THE RELATIONSHIP BETWEEN INSIDER LENDING AND FINANCIAL RISK OF COMMERCIAL BANKS IN KENYA

BY

JOSEPH MACHARIA CHEGE

D61/74727/2014

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

NOVEMBER 2016

DECLARATION

This is my original Research Project work and has not been presented for academic purposes in any institution of higher learning or university.

Signed…………………………………   Date ……………………………….

Joseph Macharia Chege
D61/74727/2014

This Research Project is submitted for examination with my approval as university supervisor:

Signed …………………………………   Date

…………………………………..

Dr. Kennedy Okiro
Lecturer
Department of Finance and Accounting
School of Business
University of Nairobi

ACKNOWLEDGEMENTS

I would like to thank God for granting me wisdom, capability and the opportunity to do this research work. It is only through His will and power that this study was achieved.

Sincere thanks go to my supervisor, Dr. Kennedy Okiro, who selflessly and patiently guided me throughout my research work. I also appreciate the staff and management of the University of Nairobi for their co-operation whenever I needed their assistance.

I also owe heartfelt gratitude and appreciation to my wife for her encouragement and insistence that this could be done.

Finally, am thankful to my parents, who have always encouraged me to strive for the best.

DEDICATION

This research study could not have been possible with *Jehova* for being so gracious by granting me this opportunity, my wife for her constant encouragement that kept me going, my children for being the inspiration from which I drew from as I continue to aspire to be their best role model and finally to my parents for instilling discipline in me at a tender age that has made me reach this far.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

ANOVA   :   Analysis of Variance

CBK   :   Central Bank of Kenya

MBA   :   Master of Business Administration

ROA   :   Return on Assets

ABSTRACT

This research study was conducted to enable the researcher to determine the effect of insider lending levels on financial risk of commercial banks in Kenya. Financial risk was measured using liquidity ratio. Insider lending was the independent variable. Lending rate, exchange rate and credit risk were used as the model control variables. The study used a descriptive research design. The population of the census study comprised all the forty two commercial banks in Kenya. Secondary data was collected on the study variables from the published annual reports and financial statements of the said banks and the annual periodic reports published by the Kenya National Bureau of Statistics. Data collected was summarized and organized into form of tables and data analysis undertaken. Data analysis was undertaken using regression and correlation analyses, as well as descriptive statistics. The research study finds that insider lending has a weak effect on financial risk among commercial banks in Kenya.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Banks are exposed to many risks, among them financial risk, due to the unique nature of their operations and their customers (Ugoani, 2016). Financial risk is fundamental in each commercial bank (Muteti, 2014). Credit risk, liquidity risk as well as market risk comprise financial risk; many approaches by commercial banks to counterbalance these risk exposures generally involve well laid out credit policies and procedures (Ugoani, 2016).

According to the moral hazard theory (Arkelof, 1970), borrowers may fail to honour their debt obligations due to incentives that arise after loan transactions have been executed. As such bad loans arise, insider loans often comprise such bad loans. Past bank failures and regulatory seizures in Kenyan banking industry have been credited to unchecked insider lending, often to politicians, senior executives, and board members, without regard to ability to repay cardinal rule (Kamau & Juma, 2014).

The study investigated the relationship between insider lending and financial risk in Kenyan commercial banks. In the past year, three banks have experienced financial difficulty in Kenya; the regulator attributed the difficulties to weak corporate governance as well as insider loans and advances characterizing the said banks (CBK, 2016). Insider loans could comprise a small percent of total bank loan portfolio but they could affect a bank's financial risk.

1.1.1 Insider Lending

According to the Prudential Guidelines issued by the Central Bank of Kenya, insider lending comprise all loans and advances to a bank's executive directors and chief executive officers (CBK, 2016). Laeven (2001) defines insider lending as the loans and advances made to internal persons in an organization; these persons are associated to a commercial bank through shareholding or the capacity to control, on terms, conditions and scales that are more advantageous than would be economically justified normally.

Insider lending could involve a borrower giving incentives to a bank manager to bend controls so as to offer a loan facility at favorable rates to the borrower; these insider loans might breach the ability to repay axiom of lending. A large shareholder in the board of directors could overtly or covertly coerce bank leadership through the threat to fire, to access the favourable advances. Insider lending thus tends to involve large shareholders (Laeven, 2001). A manageable level of insider lending is advisable; excessive levels might lead to losses that often might threaten continued existence of a bank.

1.1.2 Financial Risk

Financial risk refers to the likelihood that a firm could fail or encounter difficulty in honoring its financial obligations as and when they fall due. There are three kinds of risks constituting financial risk: credit risk, liquidity risk and market risk (Bender & Ward, 2009). Liquidity risk is the possibility that a bank would run into strain in honoring obligations from its financial engagements when they fall due; liquidity risk may arise from deposits withdrawal by customers en masse. Credit risk is the possibility of monetary loss to a bank where a borrower fails to meet his/her pledged commitment to make debt repayments. Credit risk is related to capital adequacy ratio (Nyamutowa &

Masunda, 2013). Market risk is the risk exposure that emanates from financial instruments market prices fluctuations.

Financial risk exposure is present in every commercial bank. This risk exposure needs to be mitigated to a low level. Firms, including commercial banks, cannot operate without assuming any risk at all; however, taking excessive financial risk can destroy a firm. Thus prudent financial risk management is essential (Muteti, 2014). Financial risk emanates from a firm's operations and strategy; over the launch and growth stage of the life cycle, financial risk is low, but rises at maturity and decline stages (Bender & Ward, 2009).

