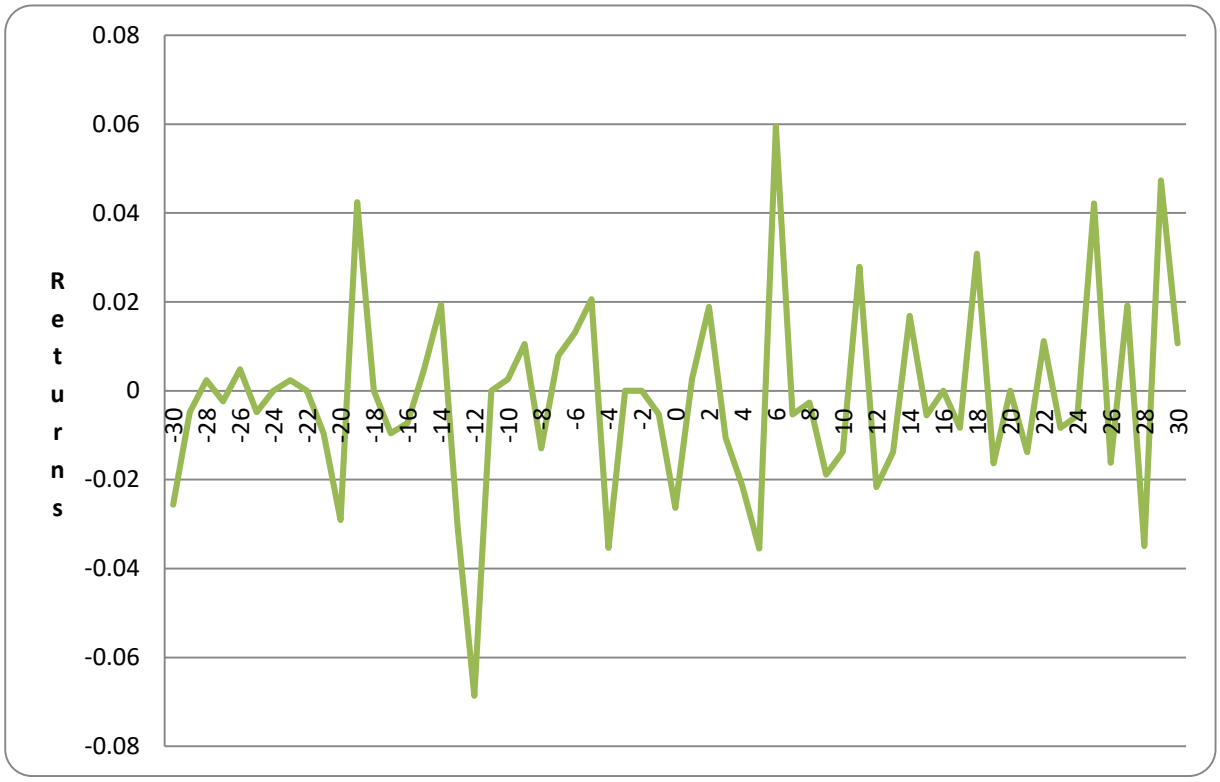
4.2.11 Standard Chartered Bank Stock Returns

The results for the behaviour of Standard Chartered Bank share prices before and after the interest rate capping announcement event are as shown in Figure 4.11 contained in the subsequent page.

The results of the study indicated that Standard Chartered Bank stock returns were significantly sensitive to the interest rate capping announcement. This is evidenced by

the erratic reaction of the stock returns. Overall, Standard Chartered Bank reacted positively to the capping by increasing slightly from an average of -0.00527861 before the event to an average of -0.000202429 after the event. The lowest stock return of -0.068627 was recorded 12 days before the event while the highest stock return of 0.059449 was recorded 6 days after the event.

Figure 4.11: Standard Chartered Bank Stock Returns



Source: Research Findings (2018)

4.3 Abnormality of Stock Returns following the Interest Rate Capping Announcement

In order to establish the abnormal returns of the listed commercial banks in Kenya, the difference between the firms' actual stock returns and expected returns were

computed. The summary of the abnormal returns are as shown in Table 4.4 together with their level of significance.

