ANALYSIS OF FINANCIAL RISK AND FINANCIAL PERFORMANCE OF BANKING SECTOR OF PAKISTAN

Submitted by:

Imtiaz Ahmad
M.Phil Economics and Finance

Supervised by:

Dr. Attiya Yasmin Javed

Professor, PIDE

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CERTIFICATE

This is to certify that this thesis entitled **"Analysis of Financial Risk and Financial Performance of Banking Sector of Pakistan"** submitted by **Mr. Imtiaz Ahmad** is accepted in its present form by the Department of Economics and Finance, Pakistan Institute of Development Economics (PIDE) Islamabad as satisfying the requirements for partial fulfillment of the Degree of Master of Philosophy in Economics and Finance.

Supervisor:

Dr. Attiya Yasmin Javed
Professor
PIDE,
Islamabad.

Internal Examiner:

Dr. Ahsan ul Haq
Assistant Professor,
PIDE
Islamabad.

External Examiner:

Dr. Muhammad Tariq Majeed
Assistant Professor,
QAU,
Islamabad.

Head, Department of Economics and Finance:

Dr. Ahsan ul Haq
PIDE,
Islamabad.

August 30, 2018

AUTHORSHIP STATEMENT

I Imtiaz Ahmad solemnly declare and affirm on oath that I myself have authored this M.phil Thesis with my own work and means, and I have not used any further means except those I have explicitly mentioned in this report. All items copied from internet or other written sources have been properly mentioned in quotation marks and with a reference to the source of citation.

Imtiaz Ahmad

DEDICATION

I want to dedicate this effort to my beloved Parents, Grand Parents and my all friends whose prayers are always with me,

(May ALLAH bless them)

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CHAPTER No. 1

INTRODUCTION

1.1 Background of the Study

The services of the banking sector are used for financing many businesses. In the last decade of the 20th century, some important changes have been noticed in the banking industry. Different strategies are used to increase the efficiency and productivity of the banking sector which also increase the level of risks for banks (Panday, 2009). Banks plays its role in the economic development of the country as well. With the advancement of technology, many changes are observed in the banking sector, which is also challenging. To perform well in the market banking sector adopted many different strategies. According to Akhtar (2007), Pakistani banks are facing new challenges in its business operations which have changed the nature and types of risk. To maintain a competitive advantage and to improve overall performance, banks are seeking ways to understand and aggressively manage the risks that can encounter their business.

In terms of business, the risk is termed as a financial risk. Financial risk affects the performance of the organization badly. As banking sector is involved in advancing/funding, so their financial risk may affect them by affecting their funding or bringing a decrease in their profit, therefore, financial risk can badly affect the capability of banks to meet their business objectives efficiently, (SBP 2009), as banking sector also plays its role in the economic development of the country. So, if they are affected then obviously the development of the country will be affected. The financial risk can be divided into three subcategories i.e. Liquidity risk, Credit risk, and Interest rate risk (Soh, 2009).

Liquidity risk is a firm's inability to meet its short-term debt obligations, thus suffering extremely large losses. This usually occurs because of a firm's failure to convert its current assets into cash without experiencing capital losses. Credit risk is the risk that a financial loss will be experienced if another party to a transaction does not fulfill its financial commitments in a timely manner. Whereas Interest rate risk is the possibility that the value of an investment will decline as the result of an unexpected change in interest rates.

According to Cumming and Hirtle (2001), the earlier literature on financial risk has focused on one type of financial risk. Whereas the interdependence of these risks has been ignored, but changes in the environment, the types of risks are changed and the exposure of banks to these types of risk has badly affected the performance of banks. Therefore, a need to control the financial risk was observed. (Santomero, 1997).

Market risk arises due to movement in prices of stocks. Directional risk is caused due to movement in stock price, interest rates and more. Non- Directional risk, on the other hand, can be volatility risks. Credit risk arises when one fails to fulfill their duties towards their counterparties. Sovereign risk usually arises due to difficult foreign exchange policies. Settlement risk, on the other hand, arises when one party makes the payment while the other party fails to fulfill the obligations. Liquidity risk arises out of inability to execute transactions. Liquidity risk can be classified into Asset Liquidity Risk and Funding Liquidity Risk. Asset Liquidity risk arises either due to insufficient buyers or insufficient sellers against sell orders and buys orders respectively. Operational risk arises out of operational failures such as mismanagement or technical failures. Operational risk can be classified into Fraud Risk and Model Risk. Fraud risk arises due to the lack of controls and Model risk arises due to the incorrect model application. Legal Risk arises out of legal

constraints such as lawsuits. Whenever a company needs to face financial loses out of legal proceedings.

There are many risk factors that affect the business. The interest rates and foreign exchange rates, Liquidity risk, operational risk, and legal risk. Risk management process involves two steps: First to recognize the risk and Second, different methods are used to measure the risk, which involves the mathematical and economic models (Gakure, 2012). The economic events have deep linkage with each other, any economic event anywhere affect other countries as well. We will try to manage this complex task regarding banking sector (Lessard and Zaheer, 1990).

The mathematical and economic model used by the banks should be according to the type of risk first bank should use an effective method to know the type of risk and then the remedy used should follow it (Kromschroder and Luck 1998). Management of the risk is not an easy task it is considered the most complex situation. So, there is a need for developing a compact formula, to deal with the financial risk. The different types of risk management approaches have been introduced by the Basel committee on banking supervision. The three of them are BASEL I accords, BASEL II accords and BASEL III accords. They are used worldwide for tracking, recording and exposing the financial risk (Senserma and Jayadev, 2009). Pakistani banks used BASEL II accords as a benchmark for capital adequacy ratio.

1.2 Broader Area of the Study

The major objective of a business is to maximize shareholder's wealth which is possible through corporate governance, other purposes include increasing profit. Same is the case of Pakistani commercial banking sectors. The banking sector in Pakistan is extending its services by offering different products to its customers. This has increased the financial risk of banks in Pakistan. The financial risk may arise due to various

reasons one of which is solvency. The 2007 financial risk has increased this possibility so the Pakistani banks avoid those financial activities which involve risk of heavy losses which may be due to unstable political, law & order & economic situation in the country (Shafique & Nasar, 2010)

Banking sector faces financial risk; this has an excessive effect on the performance of the banks, if banks handle this situation positively this will have a positive effect on the economy otherwise negative. Both types of results are obtained in different research studies. Positive effects of financial risk on the performance in studies of Barth, Nolle and Yago (2003) Molyneux and Thornton (1992) are observed and negative effects in the studies of Bourke (1989), Pasiouras and Kosmidou (2007) are experienced. There may be various factors affecting the performance of the banking sector, i.e. Interest rate, exchange rate, credit rate, market rate etc. (Athanasoluo, Brissmiss, and Delos, (2006).

