THE EFFECT OF INTEREST RATE CAPPING ON MARKET CAPITALISATION OF LISTED COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

I declare that this research project is my personal work and has not been surrendered for examination in any other institution.

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This research project has been submitted for examination with our approval as the University Supervisors.

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DEDICATION

This research project is devoted to the members of my family for their inspiration, patience and spiritual and decent support.

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ABSTRACT

The capping of interest rate has affected various stakeholders either positively or negatively. Existing shareholders and potential investors are among the affected parties. Listed banks experienced a fall in share prices with the enactment of the new law which affected the 20-share index, the 25-share index and the all share index. The objective of this study was to analyze the influence of the interest rate capping on market capitalization of listed commercial banks in Kenya. This study was anchored on Fishers Theory, Keynes Liquidity Preference Theory of Interest Rate and Signaling Theory. The study used the descriptive design research to determine how interest rate capping affects the market capitalization. The target population used the eleven (11) commercial banks listed at the NSE as at 31st December 2017. The study used secondary sources that were obtained from the NSE market reports, NSE handbook, CBK reports and the individual banks annual reports. The relationship between interest rates capping and commercial banks market capitalization was measured using regression model. The study findings indicated that there is a negative and noteworthy affiliation between interest rates and market capitalization of listed commercial banks. The study recognized that interest capping had a major effect on market capitalization of the commercial banks that are listed in Kenya.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Interest rate cap is an interest rate limit set on the subjected-on money lend by the financial institutions to the borrowers. Howard (2013) states that interest rate capping was normally an administration interposition by a legislature when it considered that the interest rate is excessively high and the market forces have failed. In this case, it acted as a guarantee that the credit offices are accessible even to the underprivileged as the move diminishes the cost of assets. The contention has been that the money related foundations make irregular benefits by charging unfair interest rate and the legislature has not possessed the capacity to accomplish the ideal impacts in the economy. Interest rate tops have been generally utilized in various economies and to various dimensions as governments look to accomplish certain political and economic targets. Created economies and also creating ones have embraced interest rate top or included more confinements all the more so after the 2008 economic crunch (Maimbo and Gallegos, 2014). Government adopt interest rate cap to stop usury like rates which have worsened financial inclusion but current research has shown that such moves only exacerbate the situation.

This study was anchored on Fishers Theory, Keynes Liquidity Preference Theory of Interest Rate and Signaling Theory. The theory of interest rate by Fisher assumes that the rate of interest is based on the available funds and the expectations on price which is a crucial determinant for investment (Patterson et al., 1999). Keynes Liquidity Preference Theory of Interest Rate advocates for an active corrective mechanism to minimize the

amplitude in the business cycle, which is ranked a very adverse economic problem (Keynes 1937). The signaling theory illustrates that the market is always looking for signals to determine the price of various securities (Bagherpour & Mehdi, 2008).

In an efficient market, the information available to investors should directly and almost immediately influence security prices in the financial markets (Fama, 1970). The new information from institutions are delivered through public announcements in respect to happenings of the business environment. The news could generate from the institution itself such as a merger or acquisition, surprise dividend announcement, financial performance, change in senior management or it could be through a government directive e.g. change in macro-economic policies like interest rates, inflation, unemployment etc. Bearing in mind the efficient market hypothesis, upon announcing of the price ceilings on interest rates by the central bank of Kenya (CBK) in August of 2016, the banking counter on the NSE experienced a bear run. What was seen as the best counter on the bourse was facing an uncertain future. Stock prices of listed banks fell by almost 10% i.e. KCB Group the biggest bank by assets fell 9.9% its lowest in four years, Co-operative bank 10% its biggest fall ever and Barclays 8.75% (Lenny & John, 2016).

The year 2016 saw the Central Bank of Kenya capping the banks' lending interest rate to a maximum of 4% above Central Bank Rate (CBR) while the deposit rate to a least of 70% of the Central Bank Rate. Over the centuries, Kenyan banks have enjoyed interest rates above the average world interest rates that were deemed too high and thereby slowing economic growth. The interest rate cap is a financial control tool that has become unpopular in industrialized countries but is becoming common in developing countries, as it goes against the ideals of a capitalist economy. The entire economy faced

uncertainty on the impact that the capping would have on market capitalization commercial banks in Kenya. It is fundamental to note that the government places interest rate caps for varied reasons which could be economic or political. The key aim of introducing a cap is consumer protection as many people would be unable to borrow at the exorbitantly high rates set by commercial banks whose key objective is staying in business and maximizing shareholders wealth. The caps would, therefore, ensure that people are guaranteed access to credit at rates that are reasonable (Cytonn Investments Management Ltd. 2017)

1.1.1 Interest Rate Capping

Interest rate cap can be defined as the management of the rate subjected by banks on loans extended to debtors (Maimbo & Gallegos, 2014). Maimbo and Henriquez (2014) argue that capping limits the affinity of some financial service providers to escalate their interest revenues especially in markets where there is marginal transparency, inadequate disclosure requests and small levels of financial literacy. Governments have utilized different strategies for regulation far and generally for quite a while to enhance access and moderateness of credit in the market to sectional and underprivileged individuals. The capping of the rates is not a preserve for the poor nations but even major economies like the USA, European Nations, Asian countries and the Americas practice cap to some extent (Maimbo & Gallegos, 2014).

Through its authoritative arm, the administration reinstated the rate capping in Kenya at close to 4%, the base rate set and advertised by CBK' (Banking Act, 2016). The law proceeded to state that the banks will make known any advance charges to the debtor

before giving the credit most likely to discourage over the top expenses to cover the lost income.

The legislatures were investigating possible ways to control what resembled maverick banks which couldn't control themselves through market forces however a required authoritative intercession to tame their savage the rate which gave them unusual profits at the disadvantage of other economic divisions. The argument in support of rate cap is that it protects the consumers from exploitative and predatory lending rates by making them affordable and reasonable.

