

**A COMPARATIVE ANALYSIS OF THE RISK IN ISLAMIC AND
CONVENTIONAL BANKS IN KENYA**

BY

DHIDHA BARISSA ADAM

SUPERVISOR: DR. JOSIAH ADUDA

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

OCTOBER 2012

DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university for moderation.

Signed: _____

Date: _____

Dhidha Barissa Adam

D61/73729/2009

This project has been presented for moderation with my approval as the appointed supervisor.

Signed: _____

Date: _____

DR. JOSIAH ADUDA

LECTURER, DEPARTMENT OF FINANCE & ACCOUNTING

UNIVERSITY OF NAIROBI

ACKNOWLEDGEMENT

I thank God for giving me the wisdom and courage and for guiding me throughout my life for without Him I would not have come this far.

Secondly, special thanks go to my supervisor Dr. Josiah Aduda, for providing unlimited, invaluable and active guidance throughout the study. His immense command and knowledge of the subject matter enabled me to shape this research project to the product that it is now.

Thirdly, I also thank my family for letting me use their valuable time to work on this project. It is my hope that their sacrifice has finally paid off.

Finally, I owe my gratitude to a number of people who in one way or another contributed towards completion of this project especially my fellow colleagues at work, students, my wife Faiza, my brother Jillo and my mother Hadija.

DEDICATION

This work is dedicated to my family

ABSTRACT

Islamic Banking has grown rapidly throughout the world and has been introduced in more than 60 countries of the world so far. However, scepticism still surrounds Islamic Banking keeping into view the earlier demise of other banks. Since, Islamic banks can not charge a fixed return unrelated with their client's operations, it may seem that Islamic banks face more risk and hence, will have more volatile returns on their assets as they have to own the asset before they sale or lease it to their clients and take on subject matter risk which conventional banks do not take. This study probes into whether Islamic banks are riskier than conventional banks or not. The objective of this study is to establish whether Islamic banks in Kenya are riskier than the conventional banks.

This was a correlational study. The population was 43 commercial banks in Kenya. Two purely Islamic banks and two other conventional banks were selected for the study. Secondary data was used in this study. Data was analysed using descriptive analysis, t-tests, correlation analysis, and regression analysis.

The descriptive statistics showed that Islamic banks were riskier than conventional banks in terms of ROE and operational risk while conventional banks were riskier than the Islamic banks in terms of credit risk and liquidity risk. The one-way sample test showed that the overall risk (ROE) was not significantly different across the banks but the differences in credit risk, liquidity risk and operational risks were statistically significant across the banks. The regression results showed that bank type has a negative influence on ROE, credit risk and operational risk while a positive effect on liquidity risk. None of

these relationships was however significant at 5% level of confidence. The study concludes that overall, Islamic banks in the sample were riskier than the conventional banks. The study also concludes that risk profiles of banks especially credit risk, liquidity risk, and operational risk is different between conventional and Islamic banks in Kenya.

The study recommends that Islamic banks in Kenya need to manage their risks as they are generally riskier than the conventional banks contrary to other findings. The study further recommends that Islamic banks should devise strategies that will help them lend out the cash as they are too liquid.

TABLE OF CONTENTS

DECLARATION.....	i
ACKNOWLEDGEMENT.....	ii
DEDICATION.....	iii
ABSTRACT.....	iv
LIST OF TABLES.....	viii
LIST OF ABBREVIATIONS.....	ix
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.2 Problem Statement.....	8
1.3 Objective of the Study.....	11
1.4 Value of the Study.....	11
CHAPTER TWO: LITERATURE REVIEW.....	13
2.1 Introduction.....	13
2.2 Theoretical Literature.....	13
2.3 Empirical Literature.....	19
2.4 Summary of Literature.....	26
CHAPTER THREE: RESEARCH METHODOLOGY.....	27
3.1 Introduction.....	27
3.2 Research Design.....	27
3.3 Population and Sample.....	27
3.4 Data Collection.....	28
3.5 Data Analysis.....	29
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION..	30
4.1 Introduction.....	30
4.2 Descriptive Analysis.....	30

4.3	Inferential Analysis	36
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS		38
5.1	Introduction	38
5.2	Summary of Study Findings.....	38
5.3	Conclusion.....	38
5.4	Recommendations for Policy	39
5.5	Limitations of the Study.....	40
5.6	Suggestions for Further Research	40
REFERENCES.....		42
APPENDICES.....		45
Appendix 1:	List of licensed Commercial Banks in Kenya	45

LIST OF TABLES

Table 1:	Operational definition of variables	28
Table 2:	ROE ratios for respective banks from 2008 to 2010	30
Table 3:	Credit risk for respective banks from 2008 to 2010	31
Table 4:	Liquidity risk for respective banks from 2008 to 2010	32
Table 5:	Operational risk for respective banks from 2008 to 2010	33
Table 7:	Credit Risk of Conventional and Islamic Banks from 2008 to 2010.....	34
Table 8:	Liquidity risk of Conventional and Islamic Banks from 2008 to 2010.....	35
Table 9:	Operational risk of Conventional & Islamic Banks from 2008 to 2010.....	35
Table 10:	One-sample test	36
Table 11:	Correlation Matrix	36
Table 12:	Regression results	37

LIST OF ABBREVIATIONS

IFI	Institute of Financial Institution
IIBF	Institute of Islamic Banking and Finance
CBK	Central Bank of Kenya
FCB	First Community Bank
ROE	Return on Equity

CHAPTER ONE:INTRODUCTION

1.1 Background of the Study

Risk and liquidity management are not just an interesting topic in Islamic banking, it is a huge issue for all banks whether Islamic or not and for those who supervise these banks. Good risk management practices and processes do not have a religion or a colour or a country. There are plenty of good risk takers in Islamic Banks and some bad ones. It is the same in the conventional banking sector. Islamic banks have brought a new innovation in the banking industry whereby transactions must pass through owning real physical assets. Risk and liquidity management are of crucial importance in the overall banking environment, and they have clear relevance also to the specific environment of Islamic banking (Anas and Mounira, 2008). In itself, Islamic banks are growing rapidly and have their own particular techniques on these issues, as elaborated on in this article. The use of profit-sharing modes in Islamic banks changes the nature of risks faced by these institutions.

Islamic banking refers to a system of banking, which is consistent with Islamic Shari'ah (Law), and guided by Islamic economics (Nzibo, 2011). Islamic law prohibits the payment and collection of riba (interest or usury).The main argument against interest is that money is not used as a commodity with which to make a profit but that it should be earned on goods and services only, not on control of money itself. Features of Islamic Banking are based on ethical principles. Islamic Shari'ah allows all economic activities in the framework of protecting public interest and safeguarding it. In addition, for an investment to be legitimate, one of the most important requirements is that its outcome

must fulfil the reality of investment transactions and that it enables the Islamic Financial Institution (IFI) to state what it expects to make in profits.

1.1.1 Risk Management in Banks

Risk arises when there is a possibility of more than one outcome and the ultimate outcome is unknown or not clear. According to Jorion and Khoury (1996) risk is the variability or volatility of unexpected outcome. Risk can be measured by the standard deviation of historic outcomes, and risk can be divided into two types: systematic risk and unsystematic risk. Systematic risk is the risk that arises from macroeconomic factors such as changes in economy, political & social issues, business environment, interest rates, inflation, war and international incidents. Systematic risk cannot be controlled and is undiversified. It can however be mitigated by risk transfer techniques i.e. hedging. Oldfield and Santomero (1997) define systematic risk as risks of asset value change associated with systemic factor, as such that it can be hedged but cannot be diversified completely. Systematic risk includes: interest rates risk, foreign exchanges risk, commodity prices risk and industry concentration risk.