The challenges experienced by the economic development of different nations are increasing with the passage of time and leads the banking sector to more risk. The failure of risk management in the banking sector is also an important reason for financial crises (Vazques & Federico, 2012)

1.3 Focused Area of the Study

Financial risk rises the possibility of loss due to which the bank`s ability to achieve its goal decreases. Financial risk arises due to the uncertainty of different events like interest rate, exchange rate, credit quality, liquidity position. (Fah and Nasr, 2008). Financial risk, most of the time is linked with each other i.e. Exchange rate is strongly linked with the interest rate, so it should be considered while framing a management system (Saunders, Cornett and McGraw, 2006). There are many variables which can influence the financial performance of the commercial banks. Some of them are the size

of the banks, the attitude of the bank's managers towards the risk, risk management and financial risk (Shen, Chen, Kao and Yeh 2009).

In this research study, the major financial risks (Market risk, Credit risk, and Liquidity risk) and corporate governance are investigated to check the performance of commercial banks of Pakistan.

1.3.1 Liquidity Risk

Liquidity is the firm`s ability to match its liabilities. Liquidity of commercial banks increases if commercial banks are unable to increases its liabilities and they fund its assets with advances. Due to which the ability to attain satisfactory funds by increasing its liabilities or changing its assets into cash to meet the demand of depositor's decreases (Ali, Tabari & Emami, 2013). the liquidity risk can be dangerous for both the capital and the profitability of commercial banks. It is the top priority of commercial banks to manage the liquidity risk in order to maintain sufficient amount of finds which can be used to meet depositor`s demand at a reasonable cost (Maaka, 2013).

The liquidity risk is not good for the capital and profitability of banks. So, one of the top urgencies of commercial banks is to maintain an adequate amount of funds which can be used to fulfill the depositor's demand (Maaka, 2013). Commercial banks are not in favor of extending deposit tenure because it limits the banks' ability of long-term lending and earnings of the banks suffer (Akhtar, 2007).

1.3.2 Credit Risk

Credit risk is the borrower`s inability to repay. This situation results in nonpayment of loans from the borrowers, this causes economic loss to commercial banks (SBP, 2009) the inability of borrowers to repay its loans is not a new situation; the major reason behind it is poor risk management. This results in lower liquidity

position as well as cash flows and profitability of commercial banks. Therefore, credit risk is a major threat to the financial performance of the bank`s failure (Greuning and Bratanvoic, 2009)

The credit operation is the important source of earning in the commercial banks in Pakistan. A large amount of credit money is supported by the strong economic activity in the country. According to Akhtar (2007), credit operations development depends upon growing business activity and regular progress in internal credit reviews; the situation gets improved due to effective management of credit risk over the last few years.

1.3.3 Interest Rate Risk

The risk due to uncertainty in interest rate i.e. it may fluctuate in future. It can be hedged however, it can`t be avoided completely. According to Santomero (1995), two market risks are of great importance to banks, one is the interest rate and other is the exchange rate risk.

The interest rate is also called market risk, the movement of different items in market i.e. foreign exchange rates, equity prices adversely affects the interest rate this results in a direct effect on capital and earning (SBP, 2009) The major reason behind the increase in interest rate is the imperfect relation of interest rate adjustment of interest received on advances and interest paid on deposits. The difference brings some changes in the cash flows and earnings spread due to which assets and liabilities mismatches in the cash flows and interest margin (Wright and Houpt, 1996).

1.3.4 Corporate Governance

The rules framed by the corporate governance safeguard the interest of many stakeholders such as shareholders, management, customers, suppliers, and the government. The framework for attaining the objectives are set by the corporate

government. The board of directors' work for the company as corporate governance. Directors are elected by shareholders. They represent the shareholders of the company. Directors make important decisions. They ensure the accountability and transparency in a company's relationship with its all stakeholders. The purpose of corporate governance is to facilitate effective management and to deliver long-term success of the company. Good corporate governance plays a very important role in the increasing performance of the company.

1.4 Problem Statement

The role of banks in the development of the economy of a country is unhidden as it provides financial services to many business sectors. The performance of the banking sector has impacts on the economy of the country. Therefore, it is important to manage different type of financial risks. The functions of banks expose it to greater risk. The financial performance of commercial banks has been negatively influenced by the different type of risk and an increased level of total risk may lead towards the banking crises (Maaka, 2012). Therefore there is a need to find the relation of these risks with the performance of commercial banks in Pakistan. The problem statement of this research study is

"To study and analyze the impact of financial risk on the financial performance of commercial banks of Pakistan"

1.5 Research Question

Several research studies have been directed to study the financial risk with various aspects of organization operations. The major emphasis of this research study is to investigate the financial risk by relating it to the financial performance of commercial banks. The research study initiated by a series of question which is as follow:

1. Does the liquidity risk influence the financial performance of commercial banks in Pakistan?
2. Does the credit risk influence the financial performance of commercial banks in Pakistan?
3. Does the interest rate risk influence the financial performance of commercial banks in Pakistan?
4. Does the Corporate Governance influence the financial performance of commercial banks in Pakistan?

This study has focused to answer the major determinants of financial performance.

1.6 Objectives of the Study

The chief objective of the present research is to examine the impact of financial risks on the financial performance of commercial banks, to test and confirm the relationship, the particular objective of the study is:

1. To examine the relationship between financial performance and liquidity risk, credit risk and interest rate risk of commercial banks in Pakistan
2. To examine the relationship between financial performance and corporate governance of commercial banks in Pakistan

1.7 Purpose of the Study

What are the effects of financial risk on the banking sector of Pakistan? The relation among various types of risk and the financial performance of Pakistani banking sector is observed upon. The central bank, policymaker may take it into account to design an effective strategy for the growth and development of banks in Pakistan, which in turn will play its role in the economic development of the country. Commercial banks may also take advantage of this research study to understand the variety of financial

risk and device such tools which can be used to manage the risk. The results of this study can be valuable for the management of commercial banks, as it provides some understanding of financial risk along with some recommendations.

CHAPTER No 2:

THEORETICAL BACKGROUND

This chapter reviews the literature relating financial risk to the performance of banks in Pakistan. This chapter is planned as the first part is about theoretical foundation and types of financial risk in the banking sector of Pakistan, the second part is based on empirical reviews on the objective of the study, and the third part is about the theoretical framework. The hypothesis is also discussed in detail in this chapter.