1.1.2 Market Capitalization

Market capitalization is the collective individual firms' market value. It is based on the number of shares issued as well as the daily market prices. Market capitalization amount could be used as a barometer of economic performance in the country. Investors in the stock markets are premised to make investment out of savings derived from incomes. More investments shall be made where incomes allow for savings by individuals and households (Mishkin & Eakins, 2012).

Market capitalization, or "market top," refers to the cumulative estimation of the majority of an administration's offers of stock. It is established by duplicating the cost of a stock by its cumulative number of exceptional offers (Barberis, 2003). Market capitalization not just what an organization's value on the open market but additionally it's the market's view of its future projections since it reflects what investors will pay for its stock. All organizations are sorted by their market capitalization as little top, mid top, or huge top. Financial market analysts need to consider these classes since organizations with various

market tops have unmistakable hazard/return attributes and have a tendency to perform diversely relying upon economic situations (Capstaffet al., 2004).

1.1.3 Interest Capping and Market Capitalization

Interest rate capping tends to create a distortion in the market and consequently create market biases. Commercial banks are inclined to lend to clients exhibiting low risks thereby creating an inefficient market through the mediation that was expected to create a positive impact. Studies highlight that such biases lead to lack of finance by clients that are deemed high risk. It means that both the client and the banks suffer and people are forced to seek funds from other sources.

Priti (2016) states that prevailing rates directly affect operations of Banks in light of the solid conviction that they influence the budgetary execution. The market valuation of Banks is the most critical factor with regards to the assessment of Bank stocks pursued by the ascent and fall of loan fees (Rosenbaum, 2015). Generally, Retail Banks profit fluctuate depending on the connection between financing costs and the rates charged on advances to customers. The rate changes influence working returns and verifiably market capitalization. Various investigations reports have shown that Banks are adversely influenced by the changes as anticipated by Stone (1974). Interest rates being a direct factor in a Banks operating margin and demand for services by consumers and its volatility immediately impacts on the market capitalization.

1.1.4 Commercial Banks in Kenya

Kenya has 42 commercial banks operating under the CBK regulations through the Banking Act out of which 11 are listed in the Nairobi Stock Exchange. Commercial

banks in Kenya are expected to provide safekeeping of clients' money kept in the bank through deposits. They are expected to facilitate transfers of money from one client to another hence creation of convenience. They carry out other roles including managing foreign exchange, facilitating international trade, provision of financial advice and providing investment services.

For the better part of the last two decades, Kenyan banks have had to do with an unregulated rates regime, whereby interest rates in the country have at times risen to close to 30%. Commercial banks have argued that the high rates are as a result of market forces, and have come about after taking into consideration many factors prevailing in the economy. The new amendment in September 2016 to put a capping sparked heated debates not only in Kenya, but regionally and internationally as well (Cytonn, 2017).

The market's categories are liquid and tend to change. As a result, a majority of investors agree that the market cap is one of the most essential determinants of that influences the size of a bank because it acts as a reflection of its value and its expectations for the future. In the Kenyan banking industry with different banks that have market caps there is a tendency to accomplish differently over diverse time periods, expanding among banks with innumerable market caps can decrease risk and instability in a group and make best use of asset returns over the long haul (Cytonn, 2017).

1.2 Research Problem

The banking segment plays a key job in allocation of resources in the economy since their foundation. In spite of the gigantic job endowed on them, the rates charged by the part has been high running from 20-30%. The high rates worried the government with an

approach of shielding customers from abuse prompting the enactment of the capping law. The announcement that the president had signed the bill capping came with a lot of uncertainty. There had been vast speculation on the effect that it would have both negatively and positively (Aligon, 2016). Speculations included that people with low incomes would flood the banking halls in a bid to get cheap credit. However, a gap exists on the impact that the bill would have on the market capitalization of banks which will consequently have an impact to the confidence of banking industry in the economy.

The capping has affected various stakeholders either positively or negatively. Existing shareholders and potential investors are among the affected parties. Listed banks experienced a fall in share prices with the enactment of the new law which affected the 20-shareindex, the 25-share index and the all share index. The stocks of DTB, KCB and Cooperative Bank which all fall in the suggestive 20 share index, were on a free fall as fears over the interest law spread at the bourse (Aglion,2016). The all share index experienced a drop of 5% from 146.48 to 139.14 as the NSE 25 share Index fell by 3 points to close the day at 3,913.93. The bond market saw 4.4 million worth of trade down from 18 million (Maloba, 2016).

Various global finance scholars have conducted studies on the wealth influence of financial segment supervisory declarations. However, the findings have been mixed and no tangible inferences have been reached. Studies done on rate caps have emphasized on announcement effect of their removal and not introduction, hence creating a research gap which this study seeks to address in analyzing the effect of the rate capping on market capitalization.

Dann and James (1982) gauged the elimination of maximum rates on deposits on stock prices of stock-owned Savings and Loans Associations and established an adverse effect. Smirlock (1984) completed an exploration on the expulsion of greatest loan fees on returns of bank stocks to check whether they responded to the deregulatory occasion. He discovered that bank stock returns were unpretentious by the evacuation of financing cost roofs. Lee and Schweitzer (1989) contemplated the declaration impact of the Financial Center Development Act (FCDA) in Delaware and observed it to be in accordance with investor riches boost. Michaely (1991) broke down the execution effect of the 1986 Tax Reform Act on the ex-profit stock value conduct and found no impact. These clashing discoveries make an examination hole.

Locally, Odongo (2013) broke down the response of stock prices to declaration of expanded capital ampleness prerequisites direction and found a negative impact. Karinga (2015) examined the declaration impact of Capital increases tax on stock execution at the NSE and found a constructive outcome. Both studies focused on the NSE as a whole and none focused on the banking sector. Most of the other studies done locally focused on monetary and fiscal policy announcements. None of them addressed the effect of rate capping on market capitalization. This research therefore sought to respond on the question: What is the effect of the interest rate capping on market capitalization of listed commercial banks in Kenya?

