

**EFFECT OF RISK MANAGEMENT PRACTICES ON THE PROFITABILITY OF
LISTED COMMERCIAL BANKS IN KENYA**

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DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no materials written or published by other people except where due reference is made and author duly acknowledge.

Signature Reg. No.14 / 00996.....

Date.....

I do hereby confirm that I have examined the master’s dissertation of

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And have certified that all revisions that the dissertation panel and examiners recommended have been adequately addressed.

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Dissertation Supervisor.

DEDICATION

This research study is dedicated to my entire family for their moral support throughout the entire MSC program especially during this research dissertation.

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ABSTRACT

The primary objective of managing banks is to improve bank performance so as to maximize shareholders returns. This objective is met at the expense of increased risk which is not always accompanied with the high returns and hence may sometime lead to underperformance. Risk management is essential to finding better performance because most banks are in risk business. The main objective of the study was to examine the effects of risk management practices on the profitability of listed commercial banks in Kenya. The specifics seek; to evaluate the effect of liquidity risk management on the profitability of listed commercial banks in Kenya. To determine the effect credit risk management on the profitability of listed commercial banks in Kenya. To find out the effect of operational risk management on the profitability of listed commercial banks in Kenya. The study was be guided by stakeholders' theory, contingency theory and agency theory. Both descriptive and correlation design were used to achieve the study objective. Purposive sampling technique was used to select 8 listed commercial banks in Nairobi Securities Exchange. Secondary panel data was collected from annual audited financial statements. Both descriptive and inferential statistics were used to analyze the data. Panel regression analysis was used to test the hypothesis of the study.

Key words: Liquidity risk management, Credit risk management, and Operational risk management.

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LIST OF ABBREVIATIONS AND ACRONYMS

CAR	Capital Adequacy Ratio
CBK	Central Bank of Kenya
CMA	Capital Market Authority
CRO	Chief Risk Officer
ERM	Enterprise Resource Management
FDI	Foreign Direct Investment
IT	Information Technology
LLRGL	Loan Loss Reserve Ratio
LLRNPL	Loan Loss Reserve to Nonperforming Loan
NAV	Net Asset Value
NPLGL	Loan to Gross Loan
NPLR	Non-performing loan ratio
NSE	Nairobi Securities Exchange
ROA	Return on Assets
ROAA	Return on Average Asset
ROAE	Return on Average Equity
ROE	Return on Equity
ROTA	Return on Total Assets
TSX	Toronto Stock Exchange
USA	United States of America

OPERATIONAL DEFINITION OF TERMS

Liquidity risk: This is the proportion of equity capital to total assets or loan capital to total assets (Maaka, 2013).

Credit risk management: This refers to the proportion of total debt to total assets or total bank debt to equity (Li and Zou, 2014)

Operational risk management: This refers to the proportion of total overheads to total assets (Sewayana, 2011).

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Well-regulated banks play a pivotal role in any given country's economy by providing financial services. Their intermediation role is a catalyst for economic growth (Kolapo, Ayeni & Oke, 2012). However, some commercial banks have approved loans without critical analysis of a situation and ended up having defaulters, non-performing loans and extended credit (Kithinji, 2010). This clearly shows how commercial banks are exposed to risk. Risk lacks a universal definition because different scholars use different approaches to define risk. According to Gallati (2003) risk is a condition experienced in an environment of adversity or where there is possibility of deviation from a desired outcome that is expected or hoped for. Kanchu & Kumar (2013) defined risk as anything limiting the achievement of a certain predefined objectives. This definition agree with the business dictionary which defines risk as the probability or threat of damage, injury, liability, loss or any other negative consequences caused by external or internal vulnerabilities and that may be avoided through preemptive action.

Kanchu and Kumar (2013) defines risk management as a measure used to identify risk in advance, analyze and respond to a particular risk. Management of risk does not only involve reduction of chance of bad happenings but also ensuring the likelihood of good things occurring. Kithinji (2010) adds that good management is both a “defensive mechanism and offensive weapon” that is used by banks depending on the corporate governance. Risk management is undoubtedly crucial in financial institutions such as commercial bank and it calls for keen attention from shareholders, regulators, practitioners and scholars since many huge losses are witnessed as result of poor risk management an organization (Imane, 2014). Risk management culture should

percolate from the first line employee to the board level (Crouhy, Gala & Marick , n.d.). Many corporate governance principles provide regulation and strategy with a sound risk management mechanism. There is a need to understand information regarding the portfolio of risks which according to Oldfield & Santamero (1997) can be segmented as: first, eliminable or avoidable risks through simple business practices; secondly, transferable risks like through insuring; and lastly, risk that call for active management at all level.

1.1.1 Risk Management in Commercial Banks

In the banking industry, there exist many different types of risks that affect the performance and activities of banks. Risk class is deemed to be either systematic (market) or unsystematic risk or financial and non-financial risk. More specifically these classes contain distinct risks according to what causes them such as credit risk, liquidity risk, operational risk, market risk, political risk, currency risk, strategic risk among others (Imane, 2014).

A study in Jordan by Imane (2014) examining risk management practices and financial performance in Islamic banking found out that liquidity, credit and operational risk management have negative and significant impact on financial performance while market risk management showed a positive and significant with financial performance. A different study in Bangladesh banks was conducted by Noman *et al.*, (2015) on effect of credit risk on banking profitability. Credit indicators were non-performing “loan to gross loan (NPLGL), loan loss reserve ratio (LLRGL), loan loss reserve to non-performing loan (LLRNPL) and capital adequacy ratio (CAR) and profitability was assessed return on average asset (ROAA) and return on average equity (ROAE). The study using panel data revealed that there was a negative and significant NPLGL and LLRGL on all profitability indicators. CAR showed a negative and significant to only ROE.

A study conducted in Nigeria by Olamide, Uwalomwa & Ranti (2015) on the effect of risk management on banks financial performance showed a negative and insignificant relationship between risk management proxies and banks performance. Ethiopia banks performance study as influenced credit risk management was conducted by Gizaw; Kebede & Selaraj (2015) found that credit measure: non-performing loan, loan loss provision and capital adequacy had a significant impact on the profitability of commercial banks. But the study did not establish the nature of the relationship.

In Kenya, Mwangi (2012) studied the effect of credit risk management on commercial bank performance. He measured performance with return on equity (ROE) and performance was assessed using non-performing loan ratio (NPLR) and capital adequacy ratio (CAR). It was found out that both NPLR and CAR had a negative and relatively significant effect on ROE.

According to Directorate of Bank Supervision (2010) and Imane (2014) the most common risks in banking includes; credit, liquidity, market operational, strategic and compliance risks though the strategic and compliance risks may be as result of operational activities and therefore can be include in operational risks. The current study will examine the effect of risk management on the profitability of commercial banks in Kenya.

1.1.2 Profitability of Commercial Banks

Profitability is the ability to make profit from all the business activities of an organization, company, firm, or an enterprise. It measures management efficiency in the use of organizational resources in adding value to the business (Soyemi, Ogunleye & Ashogbon, 2014). Profitability is the relationship of income to some balance sheet measure which indicates the relative ability to earn income on assets. Irrespective of the fact that profitability is an important aspect of business, it may be faced with some weakness such window dressing of the financial transactions and the

use of different accounting principles (Aduda, 2011). Return on Assets (ROA) is a major ratio that indicates profitability of a bank. It is a ratio of income to its total assets (Khrawish, 2011). ROA shows the percentage of how profitable company assets are generating revenue (Susan et al., 2008). In other words; it shows how efficiently the resources of a company are used to generate income. Wen (2010), states that a higher ROA shows that a company is more efficient in using its resources.