Unsystematic risk is a risk that is unique to a firm or an industry. It is associated with random causes that can be eliminated through diversification and controlled through good governance. The examples of unsystematic risk are regulatory action, mismanagement of a firm, labour difficulties, consumer preferences, loss of key accounts and labour strikes. All business or investment activities will be exposed to different type of risks or uncertainty. As risk appears to be present in all the business activities, it should be

managed with due diligence and it requires management due attention by keeping in mind the risk return trade off model.

Islamic banks operations are based on the Shariah principles. What primarily differentiates Islamic banks from conventional banks is the prohibition of Riba. In comparison to a conventional bank an Islamic bank offers similar products and services such as deposit accounts, various types of financing, credit cards and mortgage. However Islamic bank products are based on concept of profit and loss sharing, while conventional banks are not. Like other financial institutions, risk is among the main challenges and likewise it needs to be addressed properly by Islamic banks to make sure that they operate efficiently.

Khan and Ahmed (2001) discuss that Islamic banks not only face risks that conventional bank face but they also have to deal with the new and unique risk as a result of their unique asset and liability structure. According to them, this new risk exists due to the compliance of Shariah requirement. Among the nature of operations in Islamic financial institutions majority are based on profit and loss sharing, as such it is perceived that such transactions pose lower risk. While profit and loss sharing contracts expose Islamic financial institutions to a specific risk related the each type of contract and Qureshi (1984) claims that equity based financing will increase the exposure of the Islamic bank to risks.

According to Sundararajan and Errico (2002), Islamic financial institutions can be riskier than conventional financial institutions due to several reasons including the specific nature of risk and unlimited number of ways to finance a project using either profit & loss sharing or non-profit & loss sharing contracts. Lack of standardisation in each type of contract is also another factor that is why Islamic financial institutions are riskier than its companion.

Akkizidis and Khandelwal (2008) explains that the scarcity of hedging instrument, undeveloped inter-bank money markets and a market for government securities which are Shariah compliant, make Islamic financial institutions more vulnerable to unfavourable events than conventional financial institutions. Cihak and Hesse (2008) also argues that Islamic financial institutions pose risk to the financial system that in many regards differ from those posed by the conventional financial system.

In the case of Islamic banks, risks will vary depending upon the types of instruments used in the transactions either in deposit or financing. Sundararajan and Errico (2002) and Venardos (2006) argue that Islamic banks will face greater challenges in identifying and handling risk than conventional banks because of the complexities arising from the nature of the risk for each contract and profit loss sharing concept of certain financing product. While, Rosly and Zaini (2008) and Hassan and Dicle (2005) discuss that, the nature of risk faced by the capital owners in an Islamic bank varies and is unique in accordance to the types of financial instruments it uses, the people it hires to manage the bank and its degree of transparency. Rosly and Zaini (2008) explain that risk associated with each

single product can further be broken down into major and non-major risk. Major risk means the risk that dominates the product in use. Due to the unique nature in each product offered by Islamic banks, Kahf (2005) argues Islamic banks need variant “risk identification processes”, different risk management approaches & techniques and require different kind of supervision as well.

Turen (1996) classify that there are three factors that will influence total risk faced by the Islamic banks; i) risk originates from the new classification of the deposit holders, ii) risk in Islamic banks will depend on the level of the coverage of the interest charges ratio (net operating income over interest charges), and iii) risk related to the new status of the loans given by Islamic banks. Basically the first and second factor will tend to lower the risk level in Islamic banks, however third factor which is related to the status of the loans given by the banks, since Islamic banks also offering loan or financing based on profit sharing it will increase the risk to the banks.

The risk summary of Islamic banks is more or less parallel to the conventional (interest-based) banks. On the other hand, the risk faced by Islamic banks is categorized in two dimensions. The first dimensions of practice which are alike to conventional structure, and not in disagreement with the Islamic finance principles, and the second dimension of practices which are new-fangled or tailored and are believed to congregate the Islamic law and principles. One such scenario is of the termination of the Murabahah agreement that boosts the possibility for liquidity troubles (Anas and Mounira, 2008). Discovering,

gauging, managing and scrutinizing a variety of risk contacts are the major fundamentals of risk management process.

1.1.2 Overview of Islamic Banking in Kenya

Commercial banks are licensed and regulated under the Banking Act, Cap 488 and Prudential Regulations issued there-under. According to the Central Bank of Kenya, there are 43 licensed commercial banks in Kenya (see list in appendix 1). Three of the banks are public financial institutions with majority shareholding being the Government and state corporations. The rest are private financial institutions. Of the private banks, 27 are local commercial banks while 13 are foreign commercial banks.

The Commercial Banks have been selected for the study because of the recent emphasis on Risk Management in Kenyan Banking driven by the Central Bank viz. the Central Bank of Kenya guidelines as well as banks' own recent initiatives towards risk management. A process of financial liberalization was initiated in the 90s to make the banking system profitable, efficient, and resilient. The liberalization measures consisted of deregulation of entry, interest rates, and branch licensing, as well as encouragement to state owned banks to get listed on stock exchanges. With the liberalization came risks that banks needed to manage. It is therefore a suitable time to perform an analysis of risk management strategies in Commercial Banks in Kenya. The Basel-II norms, which include a move towards better risk management practices, also necessitate such a study (Bank Supervision Annual Report, 2008).

Barclays were the first to test the water in 2005 and there are now eight financial institutions offering Shari'ah compliant products in Kenya. Among them are two Islamic banks licensed by the Central Bank of Kenya (CBK) in 2007, First Community Bank (FCB) and the Gulf African Bank, which opened for business in 2008. Unlike the Islamic windows of conventional banks, these two organisations offer retail banking services through a currently limited, but growing network of branches. By mid 2010 they controlled 0.8% and 1% of banking assets in Kenya according to the Central Bank of Kenya (IIBF, 2011).

FCB is owned by East African businessmen and is headed by Nathif Adam, who started his 25 year banking career in Kenya, although much of his banking experience was gained in Saudi Arabia, Qatar and Sharjah. FCB has 17 branches across Kenya, with a heavier concentration in the south of the country; they have opened an Islamic Finance Training Centre; in 2010 they received approval to set up FCB Capital, an investment banking subsidiary and they have already reached the target of 1 billion Kenyan shillings in capital set as a 2011 target by the central bank, well ahead of many of Kenya's other banks (IIBF, 2011). In early October 2010 FCB announced the launch of the FCB Takaful Insurance Agency, which is set to work in partnership with insurance companies, to offer Shari'ah-compliant insurance products. They also announced a joint venture with the Kenya Meat Commission to help provide finance to the nomadic cattlemen of the arid and semi-arid regions of Kenya.

