CAPITAL UNIVERSITY OF SCIENCE AND TECHNOLOGY, ISLAMABAD

Impact of Corporate Governance on Non-Performing Loans: Empirical Evidence from Three Emerging Economies

by

Irfan Ali

A thesis submitted in partial fulfillment for the

degree of Master of Science

in the

Faculty of Management & Social Sciences

Department of Management Sciences

2018

This thesis is dedicated to my Family.

CAPITAL UNIVERSITY OF SCIENCE & TECHNOLOGY

ISLAMABAD

CERTIFICATE OF APPROVAL

Impact of Corporate Governance on Non-Performing Loans: Empirical Evidence from Three Emerging Economies

by

Irfan Ali

MMS153045

THESIS EXAMINING COMMITTEE

S. No.	Examiner	Name	Organization
(a)	External Examiner	Dr. Ahmed Faraz	PIDE, Islamabad
(b)	Internal Examiner	Dr. Arshad Hassan	CUST, Islamabad
(c)	Supervisor	Dr. Jaleel Ahmed Malik	CUST, Islamabad

Dr. Jaleel Ahmed Malik

Thesis Supervisor

November, 2018

Dr. Sajid Bashir

Head

Dept. of Management Sciences

November, 2018

Dr. Arshad Hassan

Dean

Faculty of Management & Social Sciences

November, 2018

Author's Declaration

I, **Irfan Ali** hereby state that my MS thesis titled "**Impact of Corporate Governance on Non-Performing Loans: Empirical Evidence from Three Emerging Economies**" is my own work and has not been submitted previously by me for taking any degree from Capital University of Science and Technology, Islamabad or anywhere else in the country/abroad.

At any time if my statement is found to be incorrect even after my graduation, the University has the right to withdraw my MS Degree.

Irfan Ali

Registration No: MMS153045

Plagiarism Undertaking

I solemnly declare that research work presented in this thesis titled "**Impact of Corporate Governance on Non-Performing Loans: Empirical Evidence from Three Emerging Economies**" is solely my research work with no significant contribution from any other person. Small contribution/help wherever taken has been dully acknowledged and that complete thesis has been written by me.

I understand the zero tolerance policy of the HEC and Capital University of Science and Technology towards plagiarism. Therefore, I as an author of the above titled thesis declare that no portion of my thesis has been plagiarized and any material used as reference is properly referred/cited.

I undertake that if I am found guilty of any formal plagiarism in the above titled thesis even after award of MS Degree, the University reserves the right to withdraw/revoke my MS degree and that HEC and the University have the right to publish my name on the HEC/University website on which names of students are placed who submitted plagiarized work.

Irfan Ali

Registration No: MMS153045

Acknowledgements

First of all I would like to thanks Almighty Allah who gave me courage to complete this thesis. I would like to express my sincere thanks to a number of people who have made the completion of this thesis possible. I am extremely grateful to all of them.

I wish to thank my supervisor Dr. Jaleel Ahmed Malik, Faculty of Management & Social Sciences, Capital University of Science & Technology, Islamabad, Pakistan, who has provided valuable instruction, mentorship and encouragement throughout the thesis journey.

I wish to show my deep gratitude to my friends Muhammad Kamran and Muhammad Nadeem Their persistent encouragement and moral support has made the difference in helping me persevere towards the completion of this journey. Finally, I pay my deep regard to my beloved Parents whose care, love devotion and prayers have made me able to achieve this goal. May Allah bless them all.

Abstract

This study finds out whether corporate governance has any meaningful impact on non-performing loans of banks of developing economies like Pakistan, India and Bangladesh. It also analyses how banks are going to overcome the difficulties by following corporate governance mechanism. This study used 11-year annual data for the observation period of 2006 to 2016. The sample for it consists of 86 banks listed in Pakistan, India and Bangladesh Stock Exchanges. By using panel data analysis technique, the statistical findings of the study indicate that there is a significant relationship between corporate governance and non-performing loan. This study may lead to meaningful reforms for banks on making good corporate governance mechanism to overcome the confronted challenges. This in turn leads to increase in foreign direct investment and improve overall performance of the banking sector.

Keywords: Non performing loan, Corporate governance, Board Size, CEO Duality, Board Independence, Audit Committee independence, Institutional Ownership, Board Meeting, Board Meeting, State Owned.

Contents

List of Tables

Chapter 1

Introduction

Financial sectors play a vital role in the economic growth of the country. There are very strong empirical and statistical evidences that support economic growth depends upon financial sector (Rajamaman and Visishta, 2002). The importance of Financial institutions (FIs) cannot be neglected in any economy because they can effectively capitalize productive investments on savings and streamline the capital flows to various sectors of the economy, and promoting investment and increasing efficiency (DFID, 2004). In many countries, the majority of financial institutions are commercial banks (Rose, 1997). It is one of the main sources of credit for owners and businesses.

Commercial banks are the main source of financial services in various market segments like small, medium and large scale companies. The majority of debtors play a crucial role for the emerging economy, those who does not have access to the capital market (Greuning and Bratanovic, 2003). The positions of these commercial institutions and the financial sector are very important since a collapse of financial intermediation that can critically break the development process of any economy (Rajamaran and Vasishta, 2002). When commercial banks are in good positions they accelerate the economic growth, but low-income of commercial banks hinder economic growth and may cause to create poverty in the country (Barth, Caprio and Levine, 2001). In this regard, the study of Han and Senhadji (2001) also argue that high income financial institutions in the economy lead to the economic growth, whereas in low income institutions leads to less growth.

Financial institutions like banks are considered as blood circulator for the development of an economy. Banks have great importance in the economic development of any country, although they provided the economy with a deficit credit. Therefore, this sector is significantly different from other industries. According to financial analysts, the economic development of any country depends upon the efficient banking operations. The Bank's operations are complex and regulators face a variety of problems. Banks operations are typically complex and for the developing economy like Pakistan, India & Bangladesh are completely depending upon financial instructions. In fact, a large number of non-domestic internal loans and advances have been identified as one of the main problems of financial institutions, and practically all cases struggle against the efficiency of commercial banks (Chijoriga, 1997).

A large number of significant banking problems have been seen in both developed as well as developing economies (Brownbridge and Harvey, 1998; Basel, 1999, 2004). According to these studies the main reasons of banking failure is financial distress due to non-performing loans. In the situation of financial distress which created because of huge non-performing loans, regulatory authorities have windup the operations of number of banks (Brownbridge, 1998). Non-performing loans leads the whole economy in major loss of outputs well as increase substantial costs (Brownbridge and Harvey, 1998). The empirical evidences from the study of Borio and Lowe (2002) indicate that in the period of banking, there is a very high loss of output with respect to the percentage of gross domestic product GDP. Similarly, much of the literature also points out that the major reason behind the banking failure are non-performing loans (Brownbridge1998).

Studies from both developed and developing economies identified the factors of non-performing loan causing banking failure and economic downfall. These factors can cause banking failure and economic downturn for any economy (Waweru and Kalani, 2009). The profitability of the banks is influenced by the non-performing loans, which directs the recurrence of the regular credit activities and reduces of the presumptions to the economy. Taking into account the financial interconnection in Europe, there is a potential risk of potential dispersal between countries. The

European regulators and the competent national authorities are concerned that the value of non-performing loans in existing European Union will not have the same value of 1 trillion Euros in Europe. System Requires Strong corporate governance practices to be balanced by effective levels of support for effective governance in the harmonization of European legislation. They have to regularly coordinate with officials about lending processes by regulatory authorities since the commencement of non-performing loans management in banks regulations mechanism.

In general term the problems of banking industry arise from both the internal and external sources. Internal banks problems can be persisting by observing bank performance with whole banking industry. Whereas, external sources are macroeconomic conditions, banks industry development and creditors fund that affect the whole industry (Hadad, Santoso, and Arianto, 2003). To overcome the problem caused by internal sources, the role of corporate governance is very important. According to many researchers and analysts it's the best indicator that can control internal cause and have a positive impact on banking industry as a whole. Poor corporate governance mechanism may lead to financial crises as seen in 1997/1998 (Hadad, Santoso, and Arianto, 2003).

1.1 Theoretical Background of Study

Corporate governance gained a lot of attention in academic literature as well as in public debates but the history of corporate governance is quite long after determining "principal-agent problem" presented by Jensen and Meckling (1976). Principal agent problem arises after separation of ownership and control because the difference of interest among shareholders and managers. Many studies like (Ross, 1973; Fama, 1980; Mallin, 2001) have made well contributions in corporate governance phenomena regarding their role in order to limits agency problem. After the financial collapse of European and Asian countries corporate governance has gained a lot of attention because corporate governance was considered as a key

problem in the aforementioned debacles. The global markets have seen a lot of un-favourable consequences as a result of attention not given to corporate governance system like transparency factors, link with shareholders etc.

Corporate governance not only deals with a single factor of the firm but deals multi dimensions of the organization. Corporate governance in every organization is the core factor and presents the health of that organization in terms of structure and the organization ability to deal with crises. The health of any organization depends upon the soundness of their governance structure as well other components and the correlation among them. According to (Morck, Shleifer and Vishny 1989) factors that lead to the improvement of firm's stability are structure of good governance, policies and regulation, efficient monitoring and reliable FRS (Financial reporting system). Corporate governance is defined widely by many researchers and all pointed similar attributes. Researchers have made two categories while regarding definition of corporate governance. The first pattern of corporate governance is their actual conduct, which include internal control like measure of performance, effectiveness, firm's growth, financial information and shareholders as well as stakeholders dealing. In line with this the second pattern is concerned with corporate normative framework like firms operating rules, their legal and financial system as well as labour markets.

The organization for economic cooperation and development (OECD) suggests corporate governance mechanism as a pattern through which business activities of the organization are directed and controlled. According to Zingales (1997) corporate governance is an art of protecting the manager's stakes as well as shareholder's interest through a set of laws and organized procedures. John and Senbet (1998) defined corporate governance in a comprehensive manner as it deals with corporate exercise their control over management and stakeholders interests. Similarly, Coleman and Nicholas-Biekpe (2006) defined corporate governance as a relationship between shareholders and stakeholder with all the business activities. The set of structure and information that are used for the purpose of supervision of the management effectiveness as well as organizations performance is corporate governance. The dependency of governance mechanism is on its responsibilities

and specification for management, board of director, Supervisory, shareholder and decision making procedure (Mayer 1999).

The organization theory states that the strength of any organization depends on co-operation of their top management. Corporate governance plays a vital role while making strategies for the organization in order to lead the firm in a sustainable and profitable way. According to Huang Hui and Zhao Jing-Jing (2008) there are eight attributes of corporate governance that leads a firm in to financial crises. So, all of the eight attributes are grouped as shareholders, board structure, agency problem and the controlling variables. Hence such a structure of governance may affect the performance of a firm.

Particular Banks having good application of corporate governance such as effectiveness of audit committee and having independent commissioners, it is expected to decrease banks management inefficiency and at the same time it is also expected to detect lending fraud. Meanwhile, it is also expected to detect involvement of senior management in such fraud like lending and their impact of non-performing loans. Non-performing loans are defined in different ways. Caprio and Klingebiel (1990) defined non-performing loan as the loan which neither creates incomes nor recover for a long time. Principal amount along with interest, not recovered within 90 days, are referred to non-performing loan. The non-performing loans consist all those assets which an organization cannot collect principal amount or their payment of interest within the aforementioned time frame. Therefore, such type of financial asset is known as non-performing because that does not generate any profit for an organization.

In line with the aforementioned statements the core concept of non-performing loan is based on many dynamics and might be classified into different categories like in term of time period, and overdue (Choudhury et al., 2002). According to Berger and De Young (1997) the loans that are problematic are non-performing loans. The study of Fofack (2005) indicates that non-performing loans are actually bad loans. In broader view non-performing loans can be explained as loan matured in both ways in the way of principal along with interest and on other hand it also spelt out the agreement of credit. The loan that does not generate any profit for

firm within 90 days nor generate interest for firms is known as non-performing loan (Alton and Hazen 2001).