1.1.3   Relationship between Insider Lending and Financial Risk

The risk attached to a loan facility is the likelihood that the loan may not be repaid as and when due (Ogbuagu, Udoh & Udoh, 2016). Insider loans are often the major reason for large nonperforming loan portfolio by commercial banks; the extension of loans and advances done outside the arm's length basis involves loans to company promoters, directors and other key stakeholders that become bad and doubtful, and irrecoverable. Nonperforming loans portfolio has negative effect on bank profitability thereby exposing banks to financial risk (Ugoani, 2016).

Insider lending is often characterized by less stringent conditions underlying the facilities; there is a negative relationship between less prudent lending and net interest margin (Berrios, 2013). According to moral hazard theory (Akerlof, 1970), borrowers and specifically insider borrowers have the incentive to dishonor loan terms after benefiting from the funds advanced. These inside borrowers are privy to the relaxed terms that allowed them access to the loans; they may wilfully or inadvertently fail to repay their dues. This then exposes the lender(s) to increased financial risk.

1.1.4   Commercial Banks in Kenya

There are 42 commercial banks in Kenya. The banks are regulated and monitored by the Central Bank of Kenya as per the provisions of the laws of Kenya and the Banking Act cap 488 and Prudential Guidelines thereon issued. The commercial banks have to maintain certain minimum capital levels as well as capital ratios and other ratios as a way to mitigate banking risk exposures: minimum statutory liquidity ratio is 20% and total capital to risk weighted assets minimum statutory ratio is 12% (CBK, 2016).

Kenyan commercial banks' risk weighted assets has increased over the years (Waithaka, 2013). Several financial institutions including commercial banks have also collapsed in Kenya in the past as a result of non-performing loans (Waweru & Kalani, 2009). Three banks have also faced financial difficulty over the recent past; Imperial bank experienced difficulty due to weak corporate governance mechanisms as well as insider lending, Chase bank was put under receivership due to related party lending and accounting treatment of the same, Dubai bank also faced difficulty due to liquidity problems (CBK, 2016).

1.2 Research Problem

A majority of Kenyan commercial banks practice good lending and financial risk management (Wanjohi, 2013). However a few have been left exposed to financial risks following unchecked insider advances and loans. Agency theory (Jensen & Meckling, 1976) postulates that although firm owners (principals) engage managers (agents) to undertake day-to-day operations of their firms with a view to maximize the principals' interests, managers may diverge from the principals' expectations and purpose to pursue other goals. Commercial bank managers may advance insider loans with relaxed terms

and conditions. Moral hazard theory (Akerlof, 1970) advises that such insider borrowers may have a disincentive to repay the loans advanced to them; in turn, financial risk exposure to the lender is affected. The study sought to establish the effect of insider lending on banks' financial risk.

In Kenya, out of the over forty banks, three banks have experienced financial difficulties in the recent past. Their failure has been attributed to weak lending controls as well as inadequate governance structures especially those related to lending (CBK, 2016). A majority of the commercial banks however have and adhere to sound credit policies and procedures. The central bank of Kenya also has in place minimum statutory ratios to be maintained by the banks; these ratios assist cushion the industry players from shocks, among them financial risks.

Past research studies have also been undertaken with varied conclusions and different aspects of insider lending and financial risk studied. A big portfolio of nonperforming loans hinders the capability of commercial banks to return sustained profits; nonperforming loans portfolio has negative effect on bank profitability (Ugoani, 2016). Negative relationship between less cautious lending (a characteristic of insider lending) and net interest margin exists (Berrios, 2013). Credit risk and its management have a high causal and significant relationship with bank profitability; an increase in default rate and capital adequacy ratio increases credit risk (Ogbuagu, Udoh & Udoh, 2016).

Loan collection approaches are key to efficient recovery of loans and bad debts by commercial banks in Kenya (Kamau & Juma, 2014). National economic downturn is the most critical cause for existence of bad loans by commercial banks in Kenya. Customer failure to reveal vital information during the loan application process as well as lack of an

effective debt collection policy contribute to non performing debt problem in Kenya (Waweru & Kalani, 2009).

From the empirical studies, various aspects of credit lending and financial risk have been studied. No study has however looked at the effect of insider lending on the financial risk of commercial banks in Kenya in the past. The research study thus sought to address this research gap by aiming to answer the research question: What is the relationship between insider lending and financial risk of commercial banks in Kenya?

1.3 Research Objective

The research study sought to investigate the relationship between insider lending and financial risk of commercial banks in Kenya.

1.4 Value of the Study

The study added to the existing knowledge on the study area thus aiding other researchers as a reference point. Other researchers might also build on the research study by focusing on other aspects of financial risk. Corporate decision makers inside commercial banks also found the study useful. They were able to draw insights into the effect of insider lending on financial risk; a useful input in their decision making processes.

The researcher also believes that the study assisted and aided bank managers especially those in-charge of risk management to better understand financial risk; thus be in a better position to mitigate this kind of risk by putting in place apt internal controls. The banking industry regulator(s) also obtained input from the study while formulating new policies as well as updating existing ones on financial risk and insider lending. The regulator's bank

supervisors also found the study useful while undertaking their routine checks and assessments.

Potential and existing investors as well as fund managers also found the study to be of value to them. Their investment decisions would be made with a better understanding of the risk exposure of their potential investment targets as well as the existing investment portfolios. The said investors are thus able to take informed decisions and craft their investment strategies accordingly.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter discusses the literature review. It is organized into six sections: introduction, theoretical review, determinants of financial risk, empirical review, conceptual framework, and ends with a summary.

2.2 Theoretical Review

This section discusses the main theories relevant to the study. These are Portfolio theory, Agency theory, and Moral hazard theory.

