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

BY

MERCY WANGARI KIMUNGE

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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.

Signed: _____Date: _____

MERCY WANGARI KIMUNGE

D63/79059/2015

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

Signed: _____Date: _____

DR. WINNIE NYAMUTE

Lecturer, Department of Finance and Accounting

School of Business, University of Nairobi

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DEDICATION

I dedicate this work to my entire family, all my lecturers and my classmates for their support, encouragement and patience during the entire period of my study and their continued prayers towards successful completion of the course study.

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LIST OF ABBREVIATIONS

APT	Arbitrage Pricing Theory
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
EMH	Efficient Market Hypothesis
EPS	Earnings Per Share
GDP	Gross Domestic Product
GNP	Gross National Product
KCB	Kenya Commercial Bank
NGOs	Non-Governmental Organization
NSE	Nairobi Securities Exchange
RWH	Random Walk Hypothesis
SPSS	Statistical Package for Social Sciences
SCAR	Standardized Cumulative Abnormal Returns

ABSTRACT

The study sought to find out the consequence of interest rate capping 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 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. 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 arte capping. 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. 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. These implies that the coming into law of the interest rate capping legislation on 14th September 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 didn't 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. The study found out that interest rate capping 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 as this is detrimental to the performance of commercial banks. The Central bank of Kenya should lias 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. The study was entirely dependent on secondary data. As a result, the researcher didn't 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 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.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The behavior of stock prices and stock returns has been a central area of study over the years. Investors are keen on this behavior as it gives them information that enables them to make decisions on which shares to buy, hold or sell in order to maximize their returns (Fama, 1965). Security traders use this information for speculative purposes; the degree of speculation depends on how efficient the market is. Security markets are tremendously effective in reproducing information about stocks. Rate of Interest is one of crucial macroeconomic variables that are believed to affect stock returns, which is more associated with the growth of economy (Alam & Uddin, 2009). Since the interest capping affects prices of all commodities, it is clear that the same have an effect on the economy (Adjasi, 2007).

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 (Lumby & Jones, 2015). 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.

In Kenya, the issue of interest rate capping has been introduced severally with different outcomes. In 2000, the Donde Bill tried to speak to the issue of interest rates but did not get greatly maintain from stakeholders including banks. In 2015 however, there were fresh attempts to cap bank interest rates through a proposal made to Parliament and the bill was finally assented by President Uhuru Kenyatta on the 24th August 2016. The Bill sought to amend section 33A of the Banking Act by coming up with (section 33B) which grant for interest upper limit, giving a caution to the borrowers to be aware of the interest they receive on their deposits and repercussions to all financial institutions that carry out the function of lending on providing interest rates higher than those set by the law. 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.

1.1.1 Interest Rate Capping

According to Villegas (1982), an interest rate cap refers to a ceiling placed on interest rates. It dictates the maximum rate that a bank can charge its customers on loans. Interest rate capping is a form of government control in 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 issues of transparency, limited disclosure need as well as low financial knowledge (Miller, 2013).

According to Miller (2013), there are several reasons why governments may opt to use interest rate caps, most of which are political and economic. One of them could be to support an industry or sector where there is a market failure or in areas where a greater financial resource is needed. Market failures usually result from market information asymmetries, moral hazards, adverse selections or the inability of financial institutions to differentiate between high risk and low risk clients. Interest rate caps are a useful tool to support a sector until it's able to sustain itself.

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

Stock return is the gain or loss of the value of a share in a specific period usually quoted as a percentage. It consists of capital gains as well as any income received by

the investor from the stock (Mugambi & Okech, 2016). Mun, Siong and Thing (2008) described stock market return as a measurement used to quantify profits from an investment during a period of ownership of stocks. It can either be capital gains or dividends earned by the investors in the stock market. Jordan and Fischer (2002) defined the stock return as the driving force and the main reward in the investment process. Investors use it to compare the alternative investments options that the can undertake. They continued to define that a return has two components being the basic component of periodic cash receipts on investments or dividends and change in the price of the asset invested, that is, capital gain or loss.

Stock returns indicate the effectiveness and efficiency the market and shares of equity allocation to investors as well as availability of market information (Taofik & Omosola, 2013). When the output of the stock is high, it means that there is a better productivity that translates a higher growth rate of every firm in this business and vice versa (Aliyu, 2011). Consequently, doubt of output from stock market, helps aggregating economy as an unstable development tendency in an economy hence hard to invest and consume (Erdugan, 2012).

The commonly used measure of stock performance is the Stock market indexing. This measure of stock market performance can be market size, stock liquidity, and the capability of investors to buy and sell securities at ease. The others can be All Share Index; which imitate market conditions as well as its stability, turnover ratio, and market liquidity reflects the performance and the condition of the stock market, as well as degree of the cost of production (Daferighe & Sunday, 2012). In Kenya, stock returns are normally calculated by NSE 20 share index since the index is usually the benchmark in measuring stock market performance.

1.1.3 Interest Rate Capping and Stock Returns

According to the Efficient Market Hypothesis (EMH) as established by Fama in 1965, the prices of securities fully reflect available information. Financial assets are continuously traded in liquid wholesale markets with low transaction costs, where prices reflect market perceptions almost instantaneously thus investors buying securities in an efficient market should expect to obtain an equilibrium rate of return. General EMH theory however insists that there ought to be an efficient market in which stock prices reflect all available information, and if there is no price perversion, stock prices are to reflect company's productivity such as economic fundamentals in macroeconomics.

In an efficient market, there are many rational investors whose aim is to maximize profits. If prices of stocks adjust immediately averagely minus a bias to new information the markets are efficient, therefore the security's price were a reasonable approximation of its intrinsic value and thus no abnormal returns. Amarasinghe (2015) investigated the dynamic relationship existing between interest rates and stock returns in the Colombo Stock Exchange. He 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. 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. This research concentrated on the impact of interest controls on financial depth. The current study focus on the impact of restrictions on stock returns.

Aggrawal (2010) clearly pointed out this relationship in the examination of consequence of interest rates on the performance of stock markets. In the study, Aggrawal (2010) noted that there was a significant effect on securities price as a result of changes in the interest rates. Prices of individual stocks changed while overall stock market performance measured using a market index changed with a change in the interest rates. High interest rates in the market lead to a decline in the prices of stocks and overall returns of the stocks.

1.1.4 Commercial Banks in Kenya

According to CBK's directory, there are forty-three commercial banks in the country some of which are internationally based. The headquarters of these banks are in Nairobi and they serve both retail and corporate customers. The banks in the country perform the following function: creation of money, community savings, ensure smooth support of payment mechanisms, ensure smooth flow of international transactions, storage of valuable goods and provision of credit services. The Central Banks of Kenya falls under Treasury docket, is accountable for the formulation and execution of monetary policy and foster of liquidity and proper operations of Kenyan

commercial banks. This policy formulation and implementation also include commercial banks financial risk management and financial performance (Central bank of Kenya, 2015). Out of the 43 banks, 31 are owned by locals and 13 by foreigners while 11 are listed on the Nairobi Securities Exchange (CBK, 2017).

The Kenyan banking sector has undergone many regulatory and financial reforms in the past. Such reforms have brought in some important changes to the banking sector as well as inspiring foreign banks to enter the Kenyan market (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 was assented into law in Kenya on 24th August 2016 and this led to 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 implementation of this capping, there was a significant fall in share charges 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 passed, 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 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. The supporters argue the capping of interest rates helps in protecting the public interest through fair charges on borrowings. that, Proponents argue that the introduction of interest rate ceilings give the small income earners an opportunity to access loan s as well as a protection from exploitation by lenders (OFT 2010). According to an added justification, since prices charged for credit can be random and anticompetitive and thus be higher compared to the actual interest rate, the capping of interest rates still give a room for firms to function (Bernanke & Kuttner, 2005). On a different note, rivals disputed that a few probable profit of financial liberalization are connected to possible gains in terms of effectiveness in the allocation of savings assets. In this context, Galindo, Schiantarelli, and Weiss's study (2007) of firms in 12 developing countries concluded that monetary liberalization such as reduction of credit reins had enhanced the effectiveness of savings in the number of cases.

In Kenya, Interest rate capping was assented into law in Kenya on 24th August 2016 and this led to 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 implementation 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 supplies led the turn down as their divide prices dropped 11 percent. The stocks that comprise of Diamond Trust Bank, Kenya Commercial Bank (KCB) and Cooperative Bank, which dropped from the investigative 20 share index, were on a open drop as fears over the interest law extend at the bourse (Aligonby, 2016).

Empirical evidence is largely inconsistent and quite varied on the manipulation of interest rate capping on stock market returns. In addition, majority of the studies conducted have addressed interest rates in general and not interest rate capping. 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. Adjasi and Biekpe (2006) examined the correlation between interest rates and stock market returns for seven African states and noted that there are long run relationships between these variables. Kasman, Vardar & Tunc (2011) found that there exists a negative relationship between the levels of interest rates, stock market prices and returns. 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. Humpe and Macmillian (2007) examined the correlation involving interest rates and stock prices using stocks listed in the USA and found that there exists a pessimistic relationship involving interest rates and stock market prices.

