EFFECT OF RISK MANAGEMENT ON FINANCIAL PERFORMANCE OF JA'IZ BANK PLC

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BEING A DISSERTATION SUBMITTED TO THE INTERNATIONAL INSTITUTE OF ISLAMIC BANKING AND FINANCE (IIIBF)BAYERO UNIVERSITY KANO, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE (M.Sc.) DEGREE IN ISLAMIC BANKING AND FINANCE (IBF).

SEPTEMBER, 2019

DECLARATION

I hereby declare that this work is the product of my research effort undertaken under the supervision of Professor Kabir Tahir Hamid and has not been presented anywhere for the award of a degree or certificate. All sources have been duly acknowledged.

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CERTIFICATION

This is to certify that the research work for this dissertation or this subsequent write-up: *'Effect of Risk Management on Financial Performance of Ja'iz Bank Plc'* (**Ahmad Mubarak Ahmad - SPS/14/MIF/00016**), was carried out under supervision of :

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APPROVAL

This dissertation *'Effect of Risk Management on Financial Performance ofJaiz Bank Plc'* has been examined and approved for the award of Mater of Science (MSc) Degree in Islamic Banking and Finance.

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ACKNOWLEDGEMENTS

All gratitude is to Allah (SWT) with whose utmost Mercies and Blessings we were able to cope with the demand of this programme. May His Peace and Mercy be upon His beloved Prophet, Muhammad Rasulullah (SAW).

The researcher wishes to express special gratitude to lecturer and Professor Kabir Tahir Hamid under whose able supervision this research work was carried out. I sincerely acknowledge his immense contribution towards the successful completion of this study, but any unavoidable errors or omissions that may be observed are wholly mine.

Furthermore, the researcher respect acknowledged and appreciates the assistance, guidance and contribution of the entire Academic Staff of the Department of Economics and IIIBF-BUK like Prof. Shehu Usman Aliyu Rano, Dr. Nafi'u Abdullahi, Dr. Aliyu Dahiru, Dr. M. A. Aliyu Muhammad among othersfor the support rendered to me; which had contributed greatly to the success of this research. I remain very grateful to the Director IIIBF-BUK Professor Binta Tijjani Jibrin, Deputy Director academic Malam Adamu Umar, and Dr. Muhammad Abdullahi Ibrahim.

Finally, I must register my appreciation to my parent and my entire family members and relatives for their encouragement, support, understanding and prayers.

Thank you all! May Almighty Allah (SWT) bless us all (Amin).

DEDICATION

This research work is dedicated to my mother for her patience, understanding and prayer throughout the period of my study.

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ABSTRACT

This study assessed the effect of risk management on financial performance of Jaiz Bank Plc.The dependent variable is Profit Expense Ratio (PER). The independent variable is risk management, which was measured by Credit Risk Management (CRM), Operational Risk Management (ORM) and Liquidity Risk Management (LRM).The ordinary least square (OLS)method is used to analyze and test the study hypotheses. The results reveal that First, credit and operational risk management practices have a negative and significant statistical effect on Jaiz bank's financial performance, and this bank failed at the same time in managing these risks. Second, liquidity risk management practices have a positive and significant statistical effect on banks' performance which, means that the Jaiz bank does not suffer neither from the operational risk during the study period nor from managing this type of risk. The study recommends that, the central bank should establish a separate entity that regulates and supervises the Islamic banks, to be responsible for regulating the bank in terms of Shariah compliance principles. Governments should open the door to scholars for more financial innovations that will comply with Islamic Shariah principles.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Risk is inevitable and inherent in every economic activity. According to Brain (2001) risk occurs when there is a potential of loss in an activity or transaction (Njoroge & Ngahu, 2017). Risk exists as a part of the environment in which organizations operate (Shafiq & Nasr, 2010); so each and every business faces some risks. Banks including Islamic banks face various types of risks which arise in the course of their activities. The major aim of banks is to maximize profit by managing risk and providing various financial services (Alimshan, 2011). In general, there are two banking systems, one which is based on interest which is also called conventional banking and the other which follows Islamic law and prohibits the payment and taking of interest which is called Islamic banking. Banking systems are well distinguished as conventional banks follow the Standard Operating Procedures (SOPs) based on a regulatory framework whose income is interest which is earned by lending money and where risk is transferred entirely to the customer (borrower). Islamic banks follow the principles and policies based on the *Shari'ah* that prohibits interest, whose income or profit is earned by trade and other non-trade-based transactions. And Islamic banks share risk with both lenders and borrowers.

Poor credit administration reduces bank profitability and leads to bank distress and/or failure (Osuka & Amako, 2015). The aim of credit risk management is to maximize a bank's risk adjusted rate of return. This can be achieved by maintaining credit risk exposure within acceptable parameters. Efficient loan portfolio diversification can ensure that credit risk is minimized but it is imperative for banks to be wary of credit risk in administering each individual loan. Non-Performing Loans (NPLs) has been critically high in deposit money banks in Nigeria which usually leads to bank collapse just like Diamond bank was merged with Access bank in 2019**.** This excessively high level of NPL in the banks was caused by poor corporate governance practices, lax credit administration processes and the absence or non- adherence to credit risk management practices. High levels of NPL have a tendency to reduce the lending ability of deposit money banks and possibly put them out of business (Taiwo, Ucheaga, Achugamonu, Adetiloye, Okoye & Agwu, 2017).

Operational risk management threatens the financial stability and performance of financial sector. Operational risk is a risk arising from execution of a company's business functions. It focuses on the risks arising from the people, systems and processes through which a company operates. According to Basel II regulations operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events (Medhat, 2006). Operational Risk may tangibly manifest itself in the likes of business disruption, control failures, errors, misdeeds or external events. The Basel Committee on Banking Supervision (2003) suggests that risks other than credit, interest and market risks can be substantial. According to the Credit-Suisse Group (2001), banks may engage in risk mitigation techniques to optimize the exposure to market and credit risk but which may in turn produce other forms of risk like operational risks which the group categorized as organizational risks, process risks, technology risks, human risks and external risks.

The liquidity risk management of banks arises from funding of long-term assets by short-term liabilities, thereby making the liabilities subject to rollover or refinancing risk. Liquidity risk management is usually of an individual nature, but in certain situations may compromise the liquidity of the financial system. Liquidity risk management in banks is defined as the risk of being unable either to meet their obligations to depositors or to fund increases in assets as they fall due without incurring unacceptable costs or losses. Liquidity problems may adversely affect the financial performance of a bank as well as its solvency. Nevertheless, among these risks, credit and liquidity risks are not only the most important risks that banks face, but they are also directly linked to what banks do and why banks fail.

For banks to have a comprehensive picture of their entire capital resources, they must integrate credit, operational and liquidity risk managements into a single steam of capital measurement. This helps bank to establish its overall risk profile, determining how much risk it is taking and the level of diversification it can achieve by entering into different business areas (Tschemernjak, 2004). Risk management on the other hand, is the total process of identifying, controlling and minimizing the impact of uncertain events. Since the banks carry the bigger and ultimate burden in the cost of these losses, they should therefore be at the fore front in managing the risks. Risk management if successful, avoids or mitigate costly risks while increasing the payoff by managing the risks effectively. Risk management is an issue that needs to be stressed and

investigated, especially in the banking industry, where the need for a good risk management structure is extremely important.

Similarly, Islamic banking has become one of the vital sources of nation's financial growth, particularly in countries where a significant number of Muslims hesitate to deal with *riba* transactions. Although the issue of risk management in Islamic banks has been widely debated by academics, risk management committees, practitioners, accountants, and investors, the issue continues to be of remarkably debatable interest. A distinctive feature of Islamic banks is the obligation to conduct operations in accordance with principles of the *Shari'ah*, which is the religious law of Muslims. The basic *Shari'ah* principle applied by Islamic financial institutions is the prohibition of usury (i.e. *Riba*). This principle has its origins in the Glorious Qur'an and the Hadith of Prophet Muhammad (S.A.W.). According to most Islamic economists *Riba* is any sort of increase over the principal amount (Hasanuz, 2001). The prohibition of *riba* has huge implication on the operations of Islamic banks since none of them can be based on interest.

Islamic banking is based on sharing of profit and loss and this is used in different transactions. The first approach is through partnership (*Musharaka*). Then, there is *Murabahah approach*, which is based on the sale at a declared mark-up and leasing contract, called *ijara*. Thus, the nature of operations of Islamic banks helps them to diversify their investments to minimize risk and maximize profits. This practice in turn tends to attract more customers thereby helping the banks to operate more efficiently.

It can be deduced that, Islamic banks take on different business transactions and take investment decisions, which involve some degree of risk. According to Ariffin et al. (2009) Islamic banks face parallel risk to western banks; however, there are variances in the level of the risks. Hussain and Al-Ajmi (2012) stated that credit, liquidity, market and operational risks are found to be the major types of risks facing Islamic banks.

Financial performance is company's ability to generate new resources, from day- to- day operations, over a given period of time; which is gauged by net income and cash from operations. A bank is a commercial institution or organisation that provides financial services, including issuing money in various forms, receiving deposits of money, lending money and processing transactions and creating credit. In the process of carrying its (Jaiz bank) major role

of financial intermediation by channeling funds from surplus units to deficit units, these classifications of financial risk will denitely be present in the financial environment.

While the types and degree of risks an organization may be exposed to depend upon a number of factors such as its size, complexity business activities and volume, it is believed that generally the banks face credit, liquidity, operational, compliance / legal /regulatory and reputation risks. Banks generally operate in environments where risk changes often, hence the need for an efficient risk management process, categorized by risk type to be able to address the specific risk factors. A clear description of all the risk factors will ensure the allocation of accountability and responsibility to deal with each factor. Such descriptions for operational risk still lacks as it seems that all the risk factors that cannot be address under credit, market and liquidity risk types are included in operational risk. This may lead to the situation where operational risk becomes a dumping ground for risk factors and may result in critical focus being neglected.

Therefore it seems as if operational risk management, as one of the latest management problem areas, is still treated as wild card. This presents a problem regarding the acceptance and management of operational risk and the risk factors it comprises. It is expected that good risk management would result to greater performance through higher profit, good productivity and increased capital investment. The banks' motivation for risk management comes from the tendency of risks leading to bank underperformance. If operational risk is not addressed systematically it can result into inconsistent performance and earnings for the stakeholders and impact a banks' revenues and net worth sometimes with disastrous systemic consequences as demonstrated by the Hess (2011); Andersen et al. (2012); Cagan (2009); Kirkpatrick (2009); Robertson (2011) and Rose (2009) on the role played by operational risk in the 2007/08 financial crisis.

Liquidity has significant effect on the financial performance of firms when there exists are mismatch between assets and liabilities. This may expose a financial institution to financial losses. This risk stems from the description of banking operations. It might affect the overall capital and earnings of the financial institution adversely. Financial institutions may face serious consequences if it is not properly managed. The banks and the regulatory authorities are becoming increasingly vigilant to the liquidity positions held by financial institutions (Muranaga & Ohsawa, 2002).

Currency-related gains and losses can have destructive impacts on reported earnings which are fundamental to the markets opinion of that company. The foreign exchange rate exposure of a firm is a measure of the sensitivity of its cash flows to changes in exchange rates. Since cash flows are difficult to measure, most researchers have examined exposure by studying how the firm's market value, the present value of its expected cash flows, responds to changes in exchange rates. The magnitude of the gain or loss that results from a particular exchange rate change is transaction exposure which refers to foreign exchange loss or gain on transaction already entered into and denominated in a foreign currency. The study applied the unrealized foreign exchange gains and losses as proxy of foreign exchange exposure as used by reference (Diebold, Schuermann & Stroughhair, 2000). The study captured the effect of interest rate as a measure of market risk since a change in interest rate could lead to a mismatch between interest paid on deposit and the interest received on loans.

In line with the above background, this study assesses the effect of risk management on financial performance of Jaiz Bank Plc.

1.2 Statement of the Research Problem

Risk is a major factor to be considered in every financial intermediation. It is a great threat to financial business and its effective management should be considered in attaining performance. Most credit decisions in financial institutions expose its management to some level of risk, hence the need for effective risk management policy, which involves identification, quantifying and managing the potentials of loss that firm faces as a result of financial intermediation activities. Risks come to play as a result of strategic failure, operational failure, financial failure, market failure and disruptions and regulatory violations. Risk is a big threat for banks as the value of any organization is measured by its credit worthiness and others. Therefore, risk management is of critical importance for the good performance of Islamic banks.

Based on the fact that Islamic banks have numerous idiosyncratic characteristics, the temperament and extent of risk facing such organizations may be considerably different due to the concept of profit-sharing approach in Islamic banks. Furthermore, Islamic banks are constrained in using some of the risk mitigation instruments that their conventional counterparts use as these are not allowed under Islamic commercial law such as conventional derivatives. There have been a fairly small number of academic studies available on Islamic banks about risk

management. However, this study will create uniqueness with the extent of influence involved towards financial performance. Uncertainty and volatility are the main attributes of today's nations' economies. While, banks represent the major players in these economies, its risk management practices are crucial issues that need more investigation. Accordingly, the main problem of this research can be summarized in the following as to what direction risk management affects financial performance of Jaiz bank plc.

The review of the existing literature shows that there have been several studies on risk management and financial performance globally. But, these studies concentrated mainly on comparative analysis between Islamic and conventional banks in terms of risk management and financial performance. Local studies such as Taufiq (2016); Yimkaa, Taofeekb, Abimbolaa and Olusegun (2015); and Soyemi, Ogunleye and Ashogbon (2014) were carried out as provided in the metrical analysis section of the study. These studies have primarily focused on the risk management practices in Islamic banks in Nigeria and Malaysia; the role of credit risk management in value creation process among commercial banks in Nigeria; and risk management practices among deposit money banks in Nigeria with a view to relating these practices to their financial performance in the 2012 financial year, respectively.

The above empirical evidence proved that, existing studies within Nigeria heavily neglected scientific research on Islamic banks in Nigeria in terms of their risk management and how it affects their financial performance. None of the studies has dealt with the comprehensive risk management practices that address all the aspects of business risks including credit, market, liquidity and operational risks and their effect on the financial performance of the Islamic banks in Nigeria. The present study is therefore a child of necessity as it uniquely assesses the effect of risk management on financial performance of Jaiz Bank Plc.

1.3 Research Questions

Based on the above background to the study and study's research problem, the following research questions are drawn:

(i) What is the effect of Credit Risk Management (CTRM) on financial performance in Jaiz Bank Nigeria Plc?

(ii) What is the effect of Operational Risk Management (OPRM) on financial performance in Jaiz Bank Nigeria Plc?

(iii) What is the effect of Liquidity Risk Management (LTRM) on financial performance in Jaiz Bank Nigeria Plc?