2.1 Theoretical Background

Among the financial institution's banks is the important source of financing, their role in the economy is unhidden. Banks face risk in their operations. The significant risk has been taken by banks on a daily basis while performing their regular operations (Pukeliene and Deksnyte, 2010). The issue of risk-taking has been a central focus of the banking literature, financial risk can be broken down into three main risk parameters i.e. Credit risk, Liquidity risk, and Interest rate risk. The amount of within each of these three financial risk parameters has been assessed the overall financial performance of a bank can be determined. The nature of banking business contains a high risk; therefore the borrowing capacity of business operation is very high than the owner`s equity (Owojori, Akintoye & Adidue, 2011).

There are some regulatory requirements for the banks which they need to consider for measuring the financial risk. This results in a sound financial risk management system and efficient management of financial risk also enhance the bank`s affordability. (Zuk-Butkuviene, Vaituleviene, and Staroselskaja 2014) risk management of financial institution does not mean the complete elimination of financial risk from the banking operation because full elimination of risk is not possible.

Managing the risk depends upon the financial risk through which the performance can be determined. Banking business has high risk. Various risk management techniques are used to manage financial risk there is a need of a strong coordination among SBP and commercial banks so that being a regulatory authority SBP should be aware of the problems being faced by the commercial banks. The purpose of research studies on banking literature is mostly two folded. The first one is linking operational performance and risk, and the second one is linking financial performance and risk.

Some studies on the financial performance of commercial banks and financial risk existed for Japan (Swada, 2010), Pakistan (Akhtar et al., 2011; Arif and Anees, 2012), Nepal (Poudel, 2012), Zimbabwe, (Mugomba et al., 2013), Kenya (Maaka, 2013), Malaysia (Sohaimi, 2013), Iran (Ali et al., 2013). Nigeria (Ogboi & Unuafe, 2013; Adeusi et al., 2013) and Serbia (Marinkovic & Radovic, 2014). The key finding of these research studies indicates the financial capital and equity is negatively influenced by financial risk existed in banks (Sohaimi, 2013).

The evidence from the literature explained that NPL has utilized as the measure of credit risk which also have a negative relation with financial earning and capital of banks (Arif & Anees, 2012).

Profitability of banks lies in the better management of all its expenses. Additionally, the management of liabilities also affects profitability. Financial risk is a crucial problem not only in Pakistan but worldwide.

2.1.1 Liquidity Risk

Liquidity risk plays important role in managing the performance of banks, but sometimes it has an inverse impact on profitability. Some previous research studies stated that liquidity risk has a positive effect on financial performance (Molyneux & Thronton, 1992, Barth 2003). While a few studies found a negative affect (Bourke,

1989; Pasiouras & Kosmidou, 2007). Some studies also explained the diverse effect of liquidity risk (Akhtar 2011, Arif & Anees 2012). It is liquidity ratios which are basically determined in two different ways. First liquidity risk is measured by adjusted assets size which comprises the liquidity ratios such as cash to the total asset (Arif & Anees 2012), cash to total deposits (Shen 2010). In the second method, liquidity risk is measured by net loans to total assets (Paasiouras & Kosmidou 2007). Non-performing loans to total assets (Maaka 2013). First is the adjusted asset size which is composed of liquidity ratio, such as cash to total assets (Berth, 2003; Arif & Anees, 2012), cash to total deposits (Shen, 2010; Mugomba, 2013). Second is adjusted loan size consisting of net loans to total assets (Pasiouras & Kosmidou, 2007) and non-performing loans to total assets (Maaka, 2013)

As per the first method, the higher the liquidity ratio means a higher level of liquidity and results in defenseless against the threat of insolvency. Similarly, according to the second method higher values of loan ratio means more threat.

Akhtar, Ali, and Sadaqat (2011) conducted a study to check the relation of liquidity risk to the solvency of the commercial banks and to check the liquidity risk management by using comparative analysis method between Islamic and conventional banks in Pakistan. They consider the size of the firm as a log of total assets, return on equity, and return on assets, net working capital and capital adequacy ratio. The secondary data collected from 12 banks (Commercial and Islamic), for four years 2006-2009. The findings showed that the size and networking capital to net assets have positive and insignificant relations to liquidity risk. ROA in Islamic banks and CAR in conventional banks have positive and significant relation with liquidity risk.

The development in the bank performance bring some positive changes in the economic sector, the productivity of the whole industry has increased. Ali, Tabari,

Ahmadi, and Emami (2013) conducted a study in Iran to check the liquidity risk on the performance of banks, they used the panel data of 15 Iranian banks from 2003-2010. Two types of variables were used to check the performance, one is the macroeconomic variables and the other is bank related variables. The finding showed that bank-related variables (bank size and assets) and macroeconomic variables (Inflation and GDP) has a positive effect on the performance of the banks.

2.1.2 Credit Risk

Once the bank fails to receive principal amount and interest on loans, this situation leads to credit risk. Poudel (2012) conducted a study to check the relation between bank performance and credit risk. Credit risk was measured by cost per loan asset (CLA), default rate (DR) and capital adequacy ratio (CAR). Data from 31 banks of Nepal was used for a period of 2001-2011. The result suggested that credit rate is an important variable to predict the financial performance of the bank. It has a significant impact on the performance of the bank.

The risk management issue not only impact the financial performance of the bank but it plays a very important role in the progress of different businesses and the economy of the country. Adeusi, Akeke, Adebisi & oladunjoye, (2013) conducted a study to check the relation between credit risk and financial performance of the bank, in Nigeria, panel data estimation was used for the period 2006-2009. Performance of the bank was measured by ROA and ROE. The study shows a significant relationship between the two.

2.1.3 Interest Rate Risk

There is a need to manage the interest rate properly if not managed properly it has a bad effect on banks profitability. (Collins, Maydew and Weiss, 1997). The importance of interest rate was felt after 90`s interest rate risk is not only managed to

minimize the losses but also increase the profit. It is considered as a cost of debt which becomes uncertain when interest rate risk rises. A rise in interest rate influences the bank`s profitability. Peng, Lei and Shu (2003) in their study check the relationship between the interest rate risk and performance, the data for a period 1992-2002 was used.

Profitability was measured by ROA, other variables were a Pre-tax return on assets, net interest margin, and net charges for provisions. Non-interest income, general and administrative expenses. The results show a significant relationship between the interest rate risk and performance.

2.1.4 Corporate governance

In a research study conducted by Robina Iqbal, she investigated the determinants concerned ownership structure and its effect on the performance (2010), these results show that most of the firms have ownership with dominant ownership concentration.