Locally, Ouma and Muriu (2014) assessed the effect of macroeconomic variables on stock outputs and established that interest rates are not important in determination of returns in long run at NSE. Kibet (2011) found out that there is a bidirectional causal relationship between exchange rate and share price that is negative causality exists in both directions. Nyamute (1998) researched on the relationship between stock prices and several variables, that is, interest rates, inflation rates, money supply, and exchange rates in Kenya; her conclusion was that there is a positive correlation between stock prices and interest rates. Chirchir (2012) examined how changes in interest rates influenced stock prices in Kenya and established a no significant causal relation between rate of interest and stock price. Muriuki (2014) found a positive important connection involving interest rates and stock market prices using nominal

interest rates and therefore contradicted findings by Chirchir. The lack of consensus among the various scholars on the effect of interest rates on stock market returns is reason enough to conduct further examination on the area of study. In addition, most of the studies conducted in Kenya have concentrated on the correlation between interest rates and stock prices and not interest rate capping on stock returns. This paper seek to identify how interest rate capping influence stock returns of listed banks at the NSE using an event study methodology. It attempt to give an explanation to the research question, what is the effect of interest rate capping on stock returns of listed commercial banks at the NSE?

1.3 Objective of the Study

To found out the consequence of interest rate capping on stock returns of commercial banks quoted 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 contribute to the advancement of monetary development and improvement the economy.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the hypothetical structure applied in the study and reviews previous studies done on interest rate capping and stock returns. It contains the theoretical review, determinants of stock returns, empirical review, conceptual framework and summary of literature review.

2.2 Theoretical Framework

This presents review of the relevant theories that explains the affiliation involving interest rate and stock market returns. The theoretical reviews covered are; Efficient Market Hypothesis, Arbitrage Pricing Theory and Rational Expectations Theory.

2.2.1 Efficient Market Hypothesis

The Efficient Market Hypothesis (EMH) as developed by Fama (1965) postulates that at any given time, stock prices of an efficient market reflect all the available information. The implication of this hypothesis is that no investors can "beat the market" and gain abnormal profits given that stocks are traded at their intrinsic value. Therefore, investors wanting higher returns can only do so by making riskier investment decisions as opposed to market timing and stock selection. This hypothesis assumes that traders are rational and that stock prices change quickly to assimilate any new information. Later in 1965, Fama affirmed the Random Walk Hypothesis (RWH), which is consistent with the EMH. RWH holds that stock prices are independent of each other and follow a random pattern, and cannot therefore be forecasted using previous market data.

Fama (1965) classified EMH into three basic levels. These levels of market effectiveness are sturdy form efficiency, Semi-strong form efficiency, and Weak-form efficiency. In Strong-form, stock value imitate all available information, both private and public; in Semi-strong form, stock prices reflect only openly accessible information; whereas, in Weak-form efficiency, stock prices reflect all relevant historical data available. Despite all these, stock markets often exhibit certain patterns that could lead to abnormal returns; these are referred to as market anomalies, for example, the January effect, neglected firms effect, day-of-the-week effect, small firms effect, among others.

Despite the EMH being the backbone of financial markets, it has a fair share of critics. The main point of contention being that the EMH assumes that investors are rational in their dealings, they have access to all available information and that their market expectations are homogenous. These assumptions beat the point of trading after all given that trade signals existence of heterogeneous expectations. While the seller expects a dip, the buyer anticipates a rise in the stock price, and hence bears and bulls. Also, it is not practical for all market participants to have the same information; if it were so, there would be no need for communication. Likewise, behavioural economists do not agree with the notion of rational investors, it purports irrational exuberance (Shostak, 1997). This theory is related to the study in that if the markets are efficient, then interest rate capping effect would be reflected in stock prices immediately.

2.2.2 Arbitrage Pricing Theory (APT)

APT was introduced by Ross (1976). The theory presumes that stock returns are influenced by some economic variables through their effect on discount rates and

future dividends (Shrestha & Subedi, 2015). APT correlates with market portfolio concept, according to arbitrage theory individuals have different portfolio of investments with their specific systematic risk. APT is a multifactor model and most of the empirical literature argues that APT proposes better results comparatively to CAPM, because it uses multiple factors for explaining shared and systematic risk (Waqar & Mustabsar, 2015). The theory established a theoretical framework that links share returns with some variables that have the potential to influence sources of income volatility (Shrestha & Subedi, 2015). Arbitrage Pricing theory (APT) uses macro-economic variables to predict stock returns and the theory assumes that various macro-economic variables can actually affect stock returns other than systematic risk beta (Waqar & Mustabsar, 2015).

Some of the macro-economic indicators that influence stock market prices include: the gross national product (GNP), the inflationary rates, the investor confidence levels, changes in the interest yield curve and expected returns on securities (Amarasignhe, 2015). Based on this linear relationship between the macro-economic variables and equity prices, it can be deduced that interest rates as a macroeconomic variable has an influence on the value of securities. Consequently, the value of the asset or security can be described as the total of the expected return and any unexpected returns on the asset (Cuthbertson, 2004). This theory is related to this study as it recognizes the influence of macro-economic variables in security asset pricing.

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 are ineffectual in influencing stock market prices and performance.

2.3 Determinants of Stock Returns

Stock market returns has 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

The securities markets are affected profoundly by rumors and news. The news can affect the sentiments and prospect of the investors and performance of corporations as people construe news differently depending on their own cognitive power. The enterprise particular factors that may influence the share price include: change of management; earnings news releases, profits and future projected earnings; declaration of dividends; introduction of new products; obtaining a new large contract; accounting errors or scandals; employee layoffs; and expected takeover or merger (Alanyali, Moat & Preis, 2013).

Certain enterprises are exposed more to own-industry specific circumstances as opposed to the wide conditions of the economy thus investors monitor price movements of the industry‘s products, entry into the industry and industry sales forecasts. An improvement in dividends may signify the prospect that the company can certainly afford to pay more dividends. The declaration of less than anticipated incomes can lead to investors trimming their company‘s valuation of stock and flows. The diversities are often considered as an encouraging indicator about a company if the stripped assets isolated from the company‘s core business. This naturally leads to an enhanced stock demand and as a result increases stock prices (Mayo, 2016).

2.3.2 Events outside the Company

Stock returns can also be affected by factors outside the control of management. Some of these factors include;

2.3.2.1 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, won the 2002 Nobel Memorial Prize in Economics. 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).

2.3.2.2 Industry Performance

The profitability and success of the industry or sector in which the company operates has a significant part to play in influencing the company‘s stock price. Typically,

stock prices for firms in the same sector fluctuate in tandem. Investors usually evaluate a firm owing to its earnings per share (EPS), future earning prospect and revenue. The reason for this being that conditions of the market mainly affect companies in the same industry in a similar way. Nevertheless, the firm‘s stock price may at times gain from bad news in its rival if the two firms are targeting the same market (Madura, 2010).

The market share gains and losses can lead to substantial effects on a company‘s stock performance, depending on the economic sector‘s conditions. Market share is primarily a sector‘s total sales percentage that the firm earns. Market share shifts have a larger effect on company performance in cyclic industries with low growth. Corporation‘s securities tend to track with the market and with their industry peers or sector (Acheampong, Agalega & Shibu, 2014). According to Mayo (2016) the mixture of general sector and market movements compared to a firm‘s performance individually predicts most of a stock price changes.

2.3.2.3 Interest Rates

The interest rate is considered the outlay of funds and an increase or a decrease in interest rate could influence the savings choice of the financiers (Olweny & Omondi, 2010). Accordingly, Rehman, Sidek and Fauziah (2009), 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 According to Barnor (2014), unexpected change in interest rate influences investing decisions, thus investors make changes in their savings arrangement, generally from capital market to fixed profits securities.

2.3.2.4 Exchange Rates

Investors choose to buy one currency, because they believe it is going to appreciate in value against other currencies. Once an economy is likely to pull back, its exchange intends to reduce. In the European debt crisis of 2010, as definite countries in the European Union were faced with perils of evade on their borrowing, the development of the European financial system was in problem. This made the Euro to drop to new lows, as financiers required acquiring other notes (Johnson, 2010). Dwivedi (2002) blames the foreign exchange volatility on high level of technology among industrialized nations. He says they produce more than what the nations can consume. Following these changes, a number of these foreigners increase their exports, leading to an increase in the supply of foreign currencies, hence drop of the local currency and results to expensive exports and low value.

Currencies of developing countries are perceived to be very risky. This makes the investors from other walks of the world to have fear of high risk when it comes to investment. A departure to safety occurs, when investors refuse to invest due to fear of high risk hence only wish to hold safe savings, or "safe havens" such as: the U.S. dollar and gold. These savings are perceived to be the slightest perilous of all obtainable savings.

2.3.2.5 Inflation Rates

Tucker (2007) in his works defines inflation as the overall rise in the standard price level of services or goods in any given economy. Inflation is referred to as an overall rise in the average 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 as a result of the increase in demand of goods or the form of cost push inflation. Demand-pull inflation

arises as a result of 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 as a result of the increase 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.

2.3.2.6 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). Tobin (1969) found a clear relationship of movement between the monetary policy and the stock market. The study laid emphasis on the importance of stock returns as a connection amongst the economic results. The study established a clear link in the economy and the stock returns. He also demonstrated that growth in money supply led to deficits in budgets that eventually affected stock returns.

2.4 Empirical Review

There are numerous empirical studies both locally and internationally to support the relationship between interest rates and stock returns, but these studies have produced mixed results. In addition, most of the studies conducted in this area have not evaluated the impact of interest rate capping on stock returns.