1.4 Objectives of the Study

The aim of this study is to assess the effect of risk management on financial performance in Jaiz Bank Nigeria Plc. The specific objectives of the study are:

1) To assess the effect of Credit Risk Management (CTRM) on financial performance in Jaiz Bank Nigeria Plc;
2) To assess the effect of Operational Risk Management (OPRM) on financial performance in Jaiz Bank Nigeria Plc;
3) To assess the effect of Liquidity Risk Management (LTRM) on financial performance in Jaiz Bank Nigeria Plc; and

1.5 Research Hypotheses

In line with the above research questions and objectives, the following hypotheses are formulated as a guide for the study:

H_{o1}: Credit Risk Management (CTRM) has no significant effect on the financial performance in Jaiz Bank Nigeria Plc.

H_{o2}: Operational Risk Management (OPRM) has no significant effect on the financial performance in Jaiz Bank Nigeria Plc.

H_{o3}: Liquidity Risk Management (LTRM) has no significant effect on the financial performance in Jaiz Bank Nigeria Plc.

1.6 Significance of the Study

At the successful completion of the study, it is expected that literature contents, results as well as findings from this study will be of benefit to individual researchers, academicians, organizations, institutions, governments, banks and other financial stakeholders. Study on the relationship between risk management and financial performance of Islamic banks in Nigeria mostly have been conceptual in nature however this study is an empirical one.

The study may offer valuable contributions from both a theoretical and practical standpoint. From a theoretical standpoint, it will contribute to the general understanding of risk management and its effect on the financial performance of Islamic banks in Nigeria. And from practical point of view, it may contribute to the practical application of risk management practices in Islamic financial institutions. While from practical standpoint, it will help in establishing the nature and direction of the effect of major risk on financial performance of Islamic bank in Nigeria. This knowledge and understating may help financial expert and analyst to preempt the possible implication of the established effect or relation.

The contents of this study and its findings may enable Jaiz Bank management to improve its risk management process and to adopt efficient strategies that are geared towards improving its financial performance through risk management processes. This may enable the Bank to perform better and maintain a competitive advantage in the Nigerian banking sector. Similarly, Government regulatory agencies such as the Central Bank of Nigeria (CBN) may use this study to design and improve the current risk management framework for Islamic banks in Nigeria.

Also, the study may add to the existing body of knowledge on the relationship between risk management and financial performance. This may benefit academicians and other researchers by providing results that form the basis for further research on risk management in the Nigerian banking sector.

Finally, this study would significantly contribute towards literature development on risk management and financial performance of Islamic banks in Nigeria. Thus, it was established that existing studies within Nigeria heavily neglected scientific research on Islamic banks in Nigeria in terms of their risk management and how it affects their financial performance. None of the studies has dealt with the comprehensive risk management practices that address all the aspects of business risks including credit, market, liquidity and operational risks and their effect on the financial performance of the Islamic banks in Nigeria. The present study is therefore significant based on its contribution to the existing literature by assessing the effects of risk management on financial performance in Jaiz Bank Plc.

1.7 Scope of the Study

This study covers the only Islamic bank in Nigeria which is Jaiz Bank plc. Specifically in addition, out of different types of risk that face financial institution such as Jaiz Bank plc, this study concentrated on effect of the management of three major risks namely: Credit Risk Management (CRM); Operational Risk Management (ORM) and Liquidity Risk Management (LRM) on the financial performance. Since, Jaiz Bank Nig. Plc. began full operations on the 6th of January, 2012; the period covered is twenty-eight data (from2012 to2018). On the other hand, the financial performance was determined by the popular ratio-based measures, which are Return on Assets (ROA), Return on Equity (ROE) and Profit Expense Ratio (PER). These ratios have been widely used as financial performance determinants of many corporate entities (like Jaiz Bank Plc) both at national and international levels. Similarly, the ROA was used to measure Jaiz Bank's financial performance in terms of managerial efficiency; while, ROE was operationalized to measure Jaiz Bank's financial performance in terms of operational efficiency. PER as market based measured is used in the study as only dependent variable in the study since Jaiz bank is asset backed investment entity in nature.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter presents review of literature that is found relevant to the topic under study. Apart from the introduction, this chapter is grouped into three sub-sections namely: conceptual framework, empirical review and theoretical framework. It is expected that, the review of related literature will form the basis based on which conclusions will be drawn.

2.2 Concepts of Risk Management

The term risk has extensively been defined by scholars such as (Bessis, 2002; Schroeck, 2002; Gallati, 2003; Fayyaz, 2006; Ghosh, 2012; Rahman, Abdullah and Ahmad, 2012) among others. Risk refers to an exposure to unpredictability of the outcome that contains a probability of variation in the desired or expected returns (Gallati, 2003; Fayyaz, 2006 and Rahman, Abdullah &Ahmad, 2012). Ghosh (2012) defines risk as a potential loss that may occur due to some antagonistic events such as economic downturns, adverse changes in fiscal and trade policy, unfavourable movements in interest rates or foreign exchange rates, or declining equity prices.

According to Ross, Westerfield and Jordan (2007) risks can be classified into two, namely systematic and unsystematic risks. The systematic risk is one that affects the entire financial system or the economy. Because systematic risks have market wide effects, they are sometimes called market risks. The unsystematic risk is one that affects a single firm or group of firms. Because these risks are unique to individual companies or industry, they are sometimes called unique or firm-specific risks. According to the business dictionary risk is a probability or threat of damage, injury, liability, loss, or any other negative occurrence that is caused by external or internal vulnerabilities, and that may be avoided through proactive action.

Risk economically, may also be defined as the difference between expected and actual rate of return. It is defined as "a future possibility that a bank may suffer unexpected and unplanned loss which may affect the achievement of the bank's objectives and the successful fulfillment thereof, and may lead, in the event of failing to control such loss, to cause the bank to go bankrupt" (Hennie, 2008).

On the other hand, risk management according to Schmit and Roth (1990) is the accomplishment of different activities formulated to reduce the adverse effect of risk regarding potential losses. Green (1992) explains that risk management in banking institutions is the mixture of policies, procedures and persons, adopted to control potential losses. This idea is supported by Santomero (1997) who mentions four steps of the risk management process which includes: standards and reports; position limits or rules; investment guidelines or strategies; and incentive contracts and compensations.

Risk management is a part of business policy of every bank. In order to appropriately implement effective risk management, it is necessary to observe the process through some of its successive stages that differ when it comes to the conventional and Islamic banking systems. However, a comprehensive process of risk management in financial institutions include establishment of appropriate environment for risk management, finding appropriate "mitigators" of risk, risk measures, and appropriate internal controls (Khan & Ahmed, 2001).

Bessis (2002) contends that risk management is the complete set of risk management processes and models permitting banking institutions to put in place different risk-based procedures and practices. According to him, risk management contains all the tools and methods necessary for measuring, monitoring and controlling different risks. Schroeck (2002) defined risk management as: "An active, strategic, and integrated process that encompasses both the measurement and the mitigation of risk, with the ultimate goal of maximizing the value of a bank, while minimizing the risk of bankruptcy (Schroeck, 2002; p.28)".

Schroeck (2002) further explains that the said process is comprised of various steps including the definition, identification, categorization, measurement, analysis, and mitigation of a bank's risk exposures. Risk management is an integrated process that uses specific means to control risks and reduce the frequency thereof, and reduce the size of loss using the best means and lowest cost by identifying, analyzing, and assessing risks and identifying the means to address them, by selecting the best among them to achieve the desired goal (Taher, 2004). Risk management theory defines the term risk management as the method through which decisions are made; a process conducted on two steps: to identify the origin and causes of risks and to develop ways to assess risks by means of mathematical models" (Khalid &Amjad, 2012).

Risk management is an ongoing process which depends directly on changes in the internal and external environments of banks; namely, changes that require constant attention to identify and control risks (Abu Hussain & Al-Ajmi, 2012). Risk management process has four basic elements namely risk identification, risk assessment, risk mitigation, and risk monitoring and reporting (Tafri, Abdul-Rahman & Omar, 2011). The Basel Committee on Banking Supervision (BCBS) (2001) defines financial risk management as a four-process sequence: "the identification of events into one or more broad categories of market, credit, operational and other risks (and then into specific sub-categories); the assessment of risks using data and a risk model; the monitoring and reporting of the risk assessments on a timely basis; and the control of these risks by senior management" (Alexander, 2004).

From the forgoing discussion, it can be deduced that risk management in banks is a sequential process, beginning with the formulation of a framework to identify measure and analyze risks and the implementation of certain measures to minimize or control inevitable losses.

2.2.1 Risk Management in Islamic Finance

The term "risk" ("*Mukhatarah*") is defined as the situation which includes the probability of diverging from the paths that lead to the expected or common result (Vaughan & Vaughan, 1999). In other words, it is a probability that the events shall happen, which are opposite of expected, in the respect that such divergence can be positive (upside) and negative (downside). The upside risk is desirable but rarely possible in everyday life. Conversely, the risk component from which organizations want to protect and manage actively is the downside risk (Kozarević, Nuhanović&Nurikić, 2013).

In its business activities, a bank and its managers constantly and inevitably face a growing number of risks, out of which the most common are: credit, liquidity, market, and operational risks. However, there are some differences in terms of the kinds and span of certain types of risks between the conventional and Islamic banking models. There are several factors that affect bank risks which include increased volatility of financial markets, globalization and increased competition in financial markets, financial innovations and "drop" of traditional banking business practice, and regulatory environment of financial institutions (Iqbal & Mirakhor, 2009). Risk management refers to the practice of identifying potential risks in advance, measuring and

analyzing them and taking preventive steps to avoid or reduce the risk. The process of risk management includes the following:

Identify the Risk: The purpose of this step is to identify what could go wrong (likelihood) and what is the consequence (loss or damage) if these risk occur.

***Measure and Analyze the Risk*:** In this step the banks should analyze the likelihood and consequences of each identified risk and decide which risk factors will potentially have the greatest effect and should, therefore, receive priority with regard to how they will be managed.

***Mitigate the Risk*:** Risk mitigation involves identifying the range of options for treating the risk, evaluating those options, preparing the risk treatment plans and implementing those plans. It is about considering the options for treatment and selecting the most appropriate method to achieve the desired outcome.

***Report and Monitor the Risk**:* Regular risk monitoring provides management with assurance that established controls are functioning properly.

When establishing a risk management process or initiative organizations examine and adopt the best management practices in the area. Typically, the objectives of risk management plans are to: avoid the risk as much as possible; eliminate negative risks and reduce the negative effects; and reduce risks to an acceptable level if risks cannot be eliminated. This means a risk level the organization can live with, making sure that proper controls are in place to keep risks within an acceptable range.

Basel II is based on three "pillars". In Pillar 1, the minimum capital requirement for credit risk in the banking book is calculated in a new way that reflects the credit ratings of counterparties. The general requirement in Basel I that banks hold a total capital equal to 8% of risk-weighted assets remain unchanged. A risk-weighted asset for operational risk is 8% of operational risk capital.

Pillar 2 which are concerned with the supervisory review process which allows regulators some discretion on how rules are applied but seek to achieve overall consistency in the application of the rules. It places more emphasis on early intervention when problem arises. Supervisors are required to do for more than just ensuring that the minimum capital required under Basel II is held. Part of their role is to encourage banks to develop and use better risk management techniques and to evaluate these techniques.

Pillar 3 which is concerned with market discipline requires banks to increase disclosure to the market of their risk assessment procedures and capital adequacy. Also, in some instances, banks will have to increase their disclosure in order to be allowed to use particular methodologies for calculating capital. The banks will be subjected to added pressure to make sound risk management decisions if shareholders and potential shareholders have more information about those decisions.

2.3 Types of Risks and Mitigation strategies

Risk is legitimate when it is necessary for value creating. But when no value is added, it is a form of gambling. To be accepted in an Islamic view, the risk shall be inevitable and thus inseparable from real value adding transactions. Islamic banks face other types of risks in addition to those encountered by conventional banks due to the specific requirements to comply with the Islamic teachings.

There are various numbers of risks that Islamic banks face as identified in the literature. The risks that affect Islamic banks include: credit risk, operational risk, legal and regulatory risk, liquidity risk, market risk, foreign exchange risk, interest rate risk, counterparty risk, commodities and inventory risk, equity investment risk, displaced commercial risk, country (Political) risk, people risk, *Shari'ah* compliance risk, equity or commodity price risk, reputation risk, money laundering and terrorist financing risk, strategic risk, technology risk, off-balance sheet risk, and solvency risk. From the foregoing, it is obvious that banking institutions face a variety of risks that may influence their survival and success. Therefore, it is necessary for banks to comprehend the concept of risk management in order to deal with different potential risks (Stan-Maduka, 2010). However, the common risks for both Islamic and conventional banks are credit risk, operational risk, and liquidity risk.

2.3.1 Credit Risk Management

Credit risk arises due to counterparty's default in meeting its obligations on time as contractually agreed. This risk exists in almost all modes of finances in IFIs. In profit-sharing modes of financing like *Mudaraba or Musharakah,* the credit risk is the risk of non-payment of the bank's share by the *Mudarib* (entrepreneur) at the due date. Likewise in case of Ijarah, credit risk arises when lessee delays or defaults in payment of rentals.

Credit risk happens when the counterparty fails to meet its obligations timely and fully in accordance with the agreed terms. It is the risk of loss due to the other party defaulting on contracts or obligations. This can lead not only to an increase in the liquidity crises but also declines the quality of the bank assets. This problem may arise for Islamic banks especially when there is a problem of asymmetry of information. The uncertain honesty of the entrepreneur and his misdirected use of funds can lead banks into difficulty. The prohibition of interest does not permit Islamic banks to postpone debts on the basis of a re-negotiated higher mark-up rate. This can provide an incentive to their dishonest clients to default, thereby exposing these banks to additional credit risk (Ben Arab and Elmelki, 2009).In order to mitigate the risk, therefore, the following *Sharī`ah*-compliant initiatives need to be taken by Central Banks, through their *Sharī`ah* Supervisory Councils (SSCs):

i. Establishment of Credit Risk Management Unit (CRMU) which will be responsible for improving the credit appraisal procedures of Islamic banks. This will strengthen their credit risk management processes.
ii. Promoting self-discipline by the Islamic banks in the management of their risks. In this regard, the banks are being encouraged to implement the Code of Corporate Governance for the Islamic Banks, and other relevant documents produced by the International Standard-Setting Bodies, such as the Dubai-based *Hawkamah*, the Bahrain-based AAOIFI, and the Malaysia-based IFSB (BCBS, 1999, 2011; Chapra and Ahmad, 2002). These documents contain details and guidance on how to analyze and manage risks effectively.
iii. Prompt issuance of subsequent revised version of all the above-mentioned documents, and any other set of guidelines on Margin Leading.
iv. Continued advocacy for the establishment of special *Sharī`ah* courts for speedy resolution of commercial cases.