1.3 Research Objective

To analyze the influence of the interest rate capping on market capitalization of listed commercial banks in Kenya.

1.4 Value of the Study

This study is useful to management together with the employees of listed banks as it creates an understanding of the influence of rate capping on market capitalization of these banks. From the findings of the study, these banks may create better strategies to cope with the rate capping through alleviating any negative effect in order to ensure their share prices are still attractive to potential investors and profitable for current shareholders

Policy makers are informed by research that attempts to demystify phenomena with which they are concerned. This study designed at exploring the influence capping on market capitalization of listed banks in Kenya. The research findings may then be used to create policies and mechanisms that are favorable to financial institutions and that aid in fostering economic growth for the country.

In the academic field, this study is important as it adds to literature available on the influence of e capping on market capitalization of listed banks. The findings of this study may be used by academicians and scholars to further understand the concept under study. The findings may eventually be utilized as reference by prospect researchers from which to base their research or from which to identify research gaps.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter discussed the theoretical and empirical literature behind the influence of rates capping on the market capitalization of the commercial banks. The section focused on theories, determinants of market capitalization and review of empirical studies.

2.2 Theoretical Framework

Dawson (2009) defined a theory as a systematic explanation for the relationship between phenomena which further provides an explanation for certain occurrences. Theoretical review is the foundation of study variables, providing a review of existing theories and hypotheses that underpin the study. In this study, the theoretical framework covered existing theories on rates capping and market capitalization

2.2.1 Fishers Theory

This theory was established by Irving Fisher an economist in 1930. The theory of interest rate by Fisher assumes that the rate of interest is based on the available funds and the expectations on price which is a crucial determinant for investment. In countries with interest rates capping legislation, are influenced by objectives of that particular country. When the state wants to get a certain objective, they intervene in the market through monetary policies to maintain the rate or the market equilibrium at a given level, resulting in a reduction of the impact from external forces according to Patterson et al. (1999).

Bank stocks react to capping but are more reactive to long-term government yields and returns changes. Forster et al. (2003) indicate that when long-term rates capping occurs, there occurs an adverse affiliation with returns of other rates delicate assets, exerting

pressure on asset prices. The capping affects the cost incurred by borrowers that also has an effect on investor's cost of funds. Many investors are attracted by the low cost of borrowing. Various results have shown that, when an increase in the rates, the share price falls and when the prices are rising, the rates are falling. The theory will be very useful in this study to determine the extent at which the capping enhances liquidity of the investors by encouraging them to invest more in the stock markets. It is expected that due to low cost of capital many investors will have access to credit. This will encourage the purchase of more shares in the securities market. Increase in the demand and volume of shares purchased can be explained by this theory

2.2.2 Keynes Liquidity Preference Theory of Interest Rate

This theory was developed by Keynes (1937). The theory states that most of the micro economic level actions taken collectively by majority of firms and individuals will cause aggregate macroeconomic inefficiency outcomes, causing the economy to operate way below its growth rate and expected growth output. The theory advocates for an active corrective mechanism to minimize the amplitude in the business cycle, which is ranked a very adverse economic problem. Keynes advocated the solution to the economic distresses to stimulate the economy by encouraging investments. Through capping the government comes up with rates ceilings which protect the consumers from high interest rates.

Monetary policy mechanisms using the capping was based on the old Keynesian explanation on money role in movement of real interest rate. Changes in interest rates impact consumer spending and investment spending of the firm. A further adverse observation shown by and Bernanke and Gertler (1995) was that interest rates are not the

most quantitatively significant variable of cost of capital during spending. Imperfections of financial markets and the view of credit transmission mechanism explains the disadvantage of using the old interest rate channel. The theory will be very useful in the research to explain the extent to which the banking industry supply and demand of money is affected by the interest rate capping. This will be manifested by the reaction of the market following the event which is the enactment of the interest capping law. If the prices of the shares fall the demand for money has increased while if the share prices rise, there is high liquidity among the investors

2.2.3 Signaling Theory

The CBR is an indicative rate that is used by the central bank to signaling measure to the market the depict direction in which the cost of money should go. Signaling theory is very important while explaining behavior in a scenario where two parties are accessing varied information. Basically, the sender should know how to communicate the information to the receiver, and the receiver should know how to interpret the signal information (Connelly, Ireland & Reutzel, 2011). Due to random valuations of companies by public capital markets, managers deliver the facts well-known by them alone to the capital markets to correct the wrong valuations since stocks value is reliant on data (Bagherpour & Mehdi, 2008).

Ross (1932) was the first to use signaling theory in finance, argued how the perceived returns of a firm are more important to the market than the actual returns of a firm. The signaling theory illustrates that the market is always looking for signals to determine the price of various securities. These signals may take the form of changes in monetary policies, legislative changes, and dividend announcements among others. The theory will

very important to evaluate the market prices following the effecting of interest rates capping. Such information signals the investors due to the information contained in capping. It is assumed no insider trading exists and hence the market will react subsequent the representation of the interest capping law. The investor's behavior is clearly seen in the direction the market price goes depending on whether the news released have a negative effect or a positive effect.

2.3 Determinants of Market Capitalization

Market capitalization is the value the stock market puts on the whole organization. It is the market gauge of an organization's value, based on apparent future prospects, economic and monetary conditions. It is, in any case, not really the value a purchaser would pay for the whole firm and is definitely not a sensible gauge of the association's genuine size, in light of the fact that an offer's market cost is based on exchanging just a small amount of the association's aggregate remarkable offers. Various studies have been conducted on some determinants of market capitalization:

2.3.1 Interest Rate Capping

Capping of interest rate below the prevailing market rate decreases the interest rate spread like in Kenyan scenario. The reduction of through capping law will definitely reduce the interest income among the banks. Chodechai (2014) prompted that banks ought to be wary while deciding the financing cost on credits where the burden of low financing cost will influence the profits accomplished by the bank, which ought to be adequate to take care of the expense of stores and general costs and misfortunes in the advance portfolio coming about because of wavering by a few clients. This variable will be measured by calculating its quarterly averages for the period under study. It is

predicted that the cap will have a harmful impact on the amounts of loans issued by the banks. The IRCR was expected to diminish recorded banks' advantage wage and thus their benefit. This was thusly anticipated that would prompt diminished allure of their offers to speculators in view of lower expected future returns. Basically, interest for their offers was additionally anticipated that would diminish, prompting a decline in offer costs.