Gulf African Bank is principally backed by Middle Eastern investors and its CEO, Najmul Hassan was formerly General Manager at Al Meezan in Karachi, Pakistan. In contrast to FCB's Kenya-centric board of directors, it has directors from Pakistan, Oman, UK and Zambia to complement its triumvirate of Kenyans including the chairman and deputy chairman. Its track record is in many respects is very similar to FCB. They have 16 branches in Kenya, but their plans to venture into other East African countries are more concrete than those of FCB. They plan to open branches in Uganda and Tanzania and to follow FCB into the takaful business. Principal investor, GulfCap Investments is expected to raise 1 billion Kenyan shillings in capital to underwrite the move into takaful (IIBF, 2011).

Currently one of the gaps in the Kenyan market is in Shari'ah-compliant investment products. FCB Capital intends to address that gap, but they are not alone. ApexAfrica Capital, the third largest member of the Nairobi Stock Exchange is also working to develop Shari'ah-compliant investment products, including unit trusts, which are particularly popular in Kenya. The Kenyan Capital Markets Authority is in the process of setting up a regulatory framework to govern this nascent market (IIBF, 2011).

1.2 Problem Statement

Since its introduction in Egypt in 1959, Islamic Banking has grown rapidly throughout the world and has been introduced in more than 60 countries of the world so far. Global financial players like Citibank, ABN AMRO, American Express Bank, and HSBC among other players are also participating in Islamic Banking and Financial Industry. However,

skepticism still surrounds Islamic Banking keeping into view the earlier demise of BCCI. Islamic banks cannot merely lend money to earn interest as interest is prohibited in Islam based on Quranic injunctions. Islamic banks are obliged to take active part in the business and opt for sharing profits as well as losses since interest based investments and borrowings are not permitted in Islam. Since, Islamic banks can not charge a fixed return unrelated with their client's operations, It may seem that Islamic banks face more risk and hence, will have more volatile returns on their assets as they have to own the asset before they sale or lease it to their clients and take on subject matter risk which conventional banks do not take. This study probes into whether Islamic banks are riskier than conventional banks or not.

The 2009 Kenyan census reported that there were 4.3 million Muslim in Kenya, 11% of the population. Conventional financial institutions and Islamic banks have seen an opportunity, helping to finance businesses catering to the Islamic market, such as restaurants, hotels, food stores and halal slaughter houses, as well as developing Shari'ah compliant wealth management and investment products targeted at some of the wealthy Somali immigrants (Institute of Islamic Banking and Finance, IIBF, 2011). The two main Islamic banks are First Community Bank and Gulf African Bank. Numerous studies have been carried out on Islamic banking risk management but none has focused on Kenya given the fact that this type of banking is not prevalent in Kenya. For instance, Jalbani and Shaikh (2009) performed a differential analysis of Islamic vs conventional banking risk management in Pakistan and found that both Islamic banks and conventional banks are profitable and the risk management procedures in Islamic banks are adequate to

mitigate their largely equity-based investments and give their customers adequate return which are comparable with conventional banks. Akhtar et al., (2011) studied liquidity risk management by comparing conventional vs. Islamic banks in Pakistan. Bhatti and Misman (2010) studied risk exposure in Islamic banks in Malaysia and noted that Islamic banks are not risk free.

Further, a number of studies have been done on Islamic banking in Kenya. Ogle (2010) did a comparative analysis of credit risk management practices of Islamic and conventional banks. Kadubo (2010) studied factors influencing development of Islamic banking in Kenya. Wendo (2010) studied response strategies by Islamic banks to competition in the commercial banking sector. Ibrahim (2009) did a comparative study on the financial performance of Islamic banks and conventional banks in Kenya. Mugo (2009) did a study on competitive strategies adopted by Islamic banks by comparing the Kenyan and the United Arab Emirates banks. Salah (2009) studied factors that led to the emergency of Islamic banking in Kenya and the regulatory challenges facing the industry. To the knowledge of the researcher, no study has attempted to analysis risk management in Islamic banks in Kenya. This is therefore a first study that attempts to do so by performing a differential analysis on the risk management practices of both Islamic and conventional banks in Kenya by focusing on reputations risk, exchange risk, price risk, operational risk, default risk, religious risk, concentration risk and liquidity risk. This study seeks to answer the following question: are there similarities and differences in the risk management practices among Islamic and conventional banks.

1.3 Objective of the Study

The objective of this study is to establish whether Islamic banks in Kenya are riskier than the conventional banks.

1.4 Value of the Study

This study will add on to the growing body knowledge on Islamic banking by providing a view from an Islamic banking developing market such as Kenya. It will show what risk management practices are carried out by Islamic banks in Kenya and whether they are riskier than the conventional banks.

The research will be useful to a number of stakeholders. First, the investors (both individuals and financial conglomerates) who want to venture into Islamic Banking will find this study very useful as it will guide them on the riskiness of Islamic banking as compared to the conventional banks.

The study will also be invaluable the Islamic banks in Kenya as it will show what risks such banks face, what strategies can be used to mitigate against such risks, and the riskiness of these banks as compared to the conventional banks.

The regulators, especially the Central Bank of Kenya will find this study very useful in providing the risks such banks face in a bid to institute measures that can cushion the banks towards such risks.

Researchers and academicians in the field of finance and banking will find this study a useful guide for carrying out further studies in the area.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review. First, a theoretical review is provided in 2.2 focusing on the theories related to risk management. This section also shows the features of risk management in Islamic banking. Secondly, the empirical review of the studies that have been done on Islamic risk management is made in 2.3. The summary of chapter as well as the research gap is provided.

2.2 Theoretical Literature

Four theories are found relevant in risk management and are therefore discussed. These are the financial economics theory, the agency theory, the new institutional economics theory, and the stakeholder theory. This section also shows the features of risk management in Islamic banks.

2.2.1 Financial Economics Approach

Financial economics approach to corporate risk management has so far been the most prolific in terms of both theoretical model extensions and empirical research. This approach builds upon classic Modigliani-Miller paradigm (Miller and Modigliani, 1958) which states conditions for irrelevance of financial structure for corporate value. This paradigm was later extended to the field of risk management. This approach stipulates also that hedging leads to lower volatility of cash flow and therefore lower volatility of firm value. Rationales for corporate risk management were deduced from the irrelevance conditions and included: higher debt capacity (Miller and Modigliani, 1963), progressive tax rates, lower expected costs of bankruptcy (Smith and Stulz, 1985), securing internal

financing (Froot et al., 1993), information asymmetries (Geczy et al., 1997) and comparative advantage in information (Stulz, 1996). The ultimate result of hedging, if it indeed is beneficial to the firm, should be higher value – a hedging premium.

Evidence to support the predictions of financial economics theory approach to risk management is poor. Although risk management does lead to lower variability of corporate value (Jin and Jorion, 2006), which is the main prerequisite for all other effects, there seems to be little proof of this being linked with benefits specified by the theory. One of the most widely cited papers by Tufano (1996) finds no evidence to support financial hypotheses, and concentrates on the influence of managerial preferences instead. On the other hand, the higher debt capacity hypothesis seems to be verified positively, as shown by Faff and Nguyen (2002), Graham and Rogers (2002) and Guay (1999). Internal financing hypothesis was positively verified by Guay (1999) and Geczy et al. (1997), while it was rejected by Faff and Guyen (2002) and Mian (1996). Judge (2006) found evidence in support of financial distress hypothesis. Tax hypothesis was verified positively by Nance, Smith and Smithson (1993), while other studies verified it negatively (Mian, 1996; Graham and Rogers, 2002). More recently Jin and Jorion (2006) provide strong evidence of lack of value relevance of hedging, although some previous studies have identified a hedging premium (Allayannis and Weston, 2001, Carter et al., 2006).