2.3.2 Liquidity Risk Management

Liquidity risk is among one of the major risks facing IFIs, it emerges from either complications in acquiring cash at rational price from borrowings or sale of commodity/assets. Two explanations could be extracted, first deposits on the liability side initiates instant liabilities regardless of the result of the funds utilization on the asset side of the statement of financial

position. Consequently if the optimum deployment of funds is not attained a disparity of maturities between liabilities and assets may be apparent. Secondly short term liabilities or current liabilities may be utilized to finance medium to short term assets. The liquidity risk triggering from both avenues is significant for IFIs. For a number of causes, Islamic banks are assumed to come across with considerable liquidity risk. First, there are limitations from *fiqh*on the securitization of the present assets of Islamic banks, which are principally debt in nature. Secondly, due to gradual growth of financial instruments, it is difficult for Islamic banks to quickly draw funding from the financial markets because there is no independent inter-Islamic bank money market. Thirdly, the lender of the last resort (CBN) provides emergency liquidity facility through bill discounting to Islamic banks in a crucial need from the same window as for conventional banks. On the other the other hand, the existing CBN financing are interest based, therefore Islamic banks cannot benefit from them.

The potential loss arising from the bank's inability either to meet its obligations or to invest fund increases in assets as they fall due without incurring unacceptable costs or losses. From this definition it is obvious that liquidity risk does not mean just the shortage of financial resources but also the excess of used funds.

As the Islamic Bank mobilizes its funds through various deposits, at least two obligations need to be fulfilled by the bank to its depositor (Abdel Megeid, 2017). These obligations are ingrained in the requirements of the *Sharī`ah*from deposit (*wadee'ah*) and partnership contracts (*sharikaat al-'uqood*) which the bank has entered into with the depositors (Al-Omar and Abdul-Haq, 1996). The strategies are as follows:

i) That the bank should maintain a level of liquidity prescribed by CBN from time to time so as to be able to meet the demand for withdrawal by its depositors; and

ii) That the bank has to strive to generate profit on its deposits and investment accounts, including those for short term maturity periods of one month, three months, six months, nine months, and twelve months.

According to Abdulkarim *et al*, (2014), for the liquidity obligation to be fulfilled, therefore, it is imperative that the Islamic bank should maintain certain percentage of total depositors' funds as reserve assets and liquid assets.

Liquidity Risk Management of NIFIs are as follows as provided in the Guidelines for NIFIs (2009):

i. All NIFIs are required to put in place appropriate policies, strategies and procedures which ensure that they maintain adequate liquidity at all times to fund their operations
ii. NIFIs shall not invest their funds in interest-bearing securities or activities. They are required to invest their funds in eligible instruments for the purpose of meeting the CBN prescribed minimum liquidity ratio. Liquid assets shall be held in line with the provision of section 15 of BOFIA 1991 (as amended), provided they comply with the principles under this model.
iii. All NIFIs are required to maintained the minimum liquidity ratio prescribed for all banks which is the requirement to hold at least 10 percent of liquid assets).

According to Shafiq et al, (2010) generally, Islamic banks manage liquidity risk by investing in Islamic capital market for either long or medium term and even inter bank transactions for short term liquidity problem solution.

2.3.3 Operational Risk Management

By definition operational risk is the 'risk of direct or indirect loss resulting from inadequate or failed internal processes, people, and technology or from external events (BCBS, 2001). Operation risk may arise due to lacking of trained and qualified professionals to carry out its responsibility. Islamic financial operations. Risks may also arise due to the dissimilar business practices; computer software available in the market which may not be appropriate for IFIs. This adds towards the risks of obtaining, developing and using information technology in Islamic banks.

Operational risk is often considered as a residual risk given the fact that any risk faced by a bank that is not market risk or credit risk falls under this category. To produce an estimate of operational risk, we could then look at the bank's financial statements and remove from the income statement (a) the impact of credit losses and (b) the profits or losses from market risk exposure. The variation in the resulting income would then be attributed to operational risk. Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events (Basel Committee on Banking Supervision, 2001). This

definition includes legal risk, but does not include reputational risk or the risk resulting from strategic decisions. Some operational risks result in increases in the bank's operating cost or decreases in its revenue, and it interacts with credit and market risk.

Operational risks can be effectively managed in such a way that losses are kept within the level of risk tolerance which is determined by balancing the cost of improvement against the expected benefits (BCBS, 2014). However, so long as workers, systems and management remain inefficient, operational risks cannot be overcome (BCBS, 2016; Kilaruka, 2008).

2.4 Measurement of Risk Management

For the purpose of this study, risk management is measured by three types of Risks: Credit Risk (CR); Operational Risk (OR) and Liquidity Risk (LR). These measures are justifiably explained as follows below where generally, if the risk measure coefficient is positive means the risk management method employed is efficiently successful and vice verse.

(a) Credit Risk (CR): Credit risk happens when the counterparty fails to meet its obligations timely and fully in accordance with the agreed terms. It is the risk of loss due to the other party defaulting on contracts or obligations. This can lead not only to an increase in the liquidity crises but also declines the quality of the bank assets. This problem may arise for Islamic banks especially when there is a problem of asymmetry of information. The uncertain honesty of the entrepreneur and his misdirected use of funds can lead banks into difficulty. The prohibition of interest does not permit Islamic banks to postpone debts on the basis of a re-negotiated higher mark-up rate. This can provide an incentive to their dishonest clients to default, thereby exposing these banks to additional credit risk (Ben Arab and Elmelki, 2009). Credit risk can be defined as Credit risk arises from the potential that an obligor is either unwilling to perform on an obligation or its ability to perform such obligation is impaired resulting in economic loss to the bank. Hence, Credit risk is the risk of loss that arises from a borrower's or counterparty's inability to meet its obligations. For any financial institution measuring and managing credit risk is very important. Therefore, CR was measured by dividing the total debt to total assets (i.e. Ratio of Total Debt to Total Assets) or dividing loan losses to total loans. This measure is in line with Ariffin (2012); Fayed (2013); Said, (2013); Nabi, Faruque and Tuj-Johara (2017).

Major sources of Credit risk arises whenever a lender is exposed to loss from a borrower, counterparty, or an obligator who fails to honour their debt obligation as they have contracted (Shafiq et al, 2010). According Adebayoet al (2017), this loss may derive from deterioration in the counterparty's credit quality, which consequently leads to a loss to the value of the debt, or according to Aruwa et al., (2014), the borrower defaults when he is willingly to fulfill the obligations.

Credit failure in banks is not new or a rare occurrence, they affect their liquidity position as well as cash flows and profits. Hence as cited by Shafiq et al (2010),that it is a biggest threat to any bank performance and the principal cause of bank failures.

According to Oluwa gbemiga et al., (2011), available statistics from liquidated banks clearly showed that inability to collect loans and advances extended to customers and creditors or companies related to directors or managers was a major contributor to the distress of liquidated banks in Nigeria. When this occurred, a number of banking licenses were revoked by the Central Bank of Nigeria (CBN). As Nigerian Deposit Insurance Corporation (NDIC) reports of various years indicate, many banks had their ratios of performing credits that were less than 10% of loan portfolios.

(b) Operational Risk (OR): Operational risk is often considered as a residual risk given the fact that any risk faced by a bank that is not market risk or credit risk falls under this category. To produce an estimate of operational risk, we could then look at the bank's financial statements and remove from the income statement (a) the impact of credit losses and (b) the profits or losses from market risk exposure. The variation in the resulting income would then be attributed to operational risk. Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events (Basel Committee on Banking Supervision, 2001). This definition includes legal risk, but does not include reputational risk or the risk resulting from strategic decisions. Some operational risks result in increases in the bank's operating cost or decreases in its revenue. Other operational risks interact with credit and market risk. For the purpose of this study, OPR was determined by dividing the costs by income as recommended by Said (2013).

(c) Liquidity Risk (LR): The potential loss arising from the Bank's inability either to meet its obligations or to invest fund increases in assets as they fall due without incurring

unacceptable costs or losses. Form this definition it's obvious that liquidity risk doesn't mean just the shortage in financial resources but also the excess of these unused funds. Maintaining liquidity in all circumstances is one of the major challenges that banks face. Liquidity of a bank means the ability of a bank to meet the financial obligations as and when due. Liquidity tells the capability of a bank to convert its assets into cash at the face value and meet the demands of customers, borrowers and depositors at the time they need it. Liquidity is a prime parameter of banking risk. LTR of the Islamic bank under study was measured by dividing total loans by total deposit (Total loans/total deposits). The high figures of the ratio show the better liquidity position Iqbal (2012) and Nabi, Faruque, & Tuj-Johara (2017).

2.5 Concept of Financial Performance

Bank's profitability is of vital importance for investors, stakeholders and the economy at large. Investors are interested in the returns for their investment. Banks' performance is the ability of a bank to achieve its objectives using its available resources. Bank's financial performance appraisal is an evaluation which is done periodically and systematically in determining the achievements of the company's objectives (Amelia, 2002).

According to Khrawish (2011), profit is the ultimate goal of banks. All the strategies designed and activities performed thereof are meant to realize this grand objective. However, this does not mean that banks have no other goals. Banks have additional social and economic goals.

To measure the financial performance of commercial banks there are variety of ratios used, of which, Return on Asset (ROA) and Return on Equity (ROE) are the major ones. 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 on the statement of financial position. ROE is the ratio of Net Income after Taxes divided by Total Equity Capital. ROA is another major ratio that indicates the profitability of a bank. It is a ratio of income to its total asset. It measures the ability of the bank management to generate income by utilizing company assets at its disposal (Khrawish, 2011).

In terms of components or determinants of Bank Performance, performance to banks refers to the capacity in generating sustainable profitability (Wild, Shaw & Chiappetta, 2009). A popular

framework used by regulators is the CAMEL framework, which uses some financial ratios to help evaluate a bank's performance. CAMEL bank rating is used by bank's management to evaluate financial performance.

The five CAMEL factors are Capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity. They indicate an increased likelihood of bank failure when any of these five factors prove inadequate. However, an Islamic bank could fail as much due to non-compliance with the Shariah as for financial imprudence. Therefore it should be ensured that all activities of an Islamic bank comply with Shariah principles (Iqbal, 2012).

Capital Adequacy, capital base of financial institutions facilitates depositors in forming their risk perception about the organization. Also, it is a significant structure for financial managers to maintain adequate levels of capitalization. Capital adequacy is very useful for a bank to conserve & protect shareholders confidence and prevent the bank from bankruptcy.

In the standard CAMEL framework, it is assessed according to: the volume of risky assets, the volume of marginal and inferior assets, bank growth experience, plans, and prospects; and the strength of management in relation to all the above factors (Sundarajan and Errico, 2002) as cited by Iqbal (2012).

Asset Quality, asset quality determines the healthiness of financial institutions against loss of value in the assets as asset impairment risks the solvency of the financial institutions.

In the standard CAMEL framework, asset quality is assessed according to: the level, distribution, and severity of classified assets, the level and composition of non-accrual and reduced rate assets, the adequacy of valuation reserves; and the demonstrated ability to administer and collect problem credits (Sundarajan and Errico, 2002) as cited by Iqbal (2012).

Management Quality, management quality means adherence to set norms, ability to plan and be proactive in the dynamic environment, leadership, innovativeness and administrative competence of the bank.

In the standard CAMEL framework, management is evaluated according to: technical competence, leadership, and administrative ability; compliance with banking regulations and

statutes; ability to plan and respond to changing circumstances; adequacy of and compliance with internal policies; tendencies toward self-dealing; and demonstrated willingness to serve the legitimate needs of the community (Sundarajan and Errico,2002) as cited by Iqbal (2012).

Earnings, capacity and functions of the Shariah Supervisory Boards should also be reviewed. Given the complexity of many Islamic banks' operations, involving the monitoring of investment projects, managing commodity inventories at times, legal uncertainties relating to Shariah litigation systems, and similar problems, establishing adequate internal systems and controls for managing risks and validation of transactions play a particularly crucial role in the effective management and containment of operational risks (Sundarajan and Errico,2002) as cited by Iqbal (2012).

The quality of earnings represents the sustainability and growth of future earnings, value of a banks' lucrativeness and its competency to maintain quality and earn consistently. The single best indicator used to gauge earning is the Return on Assets (ROA).

In the standard CAMEL framework, earnings are assessed according to: the ability to cover losses and provide for adequate capital; earnings trend; peer group comparisons; and quality and composition of net income (Sundarajan and Errico, 2002) as cited by Iqbal (2012).

The criteria set for earnings and profitability in the standard CAMEL rating framework are generally applicable to the Islamic banks as well. According to Sundararajan and Errico, economic losses would first result in a depreciation of the value of the depositor's wealth and then affect the bank's equity position in the event that it had also used its own resources to finance the loss making investment project (e.g., through a Musharaka arrangement). Also, such risks to deposits, if they materialize, might result in reputational damage and loss of depositor base, leading to liquidity and, possibly, solvency problems (Sundarajan and Errico, 2002) as cited by Iqbal (2012).

Liquidity,in case of an adequate liquidity position, the institution can obtain sufficient funds, either by increasing liabilities or by converting its assets to cash quickly at a reasonable cost.

In the standard CAMEL framework, liquidity is assessed according to: volatility of deposits; reliance on interest-sensitive funds; technical competence relative to structure of liabilities;

availability of assets readily convertible into cash; and access to inter-bank markets or other sources of cash, including lender-of-last-resort (LOLR) facilities at the central bank (Sundarajan and Errico, 2002) as cited by Iqbal (2012).

In terms of importance of performance to a bank which is linked directly with its efficient risk management, Banks with the better risk management may have some advantages: (i) It is in line with obedience function toward the rule; (ii) It increases their reputation and opportunity to attract more wide customers in building their portfolio of fund resources; (iii) It increases their efficiency and profitability. Greater credit availability leads to the opportunity to increase the productive assets and bank's profit which leads to its existence and survival Ariffin (2011).

2.5.1 Measurements of Financial Performance

This study used three (3) Measurements of financial performance (i.e. profitability) of Jaiz Bank Plc namely: Return on Asset (ROA); Return of Equity (ROE); Profit Expense Ratio (PER) as supported by Moin (2008); Gul, Irshad and Zaman (2011); Iqbal (2012); Ariffin (2012); Channar, Abbasi, & Maheshwari (2015) and El-Massah & Al-Sayed (2015). These proxies are operationalized as follows:

(i) Return on Equity (ROE): ROE is measured as the ratio of net income to total equity (i.e. Profit after tax/ equity capital). The high ratios indicate the better return to the investments of the shareholders. The higher the ROE ratio, the better the performance. However, high ROE may be due to high financial leverage. ROE tells the return owners earn on their investment in bank. ROE is of great concern to the investors and shareholders. ROE measures the efficiency of banks in making profits from every unit of shareholders equity/bank capital (Gul, Irshad and Zaman, 2011). Potential investors look for ROE before investing in a bank so it is important for a bank to have a higher ROE. The higher the ROE, the more efficient the banks performance is. The ROE, on the other hand, reflects how effectively a bank management is using shareholders' investment. It tells the bank's shareholders how much the institution is earning on the book value of their investment (Goudreau, 1992). ROE is the most important measurement of banking returns because it is influenced by how well the bank is performed on all other return

categoriesand indicates whether a bank can compete for private sources in the economy (Ariffin, 2012).