Return on Equity (ROE) is a financial ratio that refers to how much profit a company earned compared to the total amount of shareholder equity invested or found in the balance sheet (Ongore, 2011). Willie and Hopkins (1997) indicated that the ultimate measure of strength of any financial institution is not its asset size, number of branches or the pervasiveness of its electronics but rather the true measure of its return on equity. Thus, the higher the ROE the better the company is in terms of profit generation. Therefore, the current study will adopt ROA and ROE as the measures of profitability in the commercial banks due to the efficiency utilization of resources and being indicator of financial institution strength respectively.

1.1.3 History of Nairobi Securities Exchange

Kenyan securities exchange traces its root to 1920s when it was informally constituted. At this time securities trading were conducted by accountants, auctioneers, estate agents and lawyers though transactions were purely gentlemen agreement. In 1951 the first stock broker; Francis Drummond sought licence from the finance minister as such to offer the services formally. Through this stock broker London stock exchange established Nairobi stock exchange in 1954 and it was registered by registrar of societies whose membership was voluntary for stock brokers though Asians and Africans were not allowed to trade. Upon Kenya's attained of independence the market experienced a slump attributed to trading uncertainties associated with the exit of some

European investors. The government privatised the Nairobi Stock exchange around 1988. In 2004 East Africa Securities Exchange was formed drawing membership from Dar-es-Salaam Stock Exchange, the Uganda Securities Exchange and the Nairobi Stock Exchange. Demutualization commenced in 2006 NSE with the primary aim of automating the trading system which was achieved around 2009. Through automated trading system the trading hours increased from 12 noon to 1 pm. In April 2008, Smart Youth Investment Challenge was established mainly to “occupy the minds of the youth positively and draw them away from the negative energy created by the current political, economic and social situation in the country; encourage the culture of thrift and saving funds amongst the university students and encourage the youth to invest their savings in the capital markets”.

In 2009 the Complaints Handling Unit (CHU) was launched so as to bridge the confidence gap with NSE retail investors. CHU provides a hassle free and convenient way to have any concerns processed and resolved. Investors, both local and in the diaspora can forward their issues via e-mail, telephone, fax, or SMS and have the ability to track progress on-line.

In July 2011, the Nairobi Stock Exchange Limited changed its name to the Nairobi Securities Exchange Limited. The change of name reflected the strategic plan of the Nairobi Securities Exchange to evolve into a full service securities exchange which supports trading, clearing and settlement of equities, debt, derivatives and other associated instruments. In the same year, the equity settlement cycle moved from the previous T+4 settlement cycles to the T+3 settlement cycle. This allowed investors who sell their shares, to get their money three (3) days after the sale of their shares. In September 2011 the Nairobi Securities Exchange converted from a company limited by guarantee to a company limited by shares and adopted a new Memorandum and Articles of Association reflecting the change.

1.1.4 A Brief History of Commercial Banks in Kenya

Commercial banks in Kenya are licensed, supervised and regulated by the Central Bank of Kenya (CBK) as mandated under the Banking Act (Cap 488) and the Central Bank of Kenya Act. The CBK is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system. According to CBK Supervision Report, there are 43 commercial banks and 1 mortgage finance institution. Out of the 43 commercial banks in Kenya 30 of them are domestically owned and 13 are foreign owned. In terms of asset holding, foreign banks account for about 35% of the banking assets. The locally owned financial institutions comprise 3 banks with significant shareholding by the Government and State Corporations and 27 commercial banks whose greater shareholding is by the public (Central Bank of Kenya, 2015).

The banking industry has been earmarked as a key pillar to the achievement of vision 2030 through encouragement of Foreign Direct Investment (FDI), increased savings, safeguarding the economy from external shocks as well as propelling Kenya to attain the goal of becoming the leading financial powerhouse in Eastern and Southern Africa. Within the Medium Term Plan (2008-2012) under vision 2030, some of the target areas include development of safe and reliable payment systems that will ensure smooth transfer and settlement of funds between customers and banks as well as between banks. Towards this end, the use of mobile phone networks, internet, payment cards, operational resilience and security will be pursued in order to increase trust, integrity and confidence in the ICT based payment systems (Government of Kenya, 2008).

The banking sector of Kenya is governed by multiple rules such as the Banking Act, Central Bank Act, Companies Act and various prudential guidelines and policies issued by the Central Bank of Kenya (CBK) (CBK, 2009). Reforms in the banking sector started in 1994 with the failure

of several banks in Kenya, in 1995 the financial sector in Kenya was liberalized with exchange controls and other controls lifted (Nyathira, 2012).

1.2 Problem Statement

The primary objective of managing banks is to improve bank performance so as to maximize shareholders returns. This objective is met at the expense of increased risk which is not always accompanied with the high returns and hence may sometime lead to underperformance (Olamide, Uwalomwa & Ranti, 2015). Risk management is essential to finding better performance because most banks are in risk business.

Due to competition from other financial institutions and mobile service providers, banks have loosened their rules and the regulations which have made it possible for loan approval in haste without proper assessment of the borrower (Olamide *et al.*, 2015). Technology has also imposed another operational risk to the banks where robbery and attempted robbery without violence has seen many bank lose money (Komu, 2015; Oudia, 2015), money is stolen when in transit and fake documents are going through the bank processing system without knowledge. Not forgetting mismanagement of fund in the banks that has seen some being placed under receivership like Imperial Bank and Dubai Bank in year 2015.

In 2008 global financial crisis has revealed the importance of bank regulations to hedge against high risks attributed to imbalances in bank's balance. Stulz (2008) in the United States of America (USA) argued that there are five ways in which financial risk management systems can break down. Oludhe (2010) in his study on the impact of credit risk management on financial performance of commercial banks in Kenya found that there was strong impact between, Capital Adequacy, Asset Quality, Management, Earnings, Liquidity, and Sensitivity (CAMELS) components on financial performance. The study mainly focused on one element of financial risk-

credit risk. However, there is little study that has been done in Kenya to establish how the broader financial risk management affects the financial performance of commercial banks in Kenya. Clearly many types of risks affect commercial banks, However, most of the studies have been devoted to only look at the credit risk and its influence on profitability and firm performance (Kithinji 2010; Aduda & Gitonga, 2011; Mwangi, 2012;). As such, there is a need for comprehensive and integral risk management in all financial institution and more so to commercial banks to ensure increased better performance. Unlike the others past studies, this study focuses on three common types of risks namely operational, credit and liquidity risks.

1.3 Objectives of the Study

1.3.1 General Objective

To examine the effect of risk management practices on the profitability of listed commercial banks in Kenya.

1.3.2 Specific Objectives

The study was guided by the following specific objectives:

- 1) To evaluate the effect of liquidity risk management on the profitability of listed commercial banks in Kenya
- 2) To determine the effect of credit risk management on the profitability of listed commercial banks in Kenya.
- 3) To find out the effect of operational risk management on the profitability of listed commercial banks in Kenya.

1.4 Hypothesis of the Study

The following hypothesis guided the study:

H01: Liquidity risk management practices have no significant effect on the profitability of listed commercial banks in Kenya.

H02: Credit risk management practices have no significant effect on the profitability of listed commercial banks in Kenya.

H03: Operational risk management practices have no significant effect on the profitability of listed commercial banks in Kenya.

1.5 Significance of the Study

The question of credit risk and common exposures are clearly of enormous importance for the regulators, industry participants and investors. The results of this research will have implications and importance to various stakeholders as follows:

1.5.1 Management of Commercial Banks

The Management of Commercial banks will have advanced knowledge on risk management in commercial banks in Kenya. This advanced knowledge will help them formulate and implement such important policies which will ensure that the effective risk management in commercial banks increases the revenues and give the firm a competitive edge. They will also be able to address the outstanding challenges of effective risk management in commercial banks.

1.5.2 Other Researchers

This study will benefit scholars and researchers, as it will expand their knowledge on risk management in commercial banks and related areas. They will be able to come up with other relevant areas of study within the study; moreover, this study is very helpful as a source of secondary data for reviewing the literature.