2.2.2 Agency Theory

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 and 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 and Smith, 1987). Consequently, agency theory implies that defined hedging policies can have important influence on firm value (Fite and Pfleiderer, 1995). The latter hypotheses are associated with financing structure, and give predictions similar to financial theory.

Managerial motivation factors in implementation of corporate risk management have been empirically investigated in a few studies with a negative effect (Faff and Nguyen, 2002; MacCrimmon and Wehrung, 1990; Geczy et al., 1997). Notably, positive evidence was found however by Tufano (1996) in his analysis of the gold mining industry in the US. Financial policy hypotheses were tested in studies of the financial theory, since both theories give similar predictions in this respect. All in all, the bulk of empirical evidence seems to be against agency theory hypotheses however. Agency theory provides strong support for hedging as a response to mismatch between managerial incentives and shareholder interests.

2.2.3 New Institutional Economics

A different perspective on risk management is offered by new institutional economics. The focus is shifted here to governance processes and socio-economic institutions that guide these processes, as explained by Williamson (1998). Although no empirical studies of new institutional economics approach to risk management have been carried out so far, the theory offers an alternative explanation of corporate behavior. Namely, it predicts that risk management practices may be determined by institutions or accepted practice within a market or industry. Moreover, the theory links security with specific assets purchase (Williamson, 1987), which implies that risk management can be important in contracts which bind two sides without allowing diversification, such as large financing contract or close cooperation within a supply chain.

If institutional factors do play an important role in hedging, this should be observable in the data. First of all, there may be a difference between sectors. Secondly, hedging may be more popular in certain periods – in Poland one might venture a guess, that hedging should become more popular with years. A more concrete implication of this theory is that shareholders may be interested in attracting block ownership by reducing company risk. Here NIE is similar in its predictions to agency theory. However this theory also suggests that firm practices may be influenced by the ownership structure in general.

2.2.4 Stakeholder Theory

Stakeholder theory, developed originally by Freeman (1984) as a managerial instrument, has since evolved into a theory of the firm with high explanatory potential. 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, 1995) provide only indirect evidence (e.g. Judge, 2006).

2.2.5 Distinct Features of Risk Management in Islamic Banking

Besides the usual capital adequacy ratios proposed under BASEL, followed both by conventional and Islamic banks, there are some distinct features of risk management under Islamic Banking. These distinct characteristics of risk management, as discussed by Jalbani and Salman (2009) in Islamic banks are discussed below.

Islamic banks provide financing which is backed by assets. Islamic banks cannot deal in documents. All financing provided by Islamic banks results in the creation of assets i.e. capital formation. Islamic financing due to the asset backed nature results in productive economic activities; hence, it does not result in inflation. Furthermore, the underlying asset collateralizes the loan transaction provided by Islamic banks. Islamic banks need to

comply with conventional regulatory standards as well as Shariah standards. Shariah compliance is strictly followed under Islamic banks. This dual check covers the legal risk as there is a double check on money laundering and other fraudulent activities. Shariah compliance is ensured by the Shariah Supervisory Board, which comprises of influential religious scholars. The referent power of these scholars is utilized for further endorsing the system in the eyes of general public and increasing acceptance of Islamic banking among masses. Shariah compliance also ensures Corporate Social Responsibility (CSR) and ethical compliance. Islamic banks do not conduct business with tobacco, alcohol and other harmful toxic producing companies. This mechanism has given Islamic banking the name of 'ethical banking' in Europe.

Islamic banks are not merely interest-free. Interest free nature of Islamic banks is a necessary condition for Islamic banking but not the sufficient one. Islamic banking transactions need to avoid other elements of fraud, deceit and uncertainty. Islamic banking transactions are Gharar-free transactions. Gharar is an element of uncertainty in the contract about the product, price or other features of the contract. Gharar-free transactions ensure mutual benefit, covering and spreading risks of both counterparties to the contract by making each one's obligations clear at the outset. It is implied from the Gharar-free nature of Islamic banking transactions that such complex conventional instruments like options, swaptions are not allowed in Islamic banking.

Clean borrowing is not allowed in Islamic banking. Islamic banks provide financing only to create assets. Therefore, Islamic banks do not offer credit cards, personal loans and

running finance/ overdraft. On the downside, Islamic banks by restricting themselves to asset-backed financing cannot provide need-based loans, short-term financing for overhead expenses or financing for debt swap. Islamic banking does not permit transactions in most derivatives. Futures trading in stock and commodity markets, currency options, currency swaps, swaptions, short selling and other complex derivatives are not allowed in Islamic banking. However, Salam (advance sale/purchase) and Istisna (project financing) are close alternatives for Forward contracts in conventional banking. Derivatives have proven to be little effective for hedging and were the main factor behind economic fallout in East Asia in 1990s and in US and other developed markets in 2007.

2.3 Empirical Literature

The empirical literature is presented as follows: first, the risk management in Islamic banking is shown in 2.3.1. This is followed by a presentation of prior studies analysing the riskiness of Islamic banking.

2.3.1 Risk Management in Islamic Banking

Samdani (2007) classifies risk in Islamic terminology by arguing that Gharar, i.e. uncertainty makes a contract invalid in Islamic law. He classified Gharar into uncertainty about physical existence of the subject matter, uncertainty about the delivery method and date, ambiguities in contract with respect to the contract itself, subject matter, price and duration of contract.

Anas and Mounira (2008) noted that risks specific to Islamic banks are commodity and inventory risk, rate of return risk, legal and Islamic laws compliance risk, equity position

risk in the banking book, and withdrawal risk. For the conventional banks, the authors cite credit risk, market risk, exchange risk, operational risk, and liquidity risk as the major risks. In order to do that, the authors note that the Islamic bank must establish appropriate risk management environment and sound policies and procedures to control these risks. This can be done by putting up a number of measures. First, it can be done by creating a risk management environment by clearly identifying the risk objectives and strategies of the institution and by establishing systems that can identify measure, manage, and monitor various risk exposures. To ensure the effectiveness of the risk management process, Islamic banks also need to establish an efficient internal control system: Adequate Internal Controls. Secondly, by preparing a periodic risk reports such as credit risk reports, operational risk reports, liquidity risk reports and market risk reports. Thirdly, by setting up an Internal Rating System (IRS), Internal and external audit with management Risk information. Further, it can be done by enhancing transparency and comparability of banks through suitable disclosures about the quality of capital, accounting standards, risk exposures, and capital adequacy. Lastly is by providing facilities and supporting institutions. These include a lender of last resort facility, deposit protection system, liquidity management system and legal reforms.

An Islamic bank is normally exposed to certain internal and external risks. External risks are caused by changes in policies and regulations (regulatory risk) or by factors that affect the rates of benchmarks, such as LIBOR. Another risk relates to the fulfilment of obligations by debtors of the IB (credit risk). Operational risks are risks that relate to people/staff of the Islamic bank itself, including error, negligence and fraud, to systems

and technology used in the IB, to litigation processes and/or to the processes and procedures adopted in the IB; and trading book risks that are caused by price change of assets held by the IB (Kahef, 2005).