2.3.2 Inflation

Inflation is a rise in the prices of products both goods and services in an economy which leads to fall in purchasing power or value of money (Kumar, 2014). From an economic view, inflation reduces money supply and hence adversely affects the stocks returns. Limpanithiwat (2010) found out that high inflation rate resulted into higher required rate of return and the stock market volatility increased. There is a negative market capitalization and inflation relationship (Fama, 1981). Brandt and Wang (2013) found that price increases affect the investor’s risk averseness and reflects on expected high required return on capital and increased discount rate.

High rates of inflation can have very adverse effects to the securities market. Many market participants will lack the purchasing power to invest in the securities market leading to low market capitalization. The lower the number of investors in the stock markets the lower the demand of the shares leading to low prices. The low prices discourage the shareholder from participated due to fear to incur losses. Brandt and Wang (2013) found that rise affect the investor’s risk averseness and reflect on expected high required return on capital and increased discount rate. High inflation also makes the investment expensive leading to low volumes of shares trading in the market.

2.3.3 Money Supply

Money supply is defined as the monetary assets total amount used in an economy at a particular time. Money supply fluctuations are a great gauge and a vital foundation of data about the future of stock market returns or variability (Barnor, 2014). Growth in the supply of money attributes to development in the economy hence stock prices increases with introduction of expansionary monetary policy (Rehman, Sidek & Fauziah, 2009).

Humpe and Macmillan (2007) concluded that share prices are affected in a positive way by the production and while the money supply affects in a negative way. Sirucek (2013) explains that the highly key factor determining the share prices the volume of cash in the economy since money supply affects share values in a direct way. When there is a lot of money in the economy than can be utilized the excess is directed to investments. Additionally, Shiblee (2009) points that money supply causes changes in stock prices hence an increase in money supply strengthens stock prices increase. On the other hand, a fall in money slows down the growth of share prices.

2.4 Empirical Review

Crowley (2007) carried out an analysis of interest rates spreads in English speaking African countries, taking into account known factors that may play in influencing interest rates spreads in these countries. The findings were not clear on whether the quality of a loan had any effect which was direct and signification on interest rates spreads. In a regression of adjusted interest rate spreads loan quality was insignificant while in a regression of adjusted net interest rate margins it was significant.

Chirwa and Mlachila (2004) studied the reforms in the financial sectors well as the spread of interest rates in the commercial banking market of Malawi. They used Panel data regression in carrying out an in-depth look at different determinants of interest rate spreads for the period 1989 to 1999. They analyzed Provision for doubtful debts, costs that are not financial in nature, the average market share, market concentration, liquidity reserve requirement, the discount rate, inflation rate and industrial production growth. The study carried out showed that discount rate and the market concentration resulted to a high elasticity of interest rate spreads. With respect to the other factors such as liquidity reserve requirement, inflation, Non-Financial costs, market share and loan quality, Spreads were found to be relatively inelastic.

Wensheng (2002) did a study on what impact the interest rates shocks had on the banking sector's performance. The sample was two commercial banks whereby financial data from the period of 1992-2002 was collected from the bank published financial statements, and the data was then studied using Microsoft excel and contented analysis. Conclusions from the study were that banks performances were impacted by interest rates negatively and thus a recommendation to come up with strategies that would minimize the interest rate spread among Hong Kong's commercial banks.

Maimbo and Gallegos (2014) did a stock take on the countries engaged in putting ceilings or floors on the interest rates and found that it is a widespread phenomenon. 40 developing countries including transitional countries were found to practice interest rate capping. The European Union was seen to have 14 of its member states have used interest rates caps by the year 2010. The study indicated that the key reason countries impose caps is the protection of its consumers from Spain. Countries such as the UK and Greece

imposed interest rate caps with the aim of limiting the freedom enjoyed by the banking sector that was leading to the exploitation of consumers. Countries such as Zambia imposed a capping to mitigate the risk that was perceived due to high levels of debt in the country and high levels of credit. The cap meant that the underserved clients can access credit.

Laeven (2003) completed an investigation on the topping of loan costs in the United States and showed that impressive liberal estimates, for example, taking out financing costs tops positively affected the capacity of little speculators to get to subsidizing. The investigation additionally detailed that financial specialists have a tendency to move to nations with less limitations on loan costs. Poillot and Deprez (2010) did additionally ponder in the EU and found that entrance to credit by high-hazard borrowers is more noteworthy when financing costs tops are higher. Be that as it may, getting to credit at high expenses subsequently results in large amounts of default.

Ime (2014) conducted a research on Outcome of Interest Rates on Stock Prices; an Examination of the All Share Index. This paper examined the effect of rate of interest changes on the securities market in Nigeria. He studied how All Share Index in Nigerian securities market performed to the changes in the Central Bank of Nigeria's (CBN) interest rate over a period of 25 years (1986-2011). Data obtained from the central bank and stock market was analyzed based on a six-month and twelve-month percentage change basis with their respective averages taken. The study made use of the bivariate and multivariate regression examination simulations for periods of interest rate cuts and hikes. The study discovered that the impact of interest rate is not noteworthy when other variables influencing the prices of the stock are controlled.