The study of Agene (1999) in this regard indicates that banks having poor credit administration and low accountability fall in extension of non-performing loan to engage in window dressing, and thus lead to poor performance and low profitability. Therefore, in general weak corporate governance mechanism neglects the corporate objectives that stuck the economic growth of banking sectors as well as the whole economy. This may also result in low customer's funds in banks as because of decrease in public confidence. For both developed and developing economies, corporate governance is like "Achilles heels" a weak spot for bad performance. In particular, it is accepted true where corruption is endemic (Financial Standard, Sept 3, 2007).

In addition, Oluyemi (2007) found that poor corporate governance, such as fraud and counterfeiting, unprofessional conduct and disloyalty of customers, diminish shareholder wealth that led banking sector to an unreliable and weak position. Most of the owners and directors misuse their authority and privileged position in dealing self-interested activities. The aim of corporate governance is to promote competition, and at the same time enable customers to choose (Suberu and Aremu, 2010). This refers to deregulation as reform measures that provide lower rates, enable customer choice and provide reliable services so that none of them literally stay in the dark (Wilson, 1986). The arrangements of corporate governance and institutional measure are different from region to region although it always emphasis on promoting fairness for corporations, transparency, accountability and corporate responsibility.

All over in banking operations, the major risk of non-performing loan is always associated. In term of financial crisis that has collapsed in Nigeria depositary money banks is mainly instigated due to the monumental value of nonperforming loans, as seemed in their financial report. In this regard Oyejide and Soyibo (2001) indicates in his study that banks loans and advances are on the major bank assets which require an effective management, because such a loan portfolio remains a Hercules task for most of the depository money banks. The findings of Nworji,

Olagun and Olanrew (2011) considered that a consistent increase in the number of non-performing loans to Chines Deposit Money Banks has recently raised questions about the compliance of corporate governance practices of China banking sector.

Matama (2005) obtained a positive relationship between nonperforming loans and corporate governance in the strong financial management business, by taking a study on selected commercial banks. The study of Masibo, (2005) taken on Uganda Stock exchange, found a direct association between board of governance and non-performing loans of state owned listed firms. The study concludes that the success of selected state-owned companies in these organizations is due to strong corporate management, and there exists a positive link between the management and the company strong financial performance of the company through the effectiveness of the Board. The empirical findings of Piesses (2005), performed on the success of the firms and corporate governance practices predicts contradictory results with the connection between the success of the firms and corporate governance.

Some of the reasons behind the non-performing loans are inefficient government policies, political instability and weak banks measures. The high rising of non-performing loans in various countries strongly affect the weak banks with their lending activities. As per the statement of International Monetary Fund, after the financial crisis the value of non-performing loans reached to the highest level of 16% in 2011 from 7.1% in 2007, whereas in 2017 its fall to 8.4% (CEIC Report 2017). The honesty of the banker to check the borrower reduces the default loan risk. Whereas, some of other variables consider the close reasons that increase non-performing loans are unemployment, exchange rate and the strong inflation rate of the state (Bhattarai, 2014). Lack of proper management and weak governance mechanism is a reason that the Bank does not succeed. By testing various variables, such as transparency, the concentration of shareholders and strong market discipline shows that strong corporate governance strengthen the company (Quintana Aguilar, 2016).

Most of the literature argue that the process of Corporate Governance may facilitates the value creation of shareholder, and collectively protect the interests of all stakeholders. Corporate governance is generally associated with the existence of

agency problem and its roots can be traced back to separation of ownership and control of the firm. Agency problems arise as a result of the relationship between shareholders, managers and are based on conflicts of interests between controlling shareholders and minority shareholders, which is at the heart of the corporate governance literature.

1.2 Supporting Theories

1.2.1 Agency Theory

In earlier 1970s, the agency theory is introduced in the literature that explored risk sharing behavior between principle and agent (Arrow, 1971; Wilson, 1968). This theory explains the effective relationships between principal (owner) and agent (management). It defines that agents make decision on behalf of owners, the principals that gives delegation of authority to these agents. So, these agents /mangers perform on behalf of owners/principal and run the business activities, make decisions for business operations and strive to achieve common goals (Jensen et al, 1976).

The main focus of this theory is the conflicts between agents and principals. According to the study of Eisenhardt (1989) these conflicts may arise on the alignment of behavior-oriented (salary) and outcome-oriented (shareholder) wealth compensation. Whereas, the milestone is to modify the rules of corporate governance that may controls the unethical activity and reduce information asymmetry. These problems arise when the desired goals become separate between management (agent) and principle (owner) for owners it became challenging to inspect agent's activities because of asymmetry information and in the term of risks these managers' transfers risk to the principal owners because of their personal interest.

It is very important to examine the interest of all stakeholders and monitors the actions of these managers by good corporate governance mechanism. In this regard, the study of Frich and Kohlar (1999) indicates that performance is due to the actions of an organization over a period of time in part or in full related to its

past or projected cost efficiency, responsibility or accountability of management. European Central Bank in 2010 have also taken some measure in this regard to protect all stakeholders value by looking at financial performance of banks from the assessment of examining the main handlers of profitability that are, leverage, efficiency, earnings, and risk- taking. The report further suggests that a better corporate governance mechanism is necessary to maximize shareholders value and protect the interest of all stakeholders.

1.2.2 Stakeholder Theory

The theory of stakeholders was implanted in the management regulation after 1970 and established by Freeman (1984) that incorporates all stakeholders and corporate management. Stakeholder theory may define as "any group or individual who can affect or is affected by the achievement of the organization's objectives". And stakeholders are those who have a lawful claim on the firm (Hill and Jones, 1992). Freeman (1994) majorly focuses on two elements in the stakeholder theory that are purpose of firm and responsibility of management, how to treat all stakeholders.

Modern stakeholder theory states that the management of organization has a long network of value-added relationships with business partners, employees, and suppliers. According to Freeman, (1999) this valuable network of relationships is strongly significant than agent and principal's relationships in earlier agency theory. Clarkson (1995) also proposes that the company is similar systems where all stakeholders and organizations combine create wealth for their shareholders. These relationships between organizations and all stake holders can influence the survival of business as well effect the decision-making process of firm (Freeman 1984).

The main concern of the stakeholder theory is the creation of relationships with management and stakeholders. Donaldson & Preston (1995) study indicates that the theory of stakeholders was not given the decision to govern and protect the interests of only its shareholders but for all other stakeholders and to maximize the wealth and interests of the parties involve.

Further shareholders have to bear all costs linked to the decisions of management (Berle & Means 1932). However, it is difficult for owner to monitor the management activities to secure shareholder interest or its own. Self-managing behavior produces asymmetric information in poor management systems by means of monitoring (Eisenhardt 1989). That's why to eliminate these issues of agents and principals and to protect the value of all stakeholders a better corporate governance mechanism is needed that improve supervisory control and reduce asymmetric information and help regulate self-interest activities with shareholder interests (Walsh and Seward 1990).

The main purpose of corporate governance is to align the interest of shareholder with organization and to develop an effective and efficient corporate governance control mechanism for accountability of manager's decision and activities (Allen and Gale, 2001). The study also focuses to design a better corporate governance mechanism that include an effective control measures and supportive way for all stakeholders, to improve shareholders value and reduces conflicts of interest. As like effective control and corporate governance may decrease the uncertainty and risk involvement with decision making process, disclose transparency in actions and resolve the agency problem in organizations (Dissanike 1999).

However, this theory contains some limitations. Firstly, it is impossible to please all of its stakeholders. Secondly, the interest of one group may differ from another group. As like some of stakeholders are not capable to weight the decisions of the organization this is because of the differences in power levels and spheres of influence within the organization (Matt Mc Gew, 2015). This theory is important because the top management has to clearly define the goals of the organization that can best explain the interest of all stakeholders.

1.2.3 Theory of Financial Intermediaries

Allon and Santomor (1991) established the theory of financial intermediaries. The main focus of this theory is to explore the relationships among financial activities

of bank management, taxes implied by the government, imperfections in the capital market and financial distress cost. Financial firm should be rational and it is necessary for such firms to review trading and risk avoiding measures while negotiating and approvals of loan process. Many Researchers findings suggests that there are various measure that affect the health of non-performing loans, which are cost of financial distress, managerial interest, non-linearity of taxes and imperfection of the capital market (Arellano & Bond, 1991; Chaibi & Ftiti, 2015; Dimitrios et al., 2016). Similarly, the banks are required to review all these measures to avoid the risk of non-performing loans and to maximize the value of shareholders.

In modern period, the institutions focus to channelize the funds and relationships between financial intermediaries like borrowers and lenders. As like in these current decades, the application of changes in the world of finance and financial liberalization has changed the world. The necessary measures to avoid mistakes are compulsory in advance, as firm would not be able to avoid unusual attacks that could be caused by non-performing loans (NPL). The problem of non-performing loan is faced by most of the banks. To cope with these challenges, firms should channelize the funds between intermediaries and to review depository and issuance policies. (Berger & Deyoung, 1997). The theory of financial intermediaries is based on transaction cost and the cost of asymmetric information. But however, nowadays the transaction costs and asymmetric information have been decreased, and the relationships of intermediaries have increased.

In some financial markets like financial futures and options, it is mainly linked to intermediaries rather than individuals or firms. Therefore, the challenges to these markets may be difficult to reconcile with the traditional theories of finance. Hester (1994) for the first time explore the need of intermediation role in the context risk trading and participation costs with respect to non-performing loans. The study looks over the US financial market and indicates from its empirical findings that risk assessment is too much significant when to avoid the cost of transaction. The study further focuses that the roles of financial intermediaries are very necessary to be examined carefully to avoid risks in NPLs.

1.3   Problem Statement

The study tries to examine the impact of corporate governance mechanisms on non-performing loans in emerging economies like Pakistan, India, and Bangladesh. Most of the prior studies investigate the associated link of corporate governance and non-performing loans in developed economies. But in this regard the literature is missing which explore the impact of corporate governance mechanism in emerging economies. The ethics codes and legal systems of corporate governance mechanisms to control credit policy are different from one country to another, so that the characteristics of corporate governance impact need to explore in emerging economies like Pakistan, India and Bangladesh. However, these countries have a lot of strategic importance for the whole world, and it is the current need of time to check this widely accepted approach on these economies. Li (2004) investigates the impact of corporate governance on banking performance on China economy. The empirical evidence of corporate governance and non-performing loan is still lacking in Asian context.

1.4   Research Questions

This study has the following research question:

1. Any impact of board size on NPLs?

2. Board Independence affect the NPLs?

3. Is there exist any impact of CEO Duality on NPLs?

4. There is any impact of Independence of Audit committee on NPLs?

5. Is the Board meeting impact of on NPLs?

6. Impact of Institutional Ownership on NPLs?

7. What is impact of state owned institution on NPLs?

8. What is ownership concentration impact on NPLs?

1.5   Research Objectives

This study has following research objectives:

1. To explore the relationship of board size and NPLs.

2. To explore the relationship of Board Independence and NPLs.

3. To explore the relationship of CEO Duality and NPLs.

4. To explore the relationship of Independence of Audit committee and NPLs.

5. To explore the relationship of Board meeting and NPLs.

6. To explore the relationship of Institutional Ownership on NPLs?

7. To explore the relationship of state owned institution on NPLs?

8. To explore the relationship concentration impact on NPLs?

1.6   Significance of the Study

The link between corporate governance practices and non-performing loan has been considered as the valuable topic in the field of finance and literature. This study tries to explore the connection between corporate governance practices and non-performing loan. This also provides an overview of how firm or banks while experiencing some difficulties follow corporate governance codes and practices. Furthermore, the study provides value to firm's regulators, academics, investors, and other related stakeholders.

Recently financial scandals have damaged the confidence of investors in banks and capital markets and the effectiveness of existing corporate governance practices that promotes transparency and accountability. Mostly, corporate governance is confronted with the challenges of unprofessional behavior, fraud and forgery, weak internal control measures, non-execution of punitive measures through, among

other things, regulatory and legal framework. These aforementioned problems have affected the relative performance of the banks that causes low profit margin and decrease efficiency. This term lead to decrease in foreign direct investment in the banking sector.

In the second place, the 'supposed' outcomes of the research must be regarded as an advantage for the industrial development by improving the mechanism for corporate governance. Mostly, Securities and Exchange Commission (SEC) will have lots of benefits from the study. Whereas other stakeholders that can get advantages from this study are the policymakers rushed to the government and the banking sector, shareholders, employees and the general public. In banking reforms and restructuring of banking industry, the role of corporate governance will play a vital role that may leads to sectarian development.