Sarker (1999) argues further that Islamic products have different risk characteristics and consequently, different prudential regulation should be erected. It has been argued that the nature of risks Islamic banks face resulting in unique asset liability composition due to Shariah compliance requires more prudence and strict risk management procedures (Khan and Ahmed, 2003). Similar thought is shared by Errico and Farahbaksh (1998) that even though regulatory supervision of Islamic banks by their respective monetary authorities tends to follow conventional standards, but Islamic banks differ from their conventional counterparts in several ways. They conceded that minimum capital requirement should take into consideration assets composition, which entails that minimum capital requirement for uncollateralized assets must be higher.

However, Kahef (2005) argued that Islamic banks have qualitatively similar credit risk to conventional banks; therefore the processes of the calculation of minimum equity requirement for credit risk exposure should not be different from the methodologies proposed for conventional banks. Islamic banks suffered from the global crisis in 1998-1999, but performed very well after the difficult periods suggesting that the interdependence of Islamic banks to other financial system is still closely related (Yudistira, 2003).

In academic economic literature, interest-based banking is even criticized from the pure economic standpoint. Fisher (1933) explains that once profit and asset price rise begins to decelerate, highly leveraged firms and speculators find themselves with debt servicing commitments that place too high a burden on available cash-flows. This initiates a general movement to liquidate assets to meet and relieve debt-service commitments. This has two distinct results. First, distress selling reduces asset values, leading to a loss of confidence, the hoarding of currency and the elimination of debt-financed speculation. Falling asset prices also lower collateral values, making banks wary of rolling over loans. Secondly, defaulting of bank loans, and the hoarding of cash, leads to multiplied contraction in the money supply due to the fractional reserve system, resulting in declining profits and prices. Higher levels of real debt induce further bankruptcies, distress asset sales and depressing prices yield a 'Fisher Paradox' even more. For Fisher, the primary problem was the combination of debt contracts fixed in nominal value, and a falling price level. Therefore, there is validity in the proposition that debt finance is potentially destabilizing (Haberler, 1937).

Islamic banks and financial institutions world-wide are running their retail banking operations at a self-imposed reserve requirement of close to 100% since they do not have privilege of T-bills. The opportunity cost of the cash held by Islamic banks as insurance against a devastating "run" is the interest rate forgone on government debt, i.e. T-bills. Islamic banks, hence suffer from two major handicaps when compared to conventional banks: (i) lack of access to the safety net provided by the Central Banks, thus having to provide its own very costly self-insurance due to the inability to diversify the risk of a

"run"; and (ii) lack of access to government guarantees of all securities; they can only hold cash, thus having more of their liquid assets tied than compared with the conventional banks (Abdul-Rahman, Yahia 2006).

In a study on risk management in Islamic and conventional banks in Pakistan, Jalbani and Shaikh (2009) identified seven types of risks that Islamic banks face. These are reputation risk, exchange risk, price risk, concentration risk, default risk, liquidity risk and religious risk. In the study, risk was measured using return on equity (ROE) in four banks selected using judgemental sampling method. Two Islamic banks and two conventional banks were selected.

2.3.2 Riskiness of Islamic Banking

Jalbani and Shaikh (2009) sought to establish whether Islamic banks in Pakistan were riskier than conventional banks. Using a sample of four commercial banks selected using judgemental sampling technique and using ROE as the benchmark, the study found a strong relationship between ROE of both Islamic and conventional banks ($r = 0.731$). This shows that shows that both Islamic banks and conventional banks are profitable and the risk management procedures in Islamic banks are adequate to mitigate their largely equity-based investments and give their customers adequate return which is comparable with conventional banks. The study concluded that equity-based business of Islamic banks posing a slightly more risk than conventional banks is well mitigated by Islamic banks through their effective and adequate distinct risk management procedures.

Turen (1996) investigated quantitatively and also at micro level the claim that Islamic banking offers high performance and stability. In order to evaluate the risk-return characteristics of the Islamic banks, Bahrain Islamic Bank (BIB) was taken as an example. Research was conducted through three different methods. The financial ratio analysis and stock analysis both indicated that BIB offered a higher return and a lower coefficient of variation than the other commercial banks. Portfolio analysis, too, showed that BIB's stock was the best for the purpose of portfolio diversification.

Bhatti and Misman (2010) explored the risk involved in Islamic banks and risk management practices by the Islamic banks. The focus was on risk and return in Bank Islam Malaysia Berhad (BIMB). The study examined the risk level in BIMB by using two approach; Financial Statement Analysis and Stock Analysis. Apart from that, this study also predicted the Islamic banks amount of financing for each concept in Malaysia for year 2010. From the result of first approach, BIMB were found to be underperforming in comparison to conventional banks based on their ROA and ROE while also perceive higher risk. As for stock analysis the results were consistent with the financial ratio analysis, out of 28 stocks of finance sector listed at Bursa Malaysia, BIMB was ranked 25 in terms of average return for the period of ten year i.e. from 1999 to 2008. The coefficient of variations was also ranked 25 and it showed that BIMB risk was higher as compared to other stocks. This result contradicted with Turen (1996) where he finds that Islamic bank in Bahrain is better than other banks. This difference might be due to different time period of the study and also different economic position of both the countries.

Akhtar et al. (2011) studied the liquidity risk associated with the solvency of a financial institution, with a purpose to evaluate liquidity risk management (LRM) through a comparative analysis between conventional and Islamic banks of Pakistan. The study investigated the significance of Size of the firm, Networking Capital, Return on Equity, Capital Adequacy and Return on Assets (ROA), with liquidity Risk Management in conventional and Islamic banks of Pakistan. The study was based on secondary data that covered a period of four years (2006-2009). The study found positive but insignificant relationship of size of the bank and net-working capital to net assets with liquidity risk in both models. In addition Capital adequacy ratio in conventional banks and return on assets in Islamic banks was found to be positive and significant at 10% significance level.

Hassan (2009) assessed the degree to which Islamic banks in Brunei Darussalam use risk management practices (RMPs) and techniques in dealing with different types of risk. The researcher developed a questionnaire which covered six aspects in the first part: understanding risk and risk management, risk assessment and analysis (RAA), risk identification (RI), risk monitoring, credit risk analysis and RMPs. The second part consisted of two questions based on an ordinal scale dealing with two topics: methods of RI and risk facing the sample banks. This study found that that the three most important types of risk that the Islamic banks in Brunei Darussalam face are foreign-exchange risk, followed by credit risk and then operating risk. It also found that the Islamic banks were somewhat reasonably efficient in managing risk where RI and RAA are the most influencing variables in RMPs.

Ahmed et al. (2010) aimed to determine the firm's level factors which had significantly influenced the risk management practices of Islamic banks in Pakistan. The study selected credit, operational and liquidity risks as dependent variables while size, leverage, NPLs ratio, capital adequacy and asset management are utilize as explanatory variable for the period of four years from 2006 to 2009. The results indicated that size of Islamic banks had a positive and statistically significant relationship with financial risks (credit and liquidity risk), whereas its relation with operational risk was found to be negative and insignificant. The asset management established a positive and significant relationship with liquidity and operational risk. The debt equity ratio and NPLs ratio had a negative and significant relationship with liquidity and operational risk. In addition, capital adequacy has negative and significant relationship with credit and operational risk, whereas it was found to be positive and with liquidity risk.