2.2.1 Portfolio Theory

The portfolio theory as postulated by Markowitz (1952) advances that investors form their portfolios purely on the careful basis of risk-return trade-off. The theory assumes that investors are risk averse, rational, and prefer more to less returns. The theory presents a case for building portfolios that are well diversified; thereby optimizing risk and return. With a well-diversified portfolio(s) in place, investors are left now to only focus on portfolio performance instead of focusing on individual investments in the portfolio.

Commercial banks hold diversified portfolios of loans in the sense that lending is done to various segments of the economy as well as different clienteles. Insider loans form part of these loans portfolio, in Kenya. By focusing only on the overall portfolio performance, as advised by portfolio theory, might lead to nonperforming insider facilities being carried in the books over a period of time. Financial risk is determined by credit portfolio, among others; insider loans thus impacts financial risk either positively or negatively

(Onunga, 2011). Given that it might take a while before portfolio performance is assessed from unit perspective, financial risks might build up.

2.2.2 Agency Theory

Developed by Jensen and Meckling (1976), it describes a number of problems that arise from agency relationships. According to agency theory, agency relationships are created where firm owners (principals) engage managers (agents) to run the firms on behalf and in the best interests of the principals. The agents are thus tasked solely to protect, pursue and maximize the principals' interests. However in practice the agents might be tempted, and often do, to pursue other interests that conflict with the shareholder interests.

Insider loans and advances made to internal persons in an organization present such situations when agents' interest conflict the principals' (Laeven, 2001). Insider loans are those made to senior executives in a bank, board members, or even to shareholders; the agents are thus essential extending credit to themselves or related parties, they might do these lending on fairly relaxed terms and conditions. This adversely affects financial risk when defaults are registered.

2.2.3 Moral Hazard Theory

Moral hazard theory (Akerlof, 1970) advances an explanation for the behavior of parties to a contract after the contract has been entered into. The theory is based on the information asymmetry that underlies contracts, among them lending contracts. Contracts are based upon some terms and conditions that the parties thereto are anticipated to follow and abide by. The moral hazard theory presents a case for one party to a contract failing or reneging, inadvertently or purposely, to honor their part on the terms and conditions.

Insider lending beneficiaries are privy to the often relaxed terms and conditions governing the facilities advanced them (Laeven, 2001). Such insider facilities might lack collateral and may fail to meet the credit lending five Cs cannons of capital, capacity, collateral, condition and character; the beneficiaries might obtain the impetus to default due to many reasons, among them the relaxed terms and conditions of their respective facilities. This raises default risk where such lending are pervasive, and in effect financial risk.

2.3 Determinants of Financial Risk of Commercial Banks

Financial risk in commercial banks is affected by the nature and performance of insider loans. However, financial risk is also theoretically determined by other factors that are discussed below:

A determinant of financial risk is a bank's use of debt in its financial structure. The level of debt used by a firm influences its risk exposure. Debts are often collateral backed; as such, the financial risk of a borrowing firm rises with debt due to the risk of default. A bank should therefore carefully consider the effect of debt on its financial risk structure against the accruing benefits. Financial debt providers in the financial markets may shy away from lending to businesses with high risk profiles. This study also identified profitability, dividend, asset tangibility, growth (Abor et al., 2009).

Interest rate risk also determines a bank's financial risk. This emanates from the uncertain and volatile nature of interest rates within the economy. In a free economy, interest rates are subject to vagaries of the economy; erratic economic conditions adversely influences interest rates. Lenders such as commercial banks are affected from two fronts; as finance providers and finance beneficiaries. Credit facilities are often mispriced during

11

inflationary times; deposits taken during high inflation regimes might appear expensive when interest rates decline. The interplay between interest rates offered by banks on their term deposits and those charged on loans has an impact on financial risk (Li, 2003).

Foreign exchange risk is another determinant of financial risk. Banks often operate across international borders, their clients might also draw business from international borders; thus exposure to exchange rates risk. Due a rising globalization, local economies often suffer from changes and events in the international business arena; such changes impact local currencies. Some countries at time undertake currency devaluations to the detriment of firms' profits and assets value. Firms have therefore to proactively manage exchange rate risk exposures (Li, 2003).

Credit risk is another determinant of financial risk. It may arise due to insider lending, but it has more sources and influences; it may result from operational, foreign exchange, legal compliance and strategic risks and may lead to liquidity risk. There are also internal influences that can cause credit risk of financial institutions; financial inducements provided to the personnel of a bank give rise to opportunism and moral hazards by lending to poorly performing businesses and persons with doubtful credit history. Default risk fuels credit risk (Chinwe, 2015)

Corporate governance framework establishing and regulating the conduct of affairs of a bank also does determine its financial risk. Corporate governance sets the dos and don'ts as well as the best practices, processes and procedures that generally guide operations of banks, lending included. A lax corporate governance environment characterized by weak or weakly enforced internal controls, leaves a bank exposed to various risks among them financial risk (Bender and Ward, 2009).

2.4 Empirical Review

This section discusses the relevant global and local empirical studies.

2.4.1 Global Studies

Berger, Imbierowicz and Rauch (2014) undertook a research study to analyze the roles of corporate governance in bank defaults during financial crisis in the United States by examining the ownership and management structures of default and no default commercial banks in the US. The study used an exploratory research design and secondary data. The study comprised two samples: eighty five defaulting firms and 256 no default banks. Data were analyzed and presented using descriptive statistics and regression analysis and findings indicate high stakes in the bank induce lower-level management to take high risks and that risk of default rises when incentives of executive management and mid-level management are aligned. The study notes that financial variables, such as capital, earnings, and non-performing loans, are indicative of financial risk. This study assists explain the rationale behind insider loans.

