RELATIONSHIPS AMONG LIQUIDITY, CREDIT RISK AND THE MARKET VALUE OF COMMERCIAL BANKS LISTED AT THE NAIROBI SECURITIES EXCHANGE

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DECLARATION

I declare that this research project is my original work and has not been presented for a degree in any other university for purposes of examination.

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

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DEDICATION

This project is devoted to my family for instilling in me virtues of hard work and discipline.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA: Analysis of Variance

AQ: Asset quality

CAR: Capital Adequacy Ratio

CBK: Central Bank of Kenya

CIR: Cost to Income Ratio

CR: Credit Rating

LCR: Liquidity Coverage Ratio

LDR: Loan to Deposit Ratio

NSE: Nairobi StockExchange

NSFR: Net Stable Funding Ratio

ROE: Return on Equity

SPSS: Statistical package for social sciences

USA: United States of America

VIF: Variance ofAsset quality

ABSTRACT

Market value provides an important tool to investors for measuring the return on investment. Habitual volatility of stock prices provides free helpful information about the wellbeing of a company. Banking is recorded as one of the critical mainstays of Vision 2030 in Kenya. The target of this investigation was to build up the connections among liquidity, credit hazard and the market estimation of Commercial Banks Listed at the Nairobi Securities Exchange. This examination was guided by the shift ability hypothesis, monetary misery hypothesis, just as the data lopsidedness hypothesis. The investigation utilized an engaging examination. The investigation populace was all the recorded banks in NSE. The investigation gathered auxiliary information throughout the previous five years beginning year first January 2015 to 31st December 2019 from the yearly reports dispatched to the Central Bank of Kenya accessible on the CBK site and Central Bank of Kenya Resource Center. Illustrative just as inferential insights were utilized to perform investigation. The engaging insights establish focal inclination estimates which involve implies, standard deviations just as recurrence circulation. Inferential measurements includes relapse just as relationship investigation which was embraced to set up the relationship between the examination factors. The examination discoveries set up that there is a positive and huge connection among liquidity and market estimation of recorded business banks. The examination discoveries set up that there is a negative and critical connection in the midst of credit danger and market estimation of recorded business banks in Kenya. The examination dependent on this finding finishes up a presence of a critical negative connection between financing cost and market estimation of recorded business banks in Kenya. The examination discoveries set up a positive and huge association presence between resource quality and monetary execution of business banks.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Return is of key importance to an investor since it is their compensation for deferred consumption. Security market investors therefore seek to reap the highest return at a given risk level hence factors affecting stock returns are of great concern to investors, fund and portfolio managers and investment consultants. Every investor requires a return for their investment, investors will demand a return commensurate with the risk characteristic that they perceive in their investment. Securities with high transaction costs are deemed to be less liquid. If investors value a security based on its return net of transaction costs, they will require higher expected return for a security with high transaction costs rather than one with low transaction cost to compensate them for the extra cost ,it is thus imperative that investment decisions depend on an asset's liquidity as well as risks inherent in the asset. Therefore expected stock returns increases as transaction costs (illiquidity) increases and thus expected stock return has a positive relationship with transaction cost- illiquidity (Amihud & Mendelson, 2016).

This study was guided by the shiftability theory, financial distress theory, as well as the information asymmetry theory. Shiftability theory was developed by Moulton (1915). Shiftability theory asserts that liquidity level can be in a better position if the assets at hand can be sold or shifted to another prospective holder for cash (H.C, 2016). Financial distress theory originates from corporate distress modelling by Baldwin and Scott (1983) and Beaver (1996). Financial distress theory indicates that stocks of distressed organizations perform in a way which is immensely inferior as compared to stocks of financially stable organizations. The wreckers' theory of financial distress tries to clarify

the advantages that may venture out of financially distress to shareholders. Akerlof (1978) is the proponent of information asymmetry theory.

The banking industry, just like any other business environment (Karadagli, 2012), has experienced significant changes in the recent decades, changes that have since led to the rise and spread of tactful and prudent financial appmarket valueches. Among the changes we have liberalized financial systems (Hahm, 2004), globalization (Vujakovic, 2010) and technological integration.

1.1.1 Liquidity

Liquidity is the easiness of a stock to be converted into cash, without delays and changes in the price brought about by trading costs (Damodaran, 2006). Illiquidity is the circumstance under which the sale of an asset cannot happen immediately. Keynes (1930), in his research study on money, highlighted that an asset is termed as more liquid than another where it most certainly is able to be converted without loss. According to Crockett (2008), a liquid market is composed of four main characteristics. They are depth-ability to trade huge transactions without affecting prices unnecessarily, immediacy-ability to carry out transactions with speed, tightness-the difference between bid and offer prices and resilience-ability of underlying prices to be restored with speed after a disturbance.

Liquidity is of great significance in today's financial markets as it is a vital factor in stock pricing. Future cash flows of an asset can be affected by liquidity and hence the reason behind investors demanding higher returns for holding less liquid assets. There are a number of issues that should be considered when investing in a stock. These issues form

the sources of illiquidity which are made up of transaction costs, asymmetric information, search frictions, demand pressure and inventory risk (Amihud, Mendelsen & Pedersen, 2005). These costs are usually reflected in stock prices and serve as the reason as to why stock holders demand compensation for holding less liquid stocks. Illiquidity has many dimensions and all cannot be measured by one proxy (Amihud, 2002). There are several measures of liquidity. Volume based measures emphasis on the association between quantities of shares per unit of time.

1.1.2 Credit risk

According to Basel Committee on Banking Supervision (1999), Credit risk can be defined as the uncertainty on whether a borrower defaults on a loan by unfulfilling payments as agreed. This risk is mainly to the lender and it includes lost principal and interest, unbudgeted costs of collection and cash flows disruption. This loss can arise in a number of circumstances and may be partial and complete (Coyle, 2000). It may be a difficult undertaking to determine a good borrower from a bad one. This may result in inauspicious selection and moral hazards issues. Alternatively, credit risk may be defined as the risk of deterioration in the borrower's credit quality. Credit risk should be managed best on a loan-by-loan basis. However, institutions have increasingly measured and managed this risk on a portfolio basis which can give a wrong report on a borrower's credit worth. Financial institution market value is determined by so many factors with the main one being the credit risks. (Perez, Market Risk, 2014

According to Vodova (2003), credit risk means, a loss arising from a member being unable to honor his/her debt obligations when they are due. It is the probability that a counterparty or a borrower will default to pay their obligations. Vodova (2003) describes

credit risk as the likelihood that an outstanding loan will be wholly or partially lost due to default risks.

Credit risk is defined as a likelihood of failing to meet obligations by a borrower as per the agreements of credit. Chijoriga (2017) states that credit risk is costly in financial institutions and its impact is more significant compared to other risks, since its effect is direct to the financial institutions' solvency. Whereas different impediments have affected financial institutions over time for various reasons, most institutions problems have been, failure to respond to change in economic environment (Vodova, 2003). In this study, credit risk will be measured by Loan to Deposit Ratio (LDR).

1.1.3 Market value

Market value refers to the aggregate value of a firms' shares. It is obtained by computing the product of all shares by the price of each stock (Barberis, 2003).Market value helps to measure the value of a firm in the open market as well as to determine the market's perception of the firm's future prospects. Companies can be classified in terms of their market value into three bmarket valued categories: small cap, mid cap, and large cap. While investing, it is imperative for investors to bear these categories in mind because each category bears its own level or risks and returns depending on the market conditions. Nevertheless, these categories are not separated by strict rules – the ceilings for each has progressively soared high in the past (Capstaff et al., 2004).