(ii) Return on Assets (ROA): ROA is calculated as net profit of the banks to total assets (i.e. Profit after tax/ total asset). The return on assets ratio indicates how much the banks are generating profit through efficient employment of its resources. ROA has been used in a lot of studies to measure the performance of banks (Ben Naceur, 2003; Samad, 2004; and Alkassim, 2005 as cited by Javed et. al., 2011). The higher the ratio, the better the performance and assets utilization of the bank. Finally, ROA is the most comprehensive accounting measure of a bank's overall performance. Since it is defined as net income over total assets, it shows the profit earned per naira of assets. It is an indicator of bank's efficiency and a measure of the bank's ability to earn rent from its total operations (Ariffin, 2012).

(iii) Profit Expense Ratio (PER): PER can be calculated by dividing profit after tax and other deductions by annual total expenses (i.e. profit/total expense). PER depicts the income generated and cost incurred. The lower the cost to income ratio, better the bank's performance. This is aligned with Moin (2008), Imane(2014) and El-Massah& Al-Sayed (2015).

2.5 Islamic Banking Contracts

Islamic banks have different forms of contracts, this contracts in particular includes: *Murabahah, Mudaraba, Musharakah , Ijara* among others. These contracts are reviewed since are the major financing contract of Jaiz bank based on its annual reports and statement of accounts in the following sub-sections:

2.5.1 *Murabahah* Contract

Murabahah is a contract where the bank buys an asset or goods from a third party, and resells those purchases to a second party (could be individual or company) with an amount of profit agreed between the bank and the second party. The difference between this contract and conventional interest-based lending is that if the second party fails to make a deferred payment on time, the mark-up (the profit which was agreed on) will not increase and the bank itselfbecomes the owner of the product which means it carries the associated risks. Example on *Murabaha* contract, when a person wants to buy a car which costs #10000 so he goes to the

bank and the bank buys the car and resell it to that person in installments and charge a flat fee (Hassan, & Lewis, 2007; and Khan & Bhatti, 2008).

2.5.2 *Mudaraba* Contract (Finance by way of Trust)

This term refers to a form of partnership which one partner (*rabul-mal)* brings the capital and the other party (*mudarib*) brings personal effort (skills) and manages the capital. The bank can provide the full capital or part of it. The investor bears the risk, if there is loss the bank will lose the capital or a part thereof and the other party will lose his/her personal effort. *Mudaraba* enter both sides of the statement of financial position on the asset side, as project financings and on liability side as investment (Hassan, & Lewis, 2007).

2.5.3 *Musharakah*Contract

It is a contract between the bank and the customer whereby the Islamic bank offer the capital to an enterprise, and the enterprise might be existing or new either on a permanent or temporary basis. If the contract is temporary, one partner promises to buy the equity from the other party gradually until the title of the equity is completed. While if the contract of *Musharaka* his permanent, the bank manages the enterprise and search for ways to develop the projects profit (El-Tiby, 2011). The possible risks for this contract are credit risk which the bank might lose their share in capital which invested in the project or credit risk related to the payment that the customers would pay to the bank. Operational risk rises up when there is insufficient management during the life of the project, and this risk usually happen as a result of the lack of experience or the bank is not involved in managing the project or follow its financial reports. To avoid this risk, the bank is required to follow the project and take the right decision at the right time (El-Tiby, 2011).

2.5.4 *Ijarah* Contract

Ijarah contract means hiring or leasing. It is an agreement between the Islamic bank and the customer, and by this agreement the bank lease an asset to the customer who has the right to benefit from the asset on an agreed rental over a period of time. Possible risks for this contract include credit risk, when the customer (lessee) is unable to serve the lease rental when it is due. Market risk could be a possible risk if the customer defaults; in this case the bank might dispose of the asset at the market price, which might be lower than the agreed price. Operational risk

happens when the customer (lessee) use the asset in activities that are not legal in *shari'ah* principles, such as vehicle for selling cigarettes or alcohol (El-Tiby, 2011).

2.6Issues and Challenges in Islamic Risk Management

Risk management is widely developed in the conventional financial market frameworks. However, it is developing in the Islamic financial markets due to limited resources, high cost and lack of technological machines to assess and monitor risk in time. Islamic banks face crucial challenges in improving their risk management strategies as they are exposed to various types of risks.

Conventional risk management techniques and tools are based on interest, gambling and speculation, which are prohibited by *Shari'ah*. There are few risk hedging instruments and techniques in Islamic finance, despite its rapid growth but more are gradually being evolved (Syed, 2008). Hence, the development of prudential regulations and systems related to risk management, capital adequacy and corporate governance of Islamic banking are very pertinent.

Financial engineering is another operational challenge for Islamic banks, which demands standardization of the process of introducing new products in the market. Every Islamic bank has its own *shari'ah* board examining and evaluating each new product. This process should be streamlined and standardized to minimize time, effort, cost and confusion. Cross border comparison of Islamic banking performances is difficult because the regulatory frameworks of Islamic banking jurisdictions are not standardized and remain highly diversed, ranging from frameworks that promote dual banking such as in Malaysia to frameworks that only recognized Islamic banking system such as in Iran. Islamic banks may have higher operational risk; greater number of contracts, newer supporting system, evolving skill sets and lack of consistency of best practice. Operational risk goes beyond capital adequacy; a cultural change in the organization regarding the operational risk is needed in order to develop sound operational risk management practices (Akkizidis and Kumar, 2008).

The issue of capital framework and liquidity standards is central to adopting the Basel III. The banking institutions are required to raise minimum capital requirements and hold capital buffer. However, Islamic banks are exposed to operational risk arising from compliance to Basel III requirements. Some of the principles of risk management as proposed in Basel III can be

applicable to the Islamic financial industry with necessary modification and adaptations. Even so, Basel III could not provide all the risk management issues for Islamic financial institutions; hence there has been a need for alternative and supportive standards on risk management. Nevertheless, serious and sustained efforts are needed to find the applicability which is specific to countries and markets.

2.7 Empirical Studies on Risk Management and Financial Performance

This section presents the review of empirical studies on risk management and financial performance in Islamic banking. It should be noted that, empirical analysis of the existing studies are presented in chronological order.

A study by Sobhy and Megeid (2017) analyzed and compared the effectiveness of liquidity risk management of Islamic and conventional banks in Egypt to ascertain which of the two banking systems are performing better. The study sampled six Conventional Banks (CBs) and two Islamic Banks (IBs) in Egypt using the liquidity ratios; the investigation involves analyzing the financial statements for the period of eight years. The data were obtained from Bank scope database. The research found that in Egypt, CBs perform better in terms of liquidity risk management than IBs. The liquidity risk management significant differences between IBs and CBs could be attributed more cash availability to CBs than to IBs, in addition, Egyptian Central Bank regulations on capital and liquidity requirements for IBs disconcert IBs' performance. The results can be used by bankers' policy decision-makers to improve and enhance their consideration for liquidity risk management.

Also, Trad, Trabelsi and Goux (2017) examined whether Islamic finance could be an alternative to the traditional financial system and could guarantee stability in times of crisis. The research studied 78 Islamic banks in 12 countries over the 2004–2013 periods. A series of bank-specific and other country-specific indicators were combined to explain the soundness of Islamic banking in terms of profitability as measured by ROA and ROE, and risk divided into credit risk measured by IMLGL and EQL, and insolvency risk measured by Z-SCORE. The aim is to estimate five regressions using dynamic panel data econometrics (GMM system). The results indicate that bank size and capital are the main factors responsible for increasing profitability and stability of Islamic banks and reducing their credit risk. However, the ratios for liquidity and asset quality often lead to inconclusive results. It is also found that macroeconomic variables,

except inflation, are able to improve Islamic banks' stability. This is not the case for credit risk where the ratio was unfavorable.

Similarly, Sanyinna and Omar (2017) examined risk management frameworks for implementation by the Islamic banks. Considering the dynamic nature of ever-increasing internal and external forces from which diverse banking risks are emanating, it becomes imperative to continue updating the risk management mechanisms. This is absolutely necessary in order to ensure full compliance with the relevant Shariah principles, strengthen depositors' protection, engender consumer confidence, minimize the impact of failure, improve quality of services, reduce costs of operation, provide greater competitive advantage, create new markets for investments, and attract more customers. Although the risk management mechanisms cannot be generalized because Islamic financial institutions are not the same in their operational activities, sizes, personnel and sophistication, but the frameworks outlined in this paper can provide useful clues for effective and comprehensive risk management and mitigation.

Furthermore, another study by Nabi, Faruque and Tuj-Johara (2017) analyzed and compared the performance of Islamic and conventional banks in Bangladesh to find out which of the banking stream is performing better than other. The study sampled 15 conventional banks and 5 Islamic banks. For in-depth understanding and sound comparison, key performance indicators were divided into external and internal bank factors. The external factor analysis includes studying the customer behavior and perception about both Islamic and conventional banking. Internal factor analysis includes measure of differences in performance of Islamic and conventional banks in terms of profitability, liquidity, credit risk and solvency. Nine financial ratios were used to gauge profitability, liquidity and credit risk; and a model known as "Bank-o-meter" is used to gauge solvency. The study found that, in terms of profitability, liquidity and credit risk management conventional banking is in leading position, while in solvency maintenance Islamic banking dominates. Motivating factors for customers of Islamic banking is the *Shari'a's* compliance, while in case of conventional banking it is wide range of services provided by them.

Similarly, Alzoubi (2017) analyzed the determinants of liquidity risk in Islamic banks by using a comprehensive model that incorporates several variables that impact the liquidity of Islamic banks. A panel data analysis was conducted on a sample of 42 Islamic banks from 15 countries between 2007 and 2014. The results showed a negative correlation between liquidity risk and

cash ratio, as the cash balance can be used to meet any demands for liquidity from the bank's customers. Similarly, it was found that there is negative correlation between liquidity risk and securities held by the bank, since banks which need liquidity can sell these assets to meet any liquidity shortages they face. Bank size also has a negative relationship with liquidity risk, as larger banks tend to have more stability and customers feel safer dealing with large banks. Bank's equity also has a negative correlation with liquidity risk, as equity is a more stable source of funding for banks and a higher ratio of equity lowers liquidity risk. On the other hand, it was found that there a positive relationship with high profit assets, as banks shift their portfolio towards more profitable assets in order to increase their earnings, they face greater liquidity risk, a positive relationship also exists with bad finance provision. Additionally, the findings demonstrate that the relationship between bank size and liquidity risk was not linear.

In another study, Njoroge and Ngahu (2017) examined the influence of risk management practices on credit performance of First Community Bank (FCB) in Nairobi Kenya. Specifically the influence of risk identification on credit performance in FCB was examined. The study utilized risk management theory. A descriptive survey research design was employed with census approach used in data collection. The target population included branch managers, operations managers, and credit officer in the seven branches of FCB in Nairobi making a total of 56 respondents. Research questionnaire was used for data collection. Data was analyzed in form of descriptive and inferential statistics. Analysis was done using Statistical Package for Social Sciences (SPSS) version 24. The study established that risk identification had significant relationship with credit performance in FCB. It was concluded that risk identification played a key role in credit performance of the bank.

Similarly, Youssef (2017) examined the stability of Islamic banks and conventional banks during and after the recent global crisis by determining the impact of the crisis on the banks' stability. This was accomplished by measuring the z-score (the stability measure) for both types, with 96 observations of 12 banks in 4 countries where both types of banks have significant market share. These findings showed that Islamic banks performed differently during the last financial crisis, but that conventional banks were more stable on the overall. Islamic laws prevent Islamic banks to get affected in the first stages of the crisis because those laws encourage banks to invest in real assets, but the banks were affected by the subsequent stages, which indicated the relationship

between Islamic banks and the real economy. Panel data was used as an econometrics technique and determined a negative relationship between stability and the leverage.

Furthermore, Sarker, Sultana and Prodhan (2017) examined the performance of Islamic banks in Bangladesh and in particular the experience for Al-Arafah Islamic Bank Limited. Performance evaluation methodology was used to assess profit maximization, capital structure and liquidity ratios. The study used the financial data of the bank from 2010 to 2014 and observed that the trend of all the indicators is positive. The result shows that the ability, efficiency and number of products of Al-Arafah Islamic Bank Limited were increasing gradually. The investment of Al-Arafah Islamic Bank Limited is mostly on short term basis which is generally similar to other Islamic banks in Bangladesh.

In the same vein, Abdul Rehman (2016) investigated the extent to which banks used risk management practices in dealing with various risks and to compare risk management practices between Islamic and conventional banks operating in Pakistan. This study has used two sources of data, i.e. primary and secondary data. The Secondary data was collected by using content analysis through annual reports of five Islamic and conventional banks for six year period from 2008 to 2013. Content analysis was performed by using frequency analysis and un-weighted index scoring. The primary data was collected through questionnaire from the senior managers, risk managers and CRO of Islamic and conventional banks. The sample size consisted of 150 respondents from banks. The data was analyzed using descriptive statistics, regression analysis and Mann-Whitney U-test. Islamic banks were found to be significantly different from their conventional counterparts in risk identification, risk management practices, liquidity risk analysis and risk governance. Moreover, risk identification, risk assessment and analysis, credit risk analysis and risk governance were found to be mostly influencing and contributing variables in risk management practices of banks operating in Pakistan. Also, credit, liquidity, market and operational risk were found to be the most important risks faced by both conventional and Islamic banks.

In another study, Sutrisno (2016) examined the effect of risk and efficiency on the performance of Islamic banks. Risk was measured by Non-Performing Financing (NPF), capital risk measured by the Capital Adequacy Ratio (CAR) and liquidity risk is measured by Financing to Deposit

Ratio (FDR) and the minimum Reserve Requirement (RR). The Efficiency was measured by Operating Expenses to Operating Income Ratio (OEOI), while Islamic banks performance was measured by Return on Assets (ROA) and Net Profit Margin (NPM). This study involved 8 Islamic banks in Indonesia as the samples with quarterly data and processed using multiple regression analysis. The results showed the significant effect of FDR, CAR, OEOI and size on the performance of Islamic banks in contrast to the RR and NPF that had no significant effect on the performance of Islamic banks.