Chapter 2

Literature Review

Mostly non-performing loans are defined in different manner. According to Caprio and Klingebiel (1990) non-performing loans are all the loans that are not recover for long time period and also generate no income. The time period of principle and amount and interest on loans at least ninety (90) days is called non-performing loans. Hence, non-performing loans are that part of loans, which generate no income, and principal amount, and interest on loans is no longer estimated, if interest and principle amount is exceeded to ninety (90) days and also maturity of payment has passed and full payment has not been made. Therefore, non -performing consists of those assets which financial institutions cannot collect interest and partially, full payments or installment are booked. Those financial assets are referred to non-performing due to nonproductive or no income loans.

The concept of non-performing loan is based on the length of time period that's completed and also overdue (Choudhury et al., 2002). According to the study of Berger and De Young (1997), non-performing loans are problematic loan for the institutions. Fofack (2005), in this regard also explains non-performing loans as a bad loan for firms. Therefore, the broader context of non-performing loans can be considered as loans that have matured both as interest and principal over a certain period of time, and also spelt out in the contrary to the terms of the credit agreement. Hence, nonperforming debts are loans that are ninety (90) days or are late or no longer accrued interest (Alton and Hazen 2001).

Financial analysts argue that non-performing loans can undermine investor confidence in the banking system by collecting untapped financial resources even if the depreciation is managed and the resource allocation process is prevented. In a bank-based financing system, non-performing loans may further slowdown economic recovery by reducing the operational margin and weakening banks' capital to promote new loans. This is sometimes referred to as a credit crunch (Bernanke et al., 1991). In addition, borrowers who are voluntary credit information prepared by credit institutions and which have remained unresolved may act as a detrimental economic deterioration by raising good borrowers from the financial markets.

The empirical evidences from the study of Muniappan (2002) argue that a bank with high default non-performing loans is faced with the cost of non-returnable income or no-income which not only decreased profitability but also lead the banks towards solvency as a result of which the bank has difficulties in raising capital. The study of Bonin and Huang (2001) also confers that in the banking crisis's profitability will increase and financial risk may become solvency problem if it is not eliminated quickly. So, these financial crises not only decreasing the living standards, but can also eliminate the economic improvement advantages.

The ratio of non-performing loans can be used to predictor of how much potential debt losses a bank has to wait for. A high non-performing ratio demonstrates the ineffectiveness of bank performance in asset management (Siamat, 2005). Hence, the Bank's good corporate governance application, in particular the Highly Effective Audit Committee and Independent Commissioners, is expected to decrease the inefficiency of bank managements. Further it also detects the various frauds of lending headed by the various scandals of senior management and affecting the impact of high non-performing loans. Therefore, the ratio of high non-performance loans is caused by management inefficacy and also inappropriate mechanism of corporate governance (Soebagio, 2005). But on other hand, found negative impact of corporate governance on non-performing loans (Ariyanto, 2004).

The impact of corporate governance mechanism on non-performing loans in the banking sector is examined by (Li Hu & Wie Liu, 2009) in this study the evidence

shows that the public sector bank is different from the private banking banks in order to reduce the non-performing loan and cut back the recovery costs of such loans. The study found positive and significant association between corporate governance and non-performing loans. Moreover, Subhai Rajha, (2016) suggests that there is a negative impact of non-performing loans. In order to evaluate the cost function, when the level of non-performing loan is grater, in this condition banks are unable to maintain a loans when non-performing debts increased (Maggi and Guida, 2009). The next paragraph explains the theoretical and empirical relation of corporate governance and nonperforming loans.

2.1 Board Size and Non-Performing Loans

The structure of the board refers to the factors that fall within its governance; the number of independent director, number of board members and the number of meetings held during the year. The agency's theory states that involvement of boards in bank management will reduce the disciplinary impact of financial markets. In fact, in such financial institutions, the managers appointed by the public body separate their own interests to the detriment of the bank.

The empirical finding of La Porta et al. (2002) shows that state involvement in developing countries' banks emphasizes its poor management. It is because public banks face greater unproductive credit rating (Louzis et al., 2011). Therefore, the state has different objectives that prevent it from maximizing the bank's value. In its place, it raised finance to certain sectors, to endowment direct export credits and to cooperate with other state financial institutions.

The board of directors is a key part of financial and other operational decision-making and controlling the management action (Jensen, 1993; Fama, 1980). In previous studies, the size of the board affects the efficiency of the management and improves the quality of decision-making (Jensen, 1993). And it has a significant role to play in monitoring management activities and provides direction and reduces agency problems and improves shareholder prosperity (La Porta et al., 2000). There is a large discussion in the existing literature about the size of

board and the performance of firms, and there are two different finding exist in literature: the larger board is better and some empirical finding shows the smaller government is the best.

According to Mak and Yuanto, (2003) the banks which have less number of board of director i.e. consisting of at least five members, were better informed about the company's result and were thus considered to be better supervisory tasks and have batter abilities to monitors the management. The organization's board is a key mechanism to supervise and advise the management and reduce the opportunist behavior. Hence, larger the board size lowers the performance (Mustafa 2006). This is based on the idea that coordination of tasks, communication and decision-making efficiency between a large numbers of directors in board is more difficult and costly than in smaller board size (Belkhir, 2006). Therefore, the agency's theory state that a less number of board of director are recommended to diminish the cost and also agency cost through effective management, while large board size may increase potential connections and conflicts between members of the group.

So, the seven-eight-member of board are better than the larger ones (Yoshikawa and Phan, 2003). In addition, as the size of the board increases as the board ability to control management decreases due to the greater ability to dispel and increase decision-making (Jensen, 1993). Moreover, the board size with a larger quantity of directors may be disadvantageous and costly in order for institution to coordinate, maintain, plan, makes decisions and also arranging the regular board of director's meetings. (Wanyama and Olweny, 2013) Furthermore, smaller size of board consider at certain level is generally believed to improve the company's performance at all levels. Hence, the larger board increased oversight and weaker communication and difficult to make decision more effectively. So, all the previous empirical finding shows the same evidence about board size and proves less number of boards of director is more effective than larger board size. Large board size is less efficient and the CEO is easier to control (Lipton and Lorsch, 1992). In this case, the size of the board plays an important role in the activities of every wealthy organization.

According to Adam and Mehran, (2003), banks have board size because of complex organizational structure and a number of committees, such as the credit risk committees, lending and etc. etc. so the large board consists of experts from different fields. Too large the board size weakens the effectiveness of the board and also the efficiency of the governance mechanism (Yermack , 1996).Various results have been obtained from different researchers with regard to board size and nonperformance loans. Some of these findings state negative association between large board size and nonperformance loans. Mark & Li (2001) use the two-stage least squares regression to analysis the ownership and board characteristics and it found the negative relationship between nonperformance loans and larger board size. Furthermore, Zahra & Peace (1989) also prove the negative relationship. Hence, Ghabayen (2012) analyze 102 companies' financial data of Tadawul (Saudi Market) listed firms for the year of 2011. By using the simple OLs technique and found insignificant association between board size and nonperforming loans.

Maria et.al (2009) explores the impact of board size and nonperformance loans with bank efficiency. And they take 57 big banks of Europe for the period of 2002 to 2006 they used nonperforming loans as a proxy of inefficiency of banks. They empirical finding proved that smaller board size increased the banks performance then larger board.

For the purpose of investigation of board size and banks performance and effectiveness Simpson and Gleason (1999) analysis the 300 banks loans data for the period of 1995 to 1998 by adopting the egression as an estimation technique and prove larger board size decreased the effectiveness of banks and increased the level of nonperforming loans. Therefore, Belkhir (2006) also found the smeller finding with board size and nonperforming loans by adopting OLS regression technique and simple size of 260 banks. So that Bussoli (2015) analyzed 200 banks data for the period of 2009 to 2014 by adopting simple OLs technique and clarified the relationship between board size and bank loans and empirically stated that the size of the board had a negative impact on the quality of the bank's performance and led to higher nonperformance loans. Farrell and Whidbee (2000) Also prove larger board has negative association with nonperformance loans by analyzing the

545 banks data for the period of 1981 to 1992 using two SLS as an estimation technique.

2.2 Board Independence and Non-Performing Loans

The Board plays a key role in the management of strategic management decision-making within the good corporate governance system (Kose and Senbet, 1998). As per corporate governance modern concept the independent directors are associated with bank performance. In an American Governance Mechanism, companies need to require a greater number of independent board members (section 303A.01). The theory of monitoring effect states that outside executives has an interest in accelerating reputation and tracking management and company performance. However, an external executive director has better opportunities to supervise the company's top management (Fama, 1980; Fama et al., 1983).

An independent board is an enterprise-level board with a large number of external executives. An external member of the board who is not affiliated with senior management and does not participate in the business will only avoid conflicts of interest and increase the shareholder wealth.

According to China security and regulation commission CSRC (1992), independent executive directors are not allowed to lead organizations and cannot take part in the business activity or any other responsibility. They only protect shareholder value and monitor management independently. However, independent executive's director can hold the shares directly or indirectly of company. According to Fama (1980) and Fama et al., (1983) it is one of the major factors of monitoring and directing the management. In Addition, Independent director refer to evaluate management and track management performance (Jensen and Meckling 1976). So that, external executive's director decreases the information asymmetries problems and agency cost.

But, on the other hand, Westphal and Fredrickson (2001) argue that the theory of management's control on non-executive's directors has limited ability to make strategic decision. Therefore, the outsider director has less knowledge, skills and experience to work well (Baysinger and Hoskisson 1990).

Moreover, Empirical evidence, suggests that outside executives' directors work better than internal executives and can also protect the interests of shareholders (Brickley, Coles, & Terry, 1994). Several researchers have suggested that a greater share of independent, non-executive directors decreased the agency problems and also improve the performance and provide effective policy (Choe and Lee, 2003). Zahra and Pearce, (1989) explain that perfect board composition is that board that has high number of outside directors.

According to the study of (Klein, 2002) abnormal loans criteria for lower level were found when the board had more than a majority of external executive's directors after the concerning the majority of empirical finding. Another form of insider director illustration is large block holder. Within the Agency, the larger management's ownership, manager's uses their ownership to choose a board of director that cannot be controlled and monitor by the managers (Lasfer, 2006).

Companies with a high degree of ownership have a large number of outsiders as a member of the Board of Directors. To distinguish between the CEO and the chairman role they may appoint an executive director as a chairman. So, this selection of management will improve the management confidence level and also promote shareholder and their own interests. According to Choe and Lee, (2003) outsider director have new knowledge, idea, skills, expertise in different sectors and also have different knowledge of different firms, so for policy making, and day to day operational decision in depended director need to exist in board because of their valuable knowledge and fresh idea.

The banking sectors have complex business nature because of more outsider investors and level of asymmetries information (Grove et al., 2011). The relationship of independent director and nonperforming loans is mixed. Many empirical studies reported the positive and some negative and some of them fund no association between independent board and nonperforming loans.

The composition of the Board of Directors and the credit rating for banking corporate governance is characterized by opacity, control and regulation (Adams and Mehran, 2003). Transparency is due to the information symmetry between the shareholders and the manager. It may concern the latter and creditors, depositors and regulators. The decrease in this inaccuracy includes the obligation to raise equity, provisions, increase disclosure and manage adequate credit policies. The efficiency of a government, especially banks, depends on its board characteristics. These include the two tasks of the Board of Directors and the CEO (Chief Executive Officer), Independent outsider executive director, Institutional board of Directors, and Foreign board of director.

The empirical evidence of independent board and nonperforming loans is mixed. According to Vuyst and Ooghe (2001) in depended board means outsider director perform batter then depended board and reduce the nonperforming they found positive and significant relationship between in depended board and bank performance. Hence, outsider director enhances the performance of bank and good for bank governance mechanism (Skully 2002). Moreover, there is an effective association between in-depended board and nonperforming loans (Kiel and Nicholson, 2003).