2.4 Summary of Literature

The review has shown the theories that explain the motivation for risk management in commercial banks. These theories also explain the reasons for risk management in Islamic banks. The chapter has also reviewed a number of studies on risk management in Islamic banking. The practices are mostly in the Arab world where Islamic banking is practiced more. The studies have also shown conflicting views on whether Islamic banks are riskier than the conventional banks. The conflicting results followed by the fact that most studies have focused on the Islamic world are the main motivations behind the present study. The next chapter discusses how the study will be carried out.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology. First, a presentation of the research design is provided. This is followed by an explanation on the target population, description of research instruments, description of sample and sampling procedures, description of data collection procedures and a description of data analysis procedures.

3.2 Research Design

This study design is named based on the classification by method of analysis as espoused in Mugenda and Mugenda (2003). In this manner, a study could be designed as descriptive, causal-comparative, or correlational study. The method of analysis that most captures the objectives of this study is correlation and the study design was therefore appropriately named a correlation design. In this manner, the study was able to establish the relationship between the variables in the study. This was therefore the appropriate research design in this study.

3.3 Population and Sample

The population of this study was all the commercial banks in Kenya. There are 43 commercial banks in Kenya hence the population, see appendix 1. From these banks, there are only two purely Islamic banks. The two Islamic banks together with two other conventional banks were selected for the study. The two Islamic banks are First Community Bank and Gulf African Bank. The other two conventional banks were the Kenya Commercial Bank and Standard Chartered Bank.

3.4 Data Collection

Data was collected using secondary sources. The financial data from 2008-2010 was used in the study. The dependent variable was the type of bank – whether Islamic or conventional. The independent variables were the credit, liquidity, and operational risks. These were measured using the proxies in Table 1.

Table 1: Operational definition of variables

Symbol	Variable	Proxies
α	Value of Intercept	
Y	Risk	is measured by the ROE
X_1	Credit risk	Ratio of total debt to total assets
X_2	Liquidity risk	Cash to total assets
X_3	Operational risk	Return on total assets
€	Error Term	

The following model was therefore used in the study.

$$Y_t = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \quad \dots\dots\dots (1)$$

These data were sought from various sources including the respective bank websites, the Capital Markets Authority, the bank premises, and the Banking Survey 2010 booklet by ThinkBusiness.

3.5 Data Analysis

Objective: Comparing the riskiness of Islamic vs. Conventional banks, this will be analysed using both descriptive statistics and chi squares. The descriptive statistics are the minimum, maximum, mean, and standard deviation. T-tests are used to analyse the differences between risk profiles of Islamic and conventional banks. Strength of the model will be tested using significance of F statistic at 5% level as well as using R^2 .

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter presents the results of the study. The chapter presents the results of descriptive analysis as well as those of correlation and regression analysis.

4.2 Descriptive Analysis

Table 2 presents the results on the return on equity ratios for each of the selected banks from 2008 to 2010.

Table 2: ROE ratios for respective banks from 2008 to 2010

Year	FCB	Gulf	KCB	SCB
2010	-28.32%	-4.58%	25.04%	377.76%
2009	-22.93%	-14.09%	27.63%	48.34%
2008	-39.61%	-30.01%	28.52%	41.05%

As shown in Table 2, First Community Bank (FCB) had the lowest ROE of – 28.32% in 2010 while in the same year the bank with the highest ROE was Standard Chartered Bank (SCB) at 377.76%. Both Islamic banks had negative ROEs in 2010 while the conventional banks had positive ROEs.

Table 2 shows that in 2009 again both Islamic banks had negative ROEs while the conventional banks had positive ROEs. FCB had the lowest ROE of – 22.93% while SCB had the highest ROE of 48.34%

In 2008, the results in Table 2 show that the Islamic banks had negative ROEs while the conventional banks had positive ROEs with FCB having the lowest of – 39.61% while SCB having the highest of 41.05%.

Table 3 shows the results of credit risk analysis for each of the selected banks for the period under study. Higher credit risk ratios mean that the bank was riskier than others.

Table 3: Credit risk for respective banks from 2008 to 2010

Year	FCB	Gulf	KCB	SCB
2010	91.14%	87.24%	84.43%	85.76%
2009	85.11%	85.16%	88.31%	88.76%
2008	75.63%	74.54%	88.97%	88.39%

The results in Table 3 show that in 2010, FCB had the highest credit risk ratio of 91.14% while KCB had the lowest ratio of 84.43%. This means that in 2010, the two Islamic banks were relatively riskier than the conventional banks.

In 2009, the results in Table 3 show that SCB had the highest credit risk ratio of 88.76% while FCB had the lowest credit risk ratio of 85.11%. Therefore in 2009, the results show that the conventional banks were slightly riskier than the Islamic banks.

In 2008, the results in Table 3 show that KCB had the highest credit risk ratio of 88.97%. Gulf bank had the lowest credit risk ratio of 74.54%. The results reveal that in 2008, the conventional banks were slightly riskier than the Islamic banks.

Table 4 shows the results of liquidity risk analysis for each of the selected banks for the period under study. Higher liquidity risk ratios mean that the bank was more liquid than others.

Table 4: Liquidity risk for respective banks from 2008 to 2010

Year	FCB	Gulf	KCB	SCB
2010	26.93%	11.56%	7.17%	5.76%
2009	13.97%	9.02%	10.19%	6.24%
2008	4.43%	9.22%	9.02%	7.45%

The results in Table 4 show that in 2010, FCB had the highest liquidity risk ratio of 26.93% while SCB had the lowest ratio of 5.76%. This means that in 2010, the two Islamic banks were more liquid than the conventional banks.

In 2009, the results in Table 4 show that FCB had the highest liquidity risk ratio of 13.97% while SCB had the lowest ratio of 6.24%. This means that in 2009, the Islamic banks were relatively more liquid than the conventional banks.

In 2008, the results in Table 4 show that Gulf bank had the highest liquidity risk ratio of 9.22% while FCB had the lowest ratio of 4.43%. This means that in 2008, the Islamic banks were relatively less liquid than the conventional banks.

Table 5 shows the results of operational risk analysis for each of the selected banks for the period under study. Higher operational risk ratios mean that the bank was less risky than the others.

Table 5: Operational risk for respective banks from 2008 to 2010

Year	FCB	Gulf	KCB	SCB
2010	-2.51%	-0.58%	3.90%	53.80%
2009	-3.41%	-2.09%	3.23%	5.44%
2008	-9.65%	-7.64%	3.14%	4.77%

The results in Table 5 show that in 2010, SCB had the highest operational risk ratio of 53.80% while FCB had the lowest ratio of – 2.51%. These results show that in 2010, the Islamic banks were riskier than the conventional banks.

Table 5 also shows that in 2009, SCB had the highest operational risk ratio of 5.44% while FCB had the lowest ratio of – 3.41%. These results show that in 2009, the Islamic banks were riskier than the conventional banks.

In 2008, SCB had the highest operational risk ratio of 3.14% while FCB had the lowest ratio of – 9.65%. These results show that in 2008, the Islamic banks were riskier than the conventional banks.

Table 6 shows the results of ROE analysis between conventional banks and Islamic banks for the period under study. Higher ROEs mean that the banks were less risky than the others.