Similarly, Hussain, Ihsan and Hussain (2016) assessed the various risks which affect the banking operations in Pakistan and to assess the effect of risk management on the performance of both large banking institutions and small banking institutions. This study uses capital adequacy ratio, nonperforming loans, liquidity risk, interest rate risk and operational risk as proxies for risk management. Panel data from 2005-2014 was taken from the published annual reports of the commercial banks. Descriptive statistics, correlation analysis and random effect OLS regression was used to analyze the data. The result showed that better risk management system of banks leads to enhanced performance. It was concluded that capital adequacy ratio, non performing loans, interest rate risk, operational risk and liquidity risk are key drivers of profitability in large banks while performing loans and capital adequacy ratio are the only drivers of profitability in small commercial banks in Pakistan.

In a similar study, Channar, Abbasi and Maheshwari (2015) conducted comparative study to examine the risk management system of banks and its impact on their performance. The primary data for the study was collected using closed - ended questionnaire and analyzed using T-Test and correlation. The secondary data was collected from financial statements of the banks and analyzed using financial ratios. The finding of research showed that conventional banks have more effective risk management process as compared to the Islamic banks. The findings also showed that risk management has a negative non significant relation with operational performance while as it has positive relation with financial performance.

El-Massah and Al-Sayed (2015) study empirical analyze and compared the performance of Islamic and conventional banks in United Arab Emirates using Financial Ratio Analysis (FRA), to find out which of the banking streams performs better than the other. The study used panel data for both Islamic and conventional banks in the UAE during the period (2008-2014), to

statistically test the performance of 11 conventional banks and 5 Islamic banks. Financial ratios are estimated from annual reports and financial statements, to measure performance represented by profitability, liquidity, solvency and credit risk. The findings of the study indicated the superiority of conventional banks over Islamic banks in profitability, credit risk management as well as solvency. In another study, Zolkifli, Abdul-Hamid and Janor (2015) examined the determinants of liquidity risk and performance in conventional and Islamic banks. The data was collected from 2008 to 2014 and panel data analysis was used. The results revealed that the most significant factor is the capitalization. Capitalization also has a strong relationship with performance using parsimonious model. The best banks from the result are Bahrain conventional bank. Based on the findings, problem of liquidity risk related to regulatory requirement will decrease and this will give banks the opportunity to increase their profitability and financial performance.

Yimka, Taofeek, Abimbolaand Olusegun (2015) examined the role of credit risk management in value creation process among commercial banks in Nigeria. The study reviews the concepts, theories, legal acts and standards relating to the credit risk management and then develops a conceptual model with four antecedents to credit risk. The study analyzed the impact of the four antecedents namely loans and advances loss provision, total loan and advances, non-performing loan and total asset on accounting Return on Equity (ROE) and Return on Asset (ROA). The panel data came from 10 commercial banks listed on Nigeria Stock Exchange (NSE) between 2006 and 2010. The results showed that credit risk management has significant effect on financial performance of commercial banks and concluded that maintaining minimum level of non-performing loans vis-à-vis provision for loans and advances will enhance financial performance through return on equity.

Furthermore, Ishtiaq (2015) examined the effectiveness of risk management processes and their relationship with the performance of banks. This study reviews the relevant literature on banking risk management from diversed methodological strands and synthesises its conclusions to make addition to the available knowledge; particularly to address certain research gaps regarding risk management and performance of banks in developing countries, specifically in Pakistan. This study applies a mixed method research strategy by taking the quantitative method as the major component, while the qualitative method plays a supplementary role. The study collects and

analyses primary, as well as, secondary data. Two-stage data envelopment analysis technique has been adopted to examine the relationship between the risk management and performance of the selected banks. The results of the study showed that it is very important for Pakistani banks to formulate an active risk management process to identify measure, monitor and control different risks. These results further reveal that formation of a comprehensive risk management system is not only a useful practice to meet the regulatory requirements but an effective exercise to improve the performance of Pakistani banks as well.

Khalil and Ali (2015) studied the Risk Management Practice (RMP) and procedures pursued by conventional banks functioning in Peshawar region. In the study the Risk Management (RM) was used as a dependent variable, whereas Risk Assessment (RA), Risk Identification (RI), Risks Monitoring (RMn), Risk Analysis (RA) and Risk Management Practice (RMP) were used as independent variables. Data was collected through questionnaire on five Likert Scale. The study finds that risk assessment and analysis, risk analysis and RMP have significant effects, while risk identification and risk monitoring have insignificant effects on RMP.

Mongid (2015) studies the determinants of liquidity risk position of Islamic rural banking in Indonesia. ARIMAX regression method was applied to study the behavior of liquidity risk in the industry. The result shows that liquidity risk is determined by asset management, leverage and capital adequacy. Asset size is also important as growing asset improves bank liquidity position. Weaknesses in liquidity management in the Islamic rural banking market are detected. They set high liquidity ratio (up to 35%) as self insurance to anticipate liquidity risk.

In another study, Bourakba and Zerargui (2015) determined the relationship between corporate governance and credit risk in Islamic banks. The study specifically deals with governance in Islamic banks which is two-fold: Anglo-Saxon governance system and Islamic Governance System. The study measures the impact of corporate governance variables on credit risk through an empirical study on a sample of Islamic banks during the period 2005-2012. The study found that there is a very strong relationship between governance and credit risk of Islamic banks. There is a negative relationship between non-performing loans ratio and the composition of the board of directors, the size of the board of directors, board committees, concentration of ownership, as well as the size of the *Sharia* supervisory board, while there was a positive

relationship between non-performing loans ratio and the size of the bank. This evidence provides beneficial information for supervisory authorities, stakeholders and academics.

Malim (2015) assessed risk management in Islamic banking and focuses on the credit, operational and *Sharia* risks. The study highlighted the issues and challenges in risk management and provided suggestions for risk mitigation in Islamic banks. Similarly, Mutua (2015) investigated the effect of mitigating credit risk on the performance of commercial banks in Chuka Town in Tharaka Nithi County. The study was descriptive in nature. The study used both primary and secondary sources of data. The secondary data was collected from the documentations obtained from the banks and the primary data was collected using questionnaire. Data was analyzed using descriptive statistics involving percentages. The study found out that the banks had policies and strategies for mitigating credit risk which has direct impact on their performance. This is due to the fact that credit is the major investment that is being undertaken by commercial banks. Also it was found that there was a significant relationship between bank performance (in terms of return on asset) and credit risk management (in terms of risk identification, monitoring and credit control.

In the same vein, Al-Tamimi, Miniaoui and Elkelish (2015) examines the relationship between financial risk and performance of Gulf Cooperation Council Islamic banks and the relative importance of the most common types of risks. The study covered 11 of the 47 Islamic banks of the Gulf Cooperation Council region from 2000 to 2012, based on the availability of data. Data were obtained from the Bank scope database. For bank performance, the two most common measures, ROA and ROE, were used and for risk measures, four types of financial risk were used, namely credit risk, liquidity risk, operational risk, and capital risk. The result of the Regression analysis indicated that there exists a significant negative relationship between the Gulf Cooperation Council Islamic banks' performance, capital risk and operational risk. The results also showed a significant negative relationship between Gulf Cooperation Council Islamic banks' performance and financial risk. Furthermore, the results indicated that the most important type of risk is capital risk, followed by operational risk.

Mong'are (2015) examined the effect of risk management on the financial performance of Islamic banks in Kenya. The study used a descriptive research design. The study used secondary data which was obtained from the published annual reports spanning five years (2010 - 2014) for

the Islamic banks and conventional banks, with Islamic windows in Kenya. In analysing the quantitative data, the study used descriptive statistics using Statistical Package for Social Sciences (SPSS Version 18.0). The multiple regression analysis was used to determine the significance of each study's independent variable in affecting the financial performance of Islamic banks in Kenya. The study found that there was a strong positive relationship between risk management and financial performance of Islamic banks in Kenya. The study also found that there was a negative relationship between credit risk, insolvency risk, interest rate sensitivity and financial performance of Islamic banks.

Saeed (2015) examined the impact of risk management on bank performance in Malaysia. The data for the study were obtained from DataStream and annual reports of all conventional banks in the country. The sample of the study comprises of 27 conventional commercial banks in Malaysia and the period of the study is confined to 2005-2013; making up to 208 observations. The dependent variable of this study was bank performance proxied by ROA and ROE, while risk management was the independent variable and proxied by operational risk, credit risk and liquidity risk. A regression analysis with GLS estimation was run to test the hypotheses of the study and the results show that operational risk, credit risk and liquidity risk have significant influence on ROE. However, the regression results show that only operational risk and credit risk are significant to ROA while liquidity risk was found to have insignificant relationship with ROA.

Al-Ali and Naysary (2014) explore via a qualitative study, the risk management practices in Islamic banks in Kuwait through addressing risk management processes, type of risks, and measuring and mitigating risks. An in-depth interview was carried out with five informants using the convenience sampling method. After the transcription of the interview data and detailed analysis using the thematic technique, the finding indicated that the practices of risk management in Islamic banks in Kuwait was almost similar to the practices used by conventional bank in Kuwait in terms of risk management process, tools that measure the risks and the techniques adopted to mitigate the risks. Nofan and Al-Adwan (2014) provide an insight into the major challenges faced by Islamic banks in their quest for development in the current global financial system. It also attempted to determine specific and general risks faced by banks in general and in their institutionalization. Moreover, the study also stressed on the development and enhancement

of current financial tools and organizational planning that facilitate sufficient and effective operational environment for Islamic financial institutions.

Ramzan and Zafar (2014) gauged the institution's level elements which have significantly affected the liquidity risk of Islamic banks in Pakistan through balancing assets and liabilities. This study evaluated liquidity risk management. This study explores the significance of Asset base of the bank, networking capital, return on equity, regulatory Capital Adequacy Ratio (CAR) and return on assets, with liquidity risk of Islamic banks of Pakistan. Secondary data was used, that covers a period of five years, i.e. 2007-2011 for full-fledge Islamic banks in Pakistan and Fixed Effect Least Square Regression model was as used as the technique for data analysis. The analysis revealed statistically positive and significant relationship between asset base or size of the bank and liquidity risk in the estimated hypothetical model, whereas rest of the independent variables depicts statistically insignificant relationship with liquidity risk. Hence the study concludes that strong asset base of Islamic bank contributes towards strengthening liquidity control.

Imane (2014) determine the impact of risk management practices on Jordanian Islamic banks' performance. The study selects credit risk (debt and risk), operational risk (efficiency, income and cost) liquidity risk (liquidity, capital) and market risks (inflation, interest rates and financial crisis) as explanatory variables while Return on Assets (ROA) and Return on Equity (ROE) , were used as dependent variables for the period of fifteen years from 1998 to 2012. The pooled least square method with fixed effect is used to analyze and test the study hypotheses. The results revealed that: First, liquidity, credit and operational risk management practices have a negative and significant statistical impact on Islamic banks' performance, and these banks failed at the same time in managing these risks. Second, market risk management practices have a positive and significant statistical impact on banks' performance which, means that these banks do not suffer neither from the operational risk during the study period nor from managing this type of risk.

Soyemi, Ogunleye and Ashogbon (2014) examined risk management practices among deposit money banks in Nigeria with a view to relating these practices to their financial performance in the 2012 financial year. The study uses secondary data gathered through content analysis of the selected banks' annual reports and accounts. The data was analysed using descriptive statistics

and OLS regression to estimate significant influence between banks' risk management practices (credit, liquidity, operating and capital risk practices) and their financial performance. The findings appear to be largely consistent with previous works as the explanatory variables significantly accounted for variations in the financial performance. Also, Mobin and Ahmad (2014) analysed the management of liquidity risk in Islamic banks' liabilities. Malaysian Islamic banking sector was chosen as a case study. The study examined inter alia the significance of size of the firm, capitalization, bank specialization and loan loss reserve ratio of some selected Islamic banks in Malaysia. The results showed that the liquidity management of these Islamic banks is formed by the bank specification factors.

Nadeem and Khalil (2014) reviewed six studies relating to the risk management practices in Islamic and conventional/commercial banks. The same methodology/approach is used in Islamic and conventional banks. In Islamic bank they develop a questionnaire. This covers six points about the risk management process. To understand what type of risk and manage that risk, assess risk and examine it, identify risk, observe risk, credit risk and risk management practices. The study found that Islamic banks were more professional in managing risk as compared to conventional banks. But both Islamic and conventional banks have a positive impact on profitability after managing risk.

Sitwat Habib et al. (2014) conducted a research on operational risk management in corporate and banking sector of Pakistan. This research aimed to find the reasons for the implementation or lack of adoption of integrated operational risk management approach. The study revealed that risk management can improve organizational performance but in Pakistan, companies do not have appropriate infrastructure and proper knowledge of risk management. The research showed that in banking sector of Pakistan the concept of operational risk management can be seen up to some extent.

Selma et al (2013) conducted research empirically on risk management tools and practices in Tunisian commercial banks. The purpose of the research was to investigate risk management practices and procedures followed by banks. The results revealed that banks in Tunisia know the importance of efficient risk management in enhancing bank performance and cost reduction. Moreover banks have active risk management structures in Tunisia.

Fayed (2013) analyzes and compares the performance of Islamic and conventional banking in Egypt and to find out which of the banking streams is performing better than the other. To make appropriate comparative analysis, three Islamic banks (Faisal Islamic Bank, El-BarakaMisr, and National Bank for Development) and six conventional banks (National Bank of Egypt, BanqueMisr, Bank of Alexandria, National SocietyGeneral Bank, Arab African International Bank, Commercial International Bank) were studied during the period from 2008 to 2010. Financial ratios were estimated from annual reports and financial statements. Seven financial ratios were used to gauge profitability, liquidity and credit risk; and a model known as "Bank-o-meter" was used to gauge solvency. Findings indicated that the superiority of conventional banks over Islamic ones in profitability, liquidity, credit risk management as well as solvency.

In another study, Onakoya and Onakoya (2013) investigated the performance efficiency of conventional banks and Islamic banks in the United Kingdom between 2007 and 2011. A comparative study of the top four Islamic and five conventional banks were undertaken based on selected financial ratios as performance indicators. The collected secondary data derived from the banks' financial statements were transformed into percentages and ratios so that comparison can be made between the different banks and periods. Comparing conventional and Islamic banks and controlling for all other factors, the study found few significant differences in business orientation and performance in the areas of liquidity, profitability, risk and solvency and efficiency. The conventional banks were more profitable in addition to being better able to effectively and timely meet up with financial obligations. However, Islamic banks were less exposed to liquidity risk and appear to be more cost-effective while the conventional banks depend more on external sources for funding.