Apart from helping investors in choosing stock that meets their risk and diversification criterion, market value is a key determining factor in terms of the returns and the risk involved in their share. Checking of monetary states of any given nation through

expanded returns is normally implied by higher benefits to firms and shows how the share trading system assumes a urgent part in this procedure which thus induces financial development and the other way around (Corradi, Distaso & Mele, 2009). The channel through which surplus assets are exchanged from people who lend and save to those who borrow, spend and have stores deficiencies is the stock trade (Mishkin, 2010)

Unpredictability in the stock costs can to a great extent influence the money related area's execution including the whole economy overall. An economy's budgetary position is vulnerable to its outside trade instability on the off chance that it is chiefly or to a great extent dictated by the capital market. Along these lines, remote trade showcase improvements are made to have fetched suggestions for all the financial operators.Market value can be perceived as a measure of company value and stock markets and assumes a persistent valuation of a specific firm that has stocks which are publicly traded in a stock exchange (Gitman, 2014).

1.1.4 Relationship among Liquidity, Credit Risk and the Market Value

Tradeoffs exist between liquidity, credit danger and market worth and firms need to perceive and comprehend these tradeoffs and actualize methodologies that consider. Forceful interest in current resources adversely impacts a firm’s returns and positive impact on the liquidity. On the other hand, conservatism investment in current assets results in low liquidity and higher returns although it could result in unmet customer demands. Liquidity and credit risk management should therefore involve management of these tradeoffs to ensure optimization of firm market value and liquidity as well as credit risk. The prime objective of liquidity and credit risk management is to ensure smooth operations simultaneously reducing costs and increasing revenues by improving

operational responsiveness (Psillaki, Tsolas, and Margaritis 2010). Afriye and Akotey (2012) argues that although a company's primary purpose is to achieve profits, there is the need to maintain optimal levels of liquidity and credit risk in daily operations to guarantee business continuity, growth and survival.

Athanasoglou et al. (2008) onfirm that the prime objective of liquidity risk management is regulation of current assets of a company so that equilibrium is achieved between returns and the liquidity associated to that return. The degree of investment in current assets and the current liabilities determines strongly the returns of a company. Liquidity management decisions influence a firm's primary revenue streams and financing costs for short term capital requirements. It is therefore imperative for financial managers to make efficient and effective liquidity risk management decisions to realize optimal firm returns

Owojori et al. (2011) noted a negative association betweenmarket value and liquidity and credit risk. The authors further noted that liquidity management is a relevant aspect for financial managers who commit much time and resources looking for an ideal or optimum equilibrium of risk and return as well as profitability and liquidity so as to maximize wealth for the owners..

1.1.5 Commercial Banks in Kenya

Most of the financial reforms show that over the past years, banking systems in Kenya have undergone relative improvements that include financial innovations, enhanced competition and interest rate liberalization (Odunga, 2018). In 2018, the banking sector demonstrated continued resilience both in its domestic and regional operations, with the industry's total asset base growing by approximately 5.8 percent to KShs 3.7

trillion from KShs 3.5 trillion in 2017. The average liquidity ratio as at December 2018 stood at 40.3 percent as compared to 38.1 percent registered in December 2017. Total liquid assets grew by 12.1 percent while total short-term liabilities grew by 5.7 percent (CBK, 2019). Liquidity is one of the important financial stability indicators used by the central bank of Kenya since liquidity shortfall in one bank can cause systemic calamity in the banking sector since they have interconnected operations (CBK, 2019).

High risk exposure to credit and liquidity to the banks negatively affects their performance which if not properly addressed can lead further to the closure of the bank which adversely affects the performance of the financial and banking industry as a whole. As indicated in the CBK annual supervision report of 2019, non performing loans were found to be increasing in the past three years. Failure to address this issue will adversely affect short run profitability of the banks as well as the sustainability of the banks at the long run.

1.2 Research Problem

Market value provides an important tool to investors for measuring the return on investment. Habitual volatility of stock prices provides free helpful information about the wellbeing of a company. Banking is recorded as one of the key mainstays of Vision 2030 in Kenya. Banking is among the key drivers for the Kenyan financial development on account of the job they play in an economy (MacPherson, 2016). Be that as it may, the division has encountered unrest attributable to the new guidelines revered in the constitution, which expected banks to expand their base center capital necessities to one billion Kenyan shillings by 2012 (Banker, 2015). Also, the worldwide emergency influenced the activation of stores and exchange decrease (Banker, 2015). Thusly, the

financial segment has not been gainful as foreseen attributable to the progressions that has occurred after some time.

Giving credit to customers is an important activity for both banks and the same customers. To banks it can be argued from the profitability and growth aspects while for customers it can argued from development and economic growth aspects. Repayments of these credits guarantees continuity and growth of the two players in the market (credit givers and credit takers). Nonetheless, there could exist some degree of non-repayments from the credit takers. These are forms of credit risks which have been attributed to various factors in theory, ranging from financial crises to poor macroeconomic conditions. Kenyan banks are experiencing these forms of credit risks as well. The growth rate of the NPL has been increasing over years. The adverse effects of these NPLs range from a collapse of the credit system to total collapse of any economy's economic system. In order to address these risks, it is important to understand the main factors that contribute to them and the nature of the influence (Cytonn, 2016).

Credit risk as well as liquidity studies have been done severally. Mutua (2014), Korir (2013) and Gatuhu (2014) investigated the effect of credit risk management on financial performance of MFIs and commercial banks. While these studies handle credit risk management and financial performance, they don't address the recent adjustments of interest rate capping in commercial banks and credit rating on credit risks. In addition there exists conceptual as well as contextual gaps in this studies since they didn't focus on the market value and specifically for listed commercial banks in Kenya which is the focus of the current study

Okanga (2014) sough to establish the relationship between illiquidity and stock returns of companies listed at the Nairobi Securities Exchange using explanatory research design. The study found that illiquidity has a positive effect on excess stock return. Metholodogically, the current study will use descriptive research design. In addition there exists conceptual as well as contextual gaps in the study since the study did not focus on the relationship among liquidity, credit risk and the market value at Commercial Banks Listed. Kahuthu (2017) was interested in establishing the effect of stock market liquidity on stock returns of companies listed on Nairobi Securities Exchange. The study found that there is a negative causal relationship between liquidity and stock return. There exists conceptual as well as contextual gaps in the study since the study did not focus on the relationship among liquidity, credit risk and the market value at Commercial Banks Listed. Therefore, based on the research gap in the empirical studies done so far the current research answers the research question, "what are the relationships between liquidity, credit risk and the market value at commercial banks listed at the Nairobi security exchange?

1.3 Research Objective

To establish the relationships among liquidity, credit risk and the market value of Commercial Banks Listed at the Nairobi Securities Exchange.

1.4 Value of the Study

This study will also help banks not only in Kenya but also outside Kenya in making informed decisions on whether to increase or reduce the capital reserves and operationalize favourable liquidity policies. Through the determination of liquidity and credit risk exposure, commercial banks shall have reliable information on the merits and

demerits of holding different levels of liquidity. The study will also give foreign and local investors information-based chance to examine their prospective investment banks before making final investment decisions.