The study of Brick and Chidambaram, (2008) found the negative association between independent boards with nonperforming loans. On the other hand, Kajola, (2008) explore the relationship of corporate governance charrettes i.e. board composition, board size, CEO duality and audit committee, and firm's performance using nonperforming loans as a measure of effectiveness of bank and take 20 Nigerian stock listed banks for the period of 2000 to 2006. Using simple OLs regression technique and found insignificant relationship between independent board and bank performance. Within the agency, managers are likely to influence the decision-making of independent board, which may increase management's strength (Grove et al., 2011). According to the study of Poudel and Hovey, (2013) adopted the Larcker, Richardson, and Tuna (2007) techniques to measure the impact of corporate governance on commercial bank of 236 begin listed banks. So their

finding shows that independence of the board is of great importance to the effective monitoring of management action and minimize the agency, because the independent director monitor better the management opportunistic behavior. The finding of Ahmad et al. (2016) indicates negative association between independent board and bank performance and nonperforming loans on Pakistani public bank "state owned". The study also found that management tries to decrease the nonperforming loans of the firm. The findings of the study prove that management effectiveness depends on shareholder decision through voting right.

On the other hand, Hermalin and Weisbach, (1991) founds insignificant association between in depended board and nonperforming loans. Bhagat and Black, (1999); also confirms from their empirical analysis that there is insignificant relationship between outsider director and nonperforming loans. Baysinger and Butler (1985) also check the impact of independent board on firm efficiency by applying the nonperforming loans as a proxy of bank effectiveness. They found the positive impact of independent board on banks performance and reduce the nonperforming loans. Mc. Connel and Servas (1990) Investigate the relationship of corporate governance and banks performance by adopting the regression as estimation technique and take 1173 firm simple size for the period of 1986 and found independent board is positive and significant association with bank credit policy and increased the performing loans. Ezzamel and Watson (1993) also explore the impact of corporate governance on banks effectiveness by taking 600 UK firms for the period of 1990 to 1992 and explore the positive relationship between independent board and nonperforming loans.

2.3 Institutional Ownership and Non-Performing Loans

Many research studies explore the relationship of institutional investors "pension funds, insurance companies, banks, trust funds, and mutual funds". These studies emphasize their effectiveness and guide the management system for monitoring corporate management. An important role of an institutional shareholder is not just

to achieve the current or short-term result but to focus on long-term achievements and to monitor and also help to guide the management to improve the company's long-term banks performance (Blair, 1995). Large institutional shareholder prefers long term achievements rather than currents or short-term performance (Donker et al., 2009).

In a centralized ownership structure where the management structure is not productive, then an institutional shareholder plays a key role in controlling management. Gillan & Starks, (2000) pointed out that the institutional owner's expertise increases the efficiency of administration. The existence of institutional board of director affects all decisions of the Executive Board. Due to their large financial resources, these institutional shareholders can manage the actions of the director and improve the operations of banks (La Porta et al., 2000). They can access the bank's private information and thus gain better insight into the banking sector. The control exercised by the government's institutional investors is empirically studied. This control is weak due to bank rules, which is a substitute for control (Elyasiani and Jia, 2008).

The United States and in European context have different results a positive relationship between institutional investor participation and credit risk is explained by their passivity over the management control (Deng and Jia 2008 and Barry et al. 2011). On the contrary, the involvement of institutional investors and nonperforming loans in the negative relationship is due to their activism and their impact on the management (Boudriga et al., 2011). The outsider or in depended board of directors enhance the banking financial performance and also credit policy. Strong foreign banks have more benefit of economies of scale and subsidiaries. These banks have easy access to capital markets and diversify their risks. In developing countries such as, major foreign banks benefit from technology transfer and good governance.

Micco et al. (2007) analyzed the 179 countries annual financial data of commercial bank for the period of 1995 to 2002 and found positive and significant association between foreign institutional bank and nonperforming loans and also increase the performance of banks. Moreover, Boudriga et al. (2011) prove that institutional

shareholder reduces the nonperforming loans, by taking the 46 banks as sample of 12 countries during the 2002 to 2006 and found negative association with nonperforming loan.

2.4 CEO Duality and Non-Performing Loans

CEO duality is the situation where both the CEO and Board chair is one and the same person. Many researchers in the literature have defined the duality. According to the study of Davis, Choorman, & Donaldson (1997) duality is the position where a single person is holding the power and authority of two positions at a time. This is commonly called as "Stewardship Theory" (Braun and Sharma 2007). The purpose of the CEO duality is to attain the strong control and leadership, smoothing the progress of getting information, reducing coordination cost, shortening the channel of communication and eliminate the conflicts arising between two positions. The researchers are in both supporting and opposing views of the CEO duality related to firm performance. Some researchers suggest that combining the positions may result in low performance for the firm. The research supports the notion that a same position of the CEO and Chair causes agency cost, prevent them from effective exercise and monitoring and thus results in low firm performance (Coles et al., 2001). According to the analysis of White and Ingrassia (1992) the CEO duality decrease the firm value, as the board cannot remover the CEO if he is underperforming or working according to his own personal interest on the shareholders cost. This creates the agency cost between board and CEO and thus affects firm value. A person holding two top positions adopt strategies according to their own personal interest and affect firm value as a whole (Jensen and Meckling 1976).

On the other hands some researcher suggests that combining the positions may increase the firm value. As like Alexander, et al., (1993) the combining position of the CEO and chairman encourage the firm value because it decreases the agency cost between chairs and CEO. Most of the scholars argue that dividing the role and responsibility of Chairman and CEO are required to guarantee the autonomy

and efficiency, and thus it also improves the monitoring effectiveness of the board (Jensen, 1993). The findings of Mangena & Chamisa, (2008) propose that CEO duality has lots of benefits for the company and improve firm performance. The studies further suggest that CEO duality reduce agency cost, coordination cost and decision making time. The conflicts of interests between shareholders and management can be eliminated or reduce by separating the tasks of decisions control and management, by taking the 119 firms financial data of 1999 to 2008 (Boyd, 1995). Whereas the study of Kyereboah-coleman, 2007 consist of different country like Nigeria, Kenya, Ghana, and South Africa for the period of 1997 to 2001 and used panel data analysis to explore the impact of ownership concentration and banks performance, and states that the combining of two offices affect firm performance negatively as because of low access to financing debt.

Kajola (2008) explore the impact of corporate governance mechanism and banks financial performance measure by ROE and non-performing loans for the period of 2000 to 2006 Nigerian listed banks and used simple OLS method and also states a positive and significant relationship between firm performance and division of Chair and CEO roles. The study of Otieno (2012), emphasis on Nairobi stock Exchange for the period of 2006 to 2010 for analyzing the impact of corporate governance impact on banks effectiveness and by using the panel data methodology they argue that division and board of chair and CEO more often reduce the firm's agency cost.

2.5 Audit Committee Independence and Non-Performing Loan

The concept of conflict of interest between shareholders and managers arises from the corporate governance, when decisions are taken against the interests of the owner, especially in opportunistic movements (Jensen and Meckling, 1976). Such actions create an asymmetry of information for shareholders. Independent and valuable control measures always protect the interests of shareholders (Fama and Jensen, 1983).

However, Keasey and Wright (1993) recognized corporate governance mechanisms, which reduces agency costs and reduces disputes causes from delegation of authority. This mechanism involves BOD interrelations, institutional shareholders, auditors and corporate governance systems. This interconnectedness is the primary mechanism that governs the activities of firm managers (Short et al., 1999). The transparent transparency and accountability system eliminates conflicts and improves financial performance. Thus, effective audit committees improve their financial information, reduce the information asymmetry, and solve agency problems (Klein, 2002). Nevertheless, improving the performance of the depended Audit Committee and reducing the potential for poor business conditions (Ainuddin and Abdullah, 2001).

Burke and Guy (2002), and Sarbanes-Oxley Act (2002) highlights the financial reporting process as to be monitor by of the audit committees by the board of directors. For this reason, the independent manager's had the ability to control and monitors overall management process (for example, Fama, 1980, Fama and Jensen, 1983). Later, the directors are also obliged to provide false financial practices if they find it (, Parker, 1998,). Independent directors pay more attention to the quality of financial reporting, disclosure of information and financial distress than the united directors. The Audit Committee functions and roles are to monitors quality financial reporting and to examine overall corporate governance (Braiotta, 1999).

2.6 Ownership Concentration and Non-Performing Loans

The researcher discussed two views about ownership structure: large shareholders and small block owners. Shleifer and Vishna (1997) propose that a large block owner has the right to verify the manager's performance and change or mitigate the bad strategies of management. According to the study of Dowell et al., (2011) large block owners has also the ability to reduce the chances and uncertainties

of financial distress. According to Grossman and Hart (1980), in general, determines that large shareholders had good strategic management arrangements and encourage management process. Schleifer and Vishniy (1986) point out that the large shareholders have advantages over ownership or control over ownership, and major shareholders are also committed to solving the problem of free rides. On the other hand, Shleifer and Vishny (1997) also argue that if ownership concentration crosses a certain boundary line, major shareholders will protect private interests and deny the interests of minority shareholders.

According to Jensen (1993), the high level of concentrated ownership enlarges the information asymmetries between minority and large shareholder. Interest conflicts arise when major shareholders are considering their interests because they generate a dispute between the majority of shareholders and minority shareholders. That is why large shareholders are able to analyze their own benefits and influence the administration and manage the interests of minor shareholders (La Porta et al., 2000). In this case, minority shareholders have to bear high cost on their large capital and, ultimately, increase the financial burden which may years to financial distress (Lee & Yeh, 2004).

Ownership concentration is an important element of corporate identity and corporate governance, potentially important. The ownership structure is divided into two types, the concentrated ownership (family ownership) and dispersed ownership (Surya et al., 2005). In some family's ownership or businesses group, the concentration of ownership has a major impact on the majority of shareholders, resulting in a variety of relationships among shareholders, and majority shareholders are treats as minority. Firth et al., (2006) analyzed the three year 1998 to 2000 financial data of 549 firms listed shanghai stock exchange and documented that the property concentration is determined by the Herfindahl index, which is the square shape of the shares held by three major shareholders.

Whereas, investors have a high level of protection, if the management shareholders are high and expected to have their shareholdings in place for the interests of all stakeholders to minimize the negative impact of their participation in the company (Leung et al., 2007). The study of Durnec and Kim (2003) investigate

the impact of corporate governance on Kenya banks performance by taking the 44 commercial banks by adopting cross sectional technique and determines that higher ownership owned by the controlling shareholders is under way, and will improve the company's quality and effectiveness will. According to the study of Juliana (2006) also analyzed the corporate governance practices on financial performance of local banks of Kenya and prove that the high level of ownership concentration can be obtained from trustworthy commitment by the controller to minimize minority interests. In this sense, concentration of ownership is one of the key factors in the firm's operations.

An important factor in the literature is the ownership concentration of corporate governance. The higher the concentration of ownership is, the wider the company's performance will be. From the perspective of the Bank, the concentration is wider, which means that if the management does not give the desired results, then the more effective verification of the effectiveness of the administration, and the shareholders will not have to re-select them in the future. A large number of publications have shown a positive impact of higher ownership structure on the activities of companies. The study of Shleifer and Vishny (1986) survey report which consist of 5 developed countries and propose that higher ownership structure is a good component for better management of the firm.

According to the study of Boyd et al. (1998), the nonperforming loan of the firm will increase if the ownership of the firm is from large fund suppliers by analyzing the 19 firms and 12 different industries and adopting the panel data technique. The studies of, Azofra and Santamara (2011) explore the impact of control and ultimate ownership structure on banks effectiveness listed in Spanish stock exchange during 1996 to 2004 and their finding have shown with empirical evidence that higher ownership structure has a direct and positive effect on corporate governance and banking.

2.7   Number of BOD Meeting and Non- Performing Loan

Board diligence is the key element of effectiveness of board and is linked with the factors that contain its member's qualification and board meeting numbers. Board meeting is mostly beneficial for shareholders. According to the study of (Vafeas 1999) a diligent board is mostly concerned with fulfillment of shareholder's expectation by assigning more time for the supervision of activities of the managers. Similarly, when boards arrange regular meetings, because of this they are more informed and knowledgeable about company performance and this leads them to take the relevant action in order to address the issue (Abbott, Parker and Peter 2004). According to Poudel and Hovey (2013) at least 12 meeting should be taken every year according to the corporate governance code of Nepal. A study conducted on board diligence and performance of the firm by Vafeas (1999) and his study reveals negative relationship between firm performance and board diligence. Similarly, another study conducted in Malaysia by Ponnu and Karthigeyan (2010) and the results of their research study suggest no significant relation among board meeting frequency and performance of the firm. According to (Conger, Finegolda and Lawler, 1998) in context of agency board meeting frequency might direct active monitoring by the board. As the number of meeting increases, the supervision from top management increases which indicates the effective role of monitoring, which may lead to decrease the agency cost and subsequently increase or improve the performance of the firm.