Hamedian (2013) compares banks' profitability ratios including Return on Assets (ROA) and Return on Equity (ROE), and also find out their behaviour in the world 2008 financial crisis. In order to investigate and compare these two banking systems, 7 Islamic and 7 conventional banks were selected among Malaysian banking sector. Data was extracted from the annual financial reports of the banks for the period of 2005-2011. Applying E-views software some correlation and regression analysis were carried out on the data and tried to find out the impact of some independent variables (bank specific factors) including Capital Adequacy Ratio (CAR), liquidity (LQR), asset quality (ASQ), management efficiency (EFF), and Dummy on ROA and ROE of

banks. Regarding the empirical analysis conventional banks performed better than its Islamic counterparts in terms of profitability. However, Islamic banks' performance during 2008 financial crisis was better as compared to conventional banks.

Islam, Islam and Zaman (2013) compared risk management practices of the selected conventional and Islamic banks. The study found that: i) there exists variation as regards the level of awareness and concern in respect of various types of risks between conventional and Islamic banks, ii) there appears to be a gap between the conventional and Islamic banks in the practices of risk identification, iii) there also exists variation between the conventional and Islamic banks in understanding of risk and risk management practices, iv) the conventional banks attach more importance to the advanced techniques of risk management, as well as, risk mitigation. But the Islamic banks give more importance to the traditional practice mainly and v) a number of problems have been facing risk management practices in the banks, namely lack of qualified and experienced personnel, poor loan recovery and lack of market information.

Chusaini and Ismal (2013) analyzed the credit risk management in the Indonesian Islamic banking industry. Primarily, credit risk management is related to policies and procedures, credit risk management activities and credit risk controlling or mitigating. The research involved weighting a number of indicators that reflect credit risk management activities in Islamic banking. The final results of the research are index of credit risk management of the Indonesia Islamic banking industry and indices of credit risk management in the Islamic banking industry. The Index is counted by the method of scoring with the maximum score of 100 and the industrial index is obtained by combining each Islamic bank through the calculation of weighted average of individual share of financing.

Said (2013) examined the correlation between risks and efficiency within Islamic banks in the MENA area. This study used three stages of analyses. The first stage consisted of measuring the efficiency of those banks by employing the nonparametric technique, Data Envelopment Analysis (DEA) while the second stage involved analyzing risks by measuring credit, operational, and liquidity risks using financial ratios. The third stage employed Pearson Correlation Coefficients to examine the correlation between credit, operational, liquidity risks to efficiency for the period of 2006 to 2009. The study results revealed that credit risk has negative

relationship to efficiency, operational risk is negatively correlated to efficiency too and liquidity risk showed insignificant correlation to efficiency.

Similarly, Abdul-Rahman, Kighir, Oyefeso and Abdel-Salam (2013) examined compliance with the IFSB risk disclosure checklist by Islamic Banks using content analysis as a research design and the OLS regression as a technique for data analysis. The study found above average compliance with risk disclosure categories except Displaced Commercial Risk (DCR), which shows a poor result and that size and having foreign subsidiaries can assist banks to report on risk factors. The study recommended that, DCR should receive proper attention from regulators and supervisors as the importance of providing information to investment account holders is crucial to the success of the Islamic banking model of profit and loss sharing. A study by Kozarević, Nuhanović and Nurikić (2013) provide an insight into risk management practiced by BiH banks, and to determine the dependence of their financial performance on the process of active risk management.

Furthermore, Study by Iqbal (2012) investigated the relationship between size of the bank, Non-Performing Loan Ratio (NPL), Return on Assets (ROA), Return on Equity (ROE), and Capital Adequacy Ratio (CAR) with the liquidity risk of conventional and Islamic banks of Pakistan. The study is done on the secondary data for the period 2007- 2010. The study found significant and positive relation of CAR, ROA, ROE and size of the bank with the liquidity risk in both the models, whereas negative and significant relation of NPL is observed in both the models. Usman and Khan (2012) evaluate the comparative financial performance of Islamic and conventional banks. Profitability and liquidity ratios of Islamic banks (Mezan Bank Ltd, Bank Islamic and Albaraka) and conventional banks (Faysal Bank, KASB and Bank of Khyber) were compared from 2007 to 2009. The sampled banks were selected on covenant sampling technique on the basis of almost having equal weight of invested capital and number of existing branches. To make substantially noteworthy results, paired sample t-test was used. The results showed that, Islamic banks have high growth rate and profitability over the conventional banks. Moreover the Islamic banks have high liquidity power over conventional banks.

In another study, Siraj and Pillai (2012) investigated the presence, if any, of similarity in growth of chosen performance indicators of Conventional Banks and Islamic Banks in GCC region. The study selected six Islamic banks and six conventional banks. A comparative study was

undertaken based on performance indicators, namely OER, NPR, ROA, ROE, EOA, operating expense, profit, assets, operating income, deposits and total equity. Inferences based on analysis revealed better performance of Islamic banks during the study period. The analysis revealed that Islamic banks are more equity financed than conventional banks. ANOVA showed the presence of significant relationship in movement of selected financial indicators. Conventional banks registered growth in revenue during the period, but could not achieve improved profitability on account of higher provisions towards credit losses and impairment losses. The performance indicators were affected by financial crises as may be noted from the recessionary trends since 2007.

Also in another study, Akhtar, Ali and Sadaqat (2011) assessed into 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 with liquidity risk management in conventional and Islamic banks in Pakistan. The study was based on secondary data, that covers a period of four years, i.e. 2006-2009. The study found positive but insignificant relationship between the 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% level significance.

Similarly, Ariffin and Kassim (2011) analyzed the relationship between risk management practices and financial performance in the Islamic banks in Malaysia. The study assessed risk management practices of the Islamic banks and links them with the banks' financial performance. The study uses both the primary (survey questionnaire) and secondary data (annual reports). The results of the study shed some lights on the current strength of risk management practices of the Islamic banks in Malaysia. By assessing their current risk management practices and linking them with financial performance.

2.8.1 Research Gap in the Literature

Based on the above review of existing studies related to risk management and financial performance, it can be concluded that most of the existing studies on risk management and

financial performance were conducted outside Nigeria, and mainly studies concentrated on the comparative analysis between Islamic and conventional banks with respect to their risk management and financial performance. Similarly, most of these studies were conducted in Islamic dominated countries such as Egypt; Bangladesh; Kenya; Pakistan; Indonesia; United Arab of Emirates (UAE); Bahrain; Peshawar Region; Indonesia; Malaysia; Kuwait; Jordan; and Tunisia. Study on risk management and financial performance of Islamic and conventional banks was also carried out in United Kingdom (UK) and Kenya as indicates in the above empirical review.

In line with the above, it can be deduced that there are very few studies on risk management and financial performance of Islamic banks in Nigeria. This therefore, shows an empirical gap which needs to be filled. Furthermore, the above empirical analysis proved that there are many studies conducted in Nigeria with respect to risk management and financial performance. For instance, Taufiq (2016) examined the risk management practices in Islamic banks in Nigeria and Malaysia. Yimkaa, Taofeek, Abimbolaa and Olusegun (2015) examined the role of credit risk management in value creation process among commercial banks in Nigeria. Soyemi, Ogunleye and Ashogbon (2014) examine risk management practices among deposit money banks in Nigeria with a view to relating these practices to their financial performance in the 2012 financial year.

These studies proved that, existing studies within Nigeria heavily neglected research on Islamic banks in Nigeria in terms of their risk management and how it affects their financial performance. The present study is therefore an attempt to fill the gap by assessing the effects of risk management on financial performance in Jaiz Bank Plc.

2.8 Theoretical Framework

In order to theoretically guide this study in assessing the effects of risk management on financial performance in Jaiz Bank Plc, this study was anchored by four (4) theories namely: financial economics approach; institutional theory; agency theory; and stakeholder theory. These theories are briefly explained in the following subsequent sections.

2.8.1 Financial Economics Theory

Financial economics theory is based on the classic Modigliani-Miller paradigm (Miller and Modigliani, 1958) that proposes the conditions for irrelevance. In 1984, Stulz conducted a study on the *Optimal Hedging Policies* and is the first person to present a feasible economic reason why managers involve themselves in both predicted profit, as well as, in the variability around their values (Santomero, 1995). He deduces the rationales for risk management in firms based on the irrelevance conditions. After that, several alternative propositions, as well as, justifications have been developed to rationalize risk management. From the past few decades, there is an increasing literature on the different reasons for risk management and some notable contributions are the research works of Santomero (1995), Smithson, Smith and Wilford (1995) and Oldfield and Santomero (1997).

A detailed review of the relevant literature has been presented by Santomero (1995) on *Financial Risk Management,* where he points out different distinctive motives for risk management including: (i) securing internal financing; (ii) tax effects (the non-linearity of the tax structure); (iii) the cost of financial distress; and (iv) capital market imperfections.

According to the first motive, the managers of a firm have limited resources and ability to spread out the investment in the firm because of limited capital, as well as, the concentration of human capital returns. This promotes aversion to risk and a priority for stability in the firm. Similarly, it is observed in the second motive that the conventional tax burden is decreased by controlled volatility in the disclosed taxable income due to the progressive tax schedules.

2.8.2 Institutional Theory

Institutionalisation refers to, "the process through which components of formal structure become widely accepted, as both appropriate and necessary, and serve to legitimate organisations" (Tolbert and Zucker, 1983, p.25). A number of branches are involved in institutional theory (Collier and Woods, 2011). However, several studies work (Meyer and Rowan 1977; Tolbert and Zucker, 1983; DiMaggio and Powell, 1983; Scott, 1995 and Powell and DiMaggio, 1991; Collier and Woods, 2011; Hudin and Hamid, 2014) are more related to the business and organizational studies. Institutional theory focuses on the rules and regulations which are forced on institutions by the outsiders, particularly by the government regulatory bodies; and all the norms and values

which are incorporated in roles by means a part of socialisation processes or procedures (Meyer and Rowan 1977; DiMaggio and Powell 1983; Scott 1995; Powell and DiMaggio 1991).

Several studies use the institutional theory in explaining the phenomenon of risk management implementation (Collier and Woods, 2011; Hudin and Hamid, 2014). They proposed that institutionalization prevails when the risk management activities in the most of institutions becomes highly homogeneous. This homogeneity can be attained via the coercive isomorphic mechanism by which political, legitimacy or regulatory pressures are exercised on firms in the forms of persuasion, direction or invitation (DiMaggio and Powell, 1983; Powell and DiMaggio 1991; Scott 1995; Hudin and Hamid, 2014). For instance in Pakistani context, all the banks have been directed by the central bank to develop an active framework for risk management. Considering the homogeneity assumption of institutional theory, the fundamental principles relating to risk management are applied by every banking institution irrespective of their sizes and complexities. For that reason, the current theory provides an important insight into promising rationale for risk management in banks.

2.8.3 Agency Theory

Different researchers have used agency theory in their studies to provide theoretical base for risk management (Smith and Stulz, 1985; Fite and Pfleiderer, 1995; Tufano, 1998; Fatemi and Luft, 2002). This theory helps to examine a social phenomenon from a principal-agent (investor-manager) perspective. Jensen and Meckling (1976) describe this agency relationship as: "A contract under which one or more persons (the principals)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent (Jensen and Meckling, 1976, p.308)".

This theory has two fundamental assumptions (Jensen and Meckling, 1976). Firstly, the principal, as well as, agent pursue to maximise their own interest. Secondly, the interest of agent may diverge from the interest of the principal and agent is not likely to perform in the best interest of the principal. Hence, a conflict of interests may emerge between principal and agent.

Smith and Stulz (1985) have applied agency issues in corporate risk management and indicate the managers (agents) attitudes toward risk taking and hedging. Afterwards, Fite and Pfleiderer (1995) have also applied agency theory and describe the significance of hedging policies on firm

value. Tufano (1998) has also made an argument for risk management based on agency theory. He argues that managers go for hedging as much as they can without considering the interest of their shareholders. The rationale behind such conduct is the difference between the levels of risk aversion of managers and shareholders. The level of managerial risk aversion is generally more advanced than the risk aversion level of the shareholders as managers have more exposure to the market threats (Tufano, 1998). However, the proponents of agency theory consider that wealth of shareholders transfers to managers because of much extensive hedging and oppose such risk management practices (Fatemi and Luft, 2002). Tufano (1998) states that the risk management in firms somewhat enhances agency problems and costs between its managers and shareholders.

2.8.4 Stakeholder Theory

The stakeholder theory (Freeman, 1984) focuses clearly on the symmetry of stakeholders' interests as the foremost determinant of the corporate policy. The most important contribution towards the risk management is an addition of implicit contracts theory from employment to other contracts (Cornell and Shapiro, 1987; Klimczak, 2007). In certain businesses, mainly services and high-tech industries, customer confidence on firms is very important to carry on offering their services in the future and can considerably contribute to firms' values. On the other hand, the value of such implied claims is extremely sensitive to estimated costs of bankruptcy and financial distress. Since the risk management practices in a company induce to a reduction in these estimated costs, its value increases (Klimczak, 2007).

Hence, the above discussion implies that the risk management can be seen in banking institutions: to fulfill the regulatory requirements; to align the interests of managers with their shareholders interest; to reduce expected tax payments of the bank; to lower the probability of financial distress, business failures or bankruptcy; to safeguard specific investments of the organization; to help the banking organization in developing financial plans and investment activities; and to maximize the shareholders' value of the bank. In addition, it is also obvious from the above mentioned propositions that risk management is also useful within a bank to control different kinds of risks and to mitigate the possible negative effects of these exposures. However, Hudin and Hamid (2014) suggest that the adoption of a single theory is not sufficient to explain the rationale for risk management.

Therefore, this study also takes two theoretical considerations namely institutional theory and financial economics theory to guide the study. Besides the theoretical considerations for the implementation risk management mentioned above, a lot of efforts have been undertaken at international level to improve the risk management mechanism of banks (Basel Committee, 2013). The financial economics theory focuses on condition for irrelevance which takes care of credit risk management with the aim of obtaining profit while institutional theory focuses on rules and regulations which take care of operational and liquidity risks management in the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the research methodology adopted by the research. The methodological issues explained in this chapter include the research design, the population of the study, sample size and sampling technique, sources and methods of data collection, variables of the study and their measurements and techniques for data analysis and their validation.

3.2 Research Design

Ex-post facto research design is adopted under quantitative method and used as a guide for this study. The impact of effective risk management on financial performance in Islamic Bank can best be obtained by examining the financial reports of the bank. Therefore, the research adopted an *ex post facto* research design because the phenomenon of the study has already occurred. This design was adopted because it is capable of guiding the study on how to collect the existing data (annual reports and accounts) of bank under study and thereby determining the effects among the variables under study.

3.3 Source and Type of Data

This study used secondary sources of data only. The secondary data for the study was obtained from financial reports of Jaiz Bank Plc for the period covered by the study. The period covered by this study is Twenty eight (28) data from 2012 to 2018. The scope begins with 2012 because that was the year that Jaiz Bank Plc began full business operations after obtaining licence from CBN in 2011 and the data are all available in the web site of Nigerian stock exchange.