Future scientists, understudies and researchers who try to attempt related or comparable examinations will discover this investigation valuable. The examination will likewise profit scientists and researchers in the distinguishing proof of different fields of exploration by refering to related themes that require further investigations and observational investigations to decide study gaps.

The findings are hoped to be of benefit to the various managers who manage firms in this sector as this study gives important information to guide them in making more knowledgeable choices leading to shareholders' wealth maximization. The study adds to the information accessible to support both existing and future firms to improve their market value and ensure sustainability.

To government and organizations such as the CMA, in instituting policies and regulations governing liquidity and credit risk to ensure a stable banking sector that will facilitate economic growth and reduce its spiraling effects. This will assist in the advancement of the banking sector and in effect growth of the entire economy

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The current chapter provides an overview of relevant literature written on the relationship among liquidity, credit risk and the market value of Commercial Banks listed at NSE. The chapter starts with a theoretical literature review, an empirical literature, and then the chapter conclusion.

2.2 Theoretical Review

This indicates review of the related theories that explains liquidity, credit risk and their relationship with market value. The theoretical reviews covered are; the shiftability theory, financial distress theory, as well as the information asymmetry theory.

2.2.1 Shiftability Theory

Shiftability theory was developed by Moulton (1915). The theory is founded on the anticipated income doctrine and the commercial loan theory. Shiftability theory posts that banks can protect themselves from liquidity risks injected by massive withdrawals if they hold highly shift-enabled credit instruments in form of liquidity reserves. Further, the theory argues that the instruments should not only be shift-enabled but also be able to be sold to other investors and lenders. With this appmarket valuech, a proportionate mix of illiquid loans and highly liquid primary and secondary securities is maintained by banks. According to Roger et al. (2004), primary securities include reserved cash assets while secondary include noncash securities held for conversion in case of a liquidity crisis. According to Osoro and Muturi (2015), the inherent ‘shiftability’ points at the transfer of the instruments to the central bank as the last resort lender.

Maaka (2013) post that the inclusion to the reserves are treasury bills, prime banker's acceptances and commercial papers. He argues that the three securities are highly marketable due to their short-term maturity. The theory is highly effective due to what Allen and Gale (2004) call as its ability to soften the tension within loan provisions; from the perspective that secondary security reserves held by a bank can be exchanged for cash. Major cases involving successful shiftability involvements include the 1930's USA financial market distress (Mugenyah, 2015) and the 2007 global financial crisis (Musembi, Ali & Kingi, 2016).

The theory provides commercial banks with options and information on to circumvent liquidity distress. As already identified with the three banks that are currently under CBK receivership and observation, the banking sector in Kenya is equally venerable to this liquidity risks and it is every bank's obligation to explore and execute every possible remedy. Through shiftability theory, this study makes assumption that all commercial banks in Kenya understand their individual and collective sectoral role towards the health of the Kenyan economy and expectations from stakeholders as far as liquidity is concerned. Vis-àvis the assumption, this study then interrogates the awareness and financial performance.

2.2.2 Financial Distress Theory

Finance distress theory states that firms will always be susceptible to liquidity risk as long as they are not able to keep, service and balance both inflow and outflows. The theory originates from corporate distress modelling by Baldwin and Scott (1983) and Beaver (1996). The theory emulates distress in different aspects that include failure to

meet and settle obligations and bankruptcy (Ross, Hillier, Westerfield, Jaffe, & Jordan, 2012).

According to this theory, the investors anticipate yield from the firm in type of profit installment, credits, advances, and bank-runs, thus affecting the resource quality because of low stores and high nonperforming advances a lot because of tremendous withdrawals. In agreeing with Wrecker's hypothesis hence, resource quality is an enormous factor of monetary misery. With higher utilization of influence, share cost unpredictability increments for private data; subsequently the destiny of the association relies upon issues dark to the overall population, Nyamboga et al., (2014). Since investors will start requesting for returns for their endeavors, there will be consistent withdrawals regarding credits, advances and bank runs; accordingly the firm will be monetarily troubled since it will be needed to make giant installments to the investors.

2.2.3 Information Asymmetry Theory

The theory was advanced by Michael Spence, Joseph Stiglitz and George Akerlof, whose contribution to this economic theory earned them a Nobel Prize. Akerlof (1970) purported that market failure is likely to occur in circumstances where both parties possess asymmetric information. Mirrlees and Vickrey, also Nobel winners examined economic transactions in the actual world, where the players exhibit different information regarding the costs and benefits of specific transactions. A situation whereby the business owners understand the dynamics and risks facing the business than the lenders is referred to as information asymmetry (Eppy 2005). Information asymmetry describes a scenario whereby all parties involved in a transaction lack relevant facts. Information asymmetry arises in debt markets when a loaner who intends to advance a loan possesses better

information regarding potential returns and risks linked to asset developments on which funds are benchmarked. Similarly, the lender lacks adequate facts about the borrower (Edwards and Turnbull, 1994). According to Ennew and Binks (1997), perceived information asymmetry subjects banks to two major problems adverse selection (making poor lending decisions) and moral hazard (monitoring entrepreneurial behavior). Stiglitz and Weiss (1981) postulates the lender is not able to discriminate between various types of borrowers in a market with imperfect information. Financial institutions find it difficult to overcome these challenges since monitoring and appraisal require a massive resource which might be expensive when it entails a small amount of money. This is mainly because the bank lenders lack the correct information required to screen credit applications and monitor borrowers. According to (Binks and Ennew1997), often experience the challenge of information asymmetry when evaluating lending applications. The information needed to assess an entrepreneurs'' commitment and competence and business prospects is either unavailable, expensive to gather or hard to interpret which subject the banker to the two types of risks (Hussain, Deakins 1999).

2.3 Determinants of Market Value

Market value is the value the stock market places on the entire company or, simply, market gauge of an organization's esteem, in view of saw future prospects, financial and money related conditions (Woo, 1981). It is, nonetheless, not really the value a purchaser would pay for the whole firm and isn't a sensible gauge of the association's genuine size, in light of the fact that an offer's market cost depends on exchanging just a small amount of the company's aggregate extraordinary offers. Additionally, favored offers are excluded in the computation.

2.3.1 Liquidity

Liquidity is the ease of selling a security with little impact on share price. High illiquidity in the market is seen as a risk factor and thus an investor will expect higher returns for holding an illiquid stock. Liquid stocks have lower transaction costs when compared to the illiquid stocks and thus an investor seeking to acquire the latter will incur high cost and hence will demand high return to compensate them for the additional cost (Ferrouhi, 2009)

Kanga and Achoki (2016) contend that liquidity is a critical factor in the assurance of the banks market esteem. Further organizations have distinctive liquidity needs relying upon the conditions. The principle factors affecting liquidity being the nature and size of the business tasks.

Liquidity is a slippery and elusive concept in part because it encompasses a number of transactional properties of the market (Kyle, 1985). Liquidity has many dimensions and involves a number of aspects and therefore there is no one fits all measure for it (Amihud & Mendelson, 1986). Kyle (1985) highlighted three aspects of liquidity that is tightness, depth and resilience. Tightness is the cost incurred to buy or sell a security in a short time, depth is the ability to buy or sell any trade size in the market without significant change in price and resilience is the speed at which securities bounce back to their equilibrium price after an uninformed shock.