Berrios (2013) undertook a research study to investigate the relationship between bank credit risk and financial performance and the contribution of risky lending to lower bank profitability and liquidity. The study employed a descriptive research design and a population of 793 public companies in the United States. 80 banks were sampled but only 40 were studied; the forty banks had complete sought data set, period covered 2005-2009. Data analysis was done via ordinary least squares regression analysis, descriptive statistics and analysis of covariance. The study finds a negative relationship between less prudent lending and net interest margin, insider holdings and longer chief executive

officer tenure were negatively related to bank performance. This study is relevant from the perspective of the insider lending variable.

Nyamutowa and Masunda (2013) also undertook a study to test the hypothesis that the collapse of banking institutions is primarily driven by inadequate credit risk practices in the context of Zimbabwe. The qualitative survey study used a population of 14 commercial banks and obtained primary data using questionnaires. The researcher observes that the deteriorating economy, forced Zimbabwe to adopt lending guidelines that focused credit to predominantly agriculture sector to increase economic output through cheap funds obtainable at negative real interest rates. The study established that commercial banks in Zimbabwe place much weight and emphasis on collateral. The outcome being poor asset quality that in turn increases bank exposure. Foreign commercial banks operating in Zimbabwe were found to be having better credit risk practices than indigenous commercial banks.

Abor et al. (2009) in a research study to evaluate the effect of risk on the financial policy of emerging market firms sourced secondary data on publicly traded firms from 34 emerging markets (countries) over period 1990-2006. Data analysis was done using panel data analysis model. The research study found that firms with high probability of survival are likely to employ more debt, level of risk exposure influences financial decisions and finance providers are not interested in lending to firms with high business risk. Insider borrowers are high risk, thus should access credit facilities cautiously.

2.4.2 Local studies

Obudho (2014) undertook a research study with the objective of establishing the relationship between financial risk and financial performance of insurance companies in

Kenya. The population consisted 49 insurance firms and covered period 2009 to 2013. The census study used a descriptive research design and secondary data collected from the said firms' financial reports. Data was analyzed using inferential statistics, regression analysis and correlation analysis and found that an increase in financial risk leads to decrease in financial performance of insurance companies in Kenya; solvency, capital management and liquidity risks negatively affects financial performance of insurance companies in Kenya. Financial risk management therefore is essential as financial risk impacts firm performance.

Muteti (2014) also in a research study sought to find whether there exist a relationship between financial risk management and financial performance of commercial banks in Kenya using a descriptive research design. Population comprised 43 commercial banks in Kenya and covered 2009-2013 period. The study used secondary data and also used regression analysis in the data analysis. The study finds a negative relationship between credit risk, interest rate risk, foreign exchange risk, liquidity risk and financial performance of commercial banks in Kenya and a positive relationship between capital management risk, bank deposits, bank size and financial performance. The researcher underscores the need to control credit risk by commercial banks.

Waweru and Kalani (2009) undertook a study to investigate the causes of nonperforming loans, the actions that bank managers have taken to mitigate that problem and the level of success of such actions. The study used an exploratory research design and collected primary data from a sample of 30 managers from ten largest banks in Kenya. Data analysis done through regression analysis revealed that national economic recession, client failure to disclose vital information during the loan application process, and lack of

an effective debt collection policy contribute to the non performing debt problem in Kenya.

Waithaka (2013) undertook a study to investigate the effect of Basel II requirement on commercial banks in Kenya. Population of the study comprised listed banks. The census study adopted a descriptive research design and covered the period 2009-2012. Regression analysis was undertaken for data analysis and find that Basel II requirement has an impact on banks' capital requirement and asset growth and banks' lending. The eight percent minimum capital requirement was introduced as part of Basel II bank requirements. Basel II is anchored on three pillars: minimum capital, supervisory review and market discipline. Market discipline is centered on better disclosure of risk.

Wanjohi (2013) in a study to analyze the effect of financial risk management on the financial performance of commercial banks in Kenya also used a descriptive research design. The population comprised all the commercial banks in Kenya, and used both primary and secondary data. Primary data was sourced using structured questionnaire. Data analysis was done via descriptive statistics and regression analysis and found out that majority of the Kenyan banks were practicing good financial risk management and a positive correlation exists between financial risk practices and financial performance of commercial banks in Kenya.

2.5 Conceptual Framework

Figure 1: Conceptual Framework

```
┌─────────────────────┐                      ┌─────────────────────┐
│   Insider Lending   │                      │   Financial Risk    │
│   (Independent      │ ───────────────────► │   (Dependent        │
│    Variable)        │            ▲         │    Variable)        │
└─────────────────────┘            │         └─────────────────────┘
                                   │
                       ┌───────────────────────┐
                       │     Lending Rate      │
                       │     Exchange Rate     │
                       │  (Control Variables)  │
                       └───────────────────────┘
```
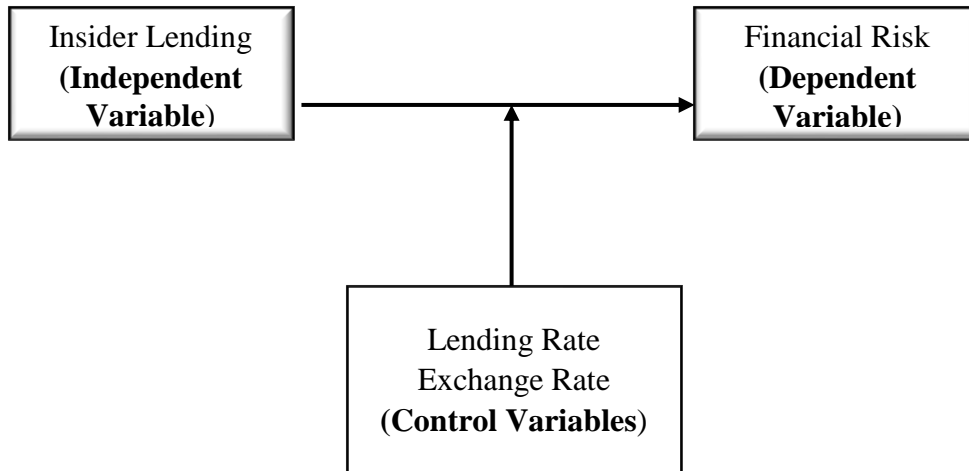
Source: Author (2016)

2.6 Summary of Literature Review

This chapter has discussed the literature review that aided the study. The theories relevant to study have been presented and discussed; these include moral hard, portfolio, and agency theories. The other determinants of financial risk have also been covered. The chapter also presents the relevant past empirical studies, local and foreign, and the study conceptual framework.