1.5.3 Government of Kenya

The government has a responsibility to ensure that public utilities for public benefits are well protected. Risk management in commercial banks have proved to be a difficult procedure for Public sector and even government itself. The successful completion of this study will furnish the government with relevant information that will enable it to make strict measures and policies that will help address the challenges of risk management in commercial banks. The study will provide findings and recommendations that will aid the government with possible suggestions to the risk management in commercial banks in Kenya.

1.6 Scope of the study

The study will examine the effect of risk management on the profitability of commercial banks in Kenya. It also considered those commercial banks that are listed in Nairobi Securities Exchange (NSE). The study analyzed the secondary data as published in the companies audited financial reports.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

The chapter will discuss the various theories and empirical literature pegging the study as presented by various scholars, authors and academicians.

2.2. Theoretical Review

The current study was guided by stakeholder's theory, contingency theory and agency theory.

2.2.1 Stakeholders Theory

The Stockholder theory was coined by Freeman (1984) as a management instrument and has over the years evolved with high explanatory potential on firm performance. Stakeholder theory focuses explicitly on equilibrium of stakeholder interests as the main determinant of corporate policy. The most promising contribution to risk management is the extension of implicit contracts theory from employment to other contracts, including sales and financing (Cornell and Shapiro, 1987). In certain industries, particularly high-tech and services, consumer trust in the company being able to continue offering its services in the future can substantially contribute to company value. However, the value of these implicit claims is highly sensitive to expected costs of financial distress and bankruptcy. Since corporate risk management practices lead to a decrease in these expected costs, company value rises (Klimczak, 2005). Therefore stakeholder theory provides a new insight into possible rationale for risk management.

However, it has not yet been tested directly. Investigations of financial distress hypothesis (Smith and Stulz, 1985) provide only indirect evidence (e.g. Judge, 2006). In his study of the effect of stakeholder theory on risk management, Aabo (2002) investigates the relationship between the objectives of companies and the risk management strategy that the companies employ. The study

shows a distinct difference between the two groups of companies in relation to actual risk management decisions which in turn have an effect on whether the risk management decisions will have a value addition or value retention effect on the company. This study concludes that this difference in risk management behavior could not be explained by company characteristics normally identified in the literature as being decisive for the extent of hedging such as firm size, leverage, and export ratio. Rather, the study finds a unique relationship between the managerial focus on stakeholders taking a conservative risk management strategy (that focused more on value preservation) and managerial focus on shareholder taking a forward looking risk management strategy (that focused on value addition). Thus the theory ensures an understanding of actual risk management decisions which in turn helps determine whether the decisions have a value addition or value retention effect on the company.

The theory is appropriate for the study since there is need to involve the interrelationship of credit management team in both short and long run profitability estimation and this will ultimately increase the profitability levels in an organization and minimize the level of risk exposure in listed commercial banks in Kenya.

2.2.2 Contingency Theory

Contingency theory was proposed by Fielder in 1967. It is one of the predominant approaches in the field of organizational design (Gupta, 1994). The theory focuses on a fit between task environment, organizational characteristics such as leadership (Fiedler, 1967), strategy (Fredrickson, 1984), or structure (Donaldson, 2001) and organization performance. The theory approach in studies of organizational structure is rooted in organizational theory, and is commonly referred to as structural contingency theory (Pfeffer, 1982) which focuses on both the internal and external environment of the organization. The leading notion of contingency based approaches is

that differences in formal organizational structures can be attributed to differences in organizational contexts (Fisher, 1998). Organizational structures are chosen rationally in pursuit of organizational effectiveness (Donaldson, 2001). They are dependent on contingency factors specific to organizational settings, that is, internal features of organizations, as well as conditions of the external environment (Misiura, 2015).

Since the risk management is not devoid of organization structure there is need to have interlinked with the profitability expectations in an organization. The four attributes of risk management considered in the current study; liquidity risk management, credit risk management, operational risk management. There is need to have a clear elaborated structure on how to manage liquidity, credit risk and operational risk management so as to have full benefits associated with good risk management on profit levels.

2.2.3 Agency Theory

The 1976 article “Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure” by Jensen and Meckling helped establish agency theory as the dominant theoretical framework of the CG literature, and position shareholders as the main stakeholder (Lan *et al.* 2010, Daily *et al.*, 2003). The adoption of the agency logic increased during the 1980s as companies started replacing the hitherto corporate logic of managerial capitalism with the perception of managers as agents of the shareholders (Zajac *et al.*, 2004). The subsequent stream of literature would break with the tradition of largely treating the firm as a black box and the assumption that the firm always sought to maximize value (Jensen, 1994). Agency theory addressed what had become a growing concern, that management engaged in empire building and possessed a general disregard for shareholder interest, what Michael Jensen called “the systematic fleecing of shareholders and bondholders”(Jensen,1989) through providing prescriptions as to how the

principal should control the agent to curb managerial opportunism and self-interest (Perrow 1986, Daily *et al.*2003).

Agency theory extends the analysis of the firm to include separation of ownership and control, and managerial motivation. In the field of corporate risk management agency issues have been shown to influence managerial attitudes toward risk taking and hedging (Smith & Stulz, 1985). Theory also explains a possible mismatch of interest between shareholders, management and debt holders due to asymmetries in earning distribution, which can result in the firm taking too much risk or not engaging in positive net value projects (Mayers & Smith, 1987). Consequently, agency theory implies that defined hedging policies can have important influence on firm value (Fite & Pfleiderer, 1995). The latter hypotheses are associated with financing structure, and give predictions similar to financial theory. Thus the theory aids in determining whether a possible mismatch of interest between shareholders, management and debt holders due to asymmetries in earning distribution can result in the firm taking too much risk or not engaging in positive net value projects.

This theory shows the need for the management to act in the best interest of the shareholders who owns the company and have entrusted it on their behalf. The management are supposed to determine the lending rate as such to ensure the level of risk exposure is manageable and the profitability of an organization are least affected by changes in prevailing rates of inflation rates as well as the government lending and borrowing rates.

2.3 Empirical Review

In the current section the study shows the relationship between the attributes of risk management and profitability of commercial banks and any corporation aimed towards improved profitability due to prudent financial management strategies.

2.3.1 Liquidity Risk Management and Profitability

Mwangi (2014) carried out a study whose main objective was to determine the effect of liquidity risk management on the financial performance of commercial banks in Kenya. A descriptive research design was adopted with the target population being the commercial banks listed as at 31st December 2013. Secondary data was obtained from published accounts of commercial banks which included statement of financial position, income statement and other disclosures between 2010 and 2013. A regression model was developed with bank performance being measured using the ROA whereas the independent variables were: liquid assets to total assets, liquid assets to total deposits, balances due to other banks /total assets and asset quality. The research findings concluded that liquidity risk management had a significant negative relationship with commercial bank performance. The study further suggested that holding more liquid assets as compared to total assets would lead to lower returns to commercial banks but the effect was not significant at 5%, holding more liquid assets as compared to total deposits would lead to lower returns to commercial banks with its effect being significant at 5%, a unit increase in liquid asset to total asset ratio decreased returns on assets by 1%, a unit increase in liquid asset to total deposits ratio decreased returns on assets by 2.2% while a unit increase in borrowings from banks decreased returns on assets by 14.2%. Moreover asset quality showed that a unit increase in non-performing loans as a proportion of total loans would lead to a 12.4% decrease on returns on assets.

Maaka (2013) carried out a study which was pegged on two objectives: To investigate the liquidity faced by commercial banks in Kenya and to establish the relationship between liquidity risk and the performance of banks in Kenya. The study incorporated a correlation research design with data being gathered between 2008 and 2012 from annual reports obtained from the CMA and NSE with a sample of 14 banks being analyzed. A regression model was developed with the

dependent variable being PBT and the independent variables consisting of deposit, cash, liquidity gap and non-performing loans. The research findings established that profitability was negatively affected due to increase in liquidity gap and leverage. The level of customer deposit was found to positively affect banks profitability. Moreover the study depicted a significant impact of all factors of liquidity risk on bank performance.