Pastor and Stambough (2003) define a liquid market as one where large quantities of securities are traded quickly with low impact on their prices and at a low cost. Similarly according to IMF 2015 market liquidity report, for a market to be liquid it needs to be

efficient in terms of low search and transaction costs, availability of accessible funds to all investors and have diverse investors with a risk appetite in that no group of investors can influence the prices in the market

2.3.2 Credit Risk

Credit hazard is the decision of delivering an advance which is exceptional either mostly or completely, due to credit events, liquidation, and absence of installment to any due commitment, and rebuilding the method of rating (Spaulding, 2017). Credit hazard creates from absence of execution by the person who acquired an advance, and this may begin from two examples, eirher the one can't or reluctant to submit himself towards behaving in the pre commited method of a contract(Citi Group, 2015). Zidan (2014) clarifies acknowledge hazard as the rate where a borrower or counterparty in a bank neglects to meet the conditions set comparable to the terms of arrangement. Credit hazard is the degree of flimsiness in the value of vessels of obligation and subordinates which are gotten from the progressions made in the borrowers and counterparties characteristics. Kisgen (2008) states acknowledge hazard as misfortunes picked up in light of the fact that credited clients can't or have would not compensation what they owe the monetary organizations as expected and completely

Raqeeb, Zaidi and Cheema (2012) clarifies acknowledge hazard as the most costly danger in any foundation managing accounts and has a more huge impact when looked at some other danger since it goes about as danger straightforwardly to the dissolvability of establishments managing funds. While foundations of money have experienced challenges over the previous years due to a significant measure of reasons, the primary base of major issues in the financial area keeps on having an immediate connection to

helpless credit norms for the borrowers and different partners, helpless stages in danger the executives, or helpless fixation to changes occurring in financial matters or different variables that can prompt a drop in the remaining of credit of a counterparty related with the bank (Basel, 1999). Credit hazard is thusly a fundamental driver of vulnerability about the monetary circumstance later on. To deal with the inevitable misfortunes acquired from the emergence of dangers monetary foundations are needed to place in the biggest proportion of value. The significant spots to get credit hazard incorporates, restricted limit of an establishment, open credit arrangements, speedy paces of interests, botch, open laws, helpless liquidity and capital levels, direct crediting, authorizing of banks in mass, poor endorsing of advances, delay in the appraisal of credit, helpless practices in loaning, obstruction from the public authority and absence of enough management by the national bank (Owusu, 2009).

2.3.3 Interest Rate

The interest rate is dependent on a country's income. The main principal role of interest rates is to mobilize and redistribute financial resources and facilitate the optimal allocation and use of these funds to enhance economic development. Excessive shifts of interest rates can pose significant threats to earnings and capital base of an organization as well as increase its operating expenses. Interest rate changes may have an impact on asset valuation, liabilities and the present value of expected cash flows (Osoro&Ogeto, 2014). Higher rates of interest humpers the present value of cash flows, which would reduce the viability investments, hence, shrinks valuation of stock returns (Rahman, et al. 2009)

2.3.4 Asset Quality

Asset quality shows a bank's asset risk situation and financial strength. Asset quality forecasts the degree of credit risk and among the dynamics which affects the health status of a bank. The value of assets controlled by a specific bank relies on the amount of credit risk, and the assets quality controlled through the bank also relies on liability to particular risks, tendencies on NPLs, and the cost-effectiveness of the debtors to the bank (Athanasoglou et al., 2008). Preferably, this ratio ought to be at a minimum. If the lending books are vulnerable to risk in a smoothly operated bank, this would be reflected by advanced interest margins. On the other hand, if the ratio decreases it entails that the risk is not being appropriately recompensed by margins.

2.4 Empirical Review

Abbas, et al. (2014) examined the credit risk effect on market value of Parkstanian banking division. The investigation used information of 2006 – 2011 from the banks and through the selection of the fixed relapse examination sway on information board, the outcomes was that a bank's acknowledge chance as an ideal proportion of the proportion existing between the advances that are not performing and the arrangement of the misfortune to the non performing credits. This was discovered influence contrarily on market esteem. This infers when the banks face a great part of the credit chance, the involvement with the market esteem decreases. This along these lines prompts an augmentation in the proportion of the all out credits and the stores altogether consequently prompting increment in the benefit level. Despite the fact that the investigation is like the current one, the factors to be utilized in the relapse model vary and in this manner the discoveries won't be essentially the equivalent.

Mendoza and Rivera (2017), examined country banks in the Philippines trying to set up whether a relationship existed between their fairly estimated worth and their credit risk levels and their capital ampleness. It was built up that a relationship did to be sure exist which was negative and measurably critical as examined utilizing the Arellano-Bond assessor. Anyway capital sufficiency didn't significantly affect market esteem. All things considered, the creators prescribed that provincial banks expected to build up whether infusion of capital would in any capacity influence their benefit Vis a Vis expanding their obligations.

In Kenya, the studies did have yielded different results. Banafa (2016) similarly conducted a study in Kenya to investigate the influence of leverage, liquidity, as well as firm size on market value of quoted nonfinancial Kenyan corporations. The study findings established that the connection between liquidity and market value is positive. It was concluded that, effective management of liquidity enables financial managers to invest in available financial opportunities and hence increase their firm’s asset base enabling them to acquire more loans when need arises.

Nyabate (2015) similarly did a research in Kenya to examine the influence of liquidity on the market value of financial corporations quoted in the NSE. The findings of the research determined that the association between liquidity and market value is weak or insignificant and that capital structure has a substantial connection with market value. The study further established a negative link between cash position indicator and market value for the financial institutions listed at the NSE. The study however recommended

the incorporation of more variables in further research on the link between liquidity and market value.

Gathigia, Munyua and Mwangi (2016) considered the impact of credit hazard on market estimation of business banks in Kenya for the year 2005 to 2014. The populace was 43 business banks in Kenya around then with the factors being resource quality, capital sufficiency, advances arrangement mad execution estimated by ROE. The discoveries indicated that credit hazard has an opposite and immaterial relationship with the banks returns.

2.5 Conceptual Framework

According to Mugenda and Mugenda (2008), the conceptual framework depicts a graphic or diagrammatical representation of the inter-relation of the research variables. For this proposed survey, the independent variables were liquidity and credit risk, while the dependent variable shall be the market value. The control variables were the interest rate and asset quality. An increase in credit risk as observed by Kahraman and Tookes (2014) will result to reduction of liquidity as well as firm market value. The study's conceptual framework is demonstrated by Figure 2.1. below