Adams and Mehran, (2003) Takes the 200 large banks on the bases of assets book value for the period of 1986 to 1996 to explore the impact of audit committee on bank performance by adopting the panel OLS estimation technique and documented that banking business is a complex business and it requires an affective and active role of monitoring by the board. In line with this bank should have more committees and larger boards in order to meet frequently for the sake of effective operating purpose. The results of their study reveals that board meetings must not be on regular basis but importance should be given to the quality

of agenda in order to get positive results of commercial banks on basis of loan performance in Kenya. There are different views regarding how age of directors influences the conflict of agency and performance of the firm. On the basis of experience and knowledge senior directors helps in mitigating the agency cost and may 6halso helpful in effective monitoring. While the study of Grove et al., (2011) consist of 236 public banks of Chania and adopting the estimation technique of Larcker, Richardson, and Tuna (2007) and suggested that senior directors have lack of energy and incentives to monitors managers actively and a result of this agency problem increases.

Reforms of National Association of Corporate Directors (NACD) have set retirement plan age and also limited the time of serving by directors. A criticism on Lehman Brothers was noticed based on age that their board consists of members having age more than 70 years. Corporate library editor Nell Minow submitted a testimony of independent corporate governance rating firm in which he stated that careers of Lehman board member are from different period. In this specific time frame there is no security of mortgage securities, trade derivatives, default credit swaps and in turn it lacks systematic risk for the product created (Berman, 2008). Similarly, Core et al., (1999) observe 95 US banks 3-year financial data and view that directors whose age is more than 70 is mostly associated with weak corporate governance and higher compensations' of executives. Another study of Larckeret al., (2007) takes 2106 banks as a sample of and measure the corporate governance by activist stock, board characteristics, ownership concentrations, audit committee and anti-takeover variables. And found no relation among average director's age and firm performance.

However, directors are more knowledgeable and experienced is beneficial for banking firms because of complex nature of business. But when age of the directors exceeds a certain point, the directors may be less active with current complex financial commodities and may also lack energy and incentive for purpose of effective monitoring and thus it leads to increase the agency problems. In similar manner when board consists of mostly senior directors, directors are less up to

date of mostly financial products like off balance sheet derivatives (Grove et al., 2011) by

2.8 State Owned and Non-performing Loans

The country's rules and regulations are essential for any business and banks have no exception in this regard. Usually governments create such rules and regulations for all banks and other institutions, so one cannot ignore these regulations of the governments, especially where banks are governed by state-owned banks. Before the reform began in 1980, Pakistani banking sector was governed by state banks, and more interestingly, Pakistan is a democratic state, but unfortunately, there are many military indications seen in the last 70 years. That is why banks owned by states are ineffective and in efficient. In Pakistan, due to political controversy, banks have split large amounts of bad loans that create the nonperforming loan issue. For this reason, in the 1980s, the Pakistani Government takes steps by launching reform to resolve the issue.

According to the study of Gomez and Jomo (1999) firms and financial institutions are highly leverages which have connections with politicians of the states. Brown and Dinc (2005) analyzed the 21 major emerging countries for the period of 1990 and 21 banks data and emphasized that politicians influence the banks' loan management and use it for political purposes on their own personal interest.

Therefore, Fraseret al. (2006) also analyzed the corporate governance and political practices on banks performance using nonperforming loans as a proxy of loans performance of Malaysian banks taking the 10 year as an observant period and suggest from the empirical findings of the study that companies with political relations had more amount of nonperforming loan because of their relationship with politicians. In addition, Micco et al. (2007) explore the relationship between bank ownership and banks financial performance by using the OLS technique and estimate separate developed and industrial country data, and their finding also indicates that state-owned banks have poor performance indicators in developing countries, but they work well in developed countries. Likewise, Cornett et al.

(2008) investigate state own and banks loans profitability by using the simultaneous equation approach and 5-year banks data for the period of 2002 to 2007 and concludes from empirical findings of the study that state-owned banks were significantly less profitable than private banks. Shen & Lin, (2012) also investigate the impact of domestic and state own banks on bank financial performance under political during the period of 2000 to 2009 by using the endogenous swathing model on Taiwan stock listed banks. The study findings suggest that banks, which have political interference, perform lower than others because the politician hire the executive according to their own will and thus financial performance deteriorates.

2.9 Tier 1 Capital and Non-performing Loans

Bank capital adequacy is measure by tier 1 capital, it is such capital which included equity capital and reserved. In tier 1 capital such equity is included which a holder can't redeem at his choice. It is such capital which bank keeps to meet its emergent requirement to keep operation smooth.

2.10 Interest Rate and Non-performing Loans

The interest rate and real interest rate is defined by Castro (2013) and Chaibi and Ftiti (2015).

The interest rate is measure by formula (Long Term Interest Rate Inflation Rate). The studies of Fofack (2005) and Castro (2013) investigate the causes of nonperforming loans during financial crises in Sub-Saharan country of Africa in 1990s. They used panel estimation technique. So, their result shows that interest rate increases the non-performing loans and affect positively. Therefore, Beck, Jakubik and Piloiu (2013) used novel panel data to determine the macroeconomic factor of nonperforming loans in 75 selected companies during previous 10 years. So the result of penal dynamic estimation shows increase in interest rate tends increase the level of nonperforming loans. Furthermore, Louzis et al. (2011) also used panel dynamic model to determinants of nonperforming in Greeks banks sector.

They found the interest rate positively correlated with nonperforming loans, and nonperforming loans also sensitive to change in interest rate and market situation. Bandar and Javid (2013) explore the relationship of nonperforming loans and macroeconomic variable during 2002 to 2011 on Pakistani banks. They found that interest rate significantly and positively associated with nonperforming loans on Pakistani banks. Therefore, Hoque and Hossain (2008) investigate loan defaults and loan loss in developing country on Persistent industrial from 1980 to 2007. So, the result shows that growth in interest rate cause of increase in nonperforming loans.

2.11 Unemployment and Non-performing Loans

Unemployment is defined simply as a percentage of the total labor force, who is unemployed, but who is looking for hard work and wants to participate (Bernstein, 2014). Joseph, Edson, Manuere, Clifford and Michael, (2012) Investigate the impact of macroeconomic factor on nonperforming loans on Zimbabwe banks. They found that high level of unemployment cause of low capability of long term loans payments. According to Nkusu (2011) also analyses the relationship between macroeconomic variables and nonperforming loans by adapting to approaches, panel regressions and PVAR (panel vector autoregressive) model during 1998 to 2009. And they state that unemployment and nonperforming loans directly related to each other. Therefore, the unemployment rate reflects the economic condition and it's also affects the debts repay ability of individual and companies. Therefore, many other studies also found positive and significant impact of unemployment on nonperforming loans (Louzis et al. 2012, Castro 2013 and Chaibi and Ftiti 2015).

2.12 Global Financial Crisis and Non-performing Loans

Clinch and Wei (2011) argue that the crisis started in the last quarter of 2007 and therefore we assume the 2007 crisis effect will be shown in 2011 annual reports. According to the finding of Kwan (2010), many banks stock dropped during the financial crisis period 2007 to 2009 and also affect their borrowing capacity. Ree (2011) Investigate the impact of global crisis for low incomes countries like Asian countries and found that banks have significantly influence by global financial crisis that began in 2007 and also face cross boarding borrowing nexus. And found significant impact of global financial crisis on nonperforming loans. Therefore, Espinoza, & Prasad, (2010) investigates the impact of global financial crises on nonperforming loans on banks sector of developed contour. They used dynamic panel model during 1995 to 2008 over 80 banks. And they argue that nonperforming loans ration observed increased during global financial crises.

2.13 GDP Growth and Non-Performing Loans

According to nonperforming loans correlated with economic development and economic condition influence the level of nonperforming loans. So high level of GDP growth improvises the income level and also incuses the borrowing capacity and lower the level of NPL. Hence low GDP growth decrease the debts repay ability and increase the level of NPL. Therefore, many empirically finding proves negative impact of GDP on nonperforming loans. The finding of Atanasijevi and Boovi, (2016) Irina & Angela, (2016) and Khemraj & Pasha, (2016) shows the negative and significant impact of GDP on NPL. Furthermore, Amuakwa-Mensah and Boakye-Adjei (2015) and Alhassan et al. (2014) also prove the negative association between GDP and nonperforming loans.

2.14 Real Effective Exchange Rate and Non-Performing Loans

According to Shingjergji (2013), analyzed the impact of macroeconomic factor on nonperforming level during the 2005 to 2012. By using the simple OLS (Ordinary Least Squares regression) model they found foreign exchange rate and NPL ratio is positively associated with each other. Because borrowing process always influence by foreign rate and it also increase the nonperforming loans. Therefore, Moinescu (2012) also analyses the impact of macroeconomic variable on nonperforming loans by adopting the simple regression model during 2003 to 2011. And their results show that the nonperforming loans have significant impact on economic development and foreign exchange rate also have positively effect on it. Khemraj and Pasha (2009) attempt to determine the nonperforming loan factor on Guyanese banking sector by adopting the penal data analysis. They found positive effect of exchange rate on nonperforming loans.

2.15 Inflation and Non-Performing Loans

The finding of (Greenidge and Grosvenor, 2009) prove that high inflation rate positively affects the non-performing loans. And argue that higher level of inflation causes of low economic growth and also increase the non-performing loans. Therefore, high level of inflation rate and interest rate both influences the borrower's capacity and also repay the debt (Badar and Javid, 2013) and (Moinescu and Codirlasu, 2012). In addition, inflation rate decreases the income level and indirectly decrease the ability of borrowing (Skarica, 2013). So that inflation positively associated with NPL (Nezianya and Izuchuku, 2014).

Chapter 3

Data Description and Methodology

3.1 Data Specifications

This study used 11-year annual data for the observation period of 2006 to 2016, to explore the relationship of corporate governance and non-performing loans. Where non-performing loan is dependent variable and corporate governance (i.e. CEO duality, Board size, board independence, Board Meetings, Audit committee independence, Institutional share hold and state-owned) are explanatory variables. The sample consists of a total of 86 banks listed on Pakistan, India and Bangladesh Stock Exchanges. It includes 26 banks from Pakistan, 36 banks from India and 24 banks from Bangladesh. The sample has been selected on the basis of market capitalization from all three selected countries banks. In this study secondary data is used, and data obtained from banks financial statements and websites over the periods of 2006 to 2016.

3.2 Estimation Technique

The study used random effect model to find out the impact of corporate governance on non-performing loans. Panel data has the advantage of increasing the number of

observations, reducing the three-dimensional variables (multicollinearity), degrees of freedom and especially increase the data reliably in case of lower number of years (Jensen, 1993). Secondly, pooling allows controlling the exogenous abnormal shocks (time-effects) of all banks and also decreases the omitted variable and its bias (i.e. unit effects). Panel data consist of two dimensions: cross sectional data dimension denoted by "n" and time series data denoted by "t".

The calculation of panel data estimators is expected to be more complicated than just the cross-sectional data or just the time series data. In some cases, however, the availability of panel information can in fact simplify computation and reasoning. The pooled regression observed homogeneous behavior of an endogenous variable for all other explanatory variable in the sample period (means same slopes and intercepts). Therefore, many other alternative estimation techniques improved the panel data reliability like fixed and random effects. Furthermore, OLS pooled estimation technique may be inconsistent and biased when unobserved factors are correlated to independent variables so we do not select this evaluation technique directly. By using either the random or fixed effect estimators, we can easily overcome this econometric challenge. Hausman test determines either the random or fixed effect is more suitable. The rejection of random effect indicates or favor of fixed effects model appropriation (Gujarati, 2009). Using the Hausman test, the random effect specication is preferred in the current study.