Table 4.1: Abnormality of Stock Returns following Interest Rate Capping Announcement

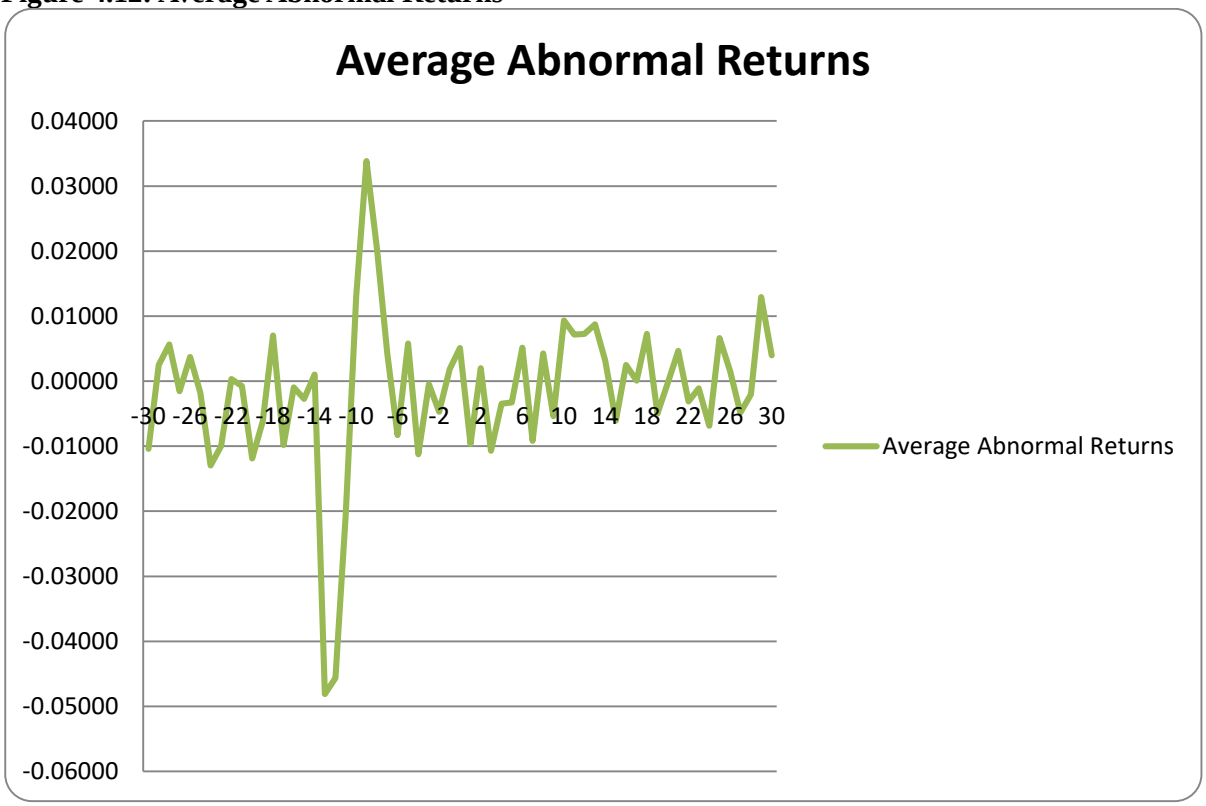
	Average Abnormal returns	STDEV	t-test	Sig
Barclays Bank Limited	-0.0033	0.018	-1.4201	0.8545
CFC Bank Limited	-0.0021	0.019	-0.8561	0.9120
Co-operative Bank Limited	0.0022	0.025	0.6816	0.9299
Diamond Trust Bank Limited	0.0004	0.028	0.1107	0.9886
Equity Bank Limited	-0.0025	0.026	-0.7448	0.9234
Housing Finance Limited	-0.0029	0.027	-0.8320	0.9145
I&M Bank Limited	-0.0016	0.033	-0.3756	0.9613
Kenya Commercial Bank	0.0116	0.011	1.1685	0.2916
National Bank Limited	-0.0037	0.043	-0.6665	0.9314
NIC Bank Limited	0.0000	0.030	0.0000	1.0000
Standard Chartered	-0.0031	0.022	-1.0915	0.8879