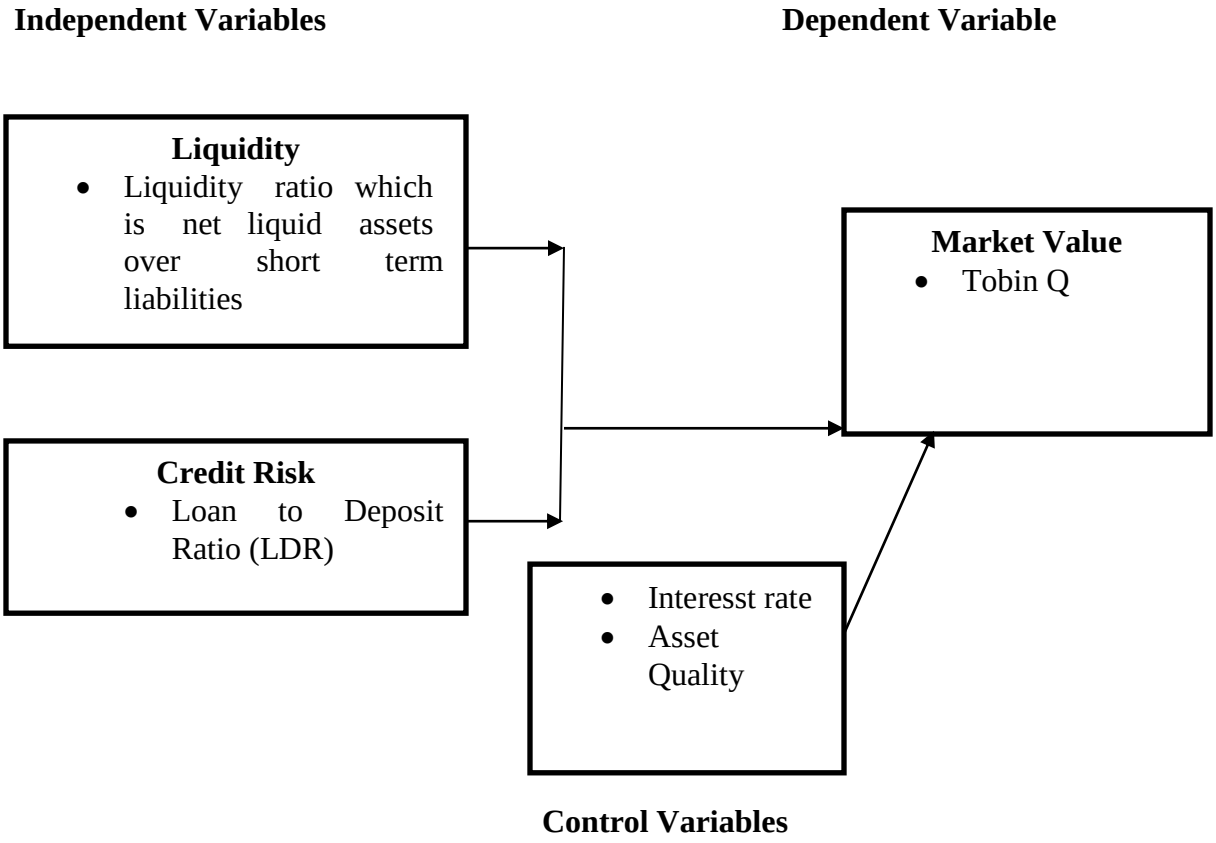

Figure 2.1: Conceptual Model

Source; Researcher (2020)

2.6 Summary of the Literature Review

Based on the review of previous literature, there exist both positive as well as negative associations between liquidity, credit risk and market value. For instance a local study done in Kenya by Maaka (2013) to gauge how the liquidity risk is associated with the commercial banks performance revealed a negative linkage. The findings are in contrary to other studies which established a positive linkage. For instance Njihia (2005), Kamoyo (2006) and Loo (2007) revealed a positive relationship. This study will provide a clear and definitive answer on the association between liquidity, credit risk and market value of Kenyan listed commercial banks.

A few examinations have been embraced trying to discover the relationship of banks' monetary exhibition and credit danger in different nations on the planet. From the audit done in the current paper, comparable examinations have been attempted in Nepal, Ethiopia, Liberia and Nigeria. The analysts looked to set up the connection between MARKET VALUE as well as ROE and different proportions of acknowledge danger, for example, NPLs, Loan to Deposit proportion, Cost to Income Ratio, among different features. The examinations by and large centered around monetary markers as a proportion of credit hazard for example monetary proportions and gave by inspected budget reports. The examinations were additionally done in business sectors where valuing as loan fees was controlled by the market interest and powers of gracefully.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter expounds on the methodology of the research, including the research design, the target population of the study, data collection methods, as well as data analysis.

3.2 Research Design

The study used a descriptive research. Glass & Hopkins (1984) characterize a distinct exploration plan as the method of social affair information that layout happenings and afterward organizes, classifies, represents, and clarifies the information gathered and every now and again utilizes realistic aids for example outlines and diagrams to help the clients in valuing the information dispersal. It also uses other measures that show difference and correlations between various variables (Cooper & Schindler, 2013). What is more, the use of a descriptive research turned out useful in the analysis of information in methodical manner when drawing valuable conclusions and recommendations (Mugenda&Mugenda, 2008).

The descriptive research is most useful especially in cases where ‘why’ or ‘how’ question is under scrutiny in a current set of phenomena that the researcher has little or no controlGray (2004). Additional statistical procedures were applied when answering the research question. The use of this research design was justified by its power in letting the researcher carry out the desired measurements and analyze the observations in order to

study the phenomena in detail and draw accurate conclusions and findings from the research.

3.3 Target Population

The population is defined in terms of the number of commercial banks established under the banking Acts of Kenya as at December 31st, 2019. As per CBK (2019) there are 44 established commercial banks in Kenya by December 31st 2019. Eleven of the 44 commercial banks have been listed on the Nairobi Securities Exchange. The study population was all the listed banks in NSE, eleven of them.

3.4 Data Collection

The study collected secondary data for the last five years starting year 1st January 2015 to 31st December 2019 from the annual reports remitted to the Central Bank of Kenya available on the CBK website and Central Bank of Kenya Resource Centre with regards to market value, liquidity, credit risk, annual average rate of interest and asset quality as shown in Appendix I. The specific data to be collected was Market value of equity, book value of equity, net liquid assets, short term liabilities, total loans, total deposits, performing loans and total gross loans. The data was collected from CBK reports and individual bank annual reports.

3.5 Diagnostic Tests

Diagnostic tests were employed in the study to ascertain the reliability of the outcome. Normality, Autocorrelation and Multicollinearity tests were mainly diagnosed. Normality is a test of assumption that the residuals of the response variable are normally distributed around the mean. This was determined by Kolmogorov-Smirnov Test and

the Shapiro-Wilk Test. Autocorrelation test was performed using Durbin-Watson. Where the statistic is less than two there is positive autocorrelation and where greater than two there is negative autocorrelation. To ensure the data collected is free from biasness and that independent variables were not related to each other, the study conducted a multicollinearity test. The variance of asset quality was used to test multicollinearity. Whenever the values of VIF was between 1 and 10, then there was no multicollinearity while when the VIF was less than 1 or greater than 10, then there was presence of multicollinearity.

3.6 Data Analysis

Objectives of the study guided the process of data analysis. This was done through the aid of statistical package for social sciences (SPSS), while observing good statistical practice throughout the period of analysis. Descriptive as well as inferential statistics were used to perform analysis. The descriptive statistics constitute central tendency measures which comprise of means, standard deviations as well as frequency distribution. Inferential statistics involves regression as well as correlation analysis which wad undertaken to establish the association between the study variables.

3.6.1 Analytical Model

The study used regression analysis to describe the relationship that exists between the dependent variable (market value) and the independent variables (liquidity and credit risk). The model used in analysis took the following format:

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

Where;

α is model intercept

β_1, β_2, β_3, and β_4 are the various intercepts

Y was the Market value as measured by Tobin Q (Market value of equity/ Book value of equity)

X_1 was Liquidity ratio which is net liquid assets over short term liabilities.