3.2.1 Principal Component Analysis (PCA)

This study used Principal component analysis (PCA) methodology to construct corporate governance index for evaluating the impact of corporate governance on non-performing loans of banks from India, Pakistan and Bangladesh. The purpose of using this methodology is PCA can control the problem of mulitcollinerity, instead of using corporate governance variables separately in regression (Agrawal & Knoeber 1996). Another advantage of this PCA is that it produces the weights for each variable of corporate governance automatically. It explains the variance of different variable of corporate governance hence, the unnecessity of pre-determination of the weights (Ammann et al. 2011).

3.2.2 Common Effect Model

The main assumption of this model is that it says there is no distinction among the intercept of all the cross section, meanings beta is same for all cross section. The common effect model can be written as follow:

$$Y_{i,t} = \beta_0 + \beta_{x,i,t} + \varepsilon_{i,t} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

3.2.3 Fixed Effect Model

This model proposes that intercept will not be the same for every cross section but will be different for each cross section. A separate dummy is included in this method to show the extent of dissimilarity between the intercept of each cross section. It is also called least square dummy variable. Due to diversity in data, intercept is different for each unit; hence best model for estimation would be the fixed effect model. The hypothesis of the same intercept would be rejected when the standard F-statistic is significant and hence fixed effect model will be applied, otherwise common effect model will be used for the estimation. The fixed effect model can be written as follow:

$$Y_{i,t} = \beta_i + \beta X_{i,t} + \varepsilon_{i,t} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

3.2.4 Random Effect Model

Random effect model is based on the assumption that intercept is different for all cross sections and time period, but here in this model it is checked whether intercept follows a systematic pattern or not. It assumes that beta is not meaningful because it follows a random path. By introducing same variable randomness in fixed effect model, the model will be like:

$$Y_{i,t} = (\beta_0 + \mu) + \beta_{x,i,t} + \varepsilon_{i,t} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

To choose between fixed effect model and random effect model the Hausman test is used. If test yields a significant value; fixed effect model will be used. Otherwise the random effect model is applied.

3.3   Measurement of Variables

3.3.1   Dependent Variable

Dependent variable is non-performing loans (NPL's) to evaluate the impact of corporate governance. The concept of non-performing loan is based on the length of time period that's completed and also overdue (Choudhury et al., 2002). According to the study of Berger and De Young (1997), non-performing loans are problematic loan for the institutions. Fofack (2005), in this regard also explains nonperforming loans as a bad loan for banks. Therefore, the broader context of non-performing loans can be considered as loans that have matured both as interest and principal over a certain period of time, and also implied in the contrary to the terms of the credit agreement. Hence, nonperforming debts are loans that are 90 days or are late or no longer accrued interest (Alton and Hazen 2001).

3.3.2   Independent Variables

3.3.2.1   Corporate Governance Index

From previous literature, independent variables included corporate governance index in addition to both kinds of determinants. By using Principal component (PCA) six corporate governance variables are used to construct index of corporate governance variables. These six variables are Board Size (BS), Board independence (BI), CEO duality (CEO), Institutional Ownership (INST), Owner concentration (OC), and State owned banks (SO) (Tarchouna et. al. 2016). Independent variable includes corporate governance index in addition to macroeconomic variables. Corporate governance is measured through seven variables in this study. These

are, Board Size, CEO Duality, Board Independence, Audit Committee independent, Board Meeting, State owned and Institutional Ownership.

3.3.2.2 Board Size

Board size (SIZE) is captured by the total number of directors on a board.

3.3.2.3 CEO Duality

To measure the CEO's duality, this study used a dummy variable. It takes the value of 1 if CEO has both the CEO and Chairman, otherwise 0.

3.3.2.4 Board Independence

Board independence (outsiders) is captured by number of outsider directors in board (Elloumi and Gueyle 2001).

3.3.2.5 Audit Committee Independence

Audit committee independent is measured by number of outsider member divided by total number of committee member.

3.3.2.6 Ownership Concentration

Ownership concentration is measured based on the voting rights directly and indirectly held by the largest (dominant) shareholder. To account for the deviation from the one share-one vote rule, study also measure the cash-flow rights held directly and indirectly by the largest shareholder. By following the methodology of, La Porta et al. (1999), according to this methodology study identified the largest shareholder that is a share-holder that holds at least 5% of the control rights. If the dominant shareholder is a corporate entity or a financial institution, we identified their owners and the owners of their owners, and so on and so forth.

3.3.2.7 Institutional Shareholder

Institutional shareholder is measured by proportions of institutional hold by large shareholders divided by total number of shares.

3.3.2.8 Number of Board Meetings

Annual board meeting held within the organization and by board members

3.3.2.9 State Owned

To measure the State Owned, this study used a dummy variable. It takes the value of 1 if bank is state owned, otherwise 0.

3.3.3 Control Variables

To investigate the relationship of corporate governance and nonperforming loans some Macroeconomics factor are used as a control variable which are derived from the previous literature. The macro economic variables considered in this study are:

3.3.3.1 Bank Specific Variable

Size of the bank used as firm specific variable in this study.

3.3.3.2 Firm Size

It is measured by natural logarithm of bank total assets. Total assets can be used as firm's size (Ehikioya 2009). Therefore, large firm may affect the firm's ability of nonperforming loans and its performance. Furthermore, firm's size has positive and significant impact on financial performance of banks. The higher level of total assets of banks indicates good performance, better management and more effective governance procedure and more reliable technology (Amaranggana, 2009).

Many empirical studies analyzed the impact of bank size and financial performance and found that bank size have positive and significant impact on bank performance (Ermina and Maria 2010, Yung 2009 and Kyereboah- Coleman and Biekpe, 2006). Hence, it is clear that big banks have better opportunities to diversify the risks of investing because they have enough capital to improve and employ a better management team (Yung, 2009).

3.3.3.3 Interest Rate

The interest rate and real interest rate is defined by Castro (2013) and Chaibi and Ftiti (2015). According to Castro (2013) non-performing loans are positively affected by the interest rate. Messai suggest that bank should lower the interest rate to decrease the level of non-performing loans. This study used inflation adjusted interest rate. The interest rate is measured by following formula.

$$Long\ Term\ Interest\ Rate\ \ Inflation\ Rate$$

3.3.3.4 Unemployment

The unemployment rate moreover shows the economics condition and lower the capability of individual and companies. Unemployment is defined simply as a percentage of the total labor force, who is unemployed, but who is looking for work and wants to participate (Bernstein, 2014). Messai finds a positive relationship between non-performing loans and unemployment, and due this banks loans provisions increased.

3.3.3.5 Global Financial Crisis

Mette et. al. 2018 study on global financial crisis and finds that financial crisis impact varies from country to country, it may negative or positive impact on non-performing loans. The global financial crisis captures through dummy variable 1 for crisis period otherwise 0.

3.3.3.6 GDP Growth

Louzis, Vouldis, & Metaxas, 2010 growth in GDP shows strong negative relationship between non-performing loans. Its negative associated with non-performing loans. The variable GDP growth defines by following formula.

GDP growth t GDP growth rate in year t GDP growth t1

3.3.3.7 Real Effective Exchange Rate

Exchange rate is that rate used to exchange one currency to another. (Badar, Javid, & Zulfiquar, 2013) increase in exchange rate cause to increase the non-performing loans. (Dash & Kabra, 2010) study shows that high level of exchange rate wills high the level of non-performing loans.

Real effective exchange rate measure selected countries and year t.

3.3.3.8 Inflation

(Makri, Tsagkanos, & Bellas, 2014) high level of inflation affects the repaying ability of peoples of country; it shows negative relation between inflation and non-performing loans. (Nkusu, 2011) study shows that inflation may negative or positive impact on non-performing loans due to quality of loans.

INFt Inflation rate in year t

3.4 Model Specifications

We used panel regression model for examining the effect of corporate governance characteristics on non-performing loans. Many researchers used different variable for corporate governance measurement. So, it is controversial to select best determinants of corporate governance among researchers. Therefore, there is no consensus of researcher on variables that predict corporate governance.

Different researchers use different corporate governance variables, so it is very difficult to select which corporate governance variables are good predictors of corporate

governance. By following the literature, we choose Board Size (BS), Board Independence (BI) Audit committee (AUI), CEO duality, Institutional Shareholder (INST), ownership concentration and board meeting consider as corporate governance variables, which are widely used in previous empirical studies (i.e. Klein, 2002, Jensen, (1993); Yermack, 1996, and Lipton and Lorsch, 1992).

$$NPL_{i,t} = \beta_0 + \beta_1 BS_{i,t} + \beta_2 BI_{i,t} + \beta_3 CEO_{i,t} + \beta_4 ACI_{i,t} + \beta_5 OC_{i,t} + \beta_6 INST_{i,t} + \beta_7 BM_{i,t} +$$

$$+\beta_8 SO_{i,t} + \beta_9 lSZ_{i,t} + \beta_{10} Unempl_{i,t} + \beta_{11} INF_t + \beta_{12} GDPG_t + \beta_{13} IntR_t + \beta_{14} LDEBT_{i,t} +$$

$$\beta_{14} ExR_{i,t} + \beta_{15} Tier\,1_{i,t} + \varepsilon_{i,t} \quad \text{...} \quad (1)$$

All variables are denoted by i for a single cross-section unit (i = 1, n) and t is denoted at time (t = 1, t).

Where,

BS = Member of board size

BI = Board member independence

CEO = CEO Duality

ACI = Audit Committee Independence

OC = Ownership concentration

INST = Institutional Ownership

BM = Board Meeting

SO = State owned bank

SZ = Bank size

IN F= Inflation rate

GDPG = Gross Domestic Product Growth

IntR = Interest Rate

Ldebt = Total debt

Tier1 = Tier 1 Capital

In the second equation, impact of corporate governance index on non-performing loan is measured taking into consideration the macroeconomic variables.

$$NPL_{i,t} = \beta_0 + \beta_1 CGVI_{i,t} + \beta_2 Lsize_{i,t} + \beta_3 GDPG_{i,t} + \beta_4 IntR_{i,t} + \beta_5 Unemp_{i,t} + \beta_6 FC_{i,t} +$$

$$\beta_7 Inf_{i,t} + \beta_8 ExR_{i,t} + \beta_9 Ldebt, t + \varepsilon_{i,t} \quad \text{..................................} \quad (2)$$

All variables are denoted by i for a single cross-section unit (i = 1, n) and t is denoted at time (t = 1, t).

Where,

CGVI = Refer to corporate governance index

SZ = Bank size

GDPG = Gross Domestic Product Growth

IntR = Interest Rate

Unemp = Unemployment

FC = Financial Crises

INF = Inflation rate

ExR = Exchange Rate

Ldebt = Refer to total debt

Chapter 4

Results and Discussion

4.1 Descriptive Statistics

The following tables from 4.1 to 4.3 described countries wise data behavior of all variables of this study for the period of 2006 to 2016. Descriptive statistics of corporate governance and macroeconomics variables are separately without using PCA (Principal component analysis) to construct index are given below. Data behavior is investigated to ensure its accuracy before performing other statistical tests. Descriptive statistics show the overall behavior of the data, including the dependent and all independent variables. The descriptive statistics tables comprise mean, minimum, and maximum values and standard deviation for all variables. The value of mean shows the average behavior of data where as standard deviation value indicates deviation of data from mean. The maximum and minimum value indicates high and lower rang of data. The descriptive statistics analysis of Pakistan in this study are given below in table 4.1.