2.4.1 Global Studies

Zinman (2008) examine impacts of the capping of interest rates on payday loans in the region. He finds that payday credit access is strongly reduced in Oregon, compared to Washington State. Also 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. He emphasizes that, as an outcome, probable payday borrowers gradually more turn to suboptimal substitutes, such as paying bills late or overdrafts on the checking account. This study focused on payday loans without taking into account the effect of the cap on stock returns of the firms.

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. This research concentrated on the impact of interest controls on financial depth. The current study focus on the impact of restrictions on stock returns.

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. This study was used a longitudinal research design while the current study determine effect of interest rate capping on stock returns using an event study methodology.

A study by 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. The study used regression to arrive at the results while the currents study apply the market model.

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. In addition, the study used a descriptive research design while the current study is applying an event study methodology.

2.5.2 Local Studies

Chirchir (2012) studied the correlation involving share prices and interest rates in Kenya. The research used Toda and Yamamoto (1995), method to decide the correlation between the stock prices and interest rates. Base on this literature review, the key variables being applied were interest rates declared as the monthly weighted average lending rate by commercial banks in Kenya and the NSE share index. The data used was from the NSE stock index values for the periods between October 2002 and September 2012. The current interest rates for October 2002 period and September 2012 were chosen for the study. He observed that no considerable fundamental correlation between the interest rate and share prices and observed that regarding the sign, causality exists in both directions. This study utilized Toda and

Yamamoto methodology while the current study were an event study. In addition, this study concentrated on interest rates in general but not interest rate capping.

Muriuki (2014) in the analysis of macro-economic variables of inflation and interest rates on stock market returns in the Nairobi Securities Exchange utilized monthly data on interest rates for 91 day treasury bills and stock market prices. Using ordinary Least squared regression analysis to establish relationship between treasury bills rates and stock market prices, Muriuki (2014) found that interest rates and inflation rates combined contributed to a 66.9% change in the stock market prices. In addition, the study found that there was a positive relationship between interest rates and stock market prices for companies listed in the NSE. The study by Muriuki applied regression analysis while the current study apply the market model. In addition, the current study specifically concentrate on interest rate capping.

Ngugi (2014) analyzed the effects of lending rates on stock prices of the banks listed at NSE. The study carried out a census of the 10 listed commercial banks at the NSE and used multiple linear regressions to analyze data. The study findings revealed that lending interest rate has been widely varying for last 5 years, changes that have been mimicked by the commercial banks' share prices. The study findings also established that the lending interest rate inversely affects commercial banks' share prices where an increase in lending rates causes a decline in the share prices. The study recommended that the lending rate variations to be considered in solving the stock crisis arising in the NSE emanating from the commercial banks involvement in the bourse. This study focused on the effect of lending rates on stock prices while the current study focus on the causes of interest rate capping on stock output.

Kitati, Evusa and Maithya (2015) analyzed the outcomes of Macro Economic Variables on Stock Market Prices for the firms listed on the Nairobi Securities Exchange in Kenya, using the weighted average interest rates data for the months January 2008 and 22 December 2012. The study found that interest rates had a negative effect on the stock market prices. Interest rates influenced individual company shares as well as the all share index and the 20 share index in the Nairobi Securities Exchange. This study applied regression analysis to carry in data analysis while the current study apply the market model.

Laichena and Obwogi (2015) analyzed the effect of macroeconomic variables on stock returns in East Africa. The study examined the effects of interest rates, inflation rate, currency exchange rate, GDP and their impacts on stock returns in East Africa. This likely hamper company profits and the dividends available for shareholders. As a result, it would be expected that the share price may drop. The research used a panel data of 3 East African countries, Kenya, Uganda and Tanzania from 2005 to 2014. Base on the research's findings, it is clear that an important correlation exist the macroeconomic variables within the and stock returns in East Africa. The study recommended that those in charge of making laws should strive to add value to on the macroeconomic situation so as to maximize stock output. The context of this study is different from the current study that focus on commercial banks in Kenya.

Mugambi and Okech (2016) explored the impact of macroeconomic variables on stock returns of listed banks in the Nairobi Securities Exchange. The study employed secondary data from the Central Bank of Kenya for a period from 2000 to 2015. The study used correlation analysis, Unit Root test and the linear regression model to establish the relationship. The study findings revealed that interest rate, exchange rate

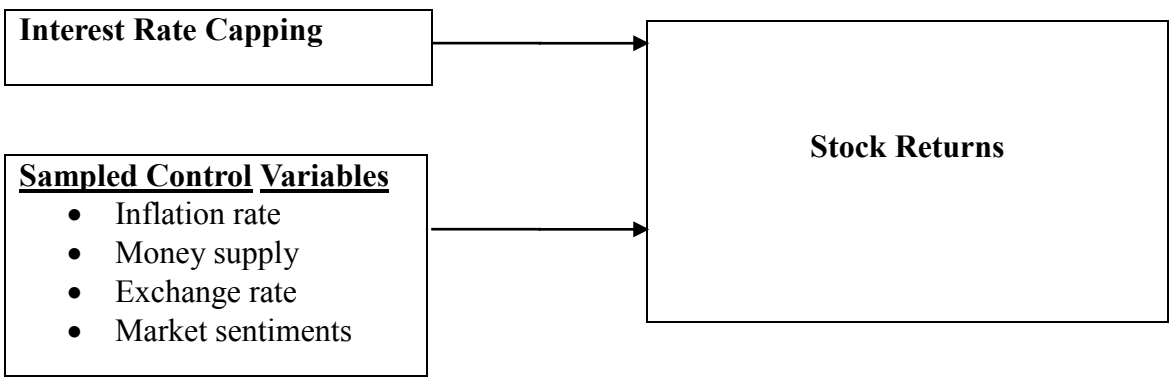
and price rises have important effects on bank stock return, whereas GDP had an irrelevant impact effect on bank supply returns. The study recommended that the government should ensure a stable macroeconomic environment and moderate its monetary policy interventions. This study applied a descriptive research design while the current study were an event study.

2.6 Conceptual Framework

According to Rehman, Sidek and Fauziah (2009), high interest charges or reduce charges would decrease the current rate of cash flows, hence raises the charges for handling cash, which later leads to a replacement upshot between supplies as well as other securities that attract interest for instance bonds. Barnor (2014) argues that from the perspective of the firm, borrowing money to finance working capital and/or for capital expenditure drive up their cost of debt. This likely hamper company profits and the dividends available for shareholders. As a result, it would be expected that the share price may drop. Higher interest rates reduce the current value of upcoming bonus revenue that should lower stock prices.

The conceptual framework gives a portrayal of how the factors identified are correlated to each other. The factors characterized here are interest rate capping and stock returns. The independent variable is interest rate capping while stock return is the dependent variable which the study seeks to explain. The control variables characterized here are inflation rate, money supply, exchange rate and market sentiments.

Figure 2.1: Conceptual Model



Source: Researcher (2017)

2.7 Summary of the Literature Review

Various theoretical frameworks have attempted to explain the concept of interest rates and stock returns. Three theories have been discussed in this theoretical review. The theories are namely: efficient market hypothesis, arbitrage pricing theory and the rational expectations theory. Some of the key determinants of stock returns have also been discussed in this section. Several empirical studies have been conducted both internationally and locally on interest rates and stock returns.

While some studies find a positive connection between interest rate and stock output, others find a negative relationship. Consequently, no consensus has yet to be achieved. In addition, most of the studies conducted in Kenya have concentrated on the relationship between interest rates and stock prices and not interest rate capping on stock returns. Kenya has recently capped its interest rates and it is important to investigate how the capping affecting investors at the NSE and especially shareholders in the banking industry. It is for this reason that this paper seek to identify how interest rate capping influence stock returns of listed banks at the NSE using an event study methodology.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains means of research to be applied to objectively establish the influence of interest rate capping on stock returns of commercial banks listed at the NSE. It also shows the population of study, research design, data collection and analysis criteria.

3.2 Research Design

The method used to carry out research is known as a research design. This study adopted 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 prices. It specifically examines what happens to the stock price, 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. When interest rate capping is analysed vis a vis a firm's stock return, the response of capital market to the event is established by assessing abnormal returns around the event day. Positive abnormal return 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 returns would be negative.

3.3 Population and Sample

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 42 commercial banks operating in Kenya as at 31st December 2016. The researcher used convenience sampling to work with a sample of the 11 commercial banks listed at the Nairobi Securities Exchange. These banks are: HF group ltd, Standard chartered bank ltd, I&M holdings ltd, National bank of Kenya ltd, NIC bank ltd, Equity group holdings, the cooperative bank of Kenya, KCB group, Diamond Trust bank Kenya ltd, CFC Stanbic bank holdings and the Barclays bank of Kenya ltd (NSE, 2017)

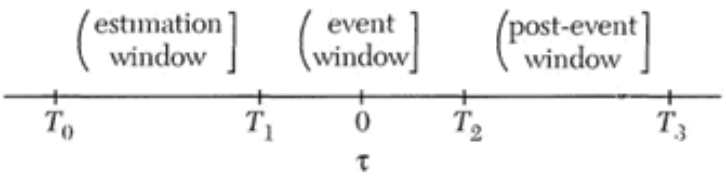
3.4 Data Collection

Data were 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 relate to stock prices 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 interest rate capping, day of cap, and 30 days after the cap).

3.5 Data Analysis

The data analysis to be used were quantitative in nature analyzed using the event study methodology. A Market Model was chosen over Capital Asset Pricing Model (CAPM), for it has a considerably better fit and it has an expected value of zero for the abnormal return. The systematically failing of CAPM to predict returns, resulting

in a non-zero expectation value for the abnormal return, make it a less useful tool (MacKinlay 1997).