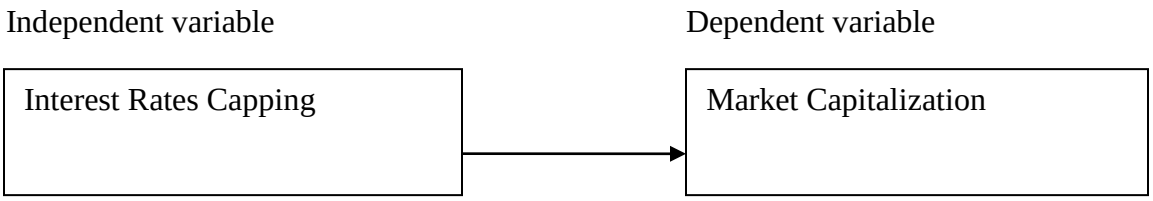
Tumurkhuu and Wang (2010) conducted a research on the EU market to examine the affiliation between interest rates and the share returns. The objective was to explain how the value of a firm is affected where researcher used a population of 358 firms and sampled 87 companies for the period 2008-2010. The model used was the event study model incorporating CAPM. The study looked the prevailing interest rate for the advances and loans and government stock rate development rate for the discounted treasury bills and bonds. Mbua (2017) investigation infers that administration directions on the budgetary division do affect the esteem that financial specialists put on recorded organizations as confirm by the market responses on the capping of interest rates.

Jagongo and Mutswenje (2014) examined the factors that influenced individual investor choices at the NSE (Nairobi Stock Exchange). The study had 42 out of 50 shareholders that made the sample size. The researchers established there is a connection between behavioral finance theory and the equity investor decisions. Herding is one of the factors that influence individual investment choices at the NSE. It is a confirmation that sensitivity to the choices of other investors can influence investment decisions, which means it affects the general return on bank stocks

2.5 Conceptual Framework

In conceptual framework we define concepts relevant for the study and show the interrelationship between the variables. The researcher may adopt a model used in earlier studies but modify it to suit his current study.

Figure 2.1: Conceptual Framework



In this study, Interest rates capping will be used as the independent factor. Independent factors are those that predict the other variable. Market Capitalization will be used as the dependent variable. Dependent variables are those that are affected by the change in the independent variables.

2.6 Summary of the Literature Review

The local empirical evidence revealed that there is an effect of interest rate caps on market capitalization. Mbua (2017) found that upon announcement of interest rate caps, there was an immediate decline in share prices upon announcement of interest rate caps. Jagongo & Mutswenje (2014) were able to show the behavioral impact of new information on shareholders. They were able to deduce that negative news affecting an investor's portfolio causes equity shareholders to liquidate a part of the portfolio

The Fishers theory, Keynesian liquidity preference theory of interest and signaling theory have played a key role in explaining how interest rates affect performance of stocks traded in the stock markets. The theories have critically looked at the interest rate capping impact to the market capitalization. The determinants of the market capitalization were identified as interest rate capping, inflation as well as money supply variables. The empirical literature studies done in Kenya and in other countries showed some conflicting relationships. Interest capping is a new law that was introduced in Kenya banking sector

against the existing accustomed industry liberalized interest rates. From the empirical review, most studies done focused on interest rate and stock prices where no caps exist. No study has been undertaken on the influence of interest rate capping on market capitalization hence necessitating this research to be carried out. The study evaluates the effects of capping on market capitalization using the most recent data in the NSE to identify the effect of interest capping laws.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This part concentrates on the appropriate methodology that the study that utilized to achieve the objectives of the research. The chapter outlines the design of the research adopted, data collection method, also the population, data analysis technique, research procedure and that was used during the research.

3.2 Research Design

The research utilized the descriptive approach to determine how interest rate capping affects the market capitalization. This method is utilized based on its ability to meet the aim of the study in examining the relationship among the independent and dependent variables of the study (Kothari, 2008).

3.3 Population

The target population used the eleven (11) commercial banks registered at the NSE as at 31st December 2017. The study adopted the census approach as the number of banks listed on the NSE is small and all the banks listed at the NSE are affected by interest rate capping.

3.4 Data Collection

The data utilized was secondary in nature obtained from NSE market reports, NSE handbook, CBK reports and the individual banks annual reports. The movement in the stock market capitalization was evaluated to determine the extent of impact due to interest capping. The market capitalization was analyzed two years before and two years after 24th August 2016 when the interest rate capping was signed into law to evaluate the effect on market capitalization.

3.5 Data Analysis

The exploration acquired quantitative information for the 11 listed commercial Banks. Illustrative and inferential measurements were utilized in information examination with help of the (SPSS) bundle. The statistics in descriptive manner included percentages and proportions of focal propensity (mean and standard deviation).

The relationship between interest rates capping and commercial banks market capitalization was measured using regression model. The model was conducted before and after the interest rates capping to assess the relation between the self-governing and reliant on variable. The model significance was tested via T-test and F-test. The adopted diagnostic model was as follows;

$Y=\beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3$

Where;

Y = Market capitalization measured by the number of shares outstanding x stock price

X_I =Interest Capping measured by the interest rate before capping and after capping

X_2 =Inflation measured by CPI index

X_3=Money Supply measured by total value of money supply

3.5.1Test of Significance

F-test was used to test the joint importance of all factors and for the test connotation of individual constants, a t-test was done. The significance of the model was determined at 95% self-reliance interval and 5% level of importance. Results indicated to be statistically noteworthy at 0.05 level, which depicts that the implication digit should be below 0.05.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This section offers the results of the research on the impact of capping on the market capitalization of banks. Analysis of secondary data commenced by undertaking a descriptive analysis of the study variables aimed at obtaining the general profile of the data. In addition, appropriate regression diagnostic checks were undertaken on the data so as to determine its suitability for further statistical analysis. Further, an estimation of the regression models specified in section 3.5 was undertaken and interpretation of the results performed using the inferential statistics.