Another study conducted by Sanjai Bhagat says that poor firm performance, the probability of disciplinary management turnover is positively correlated with stock ownership of board members, and board independence. Another study focuses on corporate governance practices among Top 100 public listed companies in Bursa Malaysia and the relationship between corporate governance practices with firm performance. Two corporate governance's indicators (Board size and Board Independence) were chosen in testing the hypothesized relationship between corporate governance practices with firm performance, which was measured by return on asset (ROA) and return on equity (ROE).

Nadeem Ahmed Sheikh, Zongjun Wang, Shoaib Khan, (2013) studied "The impact of internal attributes of corporate governance on firm performance: Evidence from Pakistan". The purpose is to investigate whether internal attributes of corporate governance such as board size, outside directors, CEO duality, managerial ownership, and ownership concentration affect the performance of Pakistani firms. The empirical results indicate that board size is positive, whereas outside directors and managerial ownership are negatively related to the return on assets, earnings per share, and market-to-book ratio. Ownership concentration is positively related to all measures of performance used in this study. CEO duality is positively related to earnings per share only. As far as control variables are concerned, leverage is negatively related to the return on assets, return on equity, and earnings per share. Alternatively, firm size is positively related to all measures of performance. In sum, empirical results indicate that internal governance mechanisms have material effects on firm performance.

2.2 Gap Identification

There are many studies (Fah & Nasir, 2008; Soh, 2009; Fah & Nasir, 2011). That have examined the three financial risks, which are a credit risk, interest risk, and liquidity risk related to the earnings response of the commercial banks and its effects on the stock returns. There are also a few numbers of studies about the analyzing liquidity risk (Akhat, 2011; Arif and knees, 2012; Ali, 2012) and credit risk (Miller and Noulas, 1997; Poudle, 2012; Ogboi & Unsafe, 2013) with respect to financial performance of banks but there is no such study found which examine the effect of these three risks jointly on the bank financial performance specifically in Pakistan. There is also no research on interest rate risk related to the financial performance of banks so there is a lot more to explore by concentrating on financial risk. In this research study, the financial performance of Pakistani banks is the main concern which has

developed rapidly in the last two decades, the financial risk is measured and analyzed as the determinants of bank`s profitability. This study has examined three financial risks in Pakistani banking industry that are liquidity risk, interest rate risk and credit risk.

2.3 Hypothesis Development

Major variables such as liquidity risk, credit risk, and interest rate risk and their relationship with financial performance are discussed in detail. The hypothesis is developed based on this observed relationship. As the quantitative research studies are conducted to understand the effect of independent variables which are liquidity risk, credit risk and interest rate risk on the dependent variables i.e. financial performance of bank (cooper and Shindler, 2001).

2.3.1 Liquidity Risk

The banking business is running on deposits deposited by customers, which directly affect the profit of the organization. The liquidity gap increases when the customers start withdrawing their deposits on a large scale (Maaka, 2013).

When it happens, the commercial banks borrow funds from a central bank or interbank market which will decrease the profit, but when banks have enough liquid assets to avoid liquidity risk to the financial performance of the bank improves (Maaka, 2013).

H1: the liquid assets have a significant positive impact on the financial performance of banks in Pakistan.

Banking sector operates on the deposits, deposited by the customers. Most of the time current assets are used for this purpose. A bank having liquidity problems faces difficulties in assembly demands of depositors. (Arif &Anees, 2012) This may result because of the maturity mismatch between assets and liabilities which create a liquidity

gap. Which in turn can negatively affect the bank profit as liabilities exceeds assets and cot of money rises? This liquidity gap may be mitigated by decreasing the liquidity gap (Plochan, 2007).

High liquidity risk adversely affects the financial performance (Arf & Anees, 2012, Mugombaet at., 2013) therefore:

H2: the liquidity gap has a negative impact on the financial performance of banks in Pakistan.

A certain amount is kept by the commercial banks named as a cash reserve. It is also the requirement of the central bank. The purpose of this amount is to maintain liquidity. Central bank regulation sets the minimum fraction of customer deposits as a reserve that each commercial bank must hold (Sohaimi, 2013). As the demand from the customer is unexpected i.e. a customer can any time demand the sum he/she has deposited with the bank. So, the commercial banks are bound to maintain a certain amount with it but the cash maintained is extremely expensive as it decreases the level of short-term investment that the firm can make (Maaka, 2013).

H3: ***the higher level of cash reserves has a negative impact on the financial performance of banks in Pakistan.***

2.3.2 Credit Risk

Credit risk in the banks can be measured by using default rate. Which is one of the major risk indicators? It is explained as the possibility that a borrower will default, by failing to repay principal and interest in a timely manner and the risk of non-performing loans increases (Poudel, 2012). The bank's credibility increases with the collection of loans and so its income, which minimizes the default rate.

The increase in default rate negatively affects the loan collection which decreases the bank`s ability to advance more money (Berrios, 2013). And it is observed that non-performing loans have a negative influence on the efficiency of the commercial banks (Barros, Managi & Matousek, 2012).

H4: ***Default rate has a significant negative impact on the financial performance of banks in Pakistan.***

The loan loss provision is the amount in the percentage of loans and advances as reserved by the bank from its earning to meet the potential losses of the year (Ogboi & Unuafe, 2013). These are the allowances for loan loss. The loans provided by the banks face risk, the risk that the customer may not return the loan, therefore the bank from its earning set aside some amount that is used in case if the customer fails to fulfill its obligations. The high level of loan loss provision indicates that there is a low amount of loan and interest

H5: Higher loan loss provision has a significant negative impact on the financial performance of banks in Pakistan.

The largest source of credit risk in the commercial bank is the loans and advances because it's the commercial assets (Fredrick, 2012). It may also be a treat to the bank`s solvency because of poor risk management and recovery of loans within a specified time. The customers of the banks use these loans and advances for a specified time and pay interest which is the income of the bank (Ogboi &Unuafe, 2013). If the customers extract their money from the banks, the banks need to keep a certain amount with itself so the commercial bank approaches the central bank and get a loan at a higher rate which boosts the cost of money to the bank. It is important for the bank to manage an effective ratio of loans and advances to avoid such mishap.

Therefore:

H6: The *Higher Loan to deposit ratio has a significant negative impact on the financial performance of banks in Pakistan.*

2.3.3 Interest Rate Risk

Interest rate risk is measured by maturity gap analysis of assets and liabilities. The maturity gap is measured by using the off-balance sheet items and explained as the difference between the rate sensitive assets and rate sensitive liabilities. These assets and liabilities are re-valued for a period of one year (Burke & Warfield, 2014).

In short-term interest rate, can increase the net interest rate margin of commercial banks, as most of the short-term sensitive assets are funded by non-interest-bearing liabilities and it also increases the maturity gap (English et al., 2012).