The event is the interest rate capping in this case and the event day represents the day of the interest rate capping and is denoted as t=0. The event window were 61 days broken as 30 days before the event date and 30 days after the event date i.e (+30, -30) days. A period prior to the event (the estimation window) was used for the regressions, which resulted in expected values for the post event window that do not include information about the event. The estimation window for the regression used in this study covered a total 60 days of observing.

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 is to find out the effect of interest rate capping on share price movement and returns. The study used statistical methods to compute the abnormal returns (AR) from the daily data after which the results were analysed to obtain the Cumulative Abnormal Returns (CAR).

3.5.1 Measuring Daily Returns

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 Returns = (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 & Tumurkhuu (2010), Bulkley & Herrerias (2005) and Jackson & Madura (2003) indicated that the market model was the most preferred and best tool. Abnormal returns (AR) were computed using the market model to yield the CAR and SCAR.

3.5.2 Abnormal Returns

The following formula were used to calculate the abnormal returns

$ARit = Rit- (\alpha i + \beta iRmt)$

Where;

ARit = Abnormal return of stock *i* at time *t*

Rit = Return of stock at time *t*

Rmt = market return at time *t*

α and β = constants

3.5.3 Cumulative abnormal returns

The cumulative abnormal returns measure the total impact of an event over the event window period and are computed as:

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

Where;

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

The event window

3.5.4 Standardized cumulative abnormal returns

Standardized cumulative abnormal returns (SCAR) were 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

This chapter presents the results and discussion of analysis findings. The study sought to find out the consequence of interest rate capping 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 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.

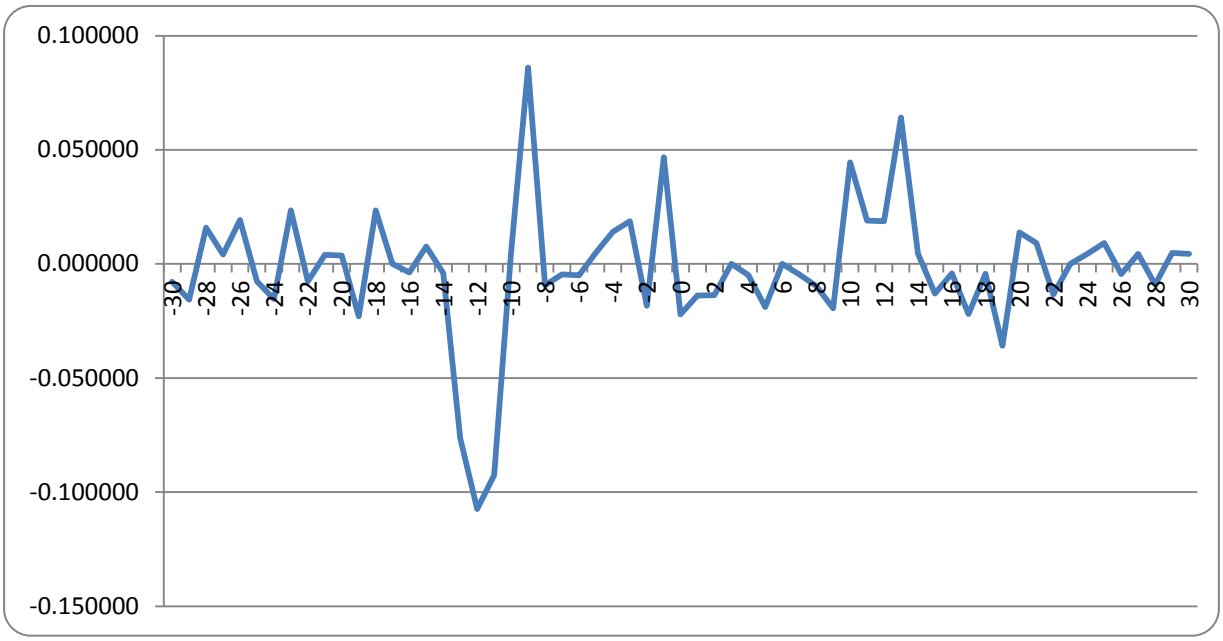
4.2 Reaction of Stock Returns to Bank Failure

The study sought to find out the consequence of interest rate capping on stock returns of commercial banks quoted at the Nairobi Securities Exchange. 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 on 14th September 2016. The section also discusses the abnormality of the stock returns and the cumulative abnormality. The detailed stock returns, abnormal returns and cumulative stock returns are as show in Appendix I.

4.2.1 Kenya Commercial Bank Limited Stock Returns

The reaction of Kenya Commercial Bank Limited stock returns following interest rate capping are as shown in figure 4.2.1.

Figure 4.2.1: KCB Stock Returns



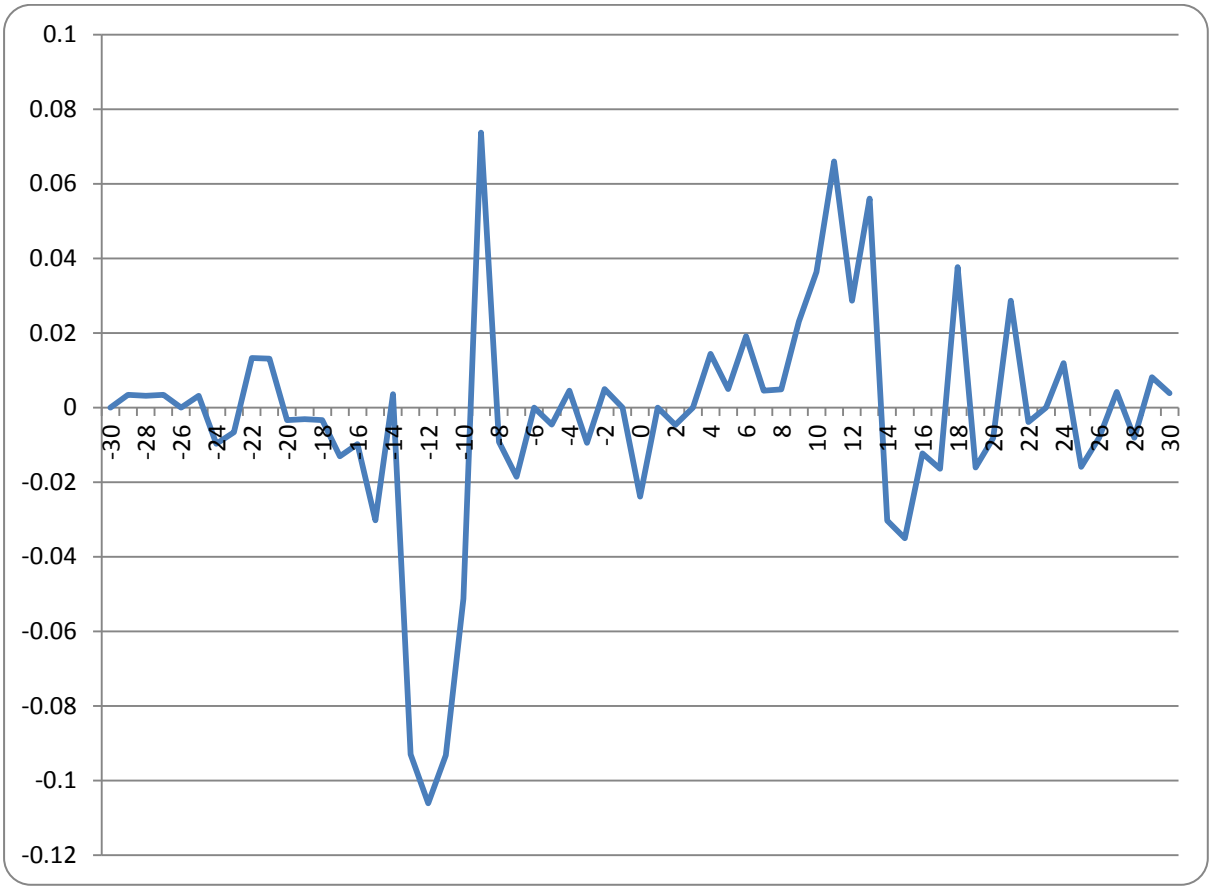
Source: Research Findings (2017)

The stock returns for Kenya Commercial Bank Limited reacted negatively to interest rate capping. 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 arte capping was not sharp.

4.2.2 Equity Bank Limited Stock Returns

The behaviour of Equity Bank Limited stock returns following interest rate capping on 14th September 2016 are as illustrated in Figure 4.2.2.