Konadu (2009) conducted a study whose main objective was to determine the liquidity trends of selected banks so as to ascertain the profitability trend of the selected banks with the aim of analyzing and establishing the relationship between bank liquidity and profitability levels in Ghana. Data was collected between 2006 and 2009 from commercial banks listed at the Ghanaian Stock Exchange which included Standard Chartered Bank Ghana Ltd, SG-SSB Ltd and Cal Bank Ltd. The liquidity ratios used for the study were cash ratio, current ratio, quick ratio and net operating cash flow ratio whereas the profitability ratios consisted of net profit margin, return on assets, return on equity and net asset turnover. Trend analysis was adopted so as to achieve the set objective. The research findings established that there was no positive relationship between liquidity trend and profitability whereas a negative relationship existed between liquidity and bank profit in Ghana.

Alshatti (2015) investigated the impact of bank liquidity management on profitability in Jordanian commercial banks during the years between 2005 and 2012 using data in the Amman Stock Market. A regression model was developed with profitability being measured by ROA and ROE whereas the independent variables consisting of investment ratio, net credit facilities/total assets, capital ratio, liquid ratio and quick acid ratio. The research findings established that there was an effect of liquidity management and commercial bank profitability where the effect investment ratio and quick ratios on profitability was positive when measured by ROE, the effect

of capital ratios on profitability was positive as measured by ROA while the effect of the other independent variables on ROA and ROE was negative. The researcher attributes the negative effect to increased volume of untapped deposits at the Jordanian commercial banks.

Although the past studies have used regression analysis to show the effect of liquidity risk management and profitability, none of the studies had considered the panel data attributes by testing the relevant diagnostic test such as Hausman test, heteroskedasticity test and multicollinearity there is need for the current study to test these diagnostic tests and consequently fit the appropriate model. Moreover, there are contrasting results and even if the studies were done in different regional locations there is need for a similar study in Kenya so as to test role of liquidity risk management strategies on profitability among profit making organizations.

2.3.2. Credit Risk Management and Profitability

Kithinji (2010) carried out a study whose main objective was to determine the relationship between credit risk management and profitability of commercial banks in Kenya. The study identified credit risk management as stringent, conservative, lenient and customized and globally standard credit risk management policies. Data non-performing loans and credit was collected from 2004 to 2008 with the amount of credit being measured by loans and advances to customers divided by total assets, non-performing was measured using non-performing loans divided by total loans and total profit was measured using ROTA (Return on Total Assets). A regression model was developed to explain the relationship between amount of credit, non-performing loans and profits during the study period. The R squared test indicated that 38.7% of profitability of commercial banks could be explained by amount of credit and non-performing loans. The adjusted R squared at -0.226 indicated that the amount of credit and non-performing loan did not explain the level of profit

made by commercial banks. The study further ascertains that the model did not explain the relationship between profits, level of non-performing loans and amount of credit.

Li and Zou (2014) conducted a study whose main objective was to determine the relationship between credit risk management and profitability of commercial banks in Europe and ascertain whether the relationship is stable or fluctuating. The study obtained annual and risk reports for the selected 47 largest commercial banks in Europe between the period of 2007 and 2012 from which they obtained information on return on assets (ROA), return on equity (ROE) which were used as proxies of profitability while non-performing loan ratio (NPLR) and capital adequacy ratio (CAR) were proxies of credit risk management. The research findings established that credit risk management did not have a positive effect on commercial bank profitability. As with regards to credit risk management NPLR had a significant relationship on both ROA and ROE while CAR had an insignificant relationship on both ROA and ROE. The researcher further established that there was a fluctuating relationship between profit and credit risk management during the period under investigation. The researchers recommended that managers ought to put more effort on credit risk management specifically to control non-performing loans.

Aduda and Gitonga (2011) embarked on a study whose main aim was to determine the relationship between credit risk management and profitability of commercial banks in Kenya. The study adopted a descriptive research design with the target population being the commercial banks listed as at 31st December 2011. Both primary and secondary was used with structured and unstructured questionnaires being administered while secondary data was obtained from banks financial statements and annual reports between 2000 and 2009 from NSE library, bank secretaries and banks supervision department at the CBK. Bank profitability was measured using ROE with credit being measured using NPLR. The research findings obtained from the regression model

indicated that there was an effect of credit risk management on profitability at reasonable level with 27.8% possibility of NPLR in predicting variance in ROE.

The choice of regression analysis was appropriate in the studies discussed above but there was need to test the regression assumptions prior to fit the model. Since most of the data adopted was panel in nature there is need to test the panel data diagnostic which had been tested in none of the above studies.

2.3.3 Operational Risk Management and Profitability

Lyambiko (2015) conducted a study which was guided by two objectives: To determine the operational risks management practices and financial performance in commercial banks in Tanzania and to identify the sources of operational risks exposures among commercial banks in Tanzania. The study adopted a descriptive research design a target population of 36 licensed commercial banks as at 31st December 2013 with a sample of the 36 commercial banks being analyzed. Secondary data was collected from the financial statements of commercial banks between 2009 and 2013. A regression model was developed with bank performance being measured by ROA and the independent variables consisting of credit risk, insolvency risk and operational efficiency. The research findings established that the independent variables had varying degrees of relationship with financial performance of commercial banks. The research confirmed that operational efficiency was positively correlated with the financial performance of commercial banks while credit risk and insolvency risk negatively influenced the financial performance of commercial banks.

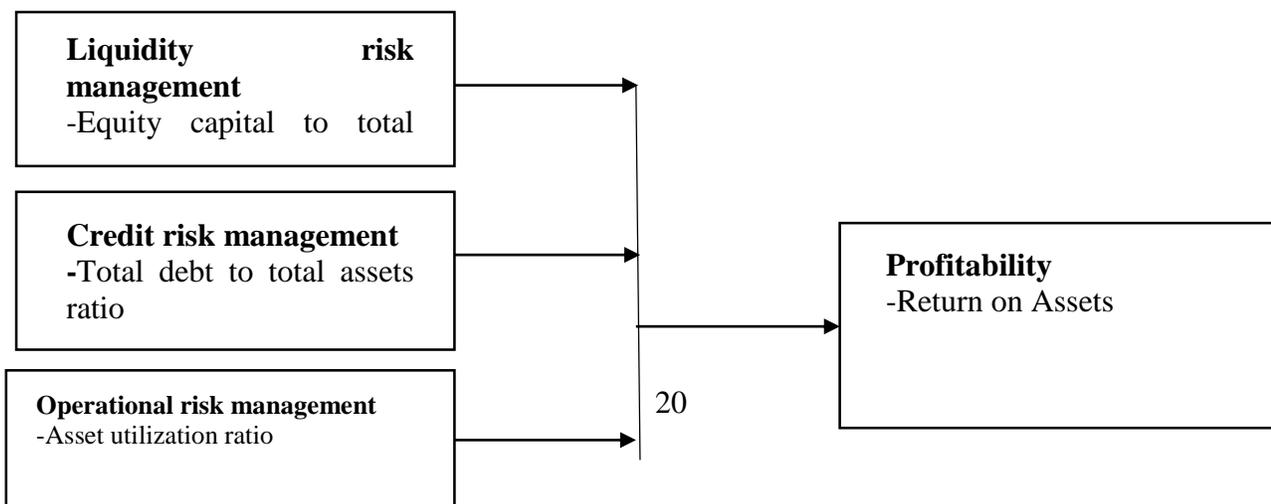
Sewanyana (2011) conducted a study which was encompassed around three objectives: To establish the relationship between operational risk and organizational environment in Stanbic bank, to establish the relationship between organizational environment and organizational

performance and to establish the relationship between operational risk and organizational performance in Stanbic bank in Uganda. The study adopted both cross-sectional and descriptive survey design with the target population consisting of 60 staff members consisting 14 risk officers, 9 human resource consultants, 18 IT officers, 13 operation officers and 11 senior managers. A sample of 51 respondents was used for the study with questionnaires and interviews being used to obtain information. Secondary data was obtained from existing firms' literature, council reports and journals. The research findings established that there was a positive and significant relationship between operational risk management, organizational environment and organizational performance. The regression analysis further revealed that operational risk management and organizational environment were significant indicators of organizational performance.