X_2 was Credit Risk measured by Loan to Deposit Ratio (LDR)

X_3 was the annual average rate of interest

X_4 was Asset quality as measured by the ratio of performing loans to total gross loans

ε represents the error in the model

3.6.2 Test of Significance

The study used R^2 to determine how change in market value is explained by various factors under consideration. Analysis of Variance (ANOVA) was done by comparing the value of F calculated in the ANOVA Table and that F critical from the F Table. P values were interpreted at 5% level of significance. Coefficients significance in the regression model was also determined using T–test. Coefficients were considered significant if they have a t value greater than two ($t>2$).

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This section presents the research findings on the study on the relationships among liquidity, credit risk and the market value of Commercial Banks Listed at the Nairobi Securities Exchange. Applying analytical tools which include descriptive statistics, regression and correlation analysis, the research findings were represented on tables as illustrated in the subsequent sections. The research used yearly secondary data, which covered a time of 5 years from the year 2015 and 2019. The study obtained complete data for the considered period.

4.3 Descriptive Statistics

Descriptive statistics comprises of the mean, standard deviation, maximum, minimum values, number of observations, skewness and kurtosis. Table 4.1 shows the descriptive results.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Dev	Skewness	Kurtosis
Market Value	55	4.80	120.00	41.081	24.5630	.520	.322
Liquidity	55	13.06	16.56	15.178	1.51557	-.435	-.760
Credit risk	55	.28	.88	.5060	.18708	.533	-.993
Interest rate	55	8.90	11.10	9.8800	.76167	.331	-.974
Asset quality	55	4.90	5.90	5.5200	.35193	-.842	-.638

Source; Researcher (2020)

The finding on table 4.1 indicates that the average market value of the listed commercial banks for the considered study period was 41.081 with a minimum and maximum market value of 4.8 and 120 respectively. The results further show that the average liquidity is 15.178 with a minimum and maximum fluctuation of 13.06 and 16.56 while the average credit risk is 0. 5060 with the minimum and maximum values being 0.28 and 0.88 respectively. The findings further show that the average interest rate over the study period is 9.88 with minimum and maximum interest rate being 8.9 and 11.1 whereas the average asset quality is 5.52 with the minimum and maximum asset quality erest rate being 4.90 and 5.90 respectively. The kurtosis and skewness values range between the recommended ranges of -1 and +1 thus an indication the data is normally distributed.

4.4 Diagnostic Tests

Diagnostic tests were completed before running the regression model. In relation to this study the diagnostic tests that were done include normality test, Multicollinearity test, autocorrelation and homoscedasticity tests.

4.4.1 Normality Tests

To test for normality, the researcher used the Shapiro-Wilk test. Below are the null hypotheses as well as the alternative hypotheses.

H0: the secondary data was not normal.

H1 the secondary data is normal

A p-value more than 0.05, would lead to rejecting the null hypothesis and vice versa. The table 4.2 below summarizes the outcomes

Table 4.2: Shapiro-Wilk Test of Normality

Variables	**Kolmogorov-Smirnov[a]**			**Shapiro-Wilk**		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Liquidity	.288	55	.331	.747	210	.401
Credit risk	.364	55	.331	.656	210	.401
Interest rate	.309	55	.331	.742	210	.401
Asset quality	.329	55	.331	.703	210	.401
Market value	.349	210	.331	.616	210	.401

Source; Researcher (2020)

In accordance to the results, the Shapiro-Walk values were 0.401 for Liquidity, Credit risk, Asset quality, Interest rate and market value each. Kolmogorov-Smirnov tested significant values were at 0.331 for liquidity, credit risk, asset quality, Interest rate and market value each. The data revealed a p- value of higher than 0.05 hence rejecting the null hypothesis and accepting the alternative hypothesis which means the normality test revealed the data was normally distributed. This data was henceforth suitable for usage in guiding parametric tests like ANOVA, Pearson's correlation as well as regression analysis

4.4.2 Homoscedasticity Test

Breusch-Pagan test was applied in order to test for homoscedasticity. This test is conducted on the basis that there is a normal distribution in the error terms. The null hypothesis of the test is a constant variance. Consequently if the p-value is very significant, the null hypothesis is rejected 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 4.3: Test for Heteroscedasticity

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity			
Ho: Constant variance			
Variables: fitted values of net profit			
	chi2 (1)	=	1.34
	Prob> chi2	=	0.2476

Source; Researcher (2020)

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

4.4.3 Multicollinearity Test

Multicollinearity in statistics can be defined as an instance where more than one predictor variables are highly correlated. Strong correlations among independent variables are an undesirable situation. In situations where there is one or more linear relationship between some of the variables perfect Multicollinearity is said to exist. Multicollinearity test was carried out on the data collected. VIF value of the variable was applied. Result where the value of VIF is below 10 means that multicolinearity is nonexistent. The analysis found a VIF value of less than 10 meaning that there was no multicolinearity existing. The outcome of multicollinearity test was as presented in Table 4.4.

Table 4.4: Multicollinearity Test

	Colinearity Statistics Tolerance	VIF
Liquidity	.500	2.000
Credit risk	.608	1.646
Interest rate	.633	1.580
Asset quality	.493	2.027
market value	.242	2.083

Source; Researcher (2020)

4.4.3 Test of Stationary

Stationarity was tested using Augmented Dickey Fuller test and the table below shows a summary of the results. All variables were found to be stationary at 1% confidence level having taken care of any trends and drifts.

Table 4.5: Serial Correlation

	Test Statistics	**1% Critical Value**	**5% Critical Value**	**10% Critical Value**	**Sig.**
Liquidity	-3.311	-2.457	-1.697	-1.31	Stationary
Credit risk	-2.152	-2.457	-1.697	-1.31	Stationary
Interest rate	-2.304	-2.457	-1.697	-1.31	Stationary
Asset quality	-3.301	-2.457	-1.697	-1.31	Stationary
market value	-3.51	-2.457	-1.697	-1.31	Stationary

Source; Researcher (2020)

4.5 Correlation analysis

To test the relationship existing between two variables a correlation analyses was done. A negative and positive correlation coefficient indicates a negative and positive correlation respectively. Pearson correlation test was applied in evaluating the correlation between stock returns and the independent variables under study. Correlation was used to determine the strength of the connection among the variables. Table 4.6 shows the correlations

Table 4.6: Correlation Matrix

	Market Value	**Liquidity**	**Credit risk**	**Interest rate**	**Asset quality**
Market Value	1				
Liquidity	0.773	1			
Credit risk	-0.463	-0.316	1		
Interest rate	-0.618	-0.163	-0.216	1	
Asset quality	0.652	0.161	0.233	0.462	1

Source; Researcher (2020)

The study established the association between liquidity, credit risk and the market value of Commercial Banks Listed at the Nairobi Securities Exchange using a Pearson Correlation analysis. The study findings presented in Table 4.6 established that there is a significant positive relationship between market value and liquidity

(rho=0.773). Therefore, it can be implied that an increase in Liquidity is associated with increased market value. Secondly, the findings showed that there is a weak negative significant relationship between market value and credit risk (rho=-0.463). This is an indication that an increase in credit risk will definitely decrease the market value of the commercial banks listed at the NSE. Also, there was a significant negative relationship between interest rate and market value (rho=-0.618) and indication that higher interest rates decreases the market value of the banks listed at the NSE. Finally, the findings showed that there is a strong positive significant relationship between asset quality and market value (rho=0.652) an indication that good quality of assets have a positive impact on the market value of the banks listed at the NSE.