Figure 4.2.2: Equity Bank Stock Returns



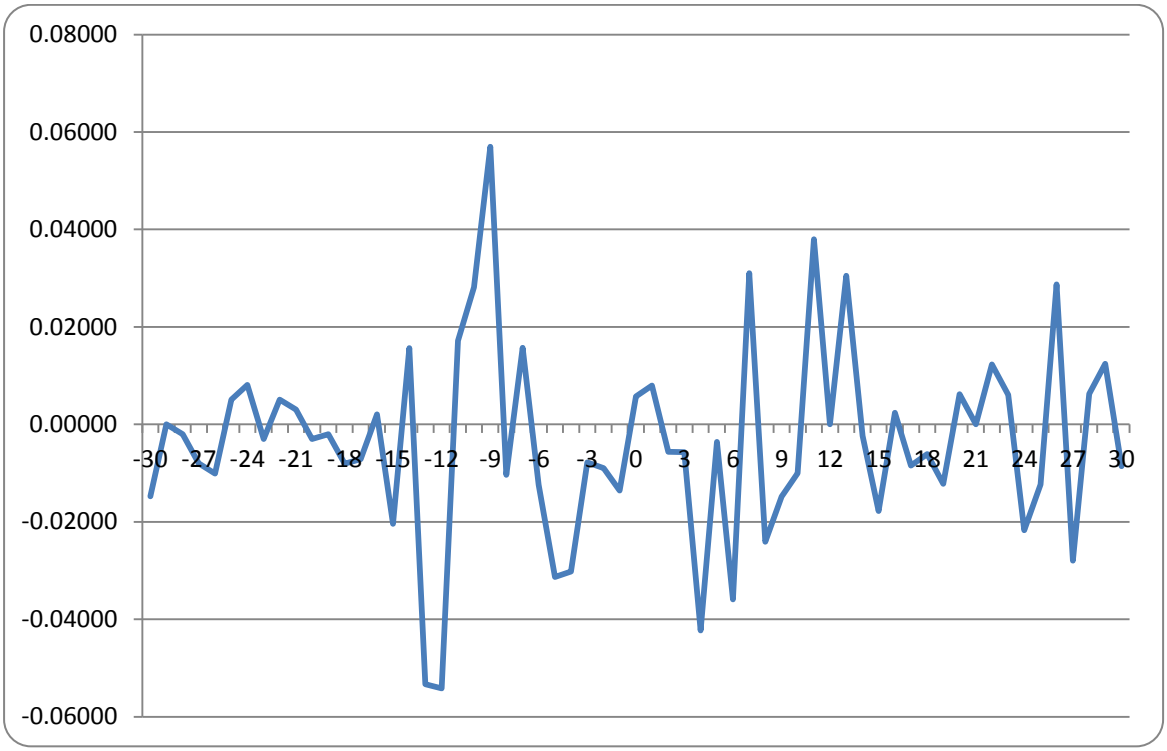
Source: Research Findings (2017)

The stock returns of Equity Bank Limited reacted positively to the interest rate capping 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 event 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.

4.2.3 Barclays Bank Limited Stock Returns

The reaction of Kenya Commercial bank Limited stock returns following interest rate capping are as shown in figure 4.2.3.

Figure 4.2.3: Barclays Bank Limited Stock Returns



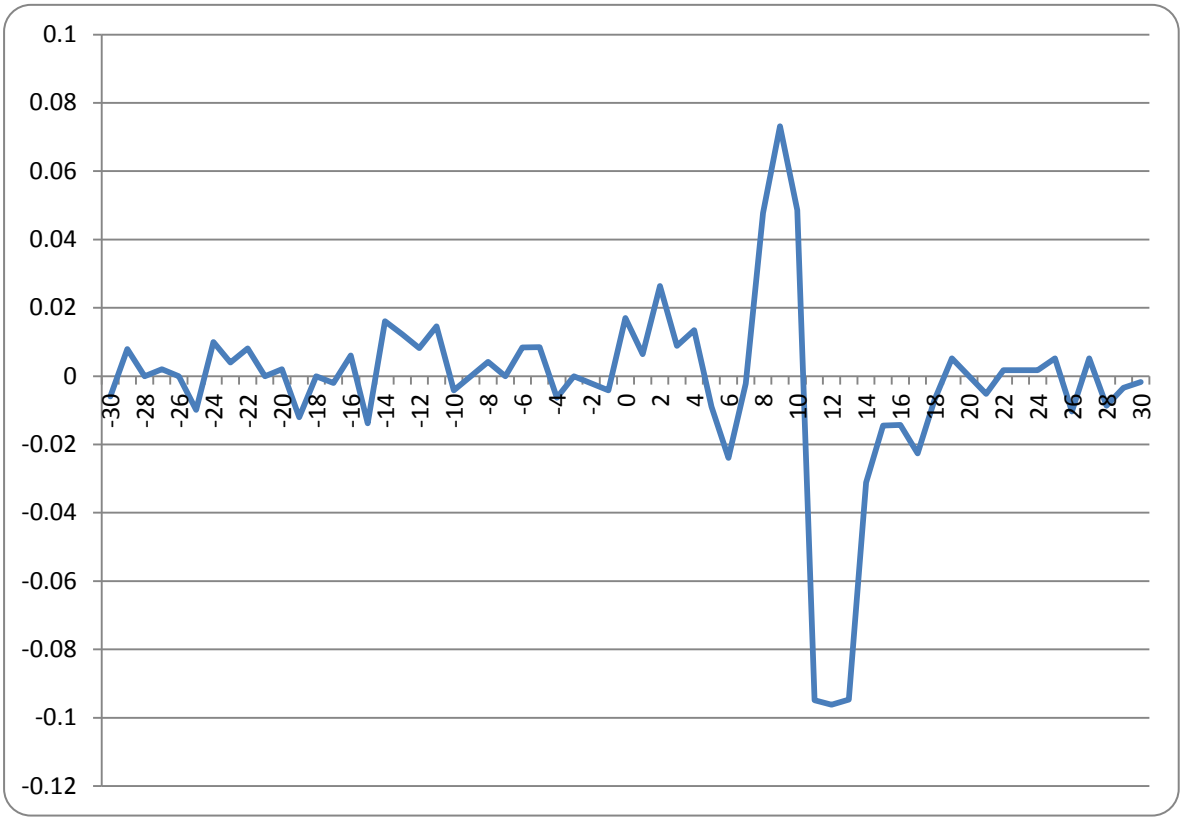
Source: Research Findings (2017)

Barclays Bank Limited reacted erratically to the interest rate capping. Overall, the reaction was positive as shown by an increase from an average stock return of -0.003934803 before the event 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.

4.2.4 Co-operative Bank Stock Returns

The results for the behaviour of Co-operative Bank stock returns following interest rate capping on 14th September 2016 are as shown in figure 4.2.4.

Figure 4.2.4: Co-operative Bank Stock Returns



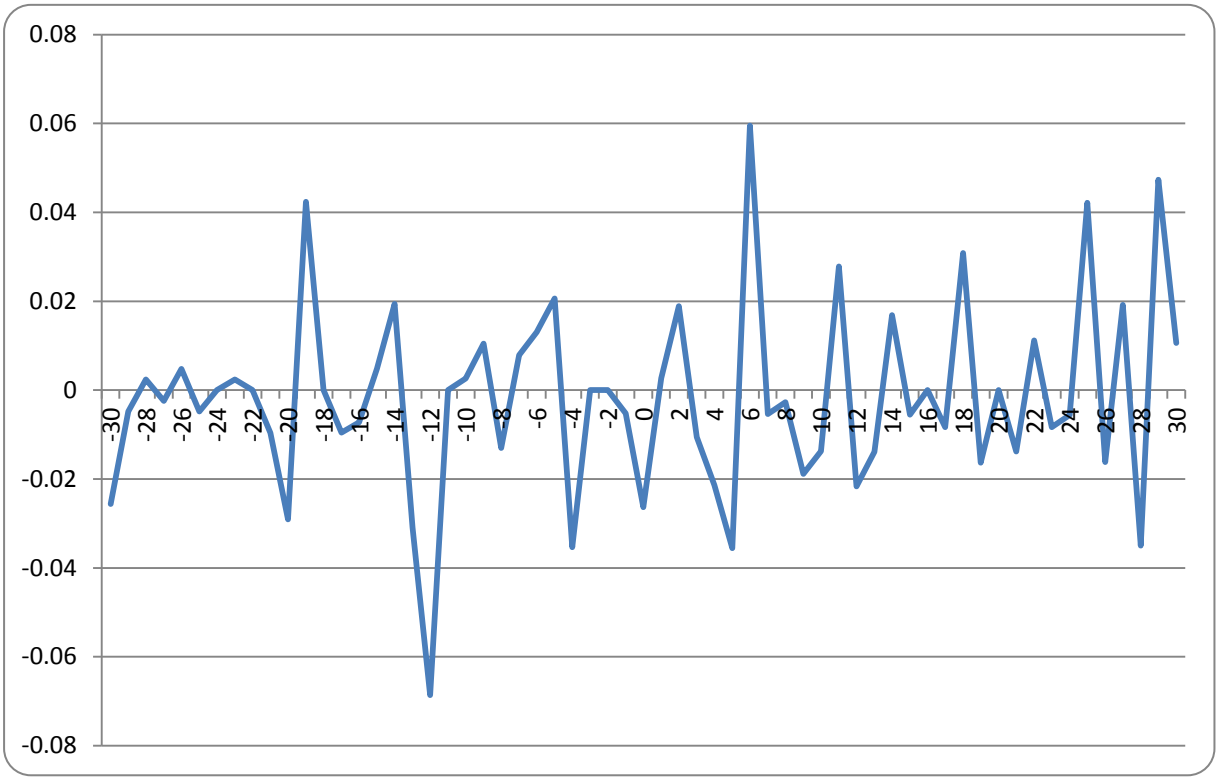
Source: Research Findings

Co-operative Bank recorded negative average stock returns before the event and positive average returns after the interest rate capping 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.

4.2.5 Standard Chartered Bank Stock Returns

The results for the behaviour of Standard Chartered Bank share prices are as shown in figure 4.2.5.