2.4 Conceptual Framework

A conceptual framework is a diagrammatic representation of the study variables under consideration. The figure shows the hypothesized effects of risk management strategy on commercial banks performance in Kenya. The risk management adapted by commercial banks are liquidity risk management, credit risk management, and operational risk management all these strategies combined are assumed to have effect on commercial banks performance as shown in Figure 2.1.

FIGURE 1
Conceptual Framework





Source: Author (2016)

TABLE 1
Operationalization of the Variables

Variable	Measures	Attributes	Scale
Y	Profitability	Return on assets	Ratio
X ₁	Liquidity management	risk Loan to deposit	Ratio
X ₂	Credit management	risk Total debt to total assets	Ratio
X ₃	Operational management	risk Asset utilization ratio (total overheads to total assets)	Ratio

Source: Author (2016)

2.5 Summary of the Literature

From the empirical studies it is evident that firms operate in an environment which faces tremendous uncertainties consisting of operating, market, credit and liquidity risks. With the increased competition in the banking sector commercial banks are faced with the challenge of maintaining their existing customer base while at the same time trying to expand their customer base with the aim of improving profits while at the same time minimizing on risks.

2.6 Research Gaps

It is quite evident that the financial market in which commercial banks operate is quite dynamic and is vulnerable to the economic tides in given environment. Within the last two years dating back from 2015 to 2016 three banks have been put under receivership and they include Dubai Bank, Imperial Bank and Chase Bank. This has been attributed to the increase in banks non-performing loans which has contributed significantly to the financial limitations of commercial banks to effectively meet their financial obligations to its depositors and other stakeholders. For the financial year ended 2015 there have been a number of commercial banks that have posted losses with National Bank of Kenya recording the most noticeable loss after tax of Kshs 1.2 billion as a result of more stringent regulation by the Central Bank of Kenya.

Therefore, it is with these considerations in light that the present study intends to identify the various risks which commercial banks are exposed to while at the same time try to provide alternative solutions which will be beneficial to the various players in the financial sector with more emphasis on commercial banks.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter will provide a discussion of the outline of the research methodology that will be used in this study. It focuses on the research design, data collection methods and will come to a conclusion on the data analysis and data presentation methods that will be used in this study.

3.2 Research Design

The study adopted a descriptive and correlation research design. Mugenda and Mugenda (2003) describe descriptive research design as a systematic, empirical inquiring into which the researcher does not have a direct control of independent variables as their manifestation has already occurred or because they inherently cannot be manipulated. Descriptive studies are concerned with the what, where and how of a phenomenon hence more placed to build a profile on that phenomenon (Mugenda & Mugenda, 2003). Correlation research design is a research which shows the relationship between the study variables (Tarus & Omandi, 2013). The design was appropriate for the study since the study seeks to show the effect of risk management strategies on listed commercial banks performance in Kenya.

3.3 Target Population

The target population for this study was the 11 commercial banks listed in Nairobi Securities Exchange as at December 2015. The choice of the commercial banks was guided by the availability of annual audited since it is annual requirement for all listed companies. According to Ngechu (2004) a population is a well-defined set of people, services, elements, and events, group of things or households that are being investigated. Mugenda and Mugenda (2003) describe population as

the entire group of individuals or items under consideration in any field of inquiry and have a common attribute.

3.4 Sample Size and Sampling Technique

According to Kothari (2004) sampling is the process of selecting a number of individuals for a study in such a way that the individual represents a larger group from which they were selected from. Sampling means selecting a given number of subjects from a defined population as representative of that population. Any statements made about the sample should also be true of the population (Mugenda and Mugenda 2003). Purposive sampling was used to select 8 commercial banks which have been listed in NSE for the last 14 years. The sampling technique was the most appropriate since it sets the inclusion and exclusion criteria for the commercial banks to be included in the study. The choice of the 14-year period is guided by Tarus and Omandi (2013) on their business case of corporate governance who argued that the use of a five-year period was not appropriate for their study since it led to a small sample size therefore they recommended for more than five-year period.

3.5 Data Collection Instrument

The study was based on secondary data gotten from the annual reports of the 8 listed commercial banks since 2002. According to Mugenda and Mugenda (2003) data readily available and which has been collected in the past by other individual(s) other than researcher is referred to as secondary data. This data is suitable in this case as it is readily available, efficient in both monetary and time constraints (Ogwe, 2014).

A succinct content analysis of the annual reports for the 6 listed commercial banks will be used. The choice of annual reports to provide risk management strategies is necessitated by: it contains voluntary disclosure and preparations of such reports have the analyst and investors in

mind (Hamrouni *et al.*, 2015). The second reason, Zarb (2007) document that annual reports provide the best firm disclosure of due to the information contained therein therefore it would be a good source of the risk management strategies adopted by listed commercial banks. The study will make use of quantitative data. And as Bryman and Bell (2007) points “quantitative research can be construed as a research strategy that emphasizes quantification in the collection and analysis of data.”

As Creswell (2008) argues prior to research a researcher ought to develop a data collection instrument which is purely meant to measure, quantify or observe the data under investigation. The current study proposes to use Disclosure Check List as the principal instrument for collecting data from the annual report. The same instrument was used by (Nduta & Muturi, 2015) in their study in Nairobi Securities Exchange.

3.6 Panel Data

A data consisting of n entities for example insurance companies and each entity is observed for a particular period of time is known as panel data (Greene, 2008). Consequently, the total number of observable observations will be a multiple of number of entities times’ number of years. Moreover, Greene argued that the panel data can be observed either quarterly, yearly and or monthly. According to Cameron and Trivedi (2009) there is need to exercise caution while analyzing panel data because there are chances of it being short if the time period is short and many entities are observed in every period or it can be long if few observations are observed over a very short period of time.

There are two heterogeneous models which are used to analyse panel data. The two models mainly examine the fixed or random effects of individual under consideration or time (Greene, 2008). The two models are differentiated by the role played by the dummy variables; for fixed

effects model (FEM) dummy variables forms part of the intercept while in random effects model (REM) dummy variables are treated as an error term (Greene, 2008).

In a FEM all the entities are hypothesised to have the same slope and uniform variance among variables under consideration. In contrast, REM examines groups or times variance and they are based on the assumption that all groups have the same intercept and slope coefficient (Greene, 2008). When examining the difference among groups of individuals under investigation the researcher ought to use the variance of the error term and not the intercept. To estimate REM the variance may be either known or unknown; for the former the model is estimated using generalized least squares method (GLS) and the later ought to be estimates using feasible generalized least squares method (FGLS) (Greene, 2003).

Incremental F test was used to test for fixed effects while Lagrange Multiplier (LM) test will be used to test for random effects (Breusch and Pagan, 1980), in the second case if the null hypothesis is accepted then the appropriate model will be pooled effects regression analysis. Moreover, Hausman test was used to compare fixed effects and random effects, the test assumes that the most appropriate model for the study is random effects and if the p value < 0.05 then the most appropriate model is fixed effects. The matrix in Table 3.1 shows the tests that were used in the study.