Table 6: ROE of Conventional and Islamic Banks from 2008 to 2010

Year	Conventional Banks	Islamic Banks
2010	213.92%	-16.45%
2009	51.80%	-18.51%
2008	49.04%	-34.81%

The results in Tale 6 show that the conventional banks had positive and higher ROEs for the entire period under study while the Islamic banks had negative ROEs for the entire period. Negative ROEs are attributed to the fact that the Islamic banks made losses for the entire three years. Thus on the basis of these figures, Islamic banks were riskier than the conventional banks.

Table 7 shows the results of credit risk analysis between conventional banks and Islamic banks for the period under study. Higher credit risk ratios mean that the bank was riskier than others.

Table 7: Credit Risk of Conventional and Islamic Banks from 2008 to 2010

CR	Conventional	Islamic
2010	85.09%	89.19%
2009	88.53%	85.13%
2008	88.68%	75.08%

The results in Table 7 show that conventional banks had higher credit risk ratios in 2008 and 2009 than the conventional banks while Islamic banks had higher credit risk ratios than conventional banks in 2010. Thus overall, the conventional banks were riskier than local banks in terms of credit risk over the period of analysis.

Table 8 shows the results of liquidity risk analysis between conventional banks and Islamic banks for the period under study. Lowers liquidity risk ratios mean that the bank was riskier than others.

Table 8: Liquidity risk of Conventional and Islamic Banks from 2008 to 2010

LR	Conventional	Islamic
2010	6.46%	19.24%
2009	8.22%	11.50%
2008	8.23%	6.83%

The results in Table 8 show that Islamic banks had higher liquidity risk ratios than the conventional banks in 2010 and 2009 and lower ratios in 2008 than the conventional banks. Since higher liquidity risk ratios are desired, the results reveal that conventional banks were riskier (less liquid) than the Islamic banks.

Table 9 shows the results of operational risk analysis between conventional banks and Islamic banks for the period under study. Higher operational risk ratios are desired.

Table 9: Operational risk of Conventional & Islamic Banks from 2008 to 2010

OR	Conventional	Islamic
2010	28.85%	-1.55%
2009	4.33%	-2.75%
2008	3.96%	-8.65%

The results in Table 9 shown that Islamic banks had negative operational risk ratios while conventional banks positive operational risk ratios for the period under study. Since higher ratios are desired, the results mean that Islamic banks were riskier than the conventional banks.

4.3 Inferential Analysis

Table 10 shows the results of one-sample t-test done in order to establish whether there were statistical differences between the risk profiles of Islamic and conventional banks.

Table 10: One-sample test

	Test Value = 1					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
ROE	-1.104	3	.350	-.5675000	-2.203515	1.068515
Credit Risk	-19.799	3	.000	-.1400000	-.162503	-.117497
Liquidity Risk	-34.840	3	.000	-.8925000	-.974026	-.810974
Operational Risk	-14.572	3	.001	-.9500000	-1.157470	-.742530

The results in Table 10 show that the overall risk (ROE) was not significantly different across the banks (p-value = 0.350). However, the differences in credit risk, liquidity risk and operational risks were statistically significant across the banks (p-value < 0.05).

Table 11 shows the correlation matrix for the variables in the study. This was done in order to find out any serial correlations between the independent variables.

Table 11: Correlation Matrix

		Bank	ROE	CR	LR	OR
Bank	Pearson Correlation	1				
	Sig. (2-tailed)					
ROE	Pearson Correlation	-.750	1			
	Sig. (2-tailed)	.250				
Credit Risk	Pearson Correlation	-.816	.578	1		
	Sig. (2-tailed)	.184	.422			
Liquidity Risk	Pearson Correlation	.732	-.745	-.230	1	
	Sig. (2-tailed)	.268	.255	.770		
Operational Risk	Pearson Correlation	-.753	1.000**	.597	-.729	1
	Sig. (2-tailed)	.247	.000	.403	.271	

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

The results in table 11 show that there was a high correlation between operational risk and liquidity risk ($R = -0.729$). There was therefore serial correlation between these two independent variables and this was taken care of in the regression analysis below.

Table 12 shows the regression analysis results for various risk models. The models are ROE, credit risk, liquidity risk, and operational risk. The results show the effect of bank type on risk profiles.

Table 12: Regression results

Variable	Model 1: ROE	Model 2: CR	Model 3: LR	Model 4: OR
Constants	2.435	0.890	0.010	0.305
Bank type	-1.335 (0.250)	-0.020 (0.184)	0.065 (0.268)	-0.170 (0.247)
R	0.750	0.816	0.732	0.753
R square	0.563	0.667	0.537	0.567
F-statistic	2.566	4.000	2.315	2.615
Prob (F-statistic)	0.250	0.184	0.268	0.247

As shown in Table 12, bank type has a negative influence on ROE (-1.335), credit risk (-0.020) and operational risk (-0.170) while a positive effect on liquidity risk (0.268). None of these relationships was however significant at 5% level of confidence. None of the models was significant in explaining the relationship as the probability of F statistic for all the models was more than 5%.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study in section 5.2, conclusion in 5.3, recommendations in 5.4, limitations of the study in 5.5, and suggestions for further research in 5.6.

5.2 Summary of Study Findings

The descriptive statistics showed that Islamic banks were riskier than conventional banks in terms of ROE and operational risk while conventional banks were riskier than the Islamic banks in terms of credit risk and liquidity risk.

The one-way sample test showed that the overall risk (ROE) was not significantly different across the banks ($p\text{-value} = 0.350$) but the differences in credit risk, liquidity risk and operational risks were statistically significant across the banks ($p\text{-value} < 0.05$).

The regression results showed that bank type has a negative influence on ROE (-1.335), credit risk (-0.020) and operational risk (-0.170) while a positive effect on liquidity risk (0.268). None of these relationships was however significant at 5% level of confidence.

5.3 Conclusion

The study concludes that overall, Islamic banks in the sample were riskier than the conventional banks. This is inconsistent with other studies that have found that Islamic banks are usually less risky than the conventional banks. But this can be attributed to the

fact that the Islamic banks made losses during the entire three years of study thus the negative returns led to higher risk profiles.

The study also concludes that risk profiles of banks especially credit risk, liquidity risk, and operational risk is different between conventional and Islamic banks in Kenya. These banks are however not different as regards the overall risk (ROE).

Lastly, the study concludes that there is no evidence that the type of bank affects risk profiles of commercial banks in Kenya. No significant effects were found in the present study for all the risk ratios used in the study.

5.4 Recommendations for Policy

The study recommends that Islamic banks in Kenya need to manage their risks as they are generally riskier than the conventional banks contrary to other findings. Better management of risk will help these banks become profitable and therefore less risky.

The study further recommends that Islamic banks should devise strategies that will help them lend out the cash as they are too liquid. This high liquidity means that the banks have too much cash which is not lent out to clients.

The study also recommends that investors need not worry about risk profiles of conventional banks as there is no evidence that the risk of banks is affected by the type of

bank. Thus investors can invest in either of these banks without minding their risk profiles.

5.5 Limitations of the Study

The study focused on a sample of two Islamic banks and two conventional banks. The study may therefore be limited by the sample selected for the study and interpretations should therefore consider this fact.

The study is also specific to Kenya. This means that the study suffers from the limitations of country specific studies as it cannot be generalized to other countries as they have different operating environment from that of Kenya.