Source: Research Findings (2018)

The study found out 7 commercial banks recorded negative abnormal returns while 4 commercial banks recorded positive abnormal returns in reaction to the interest rate capping law announcement. “However, none of the abnormal returns were found to be statistically significant as evidenced by the p-values which were all greater than 0.05. The commercial banks that recorded positive abnormal returns were Kenya Commercial Bank, Co-operative Bank Limited, Diamond Trust Bank Limited and NIC Bank Limited. The ones that had negative abnormal returns were Equity Bank Limited, Barclays Bank Limited, Diamond Trust Bank Limited, National Bank Limited, CFC Bank Limited and I&M Bank Limited. Further, none of the abnormal returns recorded were greater than 1 or less than -1 implying that none of the investors benefited or lost abnormally as a result of interest rate capping announcement”. The

trend of the abnormality after interest rate capping announcement was made on 28th July 2016 is exhibited in Figure 4.12 in the following page.

Figure 4.12: Average Abnormal Returns



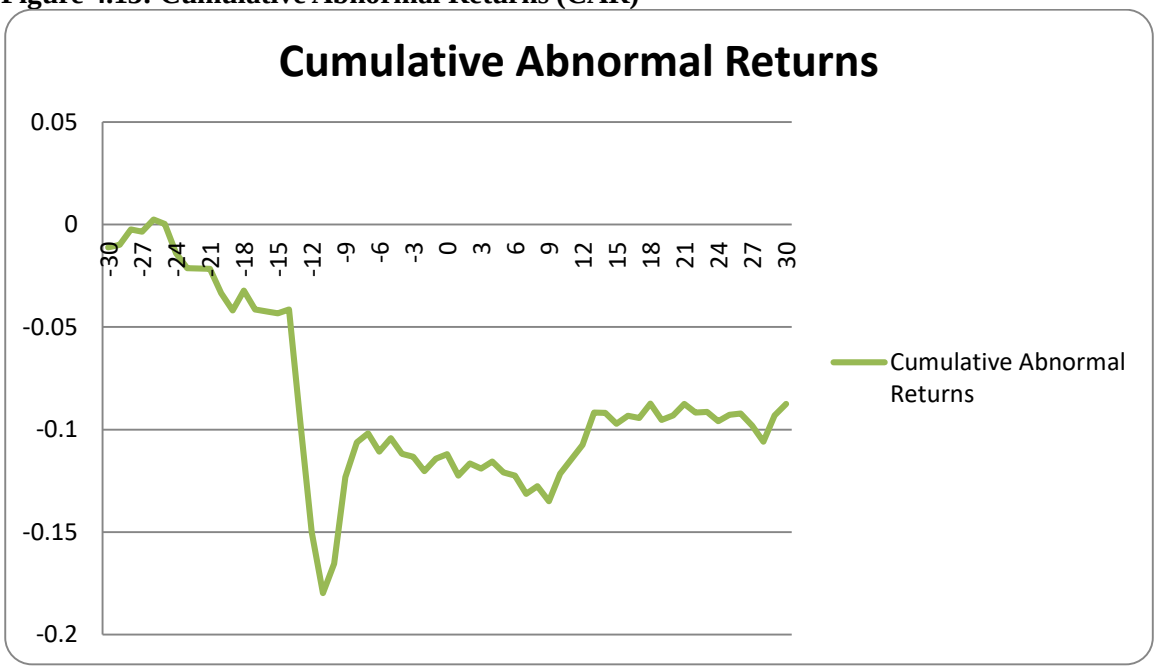
Source: Research Findings (2018)

The above figure indicates that the greatest abnormalities were recorded 13 days before the event and 9 days before the event. The lowest abnormality of -0.04810 was recorded 13 days before the event while the highest abnormality of 0.03382 was recorded on the 9th day before the event.