H7: The maturity gap has *a significant positive impact on the financial performance of banks in Pakistan.*

The main reason for interest rate risk mismatch between securities which can be measured by using the absolute difference between the total earnings assets of the commercial bank and the sum of short-term funding and deposits. These are the representing the maturity mismatch of earning assets matures after one year. Since the deposits are more rate sensitive liabilities irrespective of their predetermined maturity than the advances and other earning assets. So,

H8: interest rate ratio has a *significant negative impact on the financial performance of banks in Pakistan.*

2.3.4 Bank Size

Bank size has a positive relationship with the performance of the as the large size shows greater area coverage of the country therefore large business would be the goal of the commercial bank

H9: Bank size has a significant positive *impact on the financial performance of banks in Pakistan.*

2.3.5 Corporate Governance

In this research study, corporate governance is measured by considering a number of board of directors.

H10: corporate governance has a significant negative impact on the financial performance of banks in Pakistan.

CHAPTER No 3

METHODOLOGY

Financial risk can be broadly divided into market risk, credit risk, liquidity risk and operational risk (Soh 2009). Before we manage any risk, we must know the type of risk. The research approach used in this research study is discussed here. The methodology chapter will discuss the overall methodological approach. The data collection methods, the basis of selection, type of secondary data, sources of data and statistical techniques to analyze the data

3.1 Model Specification

The panel data regression model has been used to check the relationship between financial risk and financial performance of commercial banks. The financial performance is calculated by two proxies Return on Assets (ROA) & Return on Equity (ROE).

Two major regression models have been used to test the relationship and understand the overall impact of financial risk on performance.

Model # 1

$$ROA_{it} = \alpha_0 + \alpha_1 \sum_{n=1}^{3} Risk_{it} + \alpha_2 LG_{it} + \alpha_3 DR_{it} + \alpha_4 LLP_{it} + \alpha_5 MG_{it} + \alpha_6 SIZE_{it} + \alpha_7 BOD_{it} + \varepsilon;_{i}$$

Model # 2

$$ROE_{it} = \beta_0 + \beta_1 \sum_{n=1}^{3} Risk_{it} + \beta_2 LG_{it} + \beta_3 DR_{it} + \beta_4 LLP_{it} + \beta_5 MG_{it} + \beta_6 SIZE_{it} + \beta_7 BOD_{it} + \varepsilon;_{i}$$

Whereas $\sum_{n=1}^{3} \text{Risk}_{it}$ is the sum of three risks i.e. Liquidity risk, Credit risk and Interest rate risk and the Liquidity gap (LG), Default rate (DR), loan loss provision (LLP), maturity gap (MG), size (Bank size) and BOD (board of governance).

The Liquidity risk, credit risk, and interest rate risk are summed up in order to avoid multicollinearity.

3.2 Measurement of Variables

It is important to take the effective financial measurement of all variables in this research study. They are explained in detail

3.3 Financial Performance

The financial performance of commercial banks is measured by two proxies return on assets and return on equity. The quoted value of ROA and ROE in the balance sheet of banks is used. These are the most commonly used profitability ratios. The ROA explains how efficiently a company is using its assets to make a profit; while ROE explains the bank`s efficiency in generating revenue.

3.3.1 Liquidity Risk

There are four proxies used to measure liquidity risk: Cash reserve, liquidity gap, liquidity risk and default rate ratio. Liquidity gap is the difference between the assets and liabilities, which is obtained from the table of the maturity of assets and liabilities in the notes of the financial statement. The default rate is calculated as the ratio of non-performing loans to total assets which indicates the rate charged to a borrower who has failed to make their payment on time. The value total asset i.e. extracted from the balance sheet while the value of non-performing loans is taken from the notes.

The other important proxy is cash reserve, in which only cash and balance with treasury stock are considered. The cash is the most liquid asset. The liquid asset is the total asset ratio is measured by using cash, balance with other banks and investment as the liquid assets, which indicates that to which extent the total assets base can be supported by liquid assets.

3.3.2 Credit Risk

The credit risk is measured by three major proxies; loan loss provision ratio, maturity gap and loan to deposit ration. The maturity gap is calculated by dividing interest rate sensitive assets to interest rate sensitive liabilities, which is taken from the maturity table in the financial statement. It is the common measure used to measure the interest rate risk as it is helpful to determine the rate of interest to avoid risk.

The loan loss provision is calculated by loan loss provision to the classified loan which explains how much provision has been used to meet the non-performing /classified loans. The third measurement of credit loans to deposit ratio which explains the percentage of loans and advances backed by the deposits.

3.3.3 Interest Rate Risk

The interest rate risk is determined by using two proxies' size of the bank and interest rate ratio. The other proxy is interest rate ratio, which is measured by taking the ratio of the absolute difference of the total earning assets and the sum of short-term funding and deposits and equity. It represents the maturity mismatch of assets and liabilities by capturing the difference among the earning assets such as loan and some rate sensitive liabilities such as deposits and short-term funding. The total earning is calculated by using the on-balance sheet and off-balance sheet items which includes cash, balance with other banks.

3.3.4 Bank Size

The size of the bank is an important indicator of its profitability, as the behavior and performance of a different organization depend (Sawada, 2010). The larger the size of the organization results in the economies of scale which is beneficial to decrease the operational cost and increase the profitability (Mugomba et al., 2013). The size of the commercial bank is measured based on the total assets they have, and the natural logarithm of total assets has been used as a proxy for bank size.

3.3.5 Corporate Governance

Corporate governance is an indicator used in the research study to the performance of the commercial banks in Pakistan. The proxy used is a board of directors.

Table 1: Corporate Governance Indicator

Indicators	Measurement	Dummy Variable
Board of Directors	No. of directors of the board	1 when less than the median of the sample 0 when greater than the median of the sample

3.4 Data Collection Plan

This research study investigates the subject matter in a form of secondary research in which the data has been collected from the annual financial statement of commercial banks, the panel data technique is used to arrange the collected data and the financial ratio is used as the measurement of variable proxies. All the commercial banks continually operating from 2006-2014 are included to ensure that the sampling is current and complete.

3.5 Data Analysis

The panel data estimation model is used to analyze the data, which examine the effect of the financial risk on the financial performance of commercial banks of Pakistan. The cross-sectional data captures the individual variability while the time

series information is used to justify the dynamics adjustments in data. The statistical analysis of the data is conducted using MS Excel and STATA. The results are shown in three different statistical analysis i.e Descriptive statistics, correlation analysis, and Regression analysis.

3.6 Research Design

The descriptive research of Pakistani banks has been conducted to analyze their financial performance by focusing on financial risk. The quantitative research approach has been deployed to collect and analyze data. Some important feature of the research design which will be discussed briefly as well are the sources of obtaining the information, the techniques and skills of the researcher, the purpose of the study and the availability of time frame for the study.