TABLE 4.1: Descriptive Statistics of Pakistan

Variable	Obs	Mean	Std. Dev.	Min	Max
LNPL	286	15.6175	1.85776	8.74082	18.6697
BS	286	8.31852	1.5504	4	13
BI	286	0.7018	0.1759	0.18182	0.92308
CEO	286	0.13333	0.34057	0	1
ACI	286	0.30595	0.10213	0.14286	0.78571
OC	286	0.08478	0.06107	0.0086	0.5105
INST	286	0.13621	0.14208	3.40E-05	0.6535
BM	286	5.24444	1.27584	2	11
SO	286	0.26296	0.44106	0	1
GDPG	286	3.81125	1.45315	1.60669	6.17754
INTR	286	12.424	1.66194	8.755	14.5375
Unemp	286	5.71704	0.32642	5.1	6.2
FC	286	0.28889	0.45409	0	1
Inf	286	109.092	24.4316	73.8315	152.324
Exr	286	76.1294	14.4694	61.2413	105.36
LDebt	286	14.7967	0.10254	14.5908	14.985
Size	286	19.0559	1.24849	15.5553	21.6424

Table 4.1 consist statistical results of Pakistan. The mean value of NPL (Log of nonperforming loans) is 15.62 it means average banks have 15.62% nonperforming loans with 1.86 % of standard deviation. The minimum value is 8.74 and maximum value 18.66. The reason of higher fluctuation in minimum and maximum value is different level of nonperforming loan in different banks. The average range of board size (BS) is 8 which mean average banks have 8 members in board and standard deviation of 1.550 minimum value 4 and maximum value 13. The board independence average value is 0.72 its means average banks have 0.72 level of board independent with standard deviation value of 0.175. The sample mean value of CEO duality is 0.1333 measures by dummy variable 1 for CEO duality and 0 otherwise. Audit committee interdependence mean value is 0.3059 shows average banks have ACI level is 0.3059 with 0.1021 standard deviation having maximum value 0.79 and minimum value of 0.1428.

The sample mean value of ownership concentration (OC) 0.0847 indicates average banks have 0.084 of ownership concentration, its maximum value is 0.5 and minimum value is 0.008 with standard deviation of 0.06106. The value of sample means of institutional ownership 0.136208 indicates average banks .0136208 of shares own by institution with 0.14208 values of standard deviation. Minimum value is 3.40E-05 and maximum value shows 0.653495 of instituting ownership. The sample mean value of board meeting (BM) is 5.2444 which mean average banks held 5.2444 meeting per annum with maximum number of meeting is 11 and minimum is 2. The mean value of state owned banks (SO) 0.2629 with standard deviation of 0.44100.

The gross domestic product growth (GDPG) mean value is 3.8112 with standard deviation of 1.4531, maximum and minimum value is 6.39 and 1.606692 respectively. In addition, interest rate mean value is 12.4239 and standard deviation is 1.661 with maximum value 14.53 and minimum value of 8.755. moreover, Unemployment mean value is 5.717 and standard deviation is 0.326 with maximum value 6.2 and minimum value of 5.1. The sample mean value of financial crises is 0.2888 measures by dummy variable 1 in the years of financial and 0 otherwise. The mean value of Inflation (Inf) mean value is 109.0 and standard deviation of 24.43 and maximum value 152.32 and minimum value 73.83 is respectively. The mean value of exchange rate (exr) is 76.12 and standard deviation of 14.46 and maximum value and minimum value are respectively 105.32 and 61.24. The mean value of LDebt is 14.796 and standard deviation value is 0.102 maximum value 14.99 and minimum level of debt is 14.59. The Size (LSIZE) means value 19.056 with standard deviation of 1.2484 and maximum value of 21.6424 and minimum value 15.555 respectively.

TABLE 4.2: Descriptive Statistics of India

Variable	Obs	Mean	Std. Dev.	Min	Max
LNPL	395	9.48579	1.41475	4.70048	12.6063
BS	395	7.62727	2.49081	0	14
BI	395	0.53511	0.23364	0	0.83333
CEO	395	0.26667	0.44289	0	1
ACI	395	0.27819	0.1167	0	0.57143
OC	395	0.08933	0.06409	0	0.5105
INST	395	0.48876	0.24154	0	0.7789
BM	395	5.04546	1.88121	0	13
SO	395	0.51515	0.50053	0	1
GDPG	395	7.48152	1.66943	3.89096	10.26
INTR	395	9.12967	2.89305	4.49083	15.2875
Unemp	395	3.63661	0.22788	3.41	4.12
FC	395	0.18485	0.38876	0	1
Inf	395	115.828	28.583	69.8737	154.975
Exr	395	81.616	9.75199	70.1885	100
LDebt	395	9.0004	0.28733	8.6991	9.56757
LSize	395	18.7962	1.2934	15.5786	22.3945

The descriptive statistics analysis of India in this study are given above in table 4.2.

The mean value of LNPL (Long of nonperforming loans) is 9.48 it means average banks have 9.48% nonperforming loans with 1.414 of standard deviation. The minimum value is 4.70048 and maximum value 12.606. The reason of higher fluctuation in minimum and maximum value is different level of nonperforming loan in different banks. The average range of board size (BS) is 8 which mean average banks have 7.627273 members in board and standard deviation of 2.490807 minimum value 0 and maximum value 14. The board independence average value is 0.535109 it means average banks have 0.535109 level of board independence with standard deviation value of 0.233638. The sample mean value of CEO duality is 0.266667 measures by dummy variable 1 for CEO duality and 0 otherwise. Audit committee interdependence mean value is 0.278193 shows average banks have ACI

level is 0.278193 with 0.442888 standard deviation having maximum value 0.571429 and minimum value of 0.

The sample mean value of ownership concentration (OC) 0.089333 indicates average banks have 0.089333 of ownership concentration, its maximum value is 0.5105 and minimum value is 0 with standard deviation of 0.064089. The value of sample means of institutional ownership 0.488756 indicates average banks 0.488756 of share own by institution with 0.241539 values of standard deviation. Minimum value is 0 and maximum value shows 0.7789 of instituting ownership. The sample mean value of board meeting (BM) is 5.045455 which mean average banks held 5.045455 meeting per annum with maximum number of meeting is 13 and minimum is 0. The mean value of state owned banks (SO) 0.515152 with standard deviation of 0.500529 with minimum and maximum values as respective 0 and 1.

The gross domestic product growth (GDPG) mean value is 7.481523 with standard deviation of 1.669432, maximum and minimum value is 10.25996 and 3.890957 respectively. In addition, interest rate mean value is 9.129673 and standard deviation is 2.893047 with maximum value 15.2875 and minimum value of 4.490833. Moreover, Unemployment mean value is 3.636606 and standard deviation is 0.227879 with maximum value 4.12 and minimum value of 3.41. The sample mean value of financial crises is 0.184848 measures by dummy variable 1 in the years of financial crises and 0 otherwise. The mean value of Inflation (Inf) mean value is 115.8284 and standard deviation of 28.58304 and maximum value 154.9751 and minimum value 69.87366 is respectively. The mean value of exchange rate (exr) is 81.61602 and standard deviation of 9.751986 and maximum value and minimum value are respectively 100 and 70.18854. The mean value of LDebt is 9.000398 and standard deviation value is 0.287326 maximum value 9.567569 and minimum level of debt is 8.699102. The Size (LSIZE) means value 18.79618 with standard deviation of 1.293399 and maximum value of 22.39448 and minimum value 15.5786 respectively.

Table 4.3: Descriptive Statistics of Bangladesh

Variable	Obs	Mean	Std. Dev.	Min	Max
LNPL	264	22.1017	1.19134	18.3155	25.5594
BS	264	7.92417	1.42893	2	12
BI	264	0.58352	0.50566	0.04938	3.5
CEO	264	0.19905	0.40024	0	1
ACI	264	0.29554	0.09448	0.14286	0.57143
OC	264	0.08965	0.0582	0.0131	0.3501
INST	264	0.1113	0.13915	0	0.64557
BM	264	5.51185	1.44539	4	13
SO	264	0.1801	0.38518	0	1
GDPG	264	6.25717	0.58087	5.04513	7.11347
INTR	264	12.657	1.04698	10.4092	13.9442
Unemp	264	10.1322	1.59777	8.4	13
FC	264	0.20379	0.40377	0	1
Inf	264	118.241	26.6931	69.8737	154.975
Exr	264	96.783	6.27816	85.5554	104.464
LDebt	264	9.23122	0.11836	9.09836	9.45262
LSize	264	25.3958	0.95536	21.7216	27.8146

The descriptive statistics analysis of Bangaladesh in this study is given above in table 4.3.

The mean value of LNPL (Long of nonperforming loans) is 22.10169 it means average banks have 22.10169% nonperforming loans with 1.191338 of standard deviation. The minimum value is 18.31553 and maximum value 25.55935. The average range of board size (BS) is 7.924171 which mean average banks have 7.924171 members in board and standard deviation of 1.42893 minimum value 2 and maximum value 12. The board independence average value is 0.583524 it means average banks have 0.583524 level of board independence with standard deviation value of 0.505662. The sample mean value of CEO duality is 0.199052 measures by dummy variable 1 for CEO duality and 0 otherwise. Audit committee interdependence mean value is 0.295543 shows average banks have ACI level is 0.295543 with 0.094478 standard deviation having maximum value 0.571429 and minimum value of 0.142857.

The sample mean value of ownership concentration (OC) 0.089651 indicates average banks have 0.089651 of ownership concentration, its maximum value is 0.3501 and minimum value is 0.0131 with standard deviation of 0.058203. The value of sample means of institutional ownership 0.111304 indicates average banks 0.111304 of shares own by institution with 0.139148 values of standard deviation. Minimum value is 0 and maximum value shows 0.645568 of instituting ownership. The sample mean value of board meeting (BM) is 5.511848 which mean average banks held 5.511848 meeting per annum with maximum number of meeting is 13 and minimum is 4. The mean value of state owned banks (SO) 0.180095 with standard deviation of 0.38518 with minimum and maximum values as respective 0 and 1.

The gross domestic product growth (GDPG) mean value is 6.257166 with standard deviation of 0.580871, maximum and minimum value is 7.113465 and 5.045125 respectively. In addition, interest rate mean value is 12.65695 and standard deviation is 1.046982 with maximum value 13.94417 and minimum value of 10.40917. Moreover, Unemployment mean value is 10.13223 and standard deviation is 1.597768 with maximum value 13 and minimum value of 8.4. The sample mean value of financial crises is 0.203791 measures by dummy variable 1 in the years of financial crises and 0 otherwise. The mean value of Inflation (Inf) mean value is 118.2409 and standard deviation of 26.69305 and maximum value 154.9751 and minimum value 69.87366 is respectively. The mean value of exchange rate (exr) is 96.78299 and standard deviation of 6.278158 and maximum value and minimum value are respectively 104.4643 and 85.554. The mean value of LDebt is 9.231223 and standard deviation value is 0.118355 maximum value 9.45262 and minimum level of debt is 9.098364. The Size (LSIZE) means value 25.39576 with standard deviation of 0.955355 and maximum value of 27.81464 and minimum value 21.72157 respectively.

4.2   Correlation Analysis

Correlation analysis performed is to investigate the link between dependent and independent variables that include in this study and also explore the potential multicollinearity problem. The correlation analysis among all corporate governance variables reported in table 4.4. In this correlation used those six (6) variables that are used to construct CG index by using PCA methodology. The correlation analysis used to define or explain the multiple variable dependencies at same time. The direction (negative or positive) and strength of relationship among all variables measure by correlation analysis. The range of correlation analysis is -1 to +1, which indicates the correlation among variables. Below the 0 value (negative) value shows negative association and positive value shows positive association. Whereas +1, -1 indicates perfect correlation. The results of correlation analysis among corporate governance variables are given below.

TABLE 4.4: Correlation Analysis of Corporate Governance Variables

Variables	BS	BI	CEO	OC	SO	INST
BS	1					
BI	0	1				
CEO	0.1	0.01	1			
OC	0.36	0	0.12	1		
SO	0.17	0.02	0.09	0.18	1	
INST	0.23	0.17	0.01	0.24	0.12	1

The above table 4.4 correlation analysis shows that BS (board size) positively associated with BI, CEO, OC, SO, and INST. Board independence (BI) is positively associated with BS, CEO, OC, and INST. The table shows that only OC has high correlation value (0.3615) while all other variables have below the value of (0.3615). According to Jiraporn and Liu 2008 and Berger et al. (1997) higher correlation is batter then worse. There is no issue of multicolinearity, because all correlation values are below the 0.7 range.