4.3 Descriptive Statistics

The statistics comprises of the mean, and standard deviation, number of observations, skewness and kurtosis. Table 4.1 reflects on the descriptive results

Table 4.1: Descriptive Statistics

	Least	Maximum	Mean	Std. Dev	Skewness	Kurtosis
Market Capitalization	3728.52	5316.5	4911.85	552.8214	-1.732	0.661
Interest rates	14.69	15.65	15.2575	0.36436	-0.709	0.637
Inflation	6.07	6.96	6.4915	0.28557	-0.1	0.637
Money supply	1428216	1626461	1526268	58934.85	0.227	0.637

The finding on table 4.1 directs that the typical market capitalization of the listed commercial banks for the considered study period was 4911.85 with a minimum and

maximum of 3728.52 and 5316.5 respectively. The results further show that the typical interest rates is 15.2575 with a minimum and maximum fluctuation of 14.69 and 15.65 while the average inflation is 6.4915 with the minimum and maximum values being 6.07 and 6.96 respectively. The findings further show that the average money supply over the study period is 1,526,268 with minimum and maximum money supply being 1,428,216 and 1,626,461. The range for skewness values and kurtosis were between the suggested -1 and +1 thus an indication the data is normally distributed.

4.4 Diagnostic Tests

The research paper was able to establish of how suitable the data was by examining on the multi-collinearity for the different kind of variables and the outcome are going to be discussed in the following section.

4.4.1 Tests of Normality

The Shapiro Wilk test was used to verify if normality exists. As indicated in Table 4.2 below, data collected for analysis is normally distributed. Results indicated that the null hypothesis was rejected as 0.05 value was surpassed.

Table 4.2: Shapiro-Wilk Test of Normality

	Obs	W	V	z	Prob>z
Market Capitalization	**263**	**0.96377**	**1.321**	**0.582**	**0.28022**

4.4.2 Test for Multi-collinearity

The variance price increases aspects and lenience levels were utilized to test for multicollinearity between the dependent and independent variables.

Table 4.3: Coefficients

	Tolerance	VIF	COMMENT
Interest rates	.943	1.060	No Multicollinearity present
Inflation	.982	1.018	No Multicollinearity present
Money supply	.952	1.051	No Multicollinearity present

a. dependent variable: market capitalization

The collinearity statistics on table 4.3 indicates that there is no multicollinearity since the VIF values are less than suggested value of 10 while the lenience values are more than the suggested value of 0.2.

4.4.3 Serial Correlation

Wooldridge F-statistic serial correlation study was done to test whether the study variables were correlated in any way. Serial correlation test was done and as per the results it is clear that there is no correlation. This ensures the OLS estimates are not biased. The analytical results are indicated as follows:

Table 4.4: Serial Correlation

Test	**Statistic**
Durbin Watson	2.345

Source: Research Findings

The Durbin Watson serial correlation test results as per table 4.4 indicated the value to be 2.345 which is more than 2 implying that there is no serial correlation.

4.4.4 Heteroscedasticity

Breusch-Pagan test was applied in order to test for heteroscedasticity. This test is conducted on the basis that there is a normal distribution in the error terms. The null theory of the test is a constant variance. Consequently, if the p-value is very significant, the null theory is disallowed in support of alternative hypothesis that is variance is not constant. Results below show that the p value is greater than .05 thus the error term is constant.

Table 4.5: Heteroscedasticity Tests

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity
Ho: Constant variance
Variables: Digits of market capitalization
chi2 (1) = 1.34
Prob > chi2 = 0.2476

Basing on the level of output, the values obtained>0.05, hence there is no big difference existing in the variation of dependent to independent variables that were tested

4.5 Regression Analysis

This is a system that distinguishes the connection between at least two variables: a variable, whose respect is to be anticipated, and an independent or informative factor,

about which learning is accessible. The strategy is utilized to discover the function that depicts connection between the variables. The study employed a multiple regression as:

$Fp_t = \beta 0 + \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + e_t$

Table 4.6 and 4.7 reflects that the model summary result where R square, accustomed R square and error of approximation are presented.

Table 4.6: Model before Capping

R	R2	Adjusted R2	Std. Error
.891[a]	.794	.784	1.021

Table 4.7: Model after Capping

R	R2	Adjusted R2	Std. Error
.918[a]	.818	.808	1.052

The findings indicate that the interest rates after capping had a more joint significant effect on market capitalization of listed commercial banks in Kenya as shown by r value of 0.918 as compared to interest rates after capping which had an r figure of 0.891. The R squared after capping was 0.819 demonstrates that the independent variables accounted for 81.9% of the variance on market capitalization of listed commercial banks in Kenya while before capping was 0.794 which shows that the independent variables accounted for 79.4% of the variance on market capitalization of listed commercial banks in Kenya.

Generally, it is evident from the findings that interest capping had a noteworthy effect on market capitalization of listed commercial banks in Kenya

Table 4.8 and 4.9 below shows the ANOVA for model fitness as depicted by the F statistic and the other one for probability statistic.

Table 4.8: ANOVA before Interest Capping

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Regression	74.679	3	24.89333	6.170931	0.00001[b]
Residual	1,048.831	260	4.033967		
Total	1,123.51	263			

Table 4.9: ANOVA After Interest Capping

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Regression	82.223	3	27.40767	14.9001	0.00000[b]
Residual	478.251	260	1.839429		
Total	560.474	263			

The outcomes in Table 4.8 reflect that the F statistic was 6.1709 before interest capping, while after interest capping it was 14.9001. At 5% level of assurance, the F digit was noteworthy for both before and after interest capping. At a confidence of 5% level, the F

statistic was noteworthy. Thus, all the forecaster variables (Interest rates, Inflation, and money supply) explained a disparity in market capitalization and that the general model is substantial.

Table 4.10 and 4.11 below reflects that the coefficient outcomes for the model factors, the t-figures of all of the self-governing factors as well as the significance value.