From the various empirical studies reviewed, foreign as well as local studies have studied various aspects of credit lending and financial risk. There is no study however that has looked at the effect of insider lending on the financial risk of commercial banks in Kenya. The research study thus sought to address this research gap.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents and discusses the study research methodology. It discusses the research design, study population and sampling, data collection as well as data analysis to be adopted and used by the study.

3.2 Research Design

A research design is the theoretical arrangement within which research is undertaken; it establishes the outline for the collection, measurement and analysis of data (Kothari, 2004). The study adopted a descriptive research design. The main purpose of a descriptive research is to describe the items, objects, or targets of study as they are. This research design was apt as the research intended to describe the effect of insider lending on financial risk of commercial banks in Kenya.

3.3 Population of the Study

A population refers to all the items under study (Kothari, 2004). The census study had a population consisting of all commercial banks in Kenya (see appendix I). There are 42 commercial banks in Kenya (CBK, 2016). All these 42 banks were thus studied; thus there was no need for sampling.

3.4 Data Collection

The study primarily utilized secondary data obtained from published annual reports and or financial statements of commercial banks in Kenya for the period 2013-2015. A data collection form was used to collect the said data. Obudho (2014) also used secondary data while undertaking a similar research study. The secondary data was sourced from

different sources among them the Central Bank of Kenya and commercial banks websites.

3.5 Validity and Reliability

Validity refers to the degree to which a collection instrument measures what we actually wish to measure while on the other hand reliability has to do with the correctness and exactness of a measurement procedure or instrument (Kothari, 2004). There are three measures of validity: content validity, construct validity, and criterion related validity. Reliability is reflected in terms of a collection instrument consistently measuring the target and providing consistent results. The data collection instrument was pretested thereby allowing for checking of validity; while the researcher was the sole data collector, thereby allowing for uniform data collection.

3.6 Data Analysis

The data collected was checked for completeness, edited and presented in form of tables. Then descriptive statistics such as mean, standard deviation, median, was calculated to summarize the data collected. To establish the relationship between insider lending and financial risk, ordinary least squares regression analysis was undertaken. The analytical model being as is in the succeeding subsection.

3.6.1 Analytical Model

The study applied regression analysis. Muteti (2014), Wanjohi (2013) and Obudho (2014) also used regression analysis for similar research studies. The model used is as below:

$$FR = \beta_0 + \beta_1 IS + \beta_2 LR + \beta_3 ER + \varepsilon$$

Where;

FR = Financial Risk, measured by annual bank liquidity ratio at period end

IS = Insider Lending, measured by the proportion of insider loans to total loan book as reported under 'insider loans' in Banks' financial statements

LR = Lending Rate, control variable, measured by the annual lending rate as per the central bank of Kenya.

ER = Exchange Rate, control variable, measured by annual mean exchange rate (against US dollar)

β_i = Beta coefficient for the respective independent variable, that is the unit change in financial risk as a result of a unit change in variable i.

β_0 = the intercept, the value of financial risk when the independent variables are at zero.

ε = the error term.

3.6.2 Tests of Significance

T test and F test were undertaken at 95% level of significance to test the level of model variables significance. R squared was calculated to indicate variation in financial risk emanating from changes in insider loans and lending rates. Analysis of variance was undertaken to test the regression model's level of significance.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This section presents and discusses the data analysis done and data analysis results. The chapter is organized into sections: Response Rate, Data Validity, Descriptive Statistics, Correlation & Regression analyses and hypothesis testing, and lastly, Discussion of researching findings.

4.2 Response Rate

The census study targeted forty two commercial banks in Kenya (CBK, 2016). However only thirty commercial banks were eventually studied. These were those with complete data set and also represented 71.43% of the study population. Mugenda and Mugenda (2003) advises that fifty percent response rate is the minimum to ensure objective research findings. The achieved percentage is adequate for data analysis therefore.

4.3 Data Validity

To ensure data validity and reliability as per section 3.5, the data collection instrument was pretested thereby allowing for checking of validity. The researcher was also the sole data collector; thereby allowing for uniform data treatment and collection.

4.4 Descriptive Statistics

This section presents and discusses the descriptive statistics. Each study variable mean, standard deviation, coefficient of variation, kurtosis and skewness are covered. The table below provides a summary of the descriptive statistics.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Skewness	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
exchange_rate	90	86.12	98.18	90.89	5.36	0.606	0.254	-1.586	0.503
lending_rate	90	15.99%	17.5%	16.8%	0.62%	-0.391	0.254	-1.576	0.503
insider_lending	90	28.79m	19.55b	2.755b	3.608b	2.033	0.254	5.069	0.503
liquidity_ratio	90	16.50%	75.2%	40.1%	12.1%	1.13	0.254	1.247	0.503
Valid N (listwise)	90								

Source: Research Findings

Exchange rate has a minimum value of 86.12 and a maximum of 98.18, giving a mean of 90.89 and a standard deviation about the mean of 5.36. This variable also has a skewness and kurtosis of 0.61 and -1.586 respectively. Skewness is a measure of asymmetry and shows the manner in which the items are clustered around the average. Kurtosis is the measure of flat-toppedness of a curve. Kurtosis is the humpedness of the curve and points to the nature of distribution of items in the middle of a series (Kothari, 2004). The skewness of exchange rate is positive; thus this variable is skewed right but close to the mean. Kurtosis of -1.58 is very low indicating low tailed exchange rate data; there very few outliers in this variable, also.