3.4 Techniques for Data Analysis

Data analysis involves the breaking down and ordering of information obtained through research to reveal trends or patterns of associations between variables under examination. Methods or techniques of data analysis are the simply statistical tools or process of collecting, organizing, analyzing and interpretation of data collected for the study. There are many techniques that researcher can use to analyse data collected. Data extracted from the financial reports of Jaiz Bank Plc from 2012 to 2018, these data were sorted out using *Microsoft Excel (Version 2010)*

and analysed using *SPSS Version 22* for descriptive and inferential analyses in the study respectively.

3.4.1 Descriptive Statistics

Descriptive statistics is the term given to the analysis of data that helps describe, show or summarize data in a meaningful way such that, patterns or meanings might emerge from the data. Descriptive statistics do not, however, allow researchers to make conclusions beyond the data analysed (Babbie, 2009). Descriptive statistics are used to describe the basic features of the data in a study. Descriptive statistics provide simple summary about the variables and their measures. Descriptive statistics is the term given to the analysis of data that helps us to describe, show or summarize data in a meaningful way such that, for example, patterns might emerge from the data. They are simply way to describe this study's data.

Descriptive Statistics are used to present quantitative descriptions in a manageable form. In a research study we may have lots of measures. Or we may measure a large number of people on any measure. Descriptive statistics help us to simplify large amounts of data in a sensible way. Each descriptive statistic reduces lots of data into a simpler summary. The descriptive statistics intend to be used for the propose of summarizing and reporting data used in this study are mean, minimum, maximum, standard deviation of number of observations. The mean which is often referred to as the "average" and in reality, is the "arithmetic mean". In this study, we use mean to add all the numbers (ratios) per variable and divide it by the number of data points (that is years of the observations).

Standard deviation was used to set control limits among the variables under study within the observed period. It is a measure that is used to quantify the amount of variation or dispersion of a set of data values (*Bland & Altman, 1996*). It should be noted that, low standard deviation indicates that the data points tend to be close to the mean (also called the expected value) of the set, while a high standard deviation indicates that the data points are spread out over a wider range of values. Finally, the maximum and minimum, also kwon as largest observation, and smallest observation, are the values of the greatest and least elements of a sample data used in this study. They were used basically to summarise data used in this study.

3.4.2 Correlation

Correlation analysis measures the relationship between two variables. The resulting value (called the "correlation coefficient") shows if changes in one variable will result in changes in the other variables. When comparing the correlation between two variables, variable one is called the "dependent" variable and the other the "independent" variable. The correlation coefficient can range between ±1.0 (plus or minus one). A coefficient of +1.0, a "perfect positive correlation," means that changes in the independent item will result in an identical change in the dependent variable. A coefficient of -1.0, a "perfect negative correlation," means that changes in the independent variable will result in an identical change in the dependent variable, but the change will be in the opposite direction. A low correlation coefficient (e.g. less than ±0.10) suggests that the relationship between two items is weak or non-existent. A high correlation coefficient (i.e., closer to plus or minus one) indicates that the dependent variable will usually change when the independent changes.

3.4.3 Regression

Regression analysis is a statistical process for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables or 'predictors'. Regression analysis generates an equation to describe the statistical relationship between one or more independent variables and the dependent variable. Regression coefficients represent the mean change in the dependent variable for one unit of change in the predictor variable while holding other independent in the model constant.

In summary, it is very important to note that, descriptive statistics was used in summarizing and reporting the data extracted from the annual reports and accounts of the sampled company the way it is. Similarly, correlation analysis was employed in establishing the nature and direction of the relationship between dependent and independent variables of the study. Finally, hypotheses developed were tested using p-value approach. For the purpose of hypotheses testing in this study, the null hypothesis were rejected in favor of the alternative hypothesis when *P-value* is less than (or equal to) α. But, the study intends to rejects null hypothesis when the *P-value* is greater than α. Hence, the study used 5% (0.05) as α popularly known as level of significant throughout the statistical computations.

3.5 Model of the Study

With respect to econometric model specification, the analysis was carried out within a secondary data estimation framework. The preference of this estimation method is not only because it enables a cross-sectional time series analysis which usually makes provision for broader set of data points, but also because of its ability to control for heterogeneity and endogeneity issues. Hence, panel data estimation allows for the control of individual-specific effects usually unobservable which may be correlated with other explanatory variables included in the specification of the relationship between dependent and explanatory variables (Hausman & Taylor, 1981). Since this study contained multiple independent variables (CTRM, LTRM& OPRM), Multiple Linear Regression (MLR) model is adopted .Multiple linear regression attempts to model the relationship between two or more explanatory variables and a response variable by fitting a linear equation to observed data. Every value of the independent variable *x* is associated with a value of the dependent variable. Multiple linear regression (MLR) is a statistical technique that uses several explanatory variables to predict the outcome of a response variable. The goal of multiple linear regression (MLR) is to model the relationship between the explanatory and response variables (*Warne, 2014*).The model for MLR, given n observations, is:

$$Y_t = \beta_0 + \beta_1 x_{t1} + \beta_2 x_{t2} + ... + \beta_p x_{tp} + \varepsilon$$

$$\text{where } t = 1,2, ..., n$$

Where:

$\mathbf{Y_t}$ = dependent variable ----- PER

$\mathbf{X_{t1}}$ = independent variable – CR

$\mathbf{X_{t2}}$= independent variable – OR

$\mathbf{X_{t3}}$= independent variable – LR

$\boldsymbol{\varepsilon}$= random error in prediction, that is variance that cannot be accurately predicted by the model. Also known as residuals

$\boldsymbol{\beta_0}$ = y-intercept at a time.

$\boldsymbol{\beta_1}$= regression coefficient that measures a unit change in the dependent variable when$\mathbf{X_{t1}}$ changes – change in PER when CR changes

β_2 = coefficient value that measures a unit change in the dependent variable when X_{t2} changes – change in PER when OR change

The study's models are in line with Imane(2014), Soyemi, Ogunleye, &Ashogbon (2014); and Ariffin& Kassim (2009). To this end, the linear model, in a functional form, is stated as follows:

PER = *f* (CR, OR, LR) …….....…….. (1)

The econometric form for the models of the study is specified as follows:

$PER_t = \beta_0 + \beta_1 CR_t + \beta_2 OR_t + \beta_3 LR_t + \mu$ .....……. (2)

Variables Description:

PER = Profit Expense Ratio

CR = Credit Risk

OR = Operational Risk

LR = Liquidity Risk

3.5 Variables of the Study and their Measurements

For the purpose of this study, variables are grouped into two: dependent and independent variables. The dependent variable is the financial performance and the independent/explanatory variables are credit, operational and liquidity risks of the bank. These variables alongside their measurements and justification are explained below (See Table 3.1 below).

3.5.1 The Dependent Variable

The dependent variable is the financial performance. The most widely and acceptable determinants of financial performance is the profitability as supported by Fayed (2013) and Jawadi et al. (2014). Profitability is one of the widely used performance indicators to measure the performance of any business. Like all other business, banks earn profit when their income is more than their expenses. Profitability ratios depict banks overall performance and efficiency (See Table 3.1 below).

3.5.2 The Independent Variable

The independent variable of the study is risk management. Risk management for the purpose of this study refers to the practice of identifying potential risks in advance, measuring and analyzing

them and taking preventive steps to avoid or reduce the adverse effects or anticipated risk (See Table 3.1).The measurement of each of the variables is given in table 3.1

Table 3.1: Study's Variables and their Measurements

S/N	Names	TAG	Variables	Measurement	As Used by
1	Profit Expense Ratio	PER	Dependent	Dividing profit after tax and other deductions by total expenses (i.e. profit ÷ total expense	Imane (2014)Moin (2008) and El-Massah& Al-Sayed (2015)
2	Credit Risk	CRM	Independent	Ratio of Total Debt to Total Assets	Imane (2014)
3	Operational Risk	ORM	Independent	Operating Income/Total Assets	Imane (2014) and Hussain, A., Ihsan, A., & Hussain, J. (2016)
4	Liquidity Risk	LRM	Independent	Dividing Total Investment/Financing by Total Customer's Deposit	Imane (2014) and Iqbal (2012)

Source: Generated by the Researcher

CHAPTER FOUR

RESULTS PRESENTATION AND DISCUSSIONS

4.1 Introduction

This chapter presents and interprets the data generated for the purpose of achieving the research objectives of this study. The data relating to each of the statistical hypotheses of the study were presented and analyzed. The data for measuring both risk management and Bank performance were extracted from financial reports of Jaiz Bank Plc to determine the effects of risk management as independent variable on the financial performance as dependent variable. Specifically, this chapter starts with providing descriptive statistics of all the proxies used to measure dependent and independent variables, correlation results and then the regression result. The hypotheses of the study were also tested and inferences there from. In addition, the implications of the findings were explained.

4.2 Descriptive Statistics

This section provides summary of statistics for the variables (proxies) used in this study. The summary statistics include measures of central tendency, such as mean, measures of dispersion (the spread of the distribution) such as the standard deviationof both the dependent variable and explanatory variables. This section shows the summary statistics of the variables in order to comprehensively appreciate the nature of data as well as the results therein.

Table 4.1: Descriptive Statistics

	Mean	Std. Deviation	N
PER	.0618803	.04325864	28
CR	.0859581	.03044943	28
OP	.8702071	1.26878875	28
LR	.5936215	.83341370	28

Source: Generated by the Researcher from SPSS version 22

With respect to Profit Expense Ratio (PER), Table 4.1 shows the mean score of .0618803 with standard deviation of .04325864. These values indicate the level of dispersion within the period of the study. These statistics implies that, the management of Jaiz Bank Plc was able to maintain low cost to income ratio in certain financial years under the study; while, the bank failed to

achieve that in other years. This indicates that, the potential stakeholders and even existing shareholders will use these indictors to understand the fluctuating nature of the bank's financial performance with respect to their ability to consistently lower yearly cost to net income.

Notwithstanding, Table 4.1 shows that the average score of Credit Risk (CR) is .0859581 and its standard deviation is .03044943 which indicates high level of dispersion of Jaiz Bank Plc within the study period. These show that, the management of Jaiz Bank Plc was able to maintain the average of 8.59581% managerial efficiency while managing its credit risk throughout the period under study. In others words, the management of Jaiz Bank Plc was able to understand and manage its failure of their counterparties or obligor on their either unwilling to perform on an obligation. Meaning that, the management of Jaiz Bank Plc since commencing its full operations in 2012 up to the time of this study (2018) was able to maintain the effective percentage realized by the bank within the study period of the study as shown in Table 4.1. Hence, better and higher credit risk management efficiency may reduce liquidity crises ideally and also improve fairly the quality of Jaiz Bank Plc assets within short-term period.

Furthermore, Table 4.1 shows that the mean score for Operational Risk (OR) is .8702071 and its standard deviation is 1.26878875; which indicates moderate level of dispersion within the study period. However, these statistics indicate that while Jaiz Bank Plc is highly effective in some years under study to effectively manage its operational risk; in others quarters the effectiveness level is moderate. Based on these statistics, it is encouraging that the management of Jaiz Bank Plc should highly understand, maintain and manage the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events (other than reputational risk or the risk resulting from strategic decisions). This is so because; the average management effectiveness on OR shown in Table 4.1 is 87.02071% out of 100%. This calls for maintaining good measures and sustain action by the management team of the bank; if at all the bank wants to prevent increases in the bank's operating cost or decreases in its revenue.

Finally, the descriptive Table 4.1, the average score of the Jaiz Bank Plc within study period on Liquidity Risk (LR) is .5936215 with standard deviation of .83341370. These show low level of dispersion within years under study. This dispersion explains that, the ability and capability of Jaiz Bank Plc to convert its assets into cash at the face value and meet the demands of customers,

borrowers and depositors at the time they need it is reasonably better. Hence, highest liquidity risk management ratio realized within the study period is 83.341370. In other words, Jaiz Bank Plc within short-term period could not face potential loss as a results of the Bank's ability either to meet its obligations or to invest fund increases in assets as they fall due without incurring unacceptable costs or losses.

4.3 Correlation Results

This section presents correlation matrix between dependent variable (i.e. financial performance-PER) and independent variables (CR, OR& LR). The correlation matrix results shows the relationship between all pairs of variables (proxies) in the regression model; the relationship between all explanatory variables individually with explained variable and the relationship between all the dependent variables themselves. This gives an insight into the magnitude of the pairs of the dependent variables.

It is very important for readers to understand that, Table 4.2 below presents correlation matrix (i.e. Pearson's correlation) between one variable to another as well as among the variables of the study. The Table 4.2 provides correlation results between dependent and independent; independent and independent variables as the case may be.

Table 4.2: Correlation Results

Correlations

		PER	CRM	OPM	LRM
Pearson Correlation	PER	1.000	-.829	-.723	-.044
	CR	-.829	1.000	.400	.419
	OP	-.723	.400	1.000	.076
	LR	-.044	.419	.076	1.000
Sig. (2-tailed)	PER	.	.000	.000	.411
	CR	.000	.	.017	.013
	OP	.000	.017	.	.351
	LR	.411	.013	.351	.
N	PER	28	28	28	28
	CR	28	28	28	28
	OP	28	28	28	28
	LR	28	28	28	28

Source: SPSS (V22) Computation by the Researcher (2018). NB: * means Correlation is significant at the 0.05 level (2-tailed).

4.3.3 Relationship Between Profit Expense Ratio (PER) and Independent Variables (CR, OR, & LR)

As presented in Table 4.2, the correlation matrix shows that the correlation coefficient between PER and CTRM is -.829 (-82.9%); between PER and OPRM is -.723 (-72.3%); between PER and LTRM is -.044 (-4.4%).

The above correlation results indicate that, there is significant negative relationship between Profit Expense Ratio (PER) and CR, OR& LR. This negative relationship implies that, less managed risks faced by the management of Jaiz Bank Plc does not translate into higher financial performance in terms of Profit Expense Ratio (PER) and vice versa. However, there is a weak negative relationship between PER and LR.

4.4 Regression Results

In this section the study employed panel data estimation method to examine the impact of risk (CR, OR& LR) on the financial performance (PER) from 2012 to2018. This section contains the Multiple linear regression results in line with the regression models of the study (see section 3.4.4 above). It is very important to note that, discussions based on the results found under each and everytable which are provided in this section. This is done in order to ensure sequential and systematic presentation of results and establishing correlation between the variables under study.

The researcher made statistical decisions based on the significance level: if the significance level (p-value) is less than 5% ($P < 0.05$) we conclude that the result in a way that there is a significant impact or effect among determinants of risk management (i.e. CTRM, OPRM &LTRM) and that of Financial Performance. But when (p-value) is greater than 5% ($P > 0.05$) this study concludes that explanatory variable (CTRM, OPRM& LTRM) does not significantly explain variation of the dependent variable for instance profit expense ratio (PER). The results of regression analysis output of the study are presented in this section. This was performed using the sorted data and the results interpreted according to the R values, R2 values, the beta values and F ratio at the 95% level of significance.