3.7 Type of Investigation

The investigation-type adopted is hypothesis testing, to understand the relationships between the financial risk and financial performance of banking sector of Pakistan by considering the ROA and ROE. Therefore the research study conducted considering the financial data of the commercial banks. The financial data is obtained from the financial statements of the commercial banks for the period 2005-2014. (10 Years data).

3.8 Population and Sample

All types of commercial banks are considered that are listed on the Pakistan stock exchange during the period 2005-2014. Currently, the Pakistan stock exchange is composed of two types of banks i.e. commercial banks and investment banks. My focused area is commercial banks because they deal in currency and are more exposed to risk. So, there is a need to study these commercial banks financial performance.

3.9 Research Sample

The commercial and private banks are considered in research sampling that operational on the national level, however, some banks also operate internationally but our focus of the study is national level. The time is 2005-2014, depending upon the availability of data, 22 banks are considered. The timezone consists of 10 years.

3.10 Major Variables

The major variables used in this research study as explained as follow:

Table 2: Major Variables with Proxies used in the Research.

	Symbol	**Variables**	**Proxies**
Financial Performance	ROA	Return on Asset	Net Profit after Tax/ Total Assets
	ROE	Return on Equity	Net Profit after Tax/ Total Equity.
Liquidity Risk	LG	Liquidity Gap	Difference between assets and liabilities/ Total Assets
	LIQ	Liquidity Risk	Liquid assets/ Total Assets
	CASH	Cash Reserves	Cash with the Treasury Bank/ Total Assets
	DR	Default Rate Ratio	Non-performing loans/ Total loans.
credit Risk	LTD	Loan to Deposit Ratio	Loans and advances/ Total Deposit
	MG	Maturity gap	Rate-sensitive Asset/ Rate-sensitive liabilities
Interest Rate		IRR	total Earning -Deposit + Short-term funding/ Equity
	Size	Bank Size	LN of total assets of the bank
	E	Error Term	

Note: All values are in 000 and ratio form, except banks size that is calculated in percentage.

CHAPTER No. 4

DATA ANALYSIS AND RESULTS

4.1 Introduction

Here in this chapter, the results of the research study are discussed, these results are based on the information obtained from the financial statements of the commercial banks, the objective of which was to check the relationship between the financial risk and financial performance of the banking industry of Pakistan. Different statistical tools are used to conduct the analysis and are presented in the form of tables. The purpose of regression and correlation analysis is to check the relationship between variables and test the hypothesis.

4.2 Descriptive Statistics

Descriptive analysis is conducted to summarize the data of the research study. Mean is used to find the average and measure of dispersion is used to find variation in the data. The behavior of data can be studied from descriptive statistics however decision cannot be made wholly using descriptive statistics, inferential statistics is helpful for decision making.

Table 3: Shows the Mean, std. Deviation, Skewness, and Kurtosis.

	ROA	***LG***	***LIQ***	***CashRes***	***DR***	***LLP***	***LTD***	***MG***	***IRR***	***LnAssets***	***BOD***
Mean	0.0078	0.0716	2.79	0.0750	9.8641	7.8934	0.6169	2.6733	2.7957	25.8254	0.4047
Sta. Dev.	0.0245	0.2001	3.12	0.0706	13.1976	8.6918	0.1668	16.8387	3.8477	1.2865	0.4920
Kurtosis	17.6417	50.7038	5.1118	168.2711	22.4335	1.5506	1.8983	150.9908	44.8678	0.2958	-1.8643
Skewness	1.7373	5.4755	2.0657	12.2316	3.8445	1.4790	0.0429	11.9875	6.1098	-0.6377	0.3913

As shown the mean value of ROA is positive, showing the performance of a commercial bank of Pakistan. The variation (standard deviation) in the ROA is 2.45% which is very low. The proxies LG, LIQ and Cash Reserves have positive mean shows the good liquidity position of banks at 7.2%, 279%, and 7.5% respectively. In case of credit risk, the mean values of LTD are 61.7% showing a low level of deposit in the banks to support the advances, the commercial banks in Pakistan nay, not enough liquidity to support any uncertain event. the MG is also positive which shows that interest rate assets are higher than interest rate liabilities and creates a mismatch of securities. The std. deviation of IRR is 384% shows a very high difference between earning and deposit of the banks in Pakistan. The percentage of the Default rate and loan loss provision at 13.2 % and 8.69% which is quite high to support classified loans. There is a huge difference in the mean and standard deviation of MG, this is because of the spread of the data.

4.3 Regression Analysis

Regression analysis is used to check the relationship between the variables that are used in this research study. The purpose of the regression analysis is two folded. One is to check the dependent variable so the financial risk is used to check the performance of the commercial banks of Pakistan. Other is the effect of financial risk on the performance. The panel estimation model is used for this purpose; two tests are used for the OLS and houseman test.

The Hausman test tests the null hypothesis that the coefficients estimated by the efficient random effects estimator are the same as the ones estimated by the consistent fixed effects estimator. If they are (insignificant P-value, Prob>chi2 larger than .05) then it is safe to use random effects. If you get a significant P-value, however, you should use fixed effects.

These tests confirm that the fixed effect model should be used as the p- values of both tests are significant. The fixed effect in panel data estimation model is used to explain the individual effects that are not related to everything else.

4.3.1 Effect of Risk and Corporate Governance on Firm Performance (ROA)

Variable	Coef.	T	P>|t|
LG	0.0222	5.7000	0.0000***
LIQ	0.0000	0.6400	0.5210
CashRes	0.0933	3.2400	0.0010***
DR	-0.0006	-10.1600	0.0000***
LLP	0.0002	2.2300	0.0270**
LTD	0.0045	1.1600	0.2490
MG	-0.0001	-1.8700	0.0630*
IRR	-0.0001	-0.7700	0.4410
LnAssets	0.0031	3.1700	0.0020***
BOD	-0.0074	-5.1000	0.0000***
_cons	-0.0751	-3.0100	0.0030***
R-squared = 0.4145 Adj R-squared = 0.3858			

Note: The *, ** and *** represent 10%, 5% and 1%signifance level respectively

The financial performance of the commercial banks of Pakistan is measured by using ROA and Financial risk. Financial risk is measured by three proxies in this research study i.e. Liquidity risk, Credit risk, and Interest Rate Risk.