Lending rate has a minimum value of 15.99% and a maximum of 17.5%, and a mean of 16.8% and a standard deviation about the mean of 0.62%, skewness and kurtosis are -

0.39 and -1.576 respectively. The skewness of lending rate is negative; thus this variable is skewed to the left but also close to the mean. Kurtosis of -1.58 is very low indicating low tailed exchange rate data; there very few outliers in this variable, also.

Insider lending has a minimum value of Kenya shillings 28.79 million and a maximum of 19.55 billion, and a mean of 2.76 billion and a standard deviation about the mean of 3.61 billion, skewness and kurtosis are 2.03 and 5.07 respectively. The skewness of insider lending is positive; thus this variable is skewed to the right but slightly from the mean. Kurtosis of 5.07 is high indicating long tailed insider lending among commercial banks in Kenya; this kurtosis is also indicative of presence of outliers.

Liquidity ratio (risk) has a minimum value of 16.50% and a maximum of 75.20%, and a mean of 40.1% and a standard deviation about the mean of 12.1%, skewness and kurtosis are 1.13 and 1.25 respectively. The skewness of liquidity risk is positive; thus this variable is skewed to the right but also slightly from the mean. Kurtosis of 1.25 is relatively low indicating short tailed liquidity risk around mean; this kurtosis is also indicative of absence of outliers or presence of very few outliers.

4.5 Correlation Analysis

This section explains the correlation between the dependent variable (financial risk) and the independent variable (insider lending). In undertaking the correlation analysis, the exchange rate, lending rate and credit risk variables were taken as control variables. The table below indicates the correlation analysis summary.

Table 4.2: Correlations

Control Variables			Insider lending	Liquidity ratio
Exchange rate & lending rate	Insider lending	Correlation	1	
		Significance (2-tailed)	.	
		df	0	
	Liquidity ratio	Correlation	-0.068	1
		Significance (2-tailed)	0.02	.
		df	86	0

Source: Research Findings

A correlation coefficient of zero indicates no correlation, but +1 and -1 correlation coefficients indicate a perfect positive or a perfect negative correlation respectively (Kothari, 2004). Financial risk (measured by liquidity ratio) has a -0.068 correlation coefficient with insider lending and a significance of 0.02. The study therefore finds that insider lending has a slightly negative correlation with financial risk. Test for multicollinearity was not undertaken since there is only one independent variable.

4.6 Regression Analysis and Hypotheses Testing

This section discusses the model summary results, the analysis of variance (ANOVA) and the model coefficients.

4.6.1 Model Summary

The regression analysis model is depicted by the table 4.3 below.

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.698[a]	.487	.421	12.26923%

a. Predictors: (Constant), lending rate, insider lending, exchange rate

Source: Research Findings

R square is a measure used in statistics to measure how near to a best line of fit, analyzed data are. It is also often known as the coefficient of determination (Kothari, 2004). The study model indicates an R, R square and adjusted R square statistics of 0.698 and 0.487 respectively. Therefore 48.7% of the variations of the research data around the mean is explained by the model. R coefficient indicates the correlation of the study variables. A 0.698 R coefficient shows that there is a positive strong correlation between financial risk among commercial banks in Kenya and insider lending levels, while controlling for exchange rate and lending rate.

4.6.2 Analysis of Variance

The table 4.4 below presents a summary of the analysis of variance.

Table 4.4: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	126.654	3	42.218	5.280	.021[b]
	Residual	12945.926	86	150.534		
	Total	13072.581	89			

a. Dependent Variable: liquidity ratio

b. Predictors: (Constant), lending rate, insider lending, exchange rate

From the analysis of variance findings above, the F statistic is 5.280. The significance of the study model is 0.021. The analysis was undertaken at 95% level of significance. The 0.021 significance level is therefore within the 0.025 confidence interval, thus the study model is significant.

4.6.3 Model Coefficients

The table 4.5 below summarizes the study model coefficients.

Table 4.5 : Coefficients[a]

Model		B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	95.0% Confidence Interval for B Lower Bound	Upper Bound
1	(Constant)	36.822	35.188		1.046	0.023	-33.12	106.77
	Exchange rate	-0.218	0.323	-0.096	-0.673	0.015	-0.86	0.425
	Lending rate	1.407	2.787	0.072	0.505	0.035	-4.133	6.947
	Insider lending	-2.28E-10	0	-0.068	-0.633	0.019	0	0

a. Dependent Variable: liquidity ratio
Source: Research Findings

From the table 4.5 above, the below study model was derived.

FR = 36.822 – 0.000000000228 IS + 1.407 LR – 0.218 ER

From the above model therefore at level of absence of the independent and control variables, financial risk in commercial banks in Kenya shall be at a level of 36.82. A unit change in insider lending level results in an almost zero negative change in financial risk of commercial banks in Kenya, a unit increase/decrease in lending rate leads to a 1.407 increase/decrease in financial risk of the said firms, while a unit increase/decrease in exchange rate leads to a 0.218 decrease/increase in financial risk of commercial banks. Also relative to their effect on financial risk, exchange rate and insider lending have significant effect while lending rate has insignificant effect at 95% significance level.