4.4.1 Effect of Independent Variables (CR, OR&LR) on PER

This section presented statistical results with respect to R Square, Adjusted R Square, R Square Change, F-values, and P-values. These statistics help the study in understanding percentage (%) of variability in the PER accounted for by all of the IVs together (it's a multiple R-square). The F-test and p-value help in determining whether the model is a good fit for the data.

Table 4.3: Model Summary showing results for Explanatory Variables as predictors of Financial Performance (PER) in Jaiz Bank Plc

Model Summary				
Model	R	RSquare	Adjusted RSquare	Std. Error of the Estimate
1	.976[a]	.953	.947	.00995429
a .Predictors (Constant), CR ,OP, LR				

Source: Generated by the Researcher from SPSS version 22

Table 4.3 above indicates R value of .976 for the model (PER), which shows strongest positive relationship among risk factors (CR, OR&LR) and financial performance measured by PER of Jaiz Bank Plc under the study period. Similarly, Table 4.3 above shows R Square values of .953 which explains the determination in PER of Jaiz Bank Plc within the study period by risk factors (CR, OR and LR) all together is accounted for 95.3%. Furthermore, Table 4.3 displayed adjusted R square values of .947 for the model which shows the likelihood that the risk factors (CR, OR and LR) will affect PER is 94.7%.

Table 4.4: Analysis of Variance (ANOVA)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.048	3	.016	161.968	.000[b]
	Residual	.002	24	.000		
	Total	.051	27			
a. Dependent Variable: PER						
b. Predictors:(Constant),LR,OP,CR						

Source: GeneratedbytheResearcherfromSPSSversion22

According to the results of ANOVA in Table 4.4, the F-statistic for Model 3 (PER) is 161.968. Similarly, the p-value for the model is .000. The value indicates that the model is perfectly good and fit for the data of the study towards determining the effects of explanatory variables on PER of Jaiz Bank Plc.

Table 4.5: Regression Coefficient

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.161	.006		27.323	.000
	CR	-1.123	.076	-.790	-14.797	.000
	OP	-.015	.002	-.432	-8.876	.000
	LR	.017	.003	.320	6.511	.000

a. Dependent Variable: PER

Source: Generated by the Researcher from SPSS version 22

According to regression coefficient Table 4.5 above, it can be observed that the beta coefficients under unstandardized coefficients CR, OR andLRare-1.123, -.015 and .017 respectively. These statistics proved that, Credit Risk and Operational Risk affect profit expense (ratio)PER negatively while Liquidity RiskaffectsPER of Jaiz Bank Plc positively; hence, these explanatory variables (CR& OR) have negative significant effect on financial performance of Jaiz Bank Plc measured by PER within the study period. On the other hand, Liquidity Risk (LR) has significant positive effect on financial performance of Jaiz Bank Plc measured by PER.

These results proved that, credit and operational risks will result to low maintenance of cost to income ratio as financial performance determinant (PER) and vice versa. But higher efficiency and effectiveness of the management of Jaiz Bank Plc in terms of liquidity risk will leadto better financial performance in terms of Profit Expense Ratio (PER) within the period of the study and vice versa.

Based on the above results (beta coefficients), the regression line for the first model is as follows:

$$PER = .161\text{-}1.123_{CR}\text{-}.015_{OR} + .017_{LR...} \ldots\ldots (3)$$

From the above, the regression equation is extracted as follows:

$$PER = .161 - 1.123 - .015 + .017 = -.96 \ldots\ldots (4)$$

The equation shows that, the combination of independent variables (CR, OR & LR) have negative effect on financial performance of Jaiz Bank Plc measured by Profit Expense Ratio (PER) based on the data at hand..

4.5 Hypotheses Testing

This section contains test of hypotheses developed in this study. It is very germane to note that, P value approach is used for the purpose of hypotheses testing. The *P*-value approach involves determining "likely" or "unlikely" by determining the probability — assuming the hypothesis were true — of observing a more extreme test statistic in the direction of the alternative hypothesis than the one observed. It is very important to note that, 0.05 was used as margin error or level of significance throughout the analysis of this study, as such; 0.05 is used as α (level of significance) for the purpose of testing all the hypotheses of this study. Therefore, the study rejects hypothesis whenever p-value is less than 0.05 (α). Similarly, the study failed to reject the hypothesis if p-value is greater than 0.05 (α).

Based on the hypotheses testing summarized in Table 4.12 below, it was found that all the two of three null hypotheses tested were rejected because they failed to provide sufficient statistical evidence to stands true while one stood true. Hence, this rejection decision implies the acceptance of the following alternate for the two null hypotheses and acceptance of null hypothesis for being statistically insignificant:

H_{i0}: Credit Risk Management (CTRM) does not have significant effect on the financial performance of Jaiz Bank Nigeria Plc

H_{i2}: Operational Risk Management (OPRM) does not have significant effect on the financial performance of Jaiz Bank Nigeria Plc

H_{i3}: Liquidity Risk Management (LTRM) does not have significant effect on the financial performance of Jaiz Bank Nigeria Plc.

The equation shows that, the combination of independent variables (CR, OR&LR) have negative effect on financial performance of Jaiz Bank Plc measured by Profit Expense Ratio (PER) based

on the data at hand. In other words, profit expense ratio as market based measure is used in the study due to the nature of Jaiz bank Plc which is market based in nature. The results are statistically significant in themodel which led to summarizing the hypotheses testing as shown in table 4.6.

Table 4.6: Summary of Hypotheses Testing

H_o	Statements	P-Value	α (0.05)	Decision Criteria	Decision	Implications
H_{o1}	Credit Risk Management (CTRM) does not have a significant effect on the financial performance of Jaiz Bank Nigeria Plc	.000	0.05 (5%)	P-Value > α	H_{o1} is Rejected	H_{i1} is Accepted
H_{o2}	Operational Risk Management (OPRM) has no significant effect on the financial performance of Jaiz Bank Nigeria Plc	.000	0.05 (5%)	P-Value < α	H_{o2} is Rejected	H_{i2} is Accepted
H_{o3}	Liquidity Risk Management (LTRM) has no significant effect on the financial performance of Jaiz Bank Nigeria Plc	.000	0.05 (5%)	P-Value < α	H_{o3} is Rejected	H_{i3} is Accepted

***Source*:** Developed and Designed by the Researcher based on PER equation results in the study

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents summary, the conclusions that are drawn there from and the recommendations that are proffered. Specifically, this chapter comprised of three sections: Section one provides the summary; section two presents the conclusions and finally section three proffer recommendations on the conclusions of the study. Finally, frontiers for further research were also recommended.

5.2 Summary

Banks generally operate in environments where risk changes often, hence the need for an efficient risk management process, categorized by risk type to be able to address the specific risk factors. There have been several presentations in different fora, on risk management practices in banks, especially by practitioners. These presentations are largely theoretical and not empirical. It is expected that good risk management would result to greater performance through higher profit, good productivity and increased capital investment. The banks' motivation for risk management comes from the tendency of risks leading to bank underperformance. If operational risk is not addressed systematically it can result into inconsistent performance and earnings for the stakeholders and impact banks' revenues and net worth sometimes with disastrous systemic consequences

The magnitude of the gain or loss that results from a particular exchange rate change is transaction exposure which refers to foreign exchange loss or gain on transaction already entered into and denominated in a foreign currency. Furthermore, Islamic banks are constrained in using some of the risk mitigation instruments that their conventional counterparts use as these are not allowed under Islamic commercial law. There have been a fairly small number of academic studies available on Islamic banks about risk management. However, this study creates uniqueness with the extent of influence involved towards financial performance. Uncertainty and volatility are the main attributes of today's nations' economies. Accordingly, the main problem of this research can be summarized in the following question: what are the effects of effective

management of three various types of risk faced by an Islamic bank on their financial performance?

The review of the existing literature shows that there have been several studies on risk management and financial performance globally. But, these studies concentrated mainly on comparative analysis between Islamic and conventional banks in terms of risk management and financial performance. Existing studies within Nigeria heavily neglected scientific research on Islamic banks in Nigeria in terms of their risk management and how it affects their financial performance. None of the studies has dealt with the comprehensive risk management practices that address all the aspects of business risks including credit, liquidity and operational management risks and their effect on the financial performance of the Islamic banks in Nigeria. The present study is therefore a child of necessity as it uniquely examined the effects of risk management on financial performance of Islamic banks in Nigeria with reference to Jaiz Bank Ltd.

The study adopted ex-post facto research design as a guide in examining the effects of effective risk management on financial performance in Jaiz Bank. Also, quantitative research method was adopted to guide the study in sourcing and eliciting required data for the study. Data were sourced from financial reports of Jaiz Bank Plc for the period covered by the study. The period of the study is twenty-eight (28)data from 2012 to2018.

The financial reports of the bank were used in extracting information used to operationalize the study variables. The variables of the study were grouped into dependent and independent variables. The dependent variable is the financial performance and is measured by Profit Expense Ratio (PER). The independent variable is risk management, which were measured by Credit Risk Management (CRM), Operational Risk Management (ORM), and Liquidity Risk Management (LRM). Data used to measure this variable are statistically analysed using descriptive statistics (for describing the study's data), correlation (for explaining relationship among variables) and regression analysis (for establishing inferential effects). Hypotheses of the study were tested using p-value approach at 0.05 benchmark. Microsoft Excel (2010) was used for the purpose of sorting, extraction and computation of proxies; while, SPSS version 22 was

used to analysed the data. Based on the data presented in the previous chapter, the following are the major findings of the study:

1) Credit risk management practices have a negative and significant statistical impact on performance, which means that the Jaiz bank suffered from the credit risk during the study period and failed at the same time in managing this risk. This is aligned with the finding of Imane (2014),Saeed (2015) and Monga'are (2015)
2) Operational risk management practices have a negative and significant statistical impact on performance, which means that these banks suffered from the operational risk during the study period and failed at the same time in managing this type of risk. This is aligned with the finding of Imane (2014), Saeed (2015) and Mong'are (2015).
3) Finally, Liquidity risk management practices show a positive and significant statistical impact on banks' performance which, means that the Jaiz bank does not suffer neither from the liquidity risk during the study period nor from managing this type of risk. This result indicates that the Jaiz bank applied the best risk management practices concerning the liquidty risk. This is aligned with the finding of soyemi et'al (2015).

5.3 Conclusion

Risk management in Islamic banks is significant and become more complicated compared to conventional banks because of their unique contractual features and general legal environment. Specific aspects and diversity of contract could raise types of risk in Islamic banks. Thus risk management in financial institution has attracted more attention from the regulators, practitioners and also academics over the last decade Imane (2014). Another reason is due to the huge losses incurred by a number of financial institutions as a result of the malfunctioning of their risks management. Therefore, this study aimed to assess the effects of risk management on financial performance of Jaiz bank. The results of this study revealed that:

First, credit risk management practices have a negative and significant statistical effect on financial performance, which means that this Jaiz bank suffered from the credit risk during the study period and failed at the same time in managing this risk.

Second, operational risk management practices have a negative and significant statistical impact on financial performance, which means that this Jaiz bank suffered from the operational risk during the study period and failed at the same time in managing this risk.

Finally, liquidity risk management practices show a positive and significant statistical effect on the bank's financial performance which, means that the Jaiz bank does not suffer neither from the market risk nor from managing this type of risk during the study period. This result indicates that the Jaiz bank applied the best risk management practices concerning the liquidity risk.

5.4 Recommendations

Based on the major findings and concluded issues, the following are recommended:

1) The central bank should establish a separate entity that regulates and supervise the Islamic banks, to be responsible for regulating the banks in terms of Shariah compliance principles for managing its credit risk and other issues.
2) Governments should open the door to scholars for more financial innovations that will comply with Islamic Shariah principles in Islamic banks' operation.
3) Finally, the management and shareholders should continue to make risk management policies efficient by imposing efficient liquidity risk management (at least 10 percent of liquid assets) since it influences financial performance positively.

5.5 Suggestions for Further Studies

The present study examined the effect of risk management on financial performance of Islamic banks in Nigeria with reference to Jaiz Bank Plc. The following areas are suggested for anyone who is interested to further in this area:

1) A Comparative Study on Effectiveness of Risk Management between Conventional Bank(s) and Islamic Bank(s) in Nigeria should be an interesting area that requires empirical investigation in Nigeria.
2) A similar study should be carried out using primary data.
3) A Comparative study on Effectiveness of Credit Risk Management between conventional and Non-Interest Based Banks in Nigeria might be an interesting area that requires empirical investigation in Nigeria.

4) A Comparative study on Effectiveness of Liquidity Risk Management between conventional and Non-Interest Based Banks in Nigeria might be an interesting area that requires empirical investigation in Nigeria.
5) A Comparative study on Effectiveness of Operational Risk Management between conventional and Non-Interest Based Banks in Nigeria might be an interesting area that requires empirical investigation in Nigeria.

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APPENDIX A

SPSS V22 RESULTS

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
	CR,OR, LR	.	Enter

a. Dependent Variable: Profit Expense Ratio

b. All requested variables entered.

A1: DescriptiveStatistics

Descriptive Statistics			
	Mean	Std. Deviation	N
PER	.0618803	.04325864	28
CR	.0859581	.03044943	28
OR	.8702071	1.26878875	28
LR	.5936215	.83341370	28

A2: Model Summary

Model Summary				
Model	R	RSquare	Adjusted RSquare	Std. Error of the Estimate
1	.976[a]	.953	.947	.00995429
a. Predictors: (Constant),CR, OR, LR				

A3: Analysis of Variance

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.048	3	.016	161.968	.000[b]
	Residual	.002	24	.000		
	Total	.051	27			
a. Dependent Variable: PER						
b. Predictors:(Constant),CR, OR, LR						

A4: Correlation Results

Correlations					
		PER	CRM	OPM	LRM
Pearson Correlation	PER	1.000	-.829	-.723	-.044
	CR	-.829	1.000	.400	.419
	OR	-.723	.400	1.000	.076
	LR	-.044	.419	.076	1.000
Sig.(2-tailed)	PER	.	.000	.000	.411
	CR	.000	.	.017	.013
	OR	.000	.017	.	.351
	LR	.411	.013	.351	.
N	PER	28	28	28	28
	CR	28	28	28	28
	OR	28	28	28	28
	LR	28	28	28	28

A5: RegressionResults(PER and CR, OR & LR)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.161	.006		27.323	.000
	CR	-1.123	.076	-.790	-14.797	.000
	OR	-.015	.002	-.432	-8.876	.000
	LR	.017	.003	.320	6.511	.000
a. Dependent Variable: PER						