Figure 4.2.5: Standard Chartered Bank Stock Returns



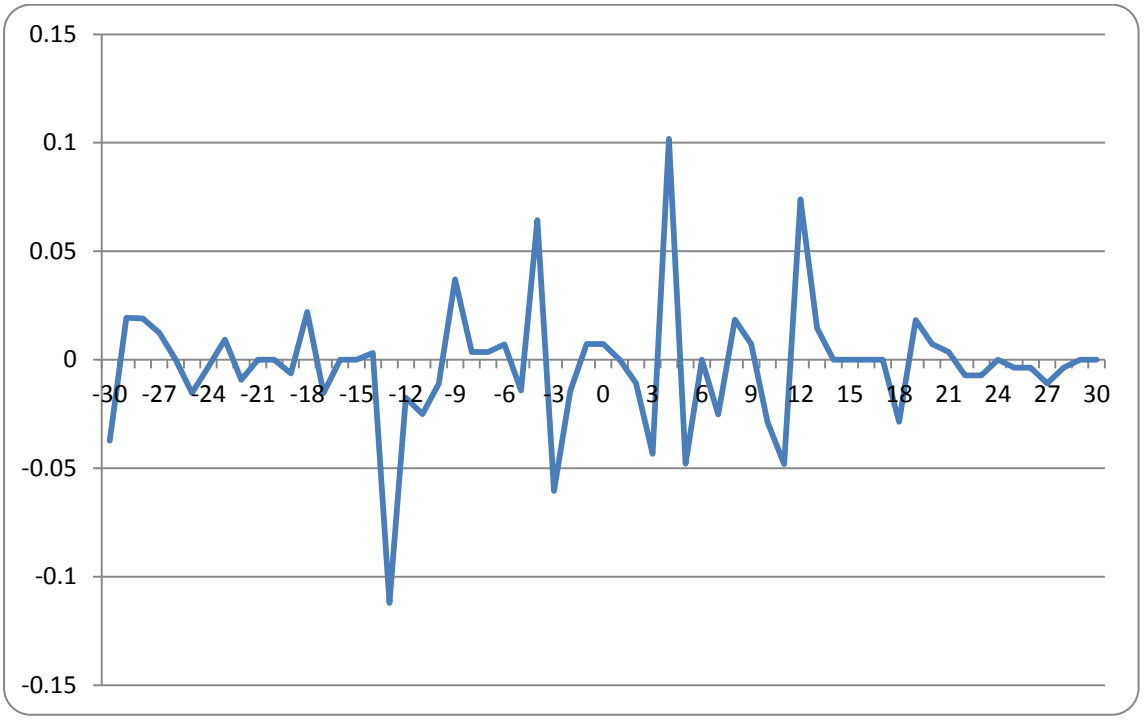
Source: Research Findings (2017)

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

4.2.6 Diamond Trust Bank Stock Returns

The results for the behaviour of Equity Bank Limited share prices are as shown in figure 4.2.6.

Figure 4.2.6: Diamond Trust Bank Stock Returns



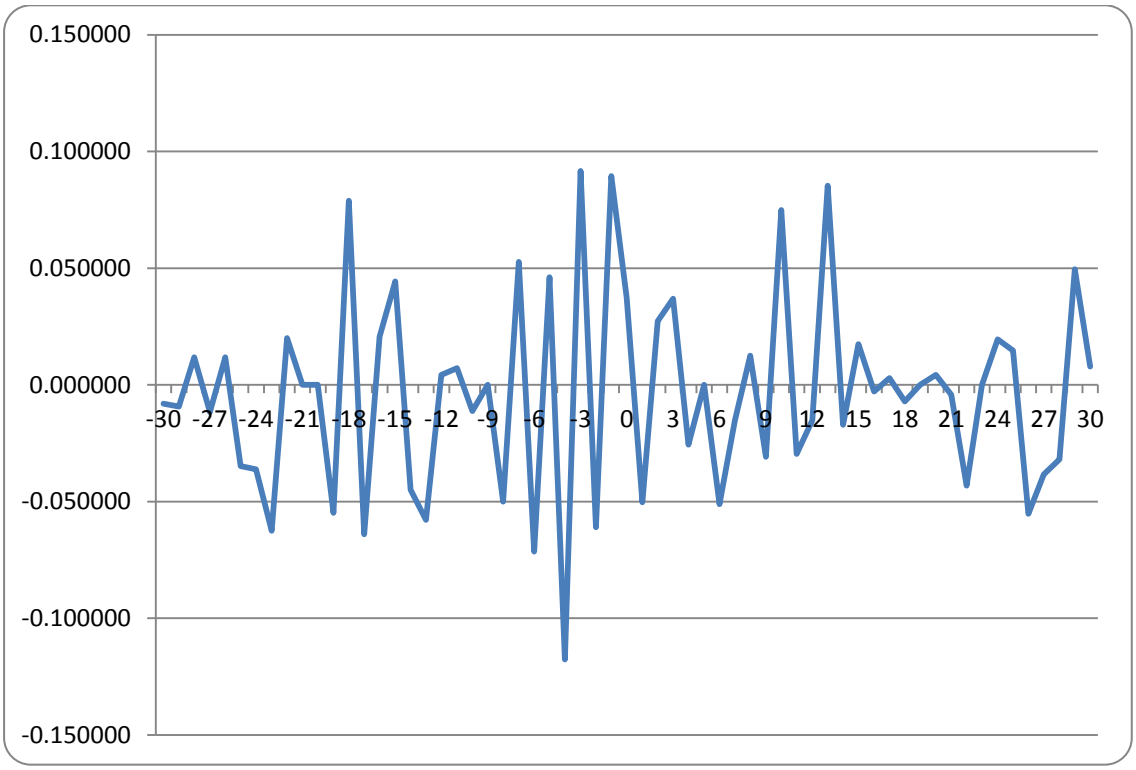
Source: Research Findings (2017)

Diamond Trust Bank stock returns reacted positively to interest rate capping 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.

4.2.7 National Bank Stock Returns

The behaviour of National Bank stock returns to interest rate capping are as shown in figure 4.2.7.

Figure 4.2.7: National Bank Stock Returns



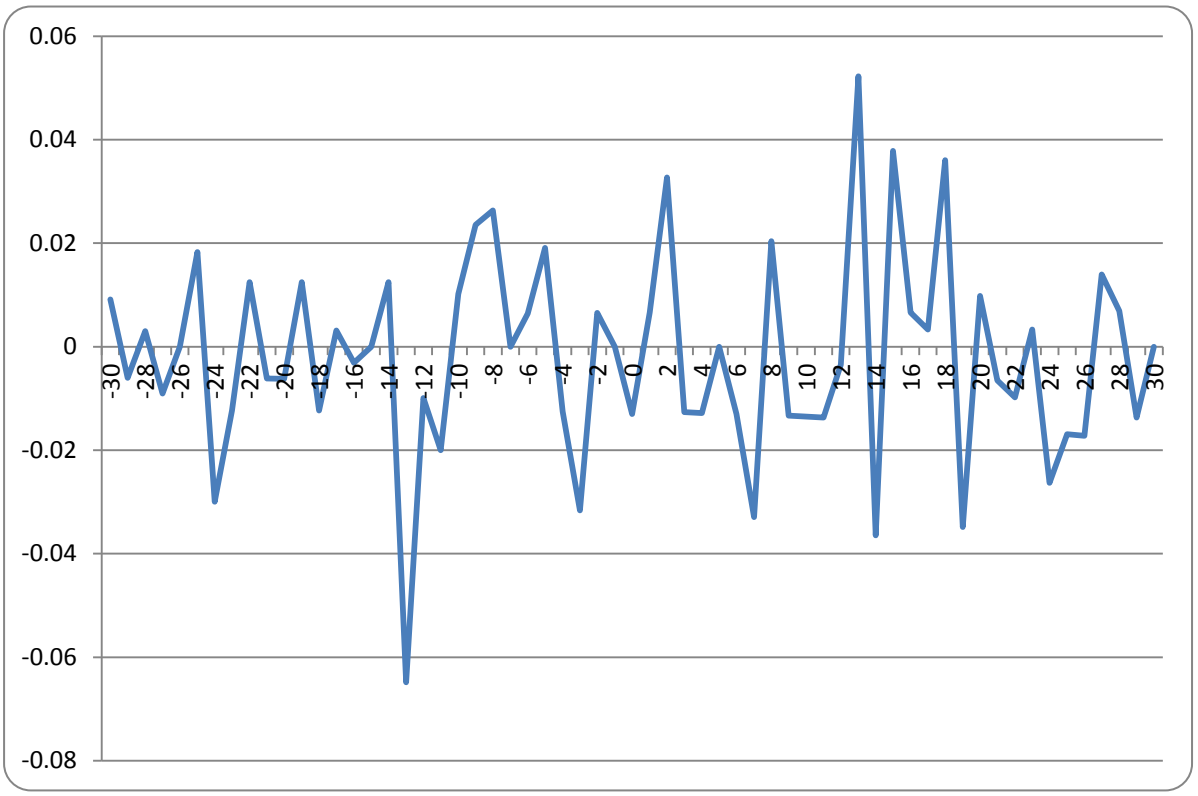
Source: Research Findings (2017)

National Bank stock returns also reacted very erratically to the interest rate capping 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.

4.2.8 CFC Bank Stock Returns

The results for the behaviour of Equity Bank Limited share prices are as shown in figure 4.2.8.