4.7 Discussion of Research Findings

The study therefore finds that insider lending has a slightly negative correlation with financial risk among commercial banks in Kenya with a negative correlation coefficient of 0.068. Regression analysis results indicate that insider lending has a very weak negative relationship with financial risk among commercial banks in Kenya. These research findings supports the positions postulated by such theories as Agency theory (Jensen and Meckling, 1976), Portfolio theory (Markowitz, 1952) and Moral Hazard theory (Arkeloff, 1970). Agency theory (Jensen and Meckling, 1976) anticipates insider lending to create agency problems thus impacting financial risk negatively; this research study findings concur with this position. Moral hazard theory (Arkeloff, 1970) foresees insider borrowers obtaining the incentive not to repay or service their facilities, thus negatively impacting financial risk also; the negative correlation found by the research

study serves to support this theory's perspective. The very weak negative relationship between financial risk and insider lending found by this research study is better than the theories posit. This could have resulted due to the strict corporate governance and regulatory environment in the Kenyan banking industry. A number of the study elements are also publicly listed and traded; thus attracting and abiding by added regulatory oversight and measures.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the study summary, conclusions and recommendations. The limitations of the study are also discussed as well as the suggestions for further research.

5.2 Summary of Findings

The study sought to establish the relationship between insider lending levels in commercial banks in Kenya and their financial risk. The census study utilized secondary data relevant to the study. The data collected covered forty two commercial banks, with a response rate of 71% and the period 2013 to 2015 and was summarized using descriptive statistics and correlation analysis & regression analysis undertaken. The findings are as below.

Over the study period exchange rate averaged 90.89 and a standard deviation about the mean of 5.36 with a positive skewness and kurtosis of -1.586 (indicating presence of very few outliers in this variable). Lending rate had a mean of 16.8% and a standard deviation about the mean of 0.62% and skewness and kurtosis are -0.39 and -1.58 respectively; this variable is skewed to the left but close to the mean, with kurtosis exactly as exchange rate. All banks have insider lending level mean of Kenya shillings 2.76 billion and a standard deviation about the mean of 3.6 billion, skewness and kurtosis are 2.03 and 5.07 respectively. The kurtosis is indicative of presence of outliers. Liquidity ratio (risk) variable had a mean of 40.1% and a standard deviation about the mean of 12.1%, skewness and kurtosis are 1.13 and 1.25 respectively. The skewness of liquidity risk is

positive and kurtosis of 1.25 is relatively low (indicative of absence of outliers or presence of very few outliers).

From correlation analysis, financial risk (measured by liquidity ratio) has a -0.068 correlation coefficient with insider lending and a significance of 0.02. The study therefore finds that insider lending has a slightly negative correlation with financial risk. Regression analysis results indicate that insider lending has a very weak negative relationship with financial risk among commercial banks in Kenya.

5.3 Conclusion

The researcher concludes that based on the findings above insider lending has a very weak negative relationship with financial risk of commercial banks in Kenya. This conclusion is similar to Muteti (2014) conclusion that financial risk has a negative influence on financial performance of banks. The study also concludes that commercial banks practice insider lending but this is undertaken prudentially; Wanjohi (2013) indicates that financial risk management has a strong influence or effect on financial performance of commercial banks in Kenya. Also out of the four study independent variables, exchange rate was found to a significant effect on financial risk (this effect is however a negative one). Lending rate has a positive but insignificant effect on financial risk, while insider lending has a negative effect but significant.

5.4 Recommendations

Based on the research study findings and conclusions, the researcher recommends that banks and related stakeholders should manage the exchange rate and lending rate

variables prudently and proactively; these two variables though having different effect on financial risk, were found to significantly affect financial risk among commercial banks in Kenya. Insider lending was found to have insignificant effect on financial risk; the researcher recommends the continuance and even improvement of current management controls of the said variables by commercial banks in Kenya.

5.5 Limitations of the Study

The study relied on secondary data over a three year period, this somewhat limited the study findings. A longer time period could have assisted enrich the study. The study findings are also limited to commercial banks in Kenya (a developing economy); thus the findings can be generalized only to commercial banks and not other nonbanking entities, the findings are also not generalizable to a developed economy context.

The researcher also had time and financial constraints. The study was mainly undertaken for academic purposes with stipulated timelines. This limited the scope of the study in some ways. The study also relied on secondary data published by the study elements; unavailability of complete sought data set also meant only 71% of the banks were studied leaving out 29%. Use of primary data could have widen the perspective and scope of the study.

5.6 Suggestions for Further Research

Based on the limitations above and the research study conclusions, the researcher suggests that further research on the research topic should be undertaken. Another research methodology could be adopted towards this suggestion. The research study finds a very weak relationship between financial risk and insider lending (with exchange rate

and lending rate being the control variables). This position contradicts the postulation of moral hazard theory (Arkeloff, 1970) that insider lending aggravates firm financial risk. Further research on the study area thus is recommended; other control variables could be introduced to the study model, also.

The researcher also recommends further research with a narrower scope of say focusing on Islamic lenders only. This recommended study would further enrich the existing theory and literature on financial risk and insider lending.

REFERENCES

Abor, J, Sarpong-Kumankoma, E, Fiawoyife, E and Osei, K. (2009). Risk Exposure andFinancial Policy. *Journal of Economic Studies*, 36(2), 195-211.

Akerlof, G.A. (1970). The Market for "Lemons": Quality Uncertainty and the Market Mechanism. *The Quarterly Journal of Economics,* 84(3), 488-500.

Bender, R and Ward, K. (2009). *Corporate Financial Strategy (3rd Ed.).* Burlington: MacMillan Publishers.

Berger, A, Imbierowicz, B and Rauch, C. (2014). The Roles of Corporate Governance in Bank Failures during Recent Financial Crisis.