The study also used a three year period. This study was limited to this period because the Islamic banks in Kenya had financial data for the three year period as they were new banks. This period of analysis limits the applicability of these results to the banking sector in Kenya.

5.6 Suggestions for Further Research

The study suggests that future studies should extend the data period depending on the availability of data to establish whether risk of banks differ according to whether they are Islamic banks or conventional ones.

The study also suggests that studies be conducted in this area with use of primary data in order to get some issues that cannot be captured by secondary data. Such studies can find out how the banks manage their risks.

REFERENCES

- Akhtar, M.F., Ahmed, N., Usman M., (2011). Risk Management Practices and Islamic Banks: An Empirical Investigation from Pakistan. *Interdisciplinary Journal of Research in Business*. Vol. 1, Issue. 6, June 2011(pp.50-57)
- Anas, E., and Mounira, B.A. (2008). Managing Risks and Liquidity in an Interest Free Banking Framework: The Case of the Islamic Banks. *International Journal of Business and Management*. Vol. 3, No. 9, pp 80-81.
- Beck, T., Demirgüç-Kunt, A., and Merrouche, O. (2010). Islamic vs. Conventional Banking: Business Model, Efficiency and Stability. World Bank Policy Research Working Paper Series. Available at SSRN: <http://ssrn.com/abstract=1694335>
- Bhatti, I., and Misman, F.N. (2010). Risks Exposure in Islamic Banks: A Case Study of Bank Islam Malaysia Berhad (BIMB). *Australian Centre for Financial Studies - Finsia Banking and Finance Conference 2010*. Available at SSRN: <http://ssrn.com/abstract=1632849>
- Carey, M., & Stulz, R. M. (2005). The Risks of Financial Institutions. SSRN eLibrary.
- Central Bank of Kenya (2008) Bank Supervision Annual Report, CBK
- Hassan, A., (2009). Risk management practices of Islamic banks of Brunei Darussalam. *The Journal of Risk Finance*, Vol. 10 No. 1, 2009 pp. 23-37
- Hassan, M. K., & Dicle, M. F. (2005). Basel II and Regulatory Framework for Islamic Banks. *Journal of Islamic Economics, Banking and Finance*, 1(1). <http://en.wikipedia.org/wiki/Malaysia>. Retrieved 18 March 2010
- Ibrahim, O.A. (2009). A Comparative Study on the Financial Performance of Islamic

Banks & Conventional Banks in Kenya, *Unpublished MBA Project*, University of Nairobi.

Institute of Islamic Banking and Finance (2011). Islamic finance flourishes in Kenya.

New Horizon, January. Retrieved on 11/8/2011 from <http://www.newhorizon-islamicbanking.com/index.cfm?section=features&id=10988&action=view>

Jalbani, A.A. and Shaikh, S.A. (2009). Risk Management in Islamic and Conventional Banks: A Differential Analysis. *Journal of Independent Studies and Research*, 7 (2), 67-70. Available at SSRN: <http://ssrn.com/abstract=1530393>

Jorion, P., & Khoury, S. J. (1996). *Financial Risk Management Domestic and International Dimensions*. Cambridge, Massachusetts: Blackwell Publishers.

Kadubo, A.S. (2010), *Factors Influencing Development of Islamic Banking in Kenya, Unpublished MBA Project*, University of Nairobi.

Kahf, M. (2005). *Basel II: Implications for Islamic Banking*. Paper presented at the 6th International Conference on Islamic Economics and Banking

Mugenda, O. M, and Mugenda, A.G. (2003). *Research methods: Quantitative & Qualitative Approaches*. ACT: Nairobi.

Mugo, A.W. (2009), *Competitive Strategies Adopted by Islamic Banks: A Comparative Study of Kenya and the United Arab Emirates, Unpublished MBA Project*, University of Nairobi.

Nzibo.com (2011). *Islamic banking: general overview*. Retrieved on 11/8/2011 from <http://www.nzibo.com/islamic.html>

- Ogle, A.I. (2010). A Comparative Analysis of Credit Risk Management Practices of Islamic and Conventional Banks in Kenya, *Unpublished MBA Project*, University of Nairobi.
- Rosly, S. A., & Zaini, M. A. M. (2008). Risk-Return Analysis of Islamic Banks' Investment Deposits and Shareholders' fund. *Managerial Finance*, 34(10), 695-707.
- Salah, A.S. (2009). Factors that Led to the Emergency of Islamic Banking in Kenya & and the Regulatory Challenges Facing the Industry, *Unpublished MBA Project*, University of Nairobi.
- Sundararajan, V., & Errico, L. (2002). Islamic Financial Institutions and Products in The Global Financial System: Key Issues in Risk Management and Challenges Ahead. IMF Working Paper, 02(192).
- Turen, S. (1996). Performance and Risk Analysis of Islamic Banks: The Case of Bahrain Islamic Bank. *Journal of King Abdulaziz University: Islamic Economics*, Vol. 7, 1415/1996
- Venardos, A. M. (2006). Islamic Banking and Finance in South-East Asia: Its Development and Future (2 ed. Vol. 3). Singapore: World Scientific Publishing Co. Pte Ltd. www.bnm.gov.my.
- Wendo, B. (2010), Response Strategies by Islamic Banks to Competition in the Commercial Banking Sector in Kenya, *Unpublished MBA Project*, University of Nairobi
- Yudistra, D (2003). Efficiency in Islamic Banking: An Empirical Analysis of Eighteen Banks. *Islamic Economic Studies*, Vol. 12, No. 1

APPENDICES

Appendix 1: List of licensed Commercial Banks in Kenya

1. African Banking Corporation Ltd
2. Bank of Africa Kenya Ltd.
3. Bank of Baroda (K) Ltd.
4. Bank of India
5. Barclays Bank of Kenya Ltd.
6. CFC Stanbic Bank Ltd.
7. Charterhouse Bank Ltd
8. Chase Bank (K) Ltd.
9. Citibank N.A Kenya
10. Commercial Bank of Africa Ltd.
11. Consolidated Bank of Kenya Ltd.
12. Co-operative Bank of Kenya Ltd.
13. Credit Bank Ltd.
14. Development Bank of Kenya Ltd.
15. Diamond Trust Bank Kenya Ltd.
16. Dubai Bank Kenya Ltd.
17. Ecobank Kenya Ltd
18. Equatorial Commercial Bank Ltd.
19. Equity Bank Ltd.
20. Family Bank Limited
21. Fidelity Commercial Bank Ltd
22. Fina Bank Ltd
23. First community Bank Limited
24. Giro Commercial Bank Ltd.
25. Guardian Bank Ltd
26. Gulf African Bank Limited
27. Habib Bank A.G Zurich
28. Habib Bank Ltd.
29. Imperial Bank Ltd
30. I & M Bank Ltd
31. Jamii Bora Bank Limited.
32. Kenya Commercial Bank Ltd
33. K-Rep Bank Ltd
34. Middle East Bank (K) Ltd
35. National Bank of Kenya Ltd
36. NIC Bank Ltd
37. Oriental Commercial Bank Ltd
38. Paramount Universal Bank Ltd
39. Prime Bank Ltd
40. Standard Chartered Bank Kenya Ltd
41. Trans-National Bank Ltd
42. UBA Kenya Bank Limited
43. Victoria Commercial Bank Ltd