4.6 Regression Analysis

The relationship between liquidity, credit risk and the market value of Commercial Banks Listed at the Nairobi Securities Exchange was established using multiple regression model after the diagnostic tests indicated that the assumptions of multiple regression model would not be violated. Regression analysis involved the analysis of coefficient of determination, model significance and model coefficients

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.804053	0.646501	0.616543	1.035581

Dependent Variable: market value

Predictors: (Constant), Liquidity, Credit risk, Asset quality and Interest rate

Source; Researcher (2020)

In determining the influence of selected predictor variables on market value, the research employed the coefficient of determination- R- squared. The study findings indicate that the value of the R-square was 0.646 implying that the selected predictor variables explain 64.6% of changes in market value. The R-square column highlights the quality of prediction by the independent variables. The study revealed that the predictor variables and the response variable have a strong relationship as shown by an R value of 0.804.

Table 4.8: ANOVA of the Regression

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Regression	98.851	4	24.712	21.580	0.000002
Residual	58.4001	50	1.1451		
Total	**157.2481**	**54**			

Dependent Variable: Listed commercial banks market value

Predictors: (Constant), Liquidity, credit risk, interest rate and asset quality

Source; Researcher (2020)

Table 4.8 provides the outcomes of the ANOVA. With P value being 0.000 and below the critical p value of 0.05, the model was considered statistically significant wholly and this is confirmed by an F statistic of 21.580 which implies that the selected predictor variables are good predictors of market value

Table 4.9: Coefficient of Correlation

	Un-standardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	3.77	0.451		8.35920	0.000
Liquidity	0.782	0.221	0.146	3.53846	0.001
Credit risk	-0.463	0.179	-0.126	2.58659	0.013
Asset quality	-0.532	0.133	-0.045	4.00000	0.000
Interest rate	0.473	0.173	0.142	2.73410	0.009

a. Dependent Variable: market value

Source; Researcher (2020)

Market value = $3.77 + 0.782X_1 + 0.463X_2 - 0.532X_4 + 0.473X_3 + \varepsilon$

From the finding in Table 4.10, the study found that holding Liquidity, Credit risk, asset quality and Interest rate at zero Listed commercial banks market value will be 3.77. It was established that a unit increase in liquidity, while holding other factors (credit risk, Asset quality and growth rate) constant, will lead to an increase in market

value by 0.782 (p = 0.001). Further, unit increase in Credit risk, while holding other factors (Liquidity, Interest rate and asset quality) constant, will lead to a decrease in market value by 0.463 (p = 0.013). A unit increase in Asset quality, while holding other factors (Liquidity, Credit risk and Interest rate) constant, will lead to a decrease in Listed commercial banks market value by 0.532 (p = 0.000). A unit increase in Interest rate, while holding other factors (Liquidity, Credit risk, and asset quality) constant, will lead to an increase in market value by 0.473 (p =0.009).

4.7 Interpretation of the Findings

Results of the Pearson's correlation coefficient depicts that there is a significant positive relationship between market value and liquidity. Therefore, it can be implied that an increase in Liquidity is associated with increased market value. In line with the study findings, Banafa (2016) established that the connection between liquidity and market value is positive. It was concluded that, effective management of liquidity enables financial managers to invest in available financial opportunities and hence increase their firm's asset base enabling them to acquire more loans when need arises. Nyabate (2015) similarly determined that the association between liquidity and market value is weak or insignificant and that capital structure has a substantial connection with market value.

Secondly, the discoveries demonstrated that there is a frail negative huge connection between market worth and Credit hazard. Couple with the examination discoveries, Abbas, et al. (2014) uncovered that that a bank's acknowledge hazard as an ideal proportion of the proportion existing between the credits that are not performing and the arrangement of the misfortune to the non performing advances contrarily influences the market esteem. This infers that when the banks face a significant part of the credit hazard,

the involvement with the market esteem decreases. This thusly prompts an addition in the proportion of the absolute advances and the stores altogether subsequently prompting increment in the benefit level. Despite the fact that the examination is like the current one, the factors to be utilized in the relapse model vary and in this manner the discoveries won't be fundamentally the equivalent. Essentially, Mendoza and Rivera (2017), set up that a relationship to be sure exist between credit danger and market esteem which was negative and factually huge as examined utilizing the Arellano-Bond assessor. Accordingly, the creators prescribed that rustic banks expected to build up whether infusion of capital would in any capacity influence their benefit Vis a Vis expanding their obligations.

The discoveries demonstrated that there is a solid negative critical connection between Interest rate and market esteem. Couple with the examination discoveries, Osoro and Ogeto (2014) saw that unreasonable movements of loan costs can present huge dangers to profit and capital base of an association just as increment its working costs. Loan fee changes may affect resource valuation, liabilities and the current estimation of expected incomes. Higher paces of revenue humpers the current estimation of incomes, which would diminish the feasibility ventures, subsequently, recoils valuation of stock returns.

The examination set up that there was a huge positive connection between resource quality and market esteem. The discoveries concur with Majakusi (2016) who attempted to decide the impacts of resource quality available estimation of business banks. He utilized an engaging exploration plan. The example period was from 2010 to 2014. This examination utilized auxiliary information that was gotten from the CBK. A relapse model was utilized in information examination. The discoveries were that there were

variances in monetary execution while resource quality and capital sufficiency enlisted a consistent development. This shows that banks deal with their resources well to fulfill clients' requests for money. Besides, business banks can ingest sensible operational and practical misfortunes without taking a chance with the organizations' strength. Besides, the administration of the business banks had the capacity to address the issue for extra money. The study found that market value and asset quality are positively correlated. This relationship is also statistically significant. Further, Yin (2009) who states; a bank‘s asset quality affects both the individual banks financial and operation performance well as soundness of the national financial system.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section summarizes the research results, conclusions and research recommendations. The research finally indicates the limitations and areas, which may require additional research.

5.2 Summary

The aim of this research was to explore the the relationships among liquidity, credit risk and the market value of Commercial Banks Listed at the Nairobi Securities Exchange. The main theories used were the shiftability theory, financial distress theory, as well as the information asymmetry theory. The independent variable of the study was liquidity and credit risk while the dependent variable was market value whereas interest rate and asset quality were incorporated as the control variables. The study employed a descriptive survey and the study population was the 11 listed Kenyan commercial banks, hence a census was carried out because of its relatively low population size.

The finding established that the average market value of the commercial banks for the considered study period was 0.1105. The results further show that the average liquidity was 15.178 while the average credit risk was 0.2159. The findings further show that the average asset quality over the study period is 6.638 whereas the average Interest rate is 5.52 with the minimum and maximum Interest rate being 4.90 and 5.90

respectively. The kurtosis and skewness values range between the recommended ranges of -1 and +1 thus an indication the data is normally distributed.

The correlation results established that the correlation between market value and liquidity was positive while the correlations between credit risk and market value was negative. In addition the correlation between interest rate and market value was negative. The correlation between asset quality and market value was strong and positive. The results established that 61.6% of the variation in the dependent variable was accounted for by the independent variables. The results of ANOVA established that the F statistics value of 21.580 was significant.