Berrios, M.R. (2013). The Relationship between Bank Credit Risk and Profitability and Liquidity. *The International Journal of Business and Finance Research*, 7(3), 105-118.

CBK. (2016). *Centralbankgoke*. Retrieved 30th August, 2016, from https://www.centralbank.go.ke/index.php/bank-supervision/commercial-banks-mortgage-finance-institutions.

Chinwe, L. (2015). Credit Risk Management in Commercial Banks. *Journal of Economics and Finance*, 6(3), 51-56.

Jensen, M. & Meckling, W. (1976). Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure. *Journal of Financial Economics,* 3(4), 305-360.

Kamau, J.G & Juma, W. 2014. Effect of Strategic Management Practices on Bank Loan Recovery by Commercial Banks in Kenya: A Case of Family Bank Limited. *International Journal of Science and Research*, 3(11), 242-248.

Kothari, C. (2004). *Research Methodology: Methods and Techniques*. New Delhi: New Age Publishers Ltd.

Laeven, L. (2001). Insider Lending and Bank Ownership: The Case of Russia. *Journal of Comparative Economics,* 29(1), 207-229.

Li, S. (2003). Future Trends and Challenges of Financial Risk Management in the Digital Economy. *Managerial Finance*, 29(5) 111-125.

Muteti, R.S. (2014). *Relationship between Financial Risk Management and Financial Performance of Commercial Banks in Kenya.* An unpublished Msc Finance project, University of Nairobi.

Nyamutowa, C & Masunda, S. (2013). An Analysis of Credit Risk Management Practices in Commercial Banking Institutions in Zimbabwe. *International Journal of Economics Research,* 4(1), 31-46.

Obudho, R. (2014). *The Relationship between Financial Risk and Financial Performance of Insurance Companies in Kenya.* An unpublished MBA Project, School of Business, University of Nairobi.

Ogbuagu, U, R, Udoh, E, Udoh, F. (2016). Loan Risk, Loan Risk Management and Commercial Bank Profitability: A Panel Analysis of Nigerian Banks. *Journal of Economics and Finance,* 7(1), 38-50.

Onunga, P. (2011). *The Determinants of Financial Risk Faced by Saccos in Kenya.* An unpublished MBA project, University of Nairobi.

Ugoani, J.N. (2016). Nonperforming Loans Portfolio and Its Effect on Bank Profitability in Nigeria. *Independent Journal of Management & Production,* 7(2).

Waithaka, N.N. (2013). *The Effect of Basel II Requirement on Kenyan Commercial Banks' Lending.* An unpublished MSc Finance project, university of Nairobi.

Wanjohi, J.G. (2013). *The Effect of Financial Risk Management on the Financial Performance of Commercial Banks in Kenya.* An unpublished MSc Finance project, university of Nairobi.

Waweru, N.M & Kalani, V.M. (2009). Commercial Banking Crises in Kenya: Causes and Remedies. *Global Journal of Finance and Banking Issues,* 3(3), 23-43.

APPENDICES

APPENDIX I: LIST OF POPULATION

1 Bank: 01 Kenya Commercial Bank Limited	24 Bank: 41 NIC Bank Limited
2 Bank: 03 Barclays Bank of Kenya Limited	25 Bank: 42 Giro Commercial Bank Limited
3 Bank: 05 Bank of India	26 Bank: 43 ECO Bank Limited
4 Bank: 06 Bank of Baroda (Kenya Limited)	27 Bank: 49 Equatorial Commercial Bank Limited
5 Bank: 07 Commercial Bank of Africa Limited	28 Bank: 50 Paramount Universal Bank Limited
6 Bank: 08 Habib Bank Limited	29 Bank: 51 Jamii Bora Bank
7 Bank: 09 Central Bank of Kenya	30 Bank: 53 Guaranty Trust Bank (Kenya) Ltd.
8 Bank: 10 Prime Bank Limited	31 Bank: 54 Victoria Commercial Bank Limited
9 Bank: 11 Co-operative Bank of Kenya Limited	32 Bank: 55 Guardian Bank Limited
10 Bank: 12 National Bank of Kenya Limited	33 Bank: 57 I&M Bank Limited
11 Bank: 14 Oriental Commercial Bank Limited	34 Bank: 59 Development Bank of Kenya Limited
12 Bank: 16 Citibank N A	35 Bank: 60 Fidelity Commercial Bank Limited
13 Bank: 17 Habib Bank A G Zurich	36 Bank: 61 Housing Finance Bank
14 Bank: 18 Middle East Bank Kenya Limited	37 Bank: 63 Diamond Trust Bank Limited
15 Bank: 19 Bank of Africa Kenya Limited	38 Bank: 66 K-Rep Bank Limited
16 Bank: 20 Dubai Bank Kenya Limited	39 Bank: 68 Equity Bank Limited
17 Bank: 23 Consolidated Bank of Kenya Limited	40 Bank: 70 Family Bank Ltd
18 Bank: 25 Credit Bank Limited	41 Bank: 72 Gulf African Bank Ltd
19 Bank: 26 Trans-National Bank Limited	42 Bank: 74 First Community Bank
20 Bank: 30 Chase Bank Limited	43 Bank: 76 UBA Kenya Bank Ltd
21 Bank: 31 CFC Stanbic Bank Kenya Limited	
22 Bank: 35 African Banking Corp. Bank Ltd	
23 Bank: 39 Imperial Bank Limited	

APPENDIX II: DATA COLLECTION FORM

FORM/SERIAL NO.   ………………………….

BANK   …………………………………………….

YEAR	2013	2014	2015
Insider Loans Amount			
Lending Rate			
Liquidity Ratio			
Exchange Rate			
Credit Risk			