Figure 4.2.8: CFC Bank Stock Returns



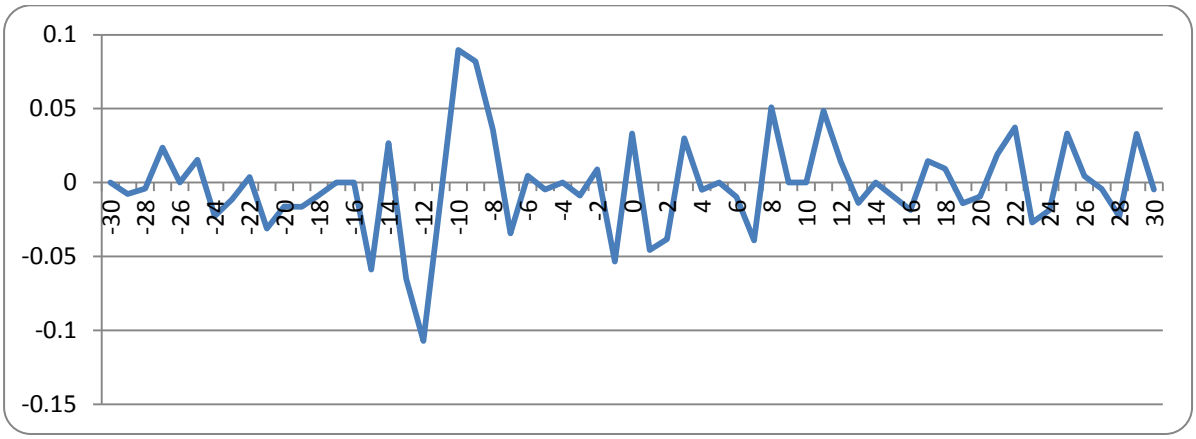
Source: Research Findings (2017)

There were ups-and-downs in CFC Bank's stock returns before and after the interest rate capping 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.

4.2.9 NIC Bank Stock Returns

The reaction of NIC Bank stock returns following interest rate capping are as shown in figure 4.2.9.

Figure 4.2.9: NIC Bank Stock Returns



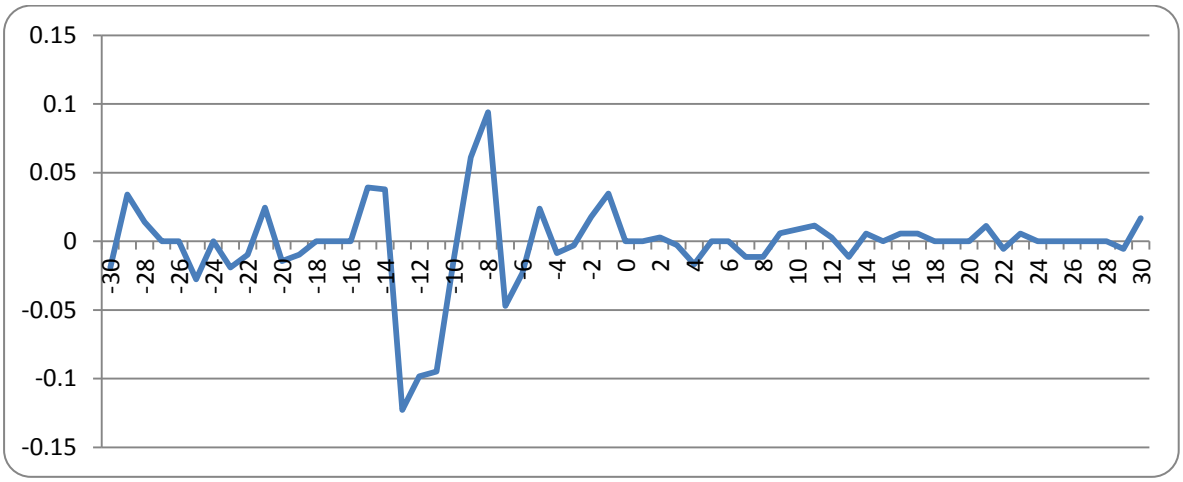
Source: Research Findings (2017)

The stock returns of NIC bank reacted positively to interest are capping. The average returns increased from -0.003206337 before the capping event to an average of 0.001969636 after the interest arte capping 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.

4.2.10 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 4.2.10.

Figure 4.2.10: I&M Bank Stock Returns



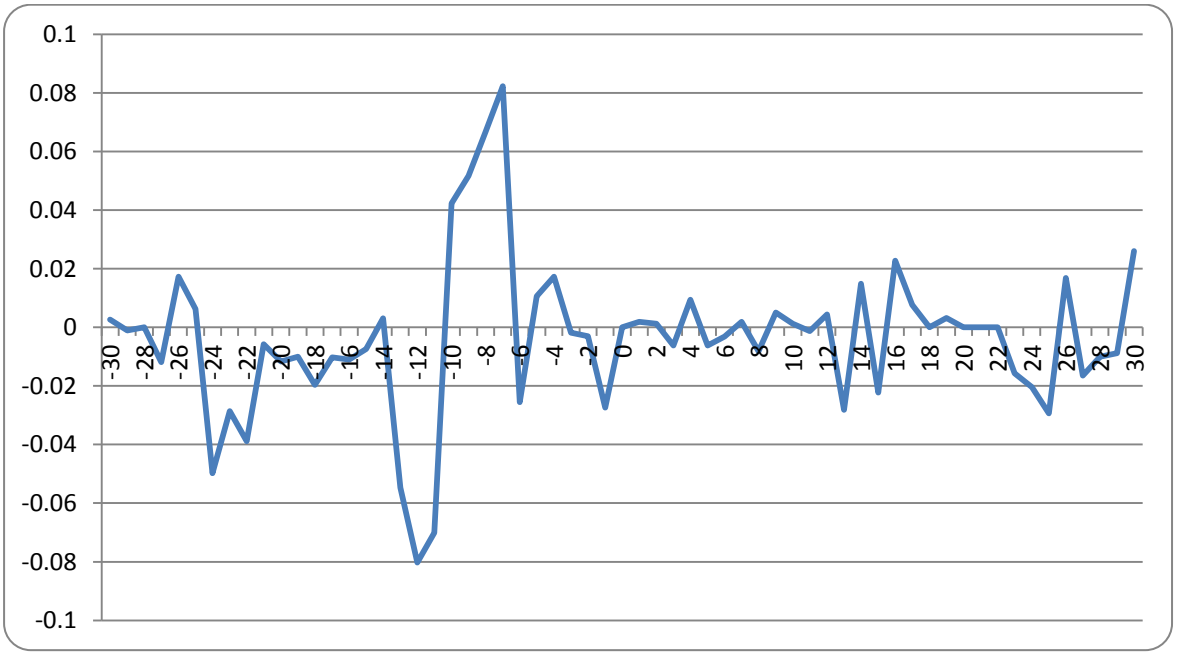
Source: Research Findings

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.

4.2.11 Housing Finance Stock Returns

The results for the behaviour of Nation Media Group share prices are as shown in figure 4.2.11.

Figure 4.2.11: Housing Finance Stock Returns



Source: Research Findings

Housing finance reacted positively to the interest rate capping 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.

4.4 Abnormality of Stock Returns following the Stock Split

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 detailed abnormal returns for all the commercial banks are shown in Appendix II. The summary of the abnormal returns are as shown in Table 4.4 together with their level of significance.

Table 4.4: Abnormality of Stock Returns following the Stock Split

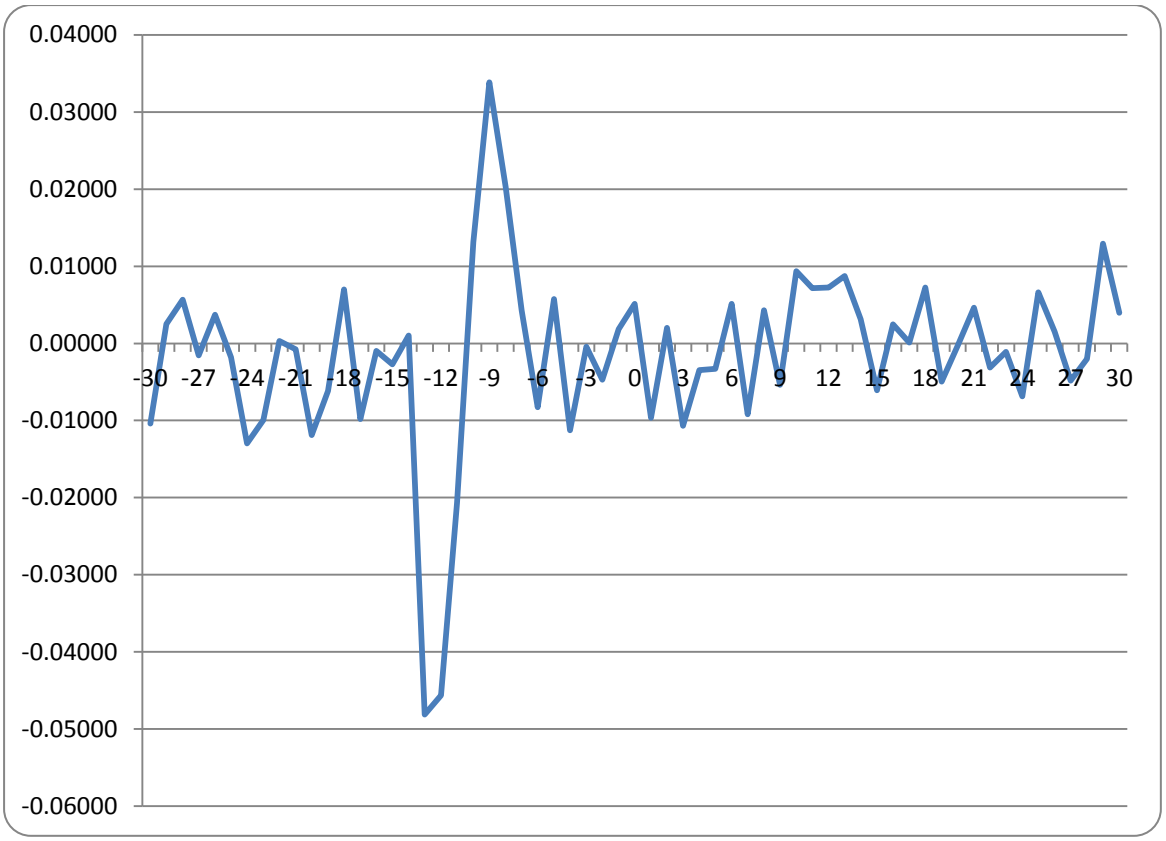
	Average Abnormal returns	**STDEV**	**t-test**
Kenya Commercial Bank	0.0116	-0.011	-0.368
Equity Bank Limited	-0.0025	0.026	-17.276
Barclays Bank Limited	-0.0033	0.018	-13.072
Co-operative Bank Limited	0.0022	0.025	0.076
Standard Chartered	-0.0031	0.022	-6.611
Diamond Trust Bank Limited	0.0004	0.028	-0.021
National Bank Limited	-0.0037	0.043	-3.782
CFC Bank Limited	-0.0021	0.019	-2.518
NIC Bank Limited	0.0000	0.030	-2.957
I&M Bank Limited	-0.0016	0.033	-3.870
Housing Finance Limited	-0.0029	0.027	-8.584