4.3.2 Liquidity Risk

The coefficient column of the data shows the coefficient values of the all the proxies of liquidity risk. The financial performance of the banks is 2.2% with a unit increase in the value of the liquidity gap and vice versa, also have a positive sign. Its p-value is 0.000 i.e. significant while the p-value is 0.000<0.05 which also explains the significant relation there for ***H2*** **is accepted**. The reason behind its positive coefficient is assets are more than liabilities and banks are in the best liquid condition. This shows an improvement in the bank's liquidity over time.

The coefficient of liquid assets is 0.000 which shows that liquid assets will bring no change in ROA of commercial banks. Its p-value is 0.52 which is insignificant so ***H1*** **is rejected.**

The results of cash reserves are showing a positive and significant relation. As there is 9.33% positive change in the financial performance of the commercial banks of Pakistan because of cash they set aside as a reserve. Its t-statistics is 3.24 and p-value is 0.010 which is significant so, **we accept *H3***. These results show consistency with the results of Holmstrom and Triole (2000) and Maaka (2013). While contradicts the results of Arif and Anees (2012) results.

The finding of this research study shows that there is the significant positive impact of liquidity risk on the financial performance of the commercial banks of Pakistan as if banks maintain an adequate level of liquid assets the performance will increase, however, liquidity gap is a threat to liquidity risk.

4.3.3 Credit Risk

The credit risk is measured by proxy loan to deposit rate ratio and default rate risk. The table shows the values of all the factors of credit risks. The coefficient of default rate risk shows that -0.06% decrease in the financial performance due to one unit decrease in default rate. The p-value of default rate 0.000 and it t-statistics is -10.16 shows a negative relationship with the financial performance of the commercial banks of Pakistan. An increase in loans increases the default rate which results in the decrease in the profitability of the commercial banks of Pakistan. (Kashyap 2002). The ***H4*** **has accepted** that support the research findings of Poudel (2012) and Kolapo (2013). The coefficient of Loan to deposit ratio is positive i.e. 0.45% means a unit positive change in LTD results in 0.45% positive change in ROA. **H6 is rejected** as its p-value is 24.90. the reason that its coefficient is positive is banks earning are low as compared to its earning capacity. The earning has the capacity to be improved.

H5 is LLP, is accepted which is significant i.e. its p-values is .0270 the reason behind this is major portion of the banks operation is not involve in borrowing and advancing which decreases the credit risk of the banks, but this is also a negative sign for the banks as is risk averse so the profitability also decreases.

4.3.4 Interest Rate Risk

The maturity gap and interest rate ratio is used to measure interest rate risk the coefficient of MG is negative which shows that there will be 0.01% negative change in the financial performance of the commercial banks of Pakistan. As the coefficient is -0.01% but its p-value is significant. i.e 0.0630>0.05 this leads to the **acceptance of *H7 at 10%***, and support the results of Burke and Warfield (2014) as maturity gap effects the interest income.

The coefficient of IRR is also negative i.e -0.001% which shows that there will be 0.01% negative change in the performance of the bank, its p-value is 0.441>0.05 which is insignificant. Therefore**, *H8* is rejected** this also support the findings of Marinkovic and Radovic (2014).

4.3.5 Bank Size

Bank size has a significant positive impact on the performance of the commercial banks of Pakistan. The coefficient of the bank size is 0.31% and its p-value is 0.002<0.05, therefore, **H9 is accepted**

The coefficient of BOD is negative and its p-value is 0.000<0.05 which is accepted. Therefore **H10 is accepted. T**here is a unit change in ROA if the BOD changes -0.0074.

4.4 Regression Analysis of ROE.

The second regression model used is to predict that the financial performance is based on Return on Equity as the measure of profitability.

Table Effect of Risk and Corporate Governance on ROE

ROE	Coef.	T	P>|t|
LG	0.1812	2.8500	0.0050***
LIQ	0.0000	-1.1400	0.2540
CashRes	0.1305	1.2700	0.2050
DR	-0.0051	-7.3700	0.0000***
LLP	-0.0014	-1.3900	0.1660
LTD	0.0440	0.9800	0.3260
MG	-0.0019	-1.6900	0.0930*
IRR	0.0076	2.8900	0.0040***
LnAssets	0.0641	5.4400	0.0000***
BOD	-0.0780	-4.6700	0.0000***
_cons	-1.5054	-4.9700	0.0000***
R-squared = 0.2702 Adj R-squared = 0.2344			

Note: The *, ** and *** represent 10%, 5% and 1%signifance level respectively

The financial performance of the commercial banks of Pakistan is measured by using ROE and Financial risk. Financial risk is measured by three proxies in this research study i.e. Liquidity risk, Credit risk, and Interest Rate Risk.

4.4.1 Liquidity Risk

The coefficient column of the data shows the coefficient values of the all the proxies of liquidity risk. The financial performance of the banks changes 18.12% with a unit increase in the value of the liquidity gap and vice versa, also have a positive sign. Its p-value is 0.000 i.e. significant while the p-value is 0.005<0.05 which also explains the significant relation there for ***H2*** **is accepted.** The reason behind its positive coefficient is assets are more than liabilities and banks are in the best liquid condition. This shows an improvement in the bank's liquidity over time.

The coefficient of liquid assets is 0.000 which shows that liquid assets will bring no change in ROE of commercial banks. Its p-value is 0.2540 which is insignificant. ***H1*** **is rejected.**

The results of cash reserves are showing a positive and significant relation. As there is 13.05% positive change in the financial performance of the commercial banks of Pakistan because of cash they set aside as a reserve. Its t-statistics is 1.27 and p-value is 0.2050 which is insignificant so, **we reject *H3***. These results show consistency with the results of Arif and Anees (2012), While contradicts the results of Holmstrom and Triole (2000) and Maaka (2013).

The finding of this research study shows that there is the significant positive impact of liquidity risk on the financial performance of the commercial banks of Pakistan as if banks maintain an adequate level of liquid assets the performance will increase, however, liquidity gap is a threat to liquidity risk.

4.4.2 Credit Risk

The credit risk is measured by proxy loan to deposit rate ratio and default rate risk. The table shows the values of all the factors of credit risks. The coefficient of default rate risk shows that -0.51% decrease in the financial performance due to one unit decrease in default rate. The p-value of default rate 0.000 and it t-statistics is -7.37 shows a negative relationship with the financial performance of the commercial banks of Pakistan. An increase in loans increases the default rate which results in the decrease in the profitability of the commercial banks of Pakistan. (Kashyap 2002). The ***H4*** **has accepted** that support the research findings of Poudel (2012) and Kolapo (2013). The coefficient of Loan to deposit ratio is positive i.e. 4.4% means a unit positive change in LTD results in 4.4% positive change in ROE. **H6 is rejected** as its p-value is 0.3260. the reason that its coefficient is positive is banks earning are low as compared to its earning capacity. The earning has the capacity to be improved.