Table 4.10: Coefficients before Capping

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	0.706	0.151		4.6755	0.000
	Interest rates	-0.556	0.221	0.146	-2.5158	0.016
	Inflation	-0.601	0.179	0.126	-3.3575	0.002
	Money supply	0.599	0.123	0.045	4.8699	0.000

a. Dependent Variable: Market capitalization

Table 4.11: Coefficients after Capping

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.521	0.061		8.5410	0.000
	Interest rates	-0.623	0.121	0.146	-5.1488	0.001
	Inflation	-0.442	0.079	0.126	-5.5949	0.001
	Money supply	0.313	0.073	0.045	4.2877	0.004

a. Dependent Variable: market capitalization

Based on the findings in the above table 4.10 it is evident that holding interest rates, inflation and money supply constant market capitalization before interest rate capping would be 0.706. The study also established that a unit upsurge in interest rates caused a 0.556 decrease in market capitalization, further it was proven by the study that a unit escalation in inflation led to a decrease in market capitalization by 0.601, it was also found that a unit upsurge in Money supply led to an intensification in market capitalization by a factor of 0.599.

The findings from table 4.11 the study established that holding interest rates, inflation and money supply constant market capitalization after interest rate capping would be 0.521. The study also established that a unit upsurge in interest rates caused a 0.623 decrease in market capitalization. Additionally, it was found that a unit upsurge in inflation led to a decrease in market capitalization by 0.442, it was also found that a unit growth in money supply led to an upsurge in market capitalization by a factor of 0.313.

The study indicates that overall, market capitalization in the listed commercial banks decreased after capping of the interest rates an implication that interest capping had a negative impact on market capitalization among registered commercial banks in Kenya.

4.6 Interpretation of the Study Findings

The regression results showed the interest rates after capping had a more joint significant effect on market capitalization of listed commercial banks in Kenya as shown by r value of 0.918 as compared to interest rates after capping which had an r value of 0.891. The R squared after capping was 0.819 shows that the independent variables accounted for 81.9% of the variance on market capitalization of listed commercial banks in Kenya while before capping was 0.794 which shows that the independent variables accounted for 79.4% of the alteration on market capitalization of listed commercial banks in Kenya. Generally, it is evident from the findings that interest capping had a noteworthy influence on market capitalization of listed commercial banks in Kenya.

The study found that holding interest rates, inflation and money supply constant market capitalization before interest rate capping would be 0.706. Evidently, a single increase in interest rates caused a 0.556 decrease in market capitalization, further it was proven by the study that a unit rise in inflation led to a decrease in market capitalization by 0.601, and it was also found that a unit rise in Money supply led to an increase in market capitalization by a factor of 0.599. In addition, the study found that holding interest rates, inflation and money supply constant market capitalization after interest rate capping would be 0.521. The study also established that a unit surge in interest rates caused a 0.623 decrease in market capitalization, additionally, it is evident that a single increase in inflation led to a decrease in market capitalization by 0.442, it was also found that a

single rise in supply of money led to an increase in market capitalization by a factor of 0.313. The study indicates that overall, market capitalization in the listed commercial banks decreased after capping of the interest rates an implication that interest capping had a negative impact on market capitalization among listed banks. In tandem to the study findings, Wensheng (2002) recognized that that banks performances were impacted by interest rates negatively and thus a recommendation to come up with strategies that would minimize the interest rate spread among Hong Kong's commercial banks.

Further, Priti (2016) states that prevailing interest rates directly affect operations of Banks in light of the solid conviction that they influence the budgetary execution. The market valuation of Banks is the most critical factor with regards to the valuation of Bank stocks pursued by the ascent and fall of loan fees. Generally, Retail Banks profit fluctuate depending on the connection between financing costs and the interest rates charged on advances to customers. Interest rate changes influence working returns and verifiably market capitalization. Various investigations reports have shown that Banks are adversely influenced by interest rate changes as anticipated by Stone (1974). Interest rates being a direct factor in a Banks operating margin and demand for services by consumers and its volatility immediately impacts on the market capitalization.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The section concludes the research by reflecting on the key findings, conclusions, endorsements and confines of the study based on the goal of the research which is to demonstrate the association between interest capping and market capitalization commercial banks that are listed.

5.2 Summary

The current study wanted to establish whether there was any significant effect on interest capping on the market capitalization of listed commercial banks in Kenya. This was demonstrated by the mean score of responses and regression coefficient.

The regression results showed the interest rates after capping had a more joint significant effect on market capitalization of listed commercial banks in Kenya as shown by r value of 0.918 as compared to interest rates after capping which had an r value of 0.891. The R squared after capping was 0.819 reflected that the independent variables made up for 81.9% of the variance on market capitalization of listed commercial banks in Kenya while before capping was 0.794 which shows that the independent variables accounted for 79.4% of the variance on market capitalization of listed commercial banks in Kenya. Generally, it is evident from the findings that interest capping had a noteworthy influence on market capitalization of listed banks.

The results indicated that holding interest rates, inflation and money supply constant market capitalization before interest rate capping would be 0.706. The study also established hat a unit growth in interest rates caused a 0.556 decrease in market

capitalization, further it was established by the study that a unit growth in inflation led to a decrease in market capitalization by 0.601, it was also found that a unit increase in Money supply led to an increase in market capitalization by a factor of 0.599. In addition, the study found that holding interest rates, inflation and money supply constant market capitalization after interest rate capping would be 0.521. Moreover, a unit growth in interest rates caused a 0.623 decrease in market capitalization, additional it was recognized by the study that a unit growth in inflation led to a decrease in market capitalization by 0.442, it was also found that a unit upsurge in money supply led to an surge in market capitalization by a factor of 0.313.

5.3 Conclusions

From the results of the study the subsequent conclusions can be made:

The study findings indicated a negative and significant affiliation between interest rates and market capitalization of the banks. The study based on this finding therefore accomplishes there is important affiliation between interest rate fluctuation and market capitalization of the banks studied. From the results, there is an adverse and noteworthy relation amid inflation and commercial banks market capitalization. The study based on this finding concludes an existence of a noteworthy negative relation between inflation and Kenyan commercial banks market capitalization.

The research findings established a positive and noteworthy connection existence between money supply and market capitalization of listed commercial banks. The study based on this finding therefore concludes existence of a significant connection amid money supply and commercial banks market capitalization in Kenya.

5.4 Recommendations for Policy and Practice

The set recommendations have been generated grounded on the results, findings and conclusions.