3.7 Model Specifications

Freund (2001) underscores that the main objective of any statistical investigation is to determine relationships that make it feasible to predict one or more variables in terms of other variables. The obtained data will be analyzed using Microsoft Excel, Stata and Eviews. The researcher carried out a T-test at 95% confidence interval to establish the significance of the independent variable in explaining changes in the dependent variable.

After the diagnostic tests the resultant model were used to examine the nature of the relationship between independent audit characteristics and real earnings management. The fitted pooled OLS, fixed and random effects models will be as follows:

Pooled OLS:

$$Y_{it} = \alpha + \beta X_{it} + \varepsilon_{it} \quad (1)$$

Where ε_{it} = error term

Fixed effects:

$$Y_{it} = \alpha_i + \beta X_{it} + \mu_i + \varepsilon_{it} \quad (2)$$

Where μ_i = fixed effect

Where ε_{it} = error term

Random effects:

$$Y_{it} = \alpha + X_{it}\beta + \mu_{it} + \varepsilon_{it} \quad (3)$$

Where ε_{it} = within entity error term

μ_{it} = between entity error term

The analytical model to be adopted in the study will be:

$$Y_{i,t} = \alpha + \beta_1 X_{1i,t} + \beta_2 X_{2i,t} + \beta_3 X_{3i,t} + \beta_4 X_{4i,t} + \varepsilon_{i,t}$$

Where Y=Profitability measured by ROA

X₁=Liquidity risk, X₂=Credit Risk, X₃=Operational Risk (measured by asset utilization ratio)

$\varepsilon_{i,t}$ = The random error term that accounting for all other variables that affect bank performance but are not captured in the model.

α = The Y intercept (Value of Y when all independent variables are zero).

$\beta_1, \beta_2, \beta_3, \beta_4$ = represent the regression slope coefficient or change in Y by each independent variable.

CHAPTER FOUR

ANALYSIS AND FINDINGS

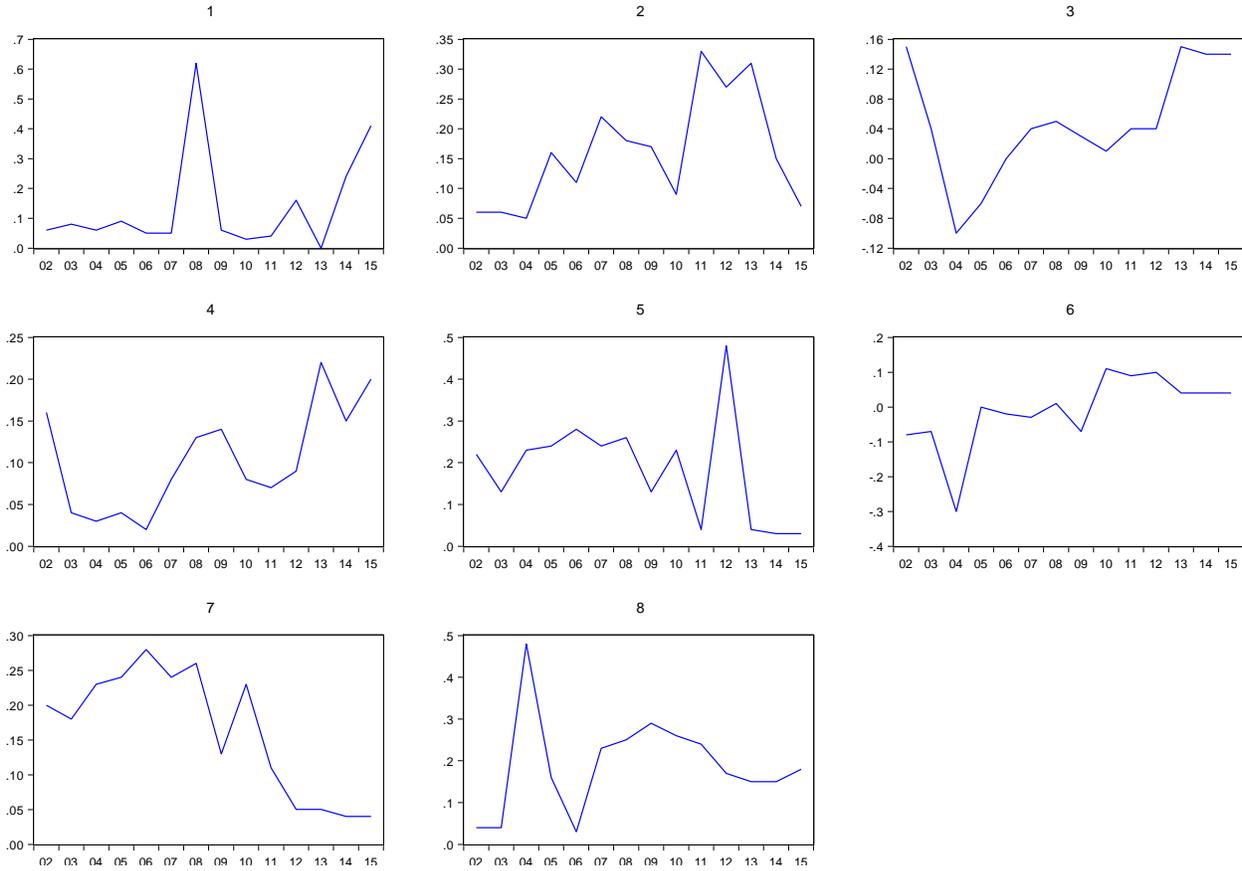
4.1 Introduction

The current chapter presents the secondary data collected from listed commercial banks in Kenya in 2002-2015. In this section exploratory analysis, panel data diagnostic analysis and panel regression analysis are presented interpreted and discussed in relation to empirical and theoretical review. The target population was composed of all listed commercial banks and purposive sampling was used to select eight commercial banks which has been listed in 2002-2015 this yielded balanced panel data.

4.2 Exploratory Data Analysis

Graphical analysis was used to examine the pattern of ROA which were used as the commercial banks performance. Moreover overlain graphs were used to examine the trend characteristics among the commercial banks under investigation. In this section dummy codes ranging from 1 to 8 were used as indicators of commercial to sustain confidentiality of the commercial banks.