H5 is LLP, is rejected which is insignificant i.e. its p-values is 0.1660 the reason behind this is a major portion of the bank's operation is involved in borrowing

and advancing which decreases the credit risk of the banks, but this is also a negative sign for the banks as is risk averse so the profitability also decreases.

4.4.3 Interest Rate Risk

The maturity gap and interest rate ratio is used to measure interest rate risk the coefficient of MG is negative which shows that there will be 0.19% negative change in the financial performance of the commercial banks of Pakistan. As the coefficient is -0.01% but its p-value is significant. i.e 0.093 this leads to the **acceptance of *H7*** *at 10%*, and support the results of Burke and Warfield (2014) as maturity gap effects the interest income.

The coefficient of IRR is also positive i.e 0.001% which shows that there will be 0.01% positive change in the performance of the bank, its p-value is 0.0040<0.05 which is significant. Therefore, ***H8*** **is accepted**.

4.4.4 Bank Size

Bank size has a significant positive impact on the performance of the commercial banks of Pakistan. The coefficient of the bank size is 6.41% and its p-value is 0.000<0.05, therefore, **H9 is accepted.** The coefficient of BOD is negative and its p-value is 0.000<0.05 which is accepted. Therefore **H10 is accepted**. There is a unit change in ROE if the BOD changes -0.0780.

4.5 Summary

The descriptive analysis shows the mean, std. deviation, skewness, the kurtosis of the data. The correlation analysis shows the association among the variables and shows that there is no multicollinearity among the independent variables. The regression analysis tests the hypothesis this shows that LG, LIQ, CashRes, IRR, LTD and Bank size have a positive effect on the performance of the commercial banks of Pakistan. While DR, LLP, MG, and BOD have a negative effect on the performance of the commercial of Pakistan. The regression analysis of corporate governance is negative and the P-values are significant therefore it is accepted.

CHAPTER NO. 5

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The findings of the research will be discussed in this chapter. The effect of market risk and corporate governance on the financial performance of the banking industry is concluded here. The recommendations are the topic of this chapter.

5.2 Major Findings of the Study

There is a significant effect of all the liquidity risk measures on the financial performance of the commercial banks of Pakistan. Liquid assets help the commercial banks to be on the safe side in case of sudden and large withdrawals of deposits (Sawada, 2010). To avoid liquidity risk banks, must hold more amount in the form of cash equivalents. There is a significant relationship found that whenever the commercial banks face liquidity problems, the increase in liquid assets help the banks to overcome this problem. The increase in liquidity gap has a positive influence on the profitability of the banks. The borrowing of the banks from the central bank will fulfill the maturity gap between the assets and liabilities. This will increase the cost but will have positive effects on the banks.

The commercial banks have sufficient cash reserves to avoid liquidity problems. The cash reserves are the amount set aside to meet the problem arises due to sudden withdrawals by customers. In my findings, the cash reserves show a positive relationship with financial performances. This shows that banks have enough cash to meet their liquidity claims, this also decreases the cost of expensive borrowings and is a competitive edge in the banking sector.

The higher level of non-performing loans also affects the performance of the commercial banks in Pakistan because of more bad debts. The non-performing loans

indicate the asset quality and estimate the changes in the future performance of the commercial banks (Boot and Thakor, 1987). The banking sector of Pakistan is exposed to high-risk loans which lead towards unpaid loans, therefore there is a need of an effective strategy to manage a percentage for non-performing loans (Ogboi and Unuafe, 2013).

The asset quality is also determined by using loans and advances. Although the finding of research studies showed that loans and advances have a negative influence on the performance of banks in Pakistan. The maturity gap ratio is helpful to understand the more interest income capability of a commercial bank. This objective can be attained by maintaining effective interest rate and evaluating assets and liabilities (Burke & Warfield, 2014). The research findings show a negative relation between maturity gap and financial performance of the commercial banks of Pakistan. Which shows that a decrease in interest rate will be helpful to generate more income and the financial performance of banks will improve. IRR in commercial banks also negative influence on the financial performance. The average maturity is measured by earning assets and short-term deposits. The depositor has the facility to withdraw these funds any time. Which will increase the mismatch leads towards the interest rate risk. (Marinkovi and Redvic, 2014).

5.3 Policy Implication

To satisfy the customers, the banks in Pakistan continuously improve their products. This reduces the effectiveness of traditional ways used to manage the financial risk. The products and services that the bank offer involve high risk. Therefore, it is important to understand the effect of liquidity risk, credit risk, and interest rate risk.

There are a number of factors that commercial banks should take into account, such as it is important for commercial banks to manage a sufficient amount of cash and liquid assets to avoid the uncertain liquidity shock. The liquidity gap position in Pakistan is not satisfactory which increases the liquidity risk. The loan to deposit ratio is very high which shows that the average deposits level is not acceptable and it increases the threat of credit risk. The commercial banks need to increase their deposits by offering more and more products at reasonable rates and terms and conditions.

The research finding also recommends that the commercial banks must control its non-performing loans, which negatively affect the returns. The banks need to maintain an adequate level of loan loss provision which has minimal effect on the earning and interest income of the commercial banks.

The research study is also beneficial for the policymakers, as they get the understanding of the financial risk to existing in the banking industry of Pakistan. The rules and regulation for handling a specific level of cash, liquid assets, loans and advances and the interest rate on products would be helpful for banks to run their operation smoothly and avoid any financial crises.

5.4 Future Research

This research study analyzes the relation between the financial risk and financial performance of the commercial banks of Pakistan. The financial risks studied are liquidity risk, credit risk, and interest rate risk. Further research can be conducted by extending the financial risk model. Further, the effect of economic variables like GDP, Inflation rate, etc. can also be studied.

5.5 Limitation of the Research Study

There is some limitation of this research study which influences the findings. They are;

- The unavailability of financial statements of some of the banks
- The Islamic branches of the commercial banks are not included.
- Only the conventional branches of the commercial banks are studied.
- The time frame is limited, due to the non-availability of data.

LIST OF BANKS

S No	Bank	S No	Bank
1	ABL	12	JS Bank
2	Bank Al-Falah	13	MCB
3	Askari bank limited	14	Standard Chartered bank limited
4	Bank AL Habib limited	15	Soneri Bank limited
5	Bank Islami	16	Silk Bank limited
6	BOK	17	Samba Bank limited
7	BOP	18	Meezan Bank limited
8	First Women Bank limited	19	KASB bank limited
9	Faysal Bank limited	20	National bank of Pakistan
10	Habib Metropolitan limited	21	NIB Bank limited
11	Habib bank limited	22	United bank limited

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