It was determined there was a noteworthy negative relation amid interest rate capping and commercial banks market capitalization in Kenya. The study endorses that the Kenyan banks management needs to ensure that they set up interest rate risk management strategies to ensure that they mitigate the effects of interest rates capping.

The research concludes a noteworthy relation amid inflation and Kenyan market capitalization of commercial banks. The research recommends that the government should ensure they have effective strategies of managing credit risk to mitigate the effects of inflation among commercial banks.

The study recommends that the banks should innovatively bring in products that yield an income to the bank as opposed to relying on the interest income alone. Relying on the interest income has seen a reduction in income received by the banks and thus lowering the return on equity. Banks should work aggressively to bring in new products that generate them non-interest income.

5.5 Limitations of the Study

The bank studied as a sample was minor bearing in mind the fact that there are 43 banks in operating in Kenya. Thus, the study was only limited to eleven banks and thus might not give the full picture of the other omitted commercial banks

A key limitation of the study is the fact that there are other factors affecting the market capitalization of commercial banks in addition to interest rate capping. It means that the

reduction of the market capitalization could be explained by variables like the size of the bank, the period of existence of the bank and the general operations of the bank.

Another key limitation was on the period of study. Interest rate capping was introduced in 2016 in Kenya and thus the study could only be done inside a short period of time. It is a limit since interest rate capping could have a different impact in the long term.

5.6 Suggestions for Further Studies

Further, a study should also be conducted to find out if interest rates capping regulation affect market capitalization of those banks which have been cross listed in other countries.

The study proposes further research into the influence of capping on the economy of the country with a specific focus on certain industries such as manufacturing who are large bank borrowers. It could also study the impact of the ability to borrow given their ability to access collateral. The study could be compared with the impact that the capping has had on small business owners who have limited ability to borrow.

Additional further studies are recommended on the long-term impact that interest rate capping will have on the banks and whether the capping should be lifted or maintained.

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Appendices

Appendix I: Listed Commercial Banks in Kenya as at 31st December 2016

1. Barclays Bank of Kenya Limited
2. CFC Stanbic of Kenya Holding Limited
3. I&M Holdings Ltd
4. Diamond Trust Bank
5. Housing Finance
6. Kenya Commercial Bank Limited
7. National Bank of Kenya
8. NIC Bank Limited
9. Standard Chartered Bank Limited
10. Equity Bank Limited
11. Co-op Bank of Kenya Limited

Source: Researcher

Appendix II: Market Capitalization

	2012	2013	2014	2015	2016
Barclays Bank of Kenya Limited	3224.2	4417	4856	5797.533	6613.433
CFC Stanbic of Kenya Holding Limited	3303.8	4519	4933	5881.133	6695.733
I&M Holdings Ltd	3366.9	4861	4946	5970.4	6759.95
Diamond Trust Bank	2546.7	3765	3949	4822.533	4523.683
Housing Finance	2650.9	3006	3882	4744.067	4359.617
Kenya Commercial Bank Limited	3703.9	4598	4885	5576.733	6167.283
National Bank of Kenya	3832.4	4788	4906	5582.4	6119.2
NIC Bank Limited	3865.8	4698	5139	5840.8	6477.4
Standard Chartered Bank Limited	3972	4793	5256	5957.667	6599.667
Equity Bank Limited	4147.3	4936	5195	5807.133	6330.983
Co-op Bank of Kenya Limited	4083	5101	5156	5853	6389.5

Appendix III: Interest Rates

	2014	**2015**	**2016**	**2017**	**2018**
JAN	17.03	15.93	18	13.66	13.65
FEB	17.06	15.47	17.91	13.69	13.68
MAR	16.91	15.46	17.87	13.61	13.49
APR	16.7	15.4	18.04	13.61	13.24
MAY	16.97	15.26	18.22	13.71	13.25
JUN	16.36	16.06	18.18	13.66	13.22
JUL	16.91	15.75	18.1	13.7	13.45
AUG	16.26	15.68	17.66	13.65	13.26
SEP	16.04	16.82	13.86	13.69	13.36
OCT	16	16.58	13.73	13.71	13.42
NOV	15.94	17.16	13.67	13.68	13.25
DEC	15.99	18.3	13.66	13.64	13.23

Appendix IV: Inflation

	2014	2015	2016	2017	2018
December	6.02	8.01	6.35	4.5	5.53
November	6.09	7.32	6.68	4.73	5.53
October	6.43	6.72	6.47	5.72	5.53
September	6.6	5.97	6.34	7.06	5.7
August	8.36	5.84	6.26	8.04	4.04
July	7.67	6.62	6.4	7.47	4.35
June	7.39	7.03	5.8	9.21	4.28
May	7.3	6.87	5	11.7	3.95
April	6.41	7.08	5.27	11.48	3.73
March	6.27	6.31	6.45	10.28	4.18
February	6.86	5.61	6.84	9.04	4.46
January	7.21	5.53	7.78	6.99	4.83

Appendix V: Money supply (millions)

	2014	**2015**	**2016**	**2017**	**2018**
December	984,036	1,216,829	1,436,877	1,638,459	1,864,880
November	986,901	1,243,601	1,484,198	1,670,865	1,919,514
October	1,006,009	1,254,488	1,513,656	1,702,545	1,956,369
September	1,022,424	1,258,812	1,489,751	1,740,178	1,973,842
August	1,045,657	1,271,638	1,514,152	1,727,324	1,961,572
July	1,067,271	1,285,452	1,505,764	1,729,606	1,948,853
June	1,084,345	1,306,395	1,504,776	1,747,622	1,957,838
May	1,107,896	1,324,685	1,517,126	1,755,476	1,960,091
April	1,122,790	1,334,898	1,536,287	1,802,006	2,008,755
March	1,159,595	1,351,392	1,561,573	1,823,130	2,024,119
February	1,198,930	1,380,732	1,595,014	1,829,364	2,027,406
January	1,213,212	1,412,702	1,612,994	1,846,754	2,046,645