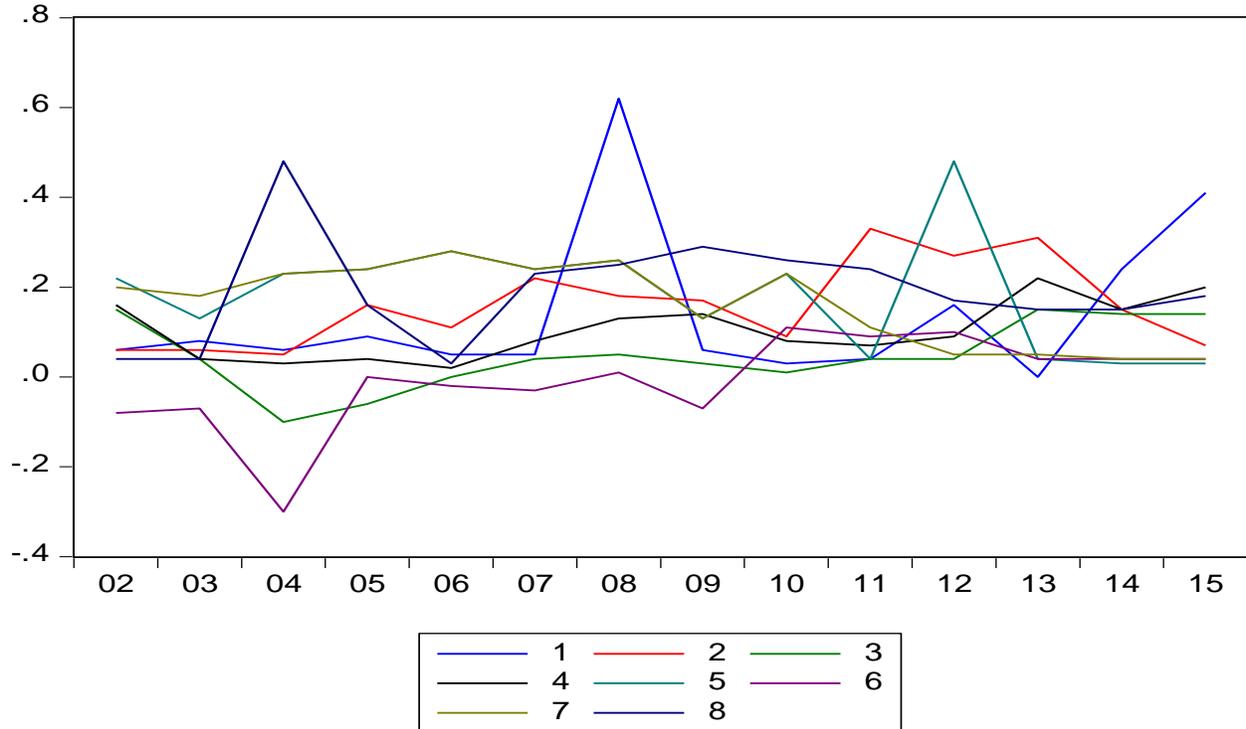
FIGURE 2
ROA Trend Analysis



Source: Author (2016)

Figure 2 there was generally an upward and down ward trend on return on assets among commercial banks listed in Kenya in 2002-2007. Although, some banks had upward and down ward trends on return on assets some for example Bank 6 which maintained an upward trend though it registered the least return.

FIGURE 3
Overlain Graph for ROA



Source: Author (2016)

The pictorial presentation showed that all the listed commercial banks had different constant slopes and there had different slopes coefficient.

4.2.1 Correlation Analysis

Correlation analysis was used to test for multicollinearity among the independent variables as well as the strength of the relationship between dependent and independent variables. Two correlation matrices were presented since the study had two measures of the dependent variables. Results were summarized in table 2.

Results in Table 2 showed that there was a positive and significant relationship between liquidity risk management and ROA ($\rho = 0.583$, p value < 0.05). Therefore, it can be deduced that a unit change in liquidity risk leads to 58.3% increase in return on assets. Secondly, there was

a positive and significant relationship between credit risk management and return on assets and a unit change in credit risk management results to 58.3% change in return on assets. Thirdly, there was positive and significant relationship between ROA and operational risk management and unit change in operational risk improved profitability by 56.6%. Liquidity risk had a positive and significant relationship with both credit risk and operational risk and since none of them had a coefficient greater than 0.8 then there were not collinearly related. Similarly, credit risk had a positive and significant relationship with operational risk and since the coefficient was less than 0.8 then there was no multicollinearity.

TABLE 2
Correlation Analysis Using ROA as the Dependent Variable

	ROA	Liquidity risk	Credit risk	Operational risk
ROA	1			
Liquidity risk	.583** .000	1		
Credit risk	.583** .000	.552** .000	1	
Operational risk	.566** .000	.496** .000	.507** .000	1

** Correlation is significant at the 0.01 level (2-tailed).

Source: Author (2016)

4.3 Panel Data Diagnostic Analysis

Prior to fitting the conceptualized model in the conceptual framework, panel data diagnostic tests were carried out. Breusch Pagan Langrange Multiplier test was used to examine the random effects. The test hypothesed that there zero variance across the entities against the alternative that there was variance variation across the entities. When the dependent variable was ROA there was evidence to warrant rejection of the null hypothesis and hence we concluded that there random effects were not appropriate to fit and the most appropriate model was random effects.

TABLE 3
Chi-Square values for the Breusch –Pagan LM Test

Model	Dependent variable	χ^2-value	p-value
1	ROA	0.29	0.000

Source: Author (2016)

Secondly, the study tested for the time fixed effects. Results in Table 4 shows that there were no time related effects while ROA was used the measure of commercial banks performance since the p value >0.05 .

TABLE 4
Test Results for Time Fixed Effects

Model	Dependent variable	F-value	p-value
1	ROA	1.64	0.1318

Source: Author (2016)

Table 5 shows both heteroskedasticity and serial correlation test. Heteroskedasticity test assumes that there is uniform variance against the alternative which states that there is no uniform across the error terms. Since the p value were less than 0.05 when the dependent variable was ROA or ROE there was enough evidence to warrant rejection of the null hypotheses of uniform variance and acceptance of the alternative that there was no uniform variance. Therefore, it was appropriate to use robust standard errors.

The serial correlation test assumed that there no serial correlation across the error terms against the alternative that there was serial correlation. Since the p value was greater than 0.05 then there was no enough evidence to warrant rejection of the null hypotheses and consequently we conclude there was no serial correlation.

TABLE 5
Result for Heteroskedasticity and Serial Correlation Test

Model	Dependent variable	Test for heteroskedasticity		Serial Correlation	
		χ^2 -value	p-value	F-value	p-value
1	ROA	27.84	0.00	1.256	0.856

Source: Author (2016)

4.3.1 Panel Descriptive Analysis for ROA

Panel descriptive analysis for ROA was tabulated as shown in Table 6. Results of the study revealed that the average ROA was 12.2% with a minimum of -3 and maximum of .62.

TABLE 6
Descriptive Statistics for Dependent Variable

Variable		Mean	Std. Dev.	Min	Max
ROA	overall		.1263	-3	.62
	between	.122	0.071	-.01	.191
	within		0.107		

Source: Author (2016)

Hausman test was applied to examine the most appropriate model to use between random effects and fixed effects. The test hypothesises that fixed effects and random effects coefficients have no symmetric difference. Results in Table 6 shows that the most appropriate model to fit when commercial banks performance was measured by ROA was fixed effects model since the p value was <0.05.

TABLE 7
Hausman Test for ROA Model

Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
		9.84	3	0.020
Variable	Fixed	Random	Variable (Diff.)	Prob.
Liquidity risk	0.227	.228	.000	.969
Credit risk	.350	.350	.000	.999
Operational risk	.255	.316	.000	.004

Source: Author (2016)

Results in table 7 shows that 73.3% of the variation in listed commercial banks performance (ROA) in Kenya can be explained by liquidity risk management, credit risk management and operational risk management while the remaining percentage can explained by other factors which are not included in the model. The statistics of 27.663 and p value of 0.000 revealed that the three risk management strategies had a joint significance on commercial banks performance.

The first hypotheses of the study stated that liquidity risk management strategy had no significant influence on commercial banks performance. Results of the study revealed that there was a positive and significant relationship between liquidity risk management and commercial bank performance and unit change in liquidity risk management increased commercial banks ROA by 0.227 units.

The results were in agreement with Agabada and Osuji (2013) who conducted a study on the efficacy of liquidity management and bank performance in Nigeria. The research findings indicated that there was a significant positive relationship between efficient liquidity management and bank performance. The results contrasted past Kenyan studies such as Maaka (2013) who found that there was an inverse relationship between leverage levels and commercial banks in Kenya while Mwangi (2014) found inverse significant relationship between holding liquid assets

and commercial banks. These findings differs since most of the studies adopted use of primary data while those using secondary data they used data for a short run period.

The second hypothesis of the study stated that credit risk management had no significant effect on commercial profitability. Results of the study showed that there was a positive and significant relationship between credit risk management and commercial banks performance and a unit change in credit risk increased ROA by 0.35 units.

These results were in agreement with Kithinji (2010) who established that the amount of credit extended contributed positively to profits but at marginal rate whereas a negative relationship existed between non-performing loans and profits. The t-test conducted indicated that profits that did not depend on non-performing loans and credit loans were significant. In addition, the results supported Gizaw *et al.*, (2015) who conducted a study whose main objective was to examine the impact of credit risk on profitability of commercial banks in Ethiopia. The research findings established that credit risk management had a positive effect on the profitability of commercial banks. The researchers recommended that there was need to enhance credit risk management so as to maintain profitability.