4.4 The Cumulative Abnormal Returns

The findings on Cumulative Average Abnormal Returns of the commercial banks listed at the NSE following the interest rate capping announcement are as shown in Figure 4.13 contained in the subsequent page.

Figure 4.13: Cumulative Abnormal Returns (CAR)



Source: Research Findings (2018)

The study found out that there was a negative Cumulative Average Abnormal Returns 30 days before interest rate capping announcement and 30 days after the interest rate capping law was announced on 28th July 2016. Throughout the event, the study recorded a steady decrease in Cumulative Average Abnormal Returns. This implies that the announcement of the interest rate capping legislation had a cumulative negative effect on the stock returns for commercial banks listed at the Nairobi Securities Exchange.

4.5 Discussion of Research Findings

The study analyzed the reaction of stock returns of 11 commercial banks listed at the NSE 30 days before the interest rate capping law was announced and 30 days after it was announced. The study discussed the abnormality of the stock returns and the cumulative abnormality. In order to establish the abnormal returns of the listed

commercial banks, the difference between the firms' actual stock returns and expected returns were computed.

The study found out that only Kenya Commercial Bank and CFC Bank reacted negatively to the announcement of the interest rate capping law. All the other banks reacted positively. Further, the study found out that seven commercial banks recorded negative abnormal returns while four commercial banks recorded positive abnormal returns in reaction to the interest rate capping law. However, none of the abnormal returns were found to be statistically significant. Further, none of the abnormal returns recorded were greater than 1 or less than -1 implying that none of the investors benefited or lost abnormally as a result of the interest rate capping announcement.

The study found out that there was a steady decrease in Cumulative Average Abnormal Returns of the commercial banks listed at the Nairobi Securities Exchange. This implies that the announcement of the interest rate capping legislation on 26th July 2016 had a cumulative negative effect on the stock returns for commercial banks listed at the Nairobi Securities Exchange. This implies that although some banks did not react negatively to the interest rate capping, the cumulative effect of the event had an adverse effect on the stock returns in the long run.

This is corroborated by existing literature. For instance, "Amarasinghe (2015) investigated the dynamic relationship existing between interest rates and stock returns in the Colombo Stock Exchange and found that interest rates had a significant effect on the stock prices and stock returns. Further, the study found that a negative relationship exists between the interest rates and the stock market returns measured

using a stock market index the ASPI. The work of Capera, Murcia, and Estrada (2011) registered a depressing relationship between preventive restrictions on interest rates as well as financial depth in 18 countries in Latin America for the period 1980–2008".

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the summary of findings, the conclusions drawn by the study, recommendations for policy change and suggestions for future research. The study then presents the major limitations of the study.

5.2 Summary of Findings

The study was an event analysis of the before and after the announcement of the Interest Rate Capping law on 28th July 2016. The study analyzed the reaction of stock returns of 11 listed commercial banks 30 days before the announcement of the law and 30 days after the announcement of the law. Analysis of the data was done with the aid of Microsoft's Excel (2013). T-test was carried out to establish the significance of interest rate capping announcement on stock returns.

The study found out that only 18.18% of the listed banks (Kenya Commercial Bank and CFC Bank) reacted negatively to the interest rate capping. All the other banks (81.82%) reacted positively. The study further established that seven commercial banks (63.64%) recorded negative abnormal returns while four commercial banks (36.36%) recorded positive abnormal returns in reaction to the announcement of the interest rate capping law. However, none of the abnormal returns were found to be statistically significant. Further, none of the abnormal returns recorded were greater than 1 or less than -1 implying that none of the investors benefited or lost abnormally as a result of interest rate capping announcement.

The commercial banks that recorded positive abnormal returns were Kenya Commercial Bank, Co-operative Bank Limited, Diamond Trust Bank Limited and NIC Bank Limited. The other quoted commercial banks recorded negative abnormal returns.