Source: Research Findings (2017)

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. However, none of the abnormal returns were found to be statistically significant. 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 arte capping. The trend of the abnormality after interest rate capping became law on 14th September is as shown in Figure 4.4.

Figure 4.4: Average Abnormal Returns



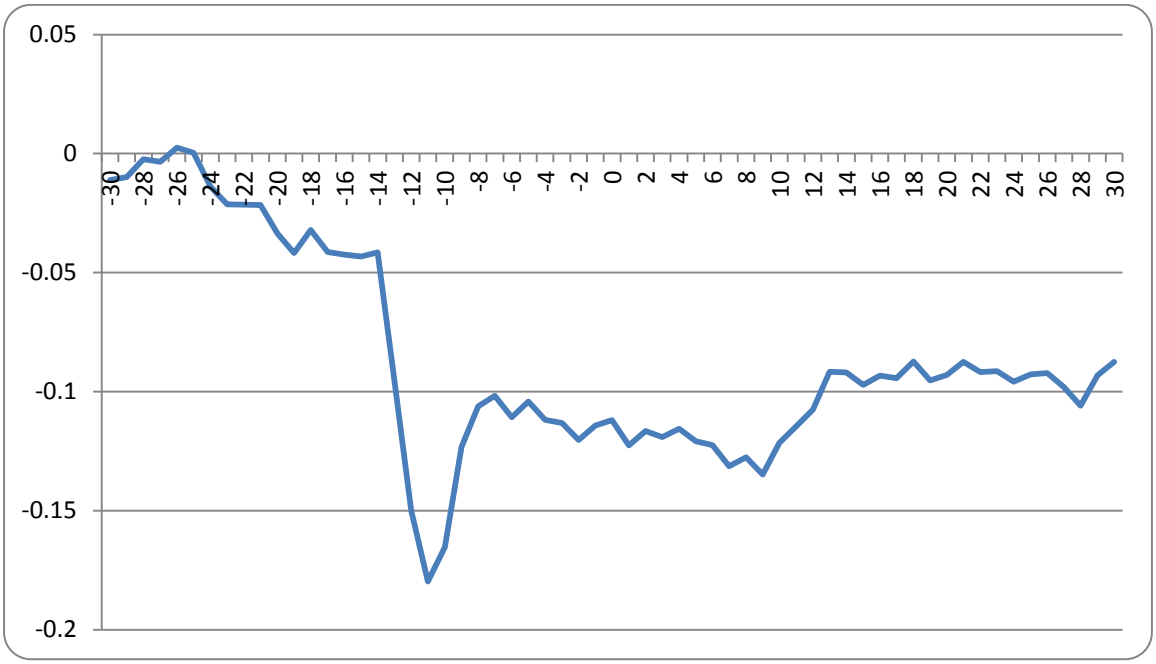
Source: Research Findings (2017)

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.

4.5 The Cumulative Abnormal Returns

The findings on Cumulative Average Abnormal Returns of the commercial banks listed at the NSE following interest rate capping are as shown in Figure 4.5.

Figure 4.5: Cumulative Abnormal Returns (CAR)



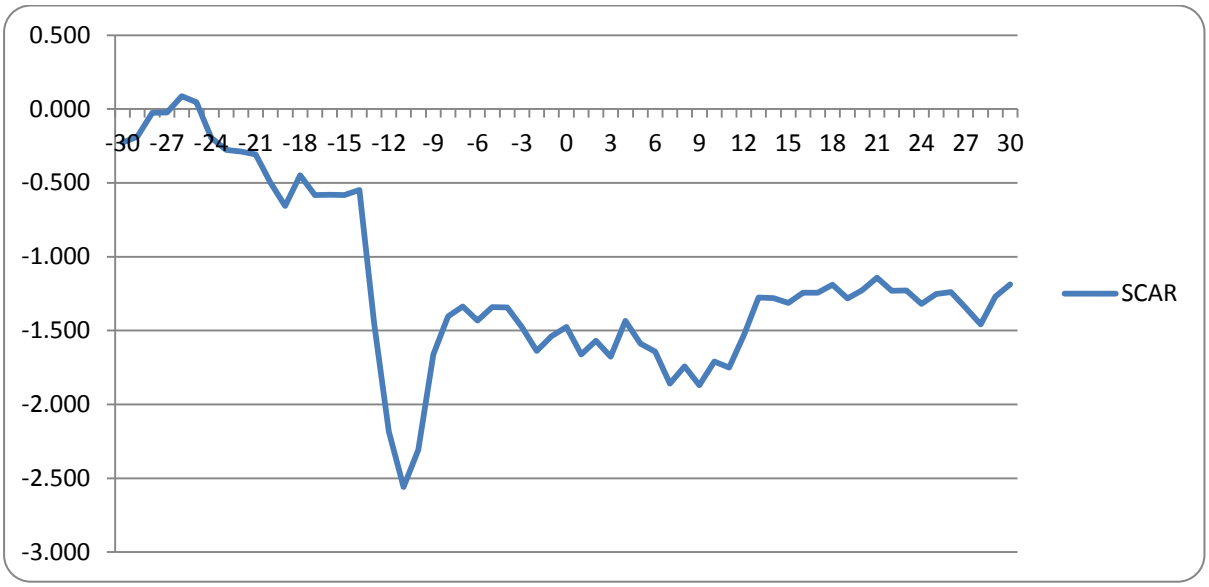
Source: Research Findings (2017)

The study found out that there was a negative Cumulative Average Abnormal Returns 30 days before interest rate capping and 30 days after interest rate capping law came into force on 14th September 2016. Throughout the event, the study recorded a steady decrease in Cumulative Average Abnormal Returns. These implies that the coming into law of the interest rate capping legislation had a cumulative negative effect on the stock returns for commercial banks listed at the Nairobi Securities Exchange.

4.6 Standardized Cumulative Abnormal Returns

The findings on Standardized Cumulative Average Abnormal Returns of the commercial banks listed at the NSE following interest rate capping are as shown in Figure 4.6.

Figure 4.6: Standardized Cumulative Abnormal Returns (SCAR)



Source: Research Findings (2017)

The study found out that the Standardized Cumulative Average Abnormal Returns was also negative during the event period (30 days before interest rate capping and 30 days after interest rate capping). The Standardized Cumulative Average Abnormal Returns recorded a steady decrease over the study period. This further indicates that interest rate capping law has a negative impact on the that the coming into law of the interest rate capping legislation had a cumulative negative effect on the stock returns for commercial banks listed at the Nairobi Securities Exchange.

4.7 Discussion of Research Findings

The study sought to find out the consequence of interest rate capping on stock returns of commercial banks quoted at the Nairobi Securities Exchange. The study analyzed the reaction of stock returns of 11 commercial banks listed at the NSE 30 days before the interest rate capping law came into action and 30 days after it came to action. 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 interest rate capping. All the other banks reacted positively. Further, 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. 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 arte capping.

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. These implies that the coming into law of the interest rate capping legislation on 14th September 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 didndt 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. Fir 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 sought to find out the consequence of interest rate capping 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 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. 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 arte capping.

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.

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. These implies that the coming into law of the interest rate capping legislation on 14th September 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 didn't 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.

5.3 Conclusion

The study concludes that interest rate capping has a cumulative negative effect on the stock returns for commercial banks listed at the Nairobi Securities Exchange. This implies that although some banks didn't 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. 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 arte capping.

5.4 Recommendations

The study found out that interest rate capping 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 arte capping as this is detrimental to the performance of commercial banks.

The Central bank of Kenya should lias 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 didn't 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 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 rom authorized vendors.

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 came into action and 30 days after it came into action. This is a short period of time for the study to establish the actual long time 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 effect.

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.

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APPENDICES

Appendix I: Data Collection Form

Month	Day	Stock price	NSE 20 share index