The third hypotheses of the study stated that operational risk management had no significant effect on commercial banks performance. Results of the study revealed that there was a positive and significant relationship between operational risk management and commercial banks performance and a unit change in operational risk management increased commercial banks performance by 0.255 units. These results were in agreement with Sewayana (2011) who found a positive and significant relationship between operational risk management and commercial banks performance.

TABLE 8**Fixed Regression Analysis on ROA and Risk Management Strategies**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.047	0.01	-3.19	0.00
Liquidity Risk	0.227	0.07	3.48	0.00
Credit Risk	0.350	0.06	6.28	0.00
Operational Risk	0.255	0.06	4.25	0.00
R-squared	0.733	Mean dependent variable		0.122
Adjusted R-squared	0.706	S.D. dependent variable		0.126
S.E. of regression	0.068	Akaike info criterion		-2.431
Sum squared residual	0.474	Schwarz criterion		-2.164
Log likelihood	147.144	Hannan-Quinn criterion.		-2.323
F-statistic	27.663	Durbin-Watson stat		1.580
Prob (F-statistic)	0.000			

Source: Author (2016)

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings of the investigation on the effect of risk management practices on the profitability of listed commercial banks in Kenya. Precisely, the chapter contains the finding summary, conclusions, recommendations and the suggested areas for further study. All the itemized headings are discussed as per the general and specific objectives of the study.

5.2 Summary

After collecting secondary data from a sample of eight (8) commercial banks' annual financial statement for a period of 14 years, panel data analysis was conducted using Excel, Stata and E-views. Diagnostic tests were also done to affirm the right model to use where fixed effect and pooled effect were found to be appropriate to assess the effect of risk management practices as measured by liquidity risk, credit risk and operational risk management and bank profitability as operationalized by ROA. The results from the fixed regression analysis of risk management strategies found that these three strategies explained 73.3% of the banks' ROA.

5.2.1 Liquidity Risk Management and Bank Profitability

In the evaluation the effect of liquidity risk management on the profitability of listed commercial banks in Kenya, the results of the study revealed the presence of positive and significant relationship between the two variables. Correlation analysis too showed a positive and moderate strength between the two variables. Further, analysis demonstrated that a unit change in liquidity risk management caused the commercial banks profit to increase by 0.24 units. The finding of this study contradicted similar study in Kenya by the Mwangi's (2014), Maaka (2013) and Konadu

(2009) in Ghana who established an inverse and insignificant relationship between the two variables.

5.2.2 Credit Risk Management and Bank Profitability

The second hypothesis stated that credit risk management has no significant effect on profitability of listed commercial banks in Kenya. Results from the study did not support this hypothesis, since the relationship between the two variables was not only positive but also significant. Correlation analysis also confirmed the regression analysis of a positive and moderate relation between credit risk management and profitability. Similarly, a study by Aduda and Gitonga (2011) in Kenya, established that there was a significant relationship. However, in Europe, Li and Zou (2014) found that the relationship between credit risk management and profit made by the banks to be fluctuating over the period under their investigation.

5.2.3 Operational Risk Management and Bank Profitability

The third objective of the study sought to find out the effect of operational risk management on the profitability of listed commercial banks in Kenya. Results from the analysis shows that there was a positive and significant relationship. Correlation analysis revealed a high degree association between the operational risk management and bank profits. In addition, a unit change in operational risk management was found to cause a rise in commercial bank's profitability (ROE) by 0.25 units. Likewise, Lyambiko's (2015) study about the commercial banks in Tanzania found that operational efficiency was directly and positively correlated to the financial performance of the banks.

5.2 Conclusions

The study sought to examine whether risk management practices would have an effect on profitability of listed commercial banks in Kenya. From the analysis, the overall outcome reveals

that the practices on risk management should be enhanced since the influence positively the returns that banks make in any given period.

This study demonstrates the importance of the liquidity risk management in influencing the income statement of the commercial banks in Kenya, thus it can be concluded that managers who ought to increase the earning of their company should keep an eye on the item that are likely to alter the liquidity of their firms. More importantly, the loan proportion given by banks need to be maintained at a manageable level so as to boost the profitability in cases of short falls.

The results lead to the conclusion that null hypothesis does not hold water in the context of the commercial banks since the significance of the credit risk management is manifested in the just concluded analysis of banks profitability. This is to say that banks need to be watchful of the way they issue long terms to their customers since a properly managed credit level of risk will for sure yield more returns to the firm.

Further, the study leads to a conclusion that null hypothesis of no significant between the operational risk management and banks profit should be rejected since the results have demonstrated that importance and positivity in a relationship of between the two variables. Critical evaluation of overheads items should be a concern of the banks that wishes to make more and high returns on the investment and asset. This being the primary goal of shareholders in any companies then banks will have no option other to ensure that operations efficiency is observed and any risk thereof is managed to tolerable level.

The current study is in support of contingency theory of risk management and consequently all commercial banks ought to devise measures aimed at the level of risk exposure and consequently increase their profit levels.

5.3 Recommendations

The prime role of the commercial banks is to create credit, which as seen here exposes the firm to risk owing to defaulting by the borrowers to honor their obligations. Therefore, banks should manage credit risk prudently since it may affect banks to move from economy to systematic crisis.

The study suggests the importance of the risk management for the financial performance of banks, thus it can be recommended that since a high level of risk management, yield high returns, the process of dealing with risk should be a continuous and developing with time. The act of balancing risk and returns cannot therefore be under emphasized.

One way to ensure shareholder goal of wealth maximization is meet is obtaining consistent profits that are distributed to them in the form of dividend, therefore the it can be recommended that those firms that wishes to do so one of the many ways is to manage exposed risk effectively.

Risk that continues to face business like commercial banks are many hence institutions should allocate resources to the risk management department so that they can act effectively and promptly. An establishment of comprehensive risk management of the commercial banks should be made a prerequisite as it contributes to the overall risk management systems.

5.4 Suggestion for Further Studies

The study focused only on three strategies on risk management against the commercial banks; however, in future inclusion of other type of risk management as independent variables would be of great importance for profit is a function of many items and risks.

Having said so profitability of the firm can also be assessed by several other factors which have not been used here and which could act as good indicators of the returns made hence they can be encouraged in further studies. Also, use of a larger sample would ensure a better representation of the 43 commercial banks in Kenya. This study can also be extended by

incorporating other financial institutions such as credit union and micro finance institutions which are also exposed to almost (if not) same risk types.

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APPENDICIES

Appendix I Letter of Introduction

Esther Wangari,

P.O. Box 14061- 00400,

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Date 16.5.2016.

Name of Respondent-----

Company Name and address-----

Dear Sir/ Madam,

RE: REQUEST FOR RESEARCH DATA

I am a Masters of Commerce student in finance and Investment candidate student at KCA University, undertaking a thesis titled “**EFFECT OF RISK MANAGEMENT ON THE PROFITABILITY OF LISTED COMMERCIAL BANKS IN KENYA**”. The research is part of the partial fulfilment for masters of commerce award. You have been selected to form part of this study and are kindly requested to assist in data collection by responding to questions in the accompanying the document check index. The information provided will exclusively be used for academic purposes only and will be treated with utmost confidence. Your cooperation and assistance will be highly appreciated.

Yours faithfully,

Esther Wangari

(Msc. Student)

Mr Njogo.

(Supervisor)

Appendix II Document Check Index

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Profitability	EBIT																
	EAT																
Liquidity risk management	Equity capital																
	Total assets																
	Loan issued																
Credit risk management	Long term debt																

Operational risk management	Total overheads																		
	Total cost																		