The "study found out that there was a steady decrease in Cumulative Average Abnormal Returns of the commercial banks listed at the Nairobi Securities Exchange. This implies that the announcement of the interest rate capping legislation on 28th July 2016 had a cumulative negative effect on the stock returns for commercial banks listed at the Nairobi Securities Exchange". This implies that although some banks did not react negatively to the interest rate capping announcement, the cumulative effect of the event had an adverse effect on the stock returns in the long run.

5.3 Conclusion

The study concludes that the interest rate capping announcement had a cumulative negative effect on the stock returns for commercial banks listed at the Nairobi Securities Exchange. This implies that although some banks did not react negatively to the interest rate capping announcement, the cumulative effect of the event had an adverse effect on the stock returns in the long run. Further, none of the abnormal returns recorded were greater than 1 or less than -1 implying that none of the investors benefited or lost abnormally as a result of the interest rate capping announcement.

5.4 Recommendations

The study found out that the interest rate capping announcement had a cumulative negative effect on the stock returns for commercial banks listed at the Nairobi Securities Exchange. The study therefore recommends that Central Bank of Kenya should reconsider and repeal the interest rate capping law, as this is detrimental to the performance of commercial banks.

The Central bank of Kenya should liaise with commercial banks to unsure that the even if the interest rate capping law is abolished, the commercial banks does not exploit borrowers by charging exorbitant interest rates.

5.5 Limitation of the Study

The study was entirely dependent on secondary data. As a result, the researcher did not have control over the accuracy the data provided. This is however a general problem when dealing with secondary data. The researcher tackled the challenge by purchasing the data from NSE licensed vendors.

The researcher further found it rather difficult to get data from the Nairobi Securities Exchange since the event happened a while ago and the data was not readily available on the website. This implied the researcher had to purchase it from authorized vendors.

Due to time and cost limitations, the scope of the study was limited to investigating the effect of interest rate capping 30 days before and 30 days after. Thus, it has not been determined if the result findings would hold for a longer time period.

The data obtained for the study could also not be used in its raw form, for instance the stock prices and stock indices, and further calculations and manipulations of the data was required. Thus, delays were imminent as data was to be edited and processed further before the researcher could be able to compile and analyse it.

The model used to find the expected returns is not empirically tested, thus there might be lack of credibility of the values of the expected returns and abnormal returns obtained in the study. The use of more empirically tested models such as the Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Model (APT) could shore up the credibility of the findings.

5.6 Suggestions for Further Research

This study narrowed its scope to a 61 day event window 30 days before the interest rate capping law announcement and 30 days after the announcement. This is a short period of time for the study to establish the actual long run effect of the interest rate capping law. In future, researchers should consider longer periods of time in order to establish both the short term and the long term effects.

Further, the study was conducted on the assumption that no other major corporate or non-corporate events took place during the event window to influence abnormal reaction of the commercial banks share prices. In future, another study should be carried out to establish if there were any other events that may have affected the conclusion of this study.

Secondary data was solely utilized in the study; alternative research can be employed using primary sources of data like in-depth questionnaires and structured interviews to be administered to all the stock market participants. These can then approve or disapprove the current study findings.

Event study method of analysis was used in this research. Further research can incorporate other analysis methods like non-parametric tests, factor analysis, cluster analysis and discriminant analysis. Also, other models can be used to obtain expected returns.

This study focused on the effect of interest rate capping announcement on stock returns of commercial banks listed at the NSE. Due to the nature of the study, this study could only focus on listed banks. The researcher recommends that future studies should be conducted on effect on interest rate capping announcement on variables such as financial performance and profitability so that all the banks operating in Kenya can be taken into account.

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APPENDICES

Appendix 1: Commercial Banks Listed at the NSE

1. Barclays Bank Ltd
2. Diamond Trust Bank Kenya Ltd
3. Equity Group Holdings
4. HF Group Ltd
5. I&M Holdings Ltd
6. KCB Group Ltd
7. National Bank of Kenya Ltd
8. NIC Group PLC
9. Stanbic Holdings Plc.
10. Standard Chartered Bank Ltd
11. The Co-operative Bank of Kenya Ltd