The linkage between the liquidity and market value of listed commercial banks was found to be significant as well as positive. However, the linkage between the credit risk and market value of listed commercial banks was estblished to be significant though negative. The results also established that the relationship between asset quality and market value of listed commercial banks was positive and significant while the relationship between interest rate and market value of listed commercial banks was negative and significant.

5.3 Conclusions

The study findings established that there is a positive and significant relationship between liquidity and market value of listed commercial banks. The study based on this finding therefore concludes there is significant relationship between liquidity and market value of listed commercial banks in Kenya. The study findings established that there is a negative and significant relation amid credit risk and

market value of listed commercial banks in Kenya. The study based on this finding concludes an existence of a significant negative relation between interest rate and market value of listed commercial banks in Kenya.

The research findings established a positive and significant connection existence between asset quality and financial performance of commercial banks. The study based on this finding therefore concludes existence of a significant connection amid asset quality and market value of listed commercial banks in Kenya.

5.4 Recommendations for Policy and Practice

This present investigation's outcomes presume that a positive relationship exists among liquidity and market an incentive in Kenya's business banks. The exploration suggests that Central Bank of Kenya be severe on liquidity proportion least and keep up it at 20% as this will upwardly affect the income of the banks and guarantee dependability in the financial business and economy by and large in the short and long haul. Banks ought zero in on productivity alone as well as guarantee that there is viable and effective liquidity the executives. This will improve the development of the Kenyan business banks. Banks should likewise not have exorbitant liquidity yet in addition have different methods of keeping up liquidity, for example, short-term acquiring or limiting bills. The over the top liquidity should be put resources into momentary instruments to build return on speculations

Having have distinguished that credit hazard significantly affects market esteem, there is need for business banks to actualize rules to share credit value of borrowers. This will expand nature of credits as a bank's resource and limit non-performing advances. Also,

great monetary administration in use should be set up. Keeping up costs at the least levels will help augment its fairly estimated worth.

The examination discovered that a positive relationship exists among worth and resource nature of a bank. This investigation suggests that banks' administration and chiefs should target expanding their resource base by concocting measures and arrangements pointed toward extending the banks' resources as this will at last affect estimation of the bank.

5.5 Limitations of the Study

The variables of this research were liquidity, credit risk, interest rate, asset quality and market value of listed commercial banks measured using Tobin Q. The findings are therefore based on those variables and the specific measured adopted to measure those variables.

The study considered yearly data for the period of five years from 2015 to 2019. The period of study was five years is not enough time to draw unequivocal conclusion.

The findings and conclusions are based on the considered research period and not prior period since interest rates, Asset quality and credit risk keep on changing year in and year out. Finally, the study used secondary data which is historical in nature and may not reflect the current situation and the non qualitative aspects.

Only commercial banks listed in NSE were chosen to participate in this study. Thus, all the 43 banks were not involved. The study had the interest rate and asset quality as a control variable, however this may affect the results when rolled out to all commercial banks.

The study was limited to commercial banks and not any other institution within the financial sector. Therefore if housing institutions and micro-finance institutions are included, the results may be varied in nature.

5.6 Suggestion for Further Research

This research was based on listed commercial banks however; liquidity and credit risk affects financial institutions like microfinance banks, saving and credit cooperative societies and credit only micro finances, which charge liquidity on advanced amount. This study therefore recommends a research on the impacts of liquidity and credit risk on other Kenyan financial forms. The research also recommends a research on the impacts of liquidity and credit risk on nonperforming loan among Kenyan financial institutions.

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Appendices

Appendix I: Data

		Market value	Liquidity ratio	Credit Risk	annual average rate of interest	Asset quality
Absa Bank Kenya PLC	2015	38.4	16.51	0.28	10.1	5.4
	2016	62.4	16.09	0.28	11.1	5.7
	2017	38.4	16.56	0.35	10	5.9
	2018	57.6	13.67	0.35	9.3	4.9
	2019	14.4	13.06	0.35	8.9	5.7
CfC Stanbic Bank Limited	2015	48	16.51	0.32	10.1	5.4
	2016	76.8	16.09	0.32	11.1	5.7
	2017	48	16.56	0.42	10	5.9
	2018	67.2	13.67	0.42	9.3	4.9
	2019	14.4	13.06	0.42	8.9	5.7
I&M Holdings Ltd	2015	19.2	16.51	0.39	10.1	5.4
	2016	14.4	16.09	0.39	11.1	5.7
	2017	4.8	16.56	0.39	10	5.9
	2018	14.4	13.67	0.39	9.3	4.9

	2019	19.2	13.06	0.42	8.9	5.7
Diamond Trust Bank Kenya Limited	2015	52.8	16.51	0.67	10.1	5.4
	2016	48	16.09	0.58	11.1	5.7
	2017	14.4	16.56	0.63	10	5.9
	2018	38.4	13.67	0.67	9.3	4.9
	2019	76.8	13.06	0.56	8.9	5.7
Housing Finance	2015	57.6	16.51	0.81	10.1	5.4
	2016	120	16.09	0.81	11.1	5.7
	2017	81.6	16.56	0.88	10	5.9
	2018	62.3	13.67	0.72	9.3	4.9
	2019	52.8	13.06	0.65	8.9	5.7
KCB Bank Kenya Limited	2015	67.2	16.51	0.72	10.1	5.4
	2016	38.4	16.09	0.79	11.1	5.7
	2017	67.2	16.56	0.39	10	5.9
	2018	38.4	13.67	0.28	9.3	4.9
	2019	38.4	13.06	0.28	8.9	5.7
National Bank of Kenya Limited	2015	19.2	16.51	0.28	10.1	5.4
	2016	9.6	16.09	0.28	11.1	5.7

	2017	14.4	16.56	0.44	10	5.9
	2018	4.8	13.67	0.49	9.3	4.9
	2019	14.4	13.06	0.46	8.9	5.7
NIC Bank Limited	2015	14.4	16.51	0.51	10.1	5.4
	2016	14.4	16.09	0.53	11.1	5.7
	2017	43.2	16.56	0.46	10	5.9
	2018	21.4	13.67	0.39	9.3	4.9
	2019	48.7	13.06	0.35	8.9	5.7
Standard Chartered Bank Kenya Limited	2015	62.4	16.51	0.70	10.1	5.4
	2016	57.6	16.09	0.63	11.1	5.7
	2017	9.6	16.56	0.84	10	5.9
	2018	57.6	13.67	0.86	9.3	4.9
	2019	52.8	13.06	0.86	8.9	5.7
Equity Bank Kenya Limited	2015	38.4	16.51	0.28	10.1	5.4
	2016	67.2	16.09	0.30	11.1	5.7
	2017	19.2	16.56	0.44	10	5.9
	2018	19.2	13.67	0.46	9.3	4.9
	2019	9.6	13.06	0.70	8.9	5.7

Cooperative Bank of Kenya Limited	2015	52.8	16.51	0.28	10.1	5.4
	2016	43.9	16.09	0.39	11.1	5.7
	2017	48	16.56	0.74	10	5.9
	2018	76.8	13.67	0.67	9.3	4.9
	2019	48	13.06	0.56	8.9	5.7

Appendix II: Listed Commercial Banks in Kenya as at 31st December, 2019

1. Absa Bank Kenya PLC

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