TABLE 4.5: Correlation Analysis Corporate Governance Index and Macroeconomic Variable

Variables	LSize	TRI	GDPG	IntRate	Inf	Ldebt	CGVI
LSize	1						
TR1	0.12	1					
GDPG	0.03	0.12	1				
IntRate	0.35	0.05	0.48	1			
Inf	0.24	0.03	0.42	0.07	1		
Ldebt	0.29	0.25	0.68	0.37	0.3	1	
CGVI	0.18	0.13	0.18	0.27	0.01	0.14	1

As mentioned before this study used Principal Component Analysis (PCA) to construct Corporate governance index in this study. Six variables BI, BS, CEO, INST, SO and OC are used to construct index of corporate governance by using Principal Components Analysis (PCA). The above table 4.5 shows correlation analysis among macroeconomic factors and corporate governance index (CGVI). According to above correlation analysis Lsize (log of size) is positively associated with inflation, TR1, IntRate, debt and CGV. Corporate governance index (CGVI) positively associated with Lsize, TR1, IntRate, and debt. In this correlation analysis only Ldebt has high correlation value (0.6860) while all other variables have below the value of (0.6860) and the lowest correlation is between CGV and Inf (0.0133). There is no multicoreanarity problem, because, the all the correlation value is below the 0.7 range.

TABLE 4.6: Regression Analysis Without CG Index

VARIABLES	Model-1	Model-2
LSize	-0.214***	-0.179**
	-0.063	-0.0573
TR1	-0.0127	-0.00362
	-0.0337	-0.0339
GDPG	-0.227	-0.239
	-0.158	-0.165
IntRate	0.0212	0.0526
	-0.095	-0.105
Inf	0.0488	0.0461
	-0.0407	-0.0422
Ldebt	0.151*	0.610*
	-0.0814	-0.081
CGVI		0.610**
		-0.266
Constant	18.28***	16.87***
	-2.413	-2.466
Observations	651	651
R-Saquared	0.044	0.055
Number of years	11	11
Country FE	YES	YES
Year FE	YES	YES

In this section corporate governance index and nonperforming loans have been examined. For investigating the relationship of corporate governance index and its impact on nonperforming loans, the static penal regression model is used.

The above table 4.6 is divided into two different parts to analyze the corporate governance and nonperforming loans. First part consists of empirical analysis of macroeconomic variables and firm specific variables, and second part consists of corporate governance index along with macroeconomic factors and its impact on nonperforming loans. In the model-1 all macroeconomic variables i.e. Lsize, TR1, GDPG, INtRate, Inflation, and Ldebt treated as a control variable.

For exploring the impact of only macroeconomic variables study used static panel regression model. In first model all macroeconomic variables include in first model and exclude the corporate governance index after that in second model CGVI and all other variables analyzed.

The above table 4.6 indicates that the value of R-squared R2 (0.044) of first model (which include all macroeconomic factors) shows only 4.4% dependent variable explained by independent variables. Furthermore, the R2 value found satisfactory for the model of corporate governance and nonperforming loan.

In first model only Lsize (log of size) found statistical significant at the level of (p =< 0.05) with coefficient value of (*beta* = -0.214). Its means if 1% increase occur in Lsize dependent variable will change 0.214% inversely. The Ldebt is also found statistically significant at the level of (p =< 0.05) with coefficient value of (*beta* = 0.151). The results linked with finding of (Louzis et al. 2012, Castro 2013 and Chaibi and Ftiti 2015). TR1, GDPG, IntRate, and Inf found statically insignificant impact on nonperforming loan.

This study explores the impact of corporate governance index (CGVI) on nonperforming loan along with macroeconomic variable in second model. In second model CGVI found positive and significant impact on nonperforming loan at the level of (p =< 0.01) with coefficient value of (*beta* = 610). Which means if 1% variation occur in independent variable the depended variable will move 610% to same side, these finding linked with (Li, Li. Hu & Wie Liu, 2009). According to Maggi and Guida, (2009) in case of cost function, when the level of non-performing loan is grater, in this condition banks are unable to maintain loans when non-performing debts increased.

In second model, Lsize (log of size) found negatively significant at the level of (p =< 0.05) with coefficient value of (*beta* = -0.179). Its means if 1% increases occur in Lsize dependent variable will change -0.179% inversely. The Ldebt is also found statistically significant at the level of (p =< 0.05) with coefficient value of (*beta* = 0.610). While other TR1, GDPG, IntRate, and inflation found statistically insignificant.

TABLE 4.7: Regression Analysis CG and Macroeconomic Factor

Ordinary Least square			
Variables	**Coefficient**	**Std. Error**	**Prob.**
C	-24.24252	1.162541	0.0000
Size	1.549421	0.032345	0.0000
GDPG	-0.285665	0.050289	0.0000
INT	0.163625	0.038146	0.0000
CPI	0.006285	0.003222	0.0515
LDebt	0.624746	0.043663	0.0000
BS	-0.071467	0.044622	0.1097
BI	0.000402	0.000511	0.4316
CEO	-0.15435	0.187461	0.4106
OC	-0.40235	1.201196	0.7378
INST	-0.407465	0.166038	0.0144
SO	0.619501	0.165816	0.0002
TIER1	0.008472	0.007566	0.2632
R- Squared	0.870537		
Adjusted R- Square	0.868346		
Prob. (F-Statistic)	0.000000		

Table 4.7 shows the results of common effect model. Likelihood ratio is used to determine between common effect model and fixed effect model. This ratio suggests to use fixed effect model for this study.

TABLE 4.8: Regression Analysis CG and Macroeconomic Factor

Fixed Effect			
Variables	**Coefficient**	**Std. Error**	**Prob.**
C	24.81166	2.075576	0.0000
Size	-0.011552	0.048623	0.8123
GDPG	-0.006118	0.023321	0.7932
INT	0.100778	0.016151	0.0000
CPI	0.019365	0.001446	0.0000
LDebt	-1.228286	0.180512	0.0000
BS	0.036785	0.023827	0.1231
BI	-8.00E-05	0.000219	0.7149
CEO	0.034315	0.104852	0.7436
OC	-0.636853	0.556925	0.2533
INST	-0.068451	0.084011	0.4155
SO	-0.134778	0.273935	0.6229
TIER1	0.000952	0.004090	0.8160
R- Squared	0.982446		
Adjusted R- Square	0.979718		
Prob (F-Statistic)	0.000000		

Table 4.8 shows the results of fixed effect model. Likelihood ratio is used to determine either use common effect model and fixed effect model. Ratio suggests to use fixed effect model for this study. However, in fixed effect model the value of adjusted R-square is 98% which is very high and inappropriate, also all the variables of corporate governance showed insignificant results with non-performing loan therefore fixed effect model is not appropriate for this study.

TABLE 4.9: Regression Analysis CG and Macroeconomic Factor

Random Effect			
Variables	Coefficient	Std. Error	Prob.
C	-9.174851	0.952317	0.0000
Size	0.897371	0.032595	0.0000
GDPG	-0.170164	0.020414	0.0000
INT	0.070175	0.015675	0.0000
CPI	0.01031	0.00136	0.0000
LDebt	0.381588	0.046553	0.0000
BS	0.054076	0.023033	0.0192
BI	0.000199	0.000217	0.3607
CEO	-0.026872	0.101123	0.7905
OC	-0.373678	0.549654	0.4968
INST	-0.303057	0.081772	0.0002
SO	0.312594	0.191259	0.1026
TIER1	0.012234	0.003963	0.0021
R- Squared	0.450285		
Adjusted R- Square	0.440981		
Prob (F-Statistic)	0.000000		

Table 4.9 shows the results of Random effect model. On the base of Likelihood ratio fixed effect model is suggested but because of high value of adjusted R-square and all the variables of corporate governance showed insignificant results with non-performing loan. fixed effect model can't be use for this study. So, random effect model is considered best for this study.

Table 4.9 shows that board size is significantly positively related with non-performing loan with coefficient of 5.46% and standard error of 2.30%. Institutional ownership is significant inversely related with non-performing loan having beta coefficient of -30.31% and standard deviation of 8.18%. Similarly, tier1 capital is also significantly positively related with non-performing loan with beta coefficient of 1.2% with standard error of 0.4%. The other variables of corporate governance

i.e. board independence, CEO duality, ownership concentration and state-owned show insignificant behavior with non-performing loan.

The results of common effect model show that all the macro economic factors are significantly related with non-performing loans. Interest rate, consumer price index (inflation) and debt are positively related with the non-performing loans. GDPG, however, is negatively related with non-performing loan and it shows that with 1% increase in GDPG will result in17% decrease in non-performing loan.

Size is used as control variable in this study. It is significantly positively related with non-performing loan having beta coefficient of 89.73% and standard error of 3.26%. The value of adjusted R-square is 44.09% that is quite satisfactory for this study. The p-value of F-statistics is significant showing that the overall model is significant.

Chapter 5

Conclusion and Recommendations

5.1 Conclusion

The study examines the impact of corporate governance mechanisms on nonperforming loans in emerging economies; Pakistan, India, and Bangladesh. Study use Principal component analysis (PCA) to construct index and evaluate the impact of variables. The link between corporate governance practices and non-performing loan has been considered as the valuable topic in the field of finance and literature. So the reason behind the study is to find out whether corporate governance has any meaningful impact on non-performing loan on these economies. This study also analyses how banks are going to overcome difficulties following corporate governance mechanism.

The study measures corporate governance by taking widely accepted variables that are boards size, Board Composition, CEO Duality, Independence of Audit committee and Board member independence. To confirm the accuracy of results and analysis, some macroeconomic variables are also considered as control variables. By using static panel data analysis, the statistical findings of the study indicate that there is a significant relationship between corporate governance and non-performing loan. While exploring the variables of corporate governance the

value of board size is found negatively significant that showing the inverse relationship between board size and nonperforming loan. The results are in line with the finding of Whidbee (2000), Maria et.al 2009, and Bussoli 2015). They suggested that board size increases the banks performance and decreases the nonperforming loan.

The value of board independent (BI) is also found negatively significant. The study of Brick and Chidambaram (2008), and Ahmad et al. (2016) also indicates that board independent and non-performing loan have a negative association. Hence, the value of CEO duality is found statistically positive and significant. So, CEO Duality and nonperforming loan have direct relationship. These results are in-line with Kajola (2008) and Otieno (2012) findings.

The audit committee independence is also found negatively significant and the results are in-line with finding of Parker, (1998) and Ainuddin and Abdullah, (2001). Whereas, the intuitional shareholder (INST), board meeting (BM) and state owned (SO) also found positively significant with nonperforming loan. These results link with the findings of Boudriga et al. (2011). In term of ownership concentration (OC), it is found statically insignificant and have no impact on nonperforming loan according to this study. The study of Azofra and Santamara (2011) supports the same findings.

5.2   Recommendations and Policy Implications

The study contributes the pros of corporate governance on non-performing loan in the context of Pakistan, India and Bangladesh. It is because these developing economies of Asia contain strategic importance geographically. This study may lead to meaningful reforms for banks on making good corporate governance mechanism. Recently faced financial scandals have damaged the confidence of investors in banks and capital markets and the effectiveness of existing corporate governance practices that promotes transparency and accountability. Mostly, corporate governance is confronted with the challenges of unprofessional behavior,

fraud and forgery, weak internal control measures, non-execution of punitive measures through, among other things, regulatory and legal framework. This in term leads to decrease in foreign direct investment in the banking sector.

The study is regarded as an advantage for the industrial development by improving the mechanism for corporate governance. Mostly, Securities and Exchange Commission (SEC) will have lots of benefits from the study. Whereas, other stakeholder that can get advantage from this study are the policymakers rushed to the government and the banking sector, shareholders, employees and the general public. In banking reforms and restructuring of banking industry, the role of corporate governance will play a vital role that may leads to sectarian development.

The study suggests the following recommendations.

- Corporate governance mechanism need to improve in Asian context to enhance or developed banking system and loan recovery as well

- The data sample and time frame should be increased for the study, and other model should be adopted for the study.

Bibliography

Adams, R. B., & Ferreira, D. (2007). A theory of friendly boards. The Journal of Finance, 62(1), 217-250.

Adams, R. B., & Mehran, H. (2003). Board structure, banking firm performance and the bank holding company organizational form. In Federal Reserve Bank of Chicago Proceedings (No. 866). African Journal of accounting, Economics, Finance and Banking Research, 4 (4), 12-33.

Agrawal, A., Knoeber, C.R., 1996. Firm performance and mechanisms to control agency problems between managers and shareholders. Journal of financial and quantitative analysis 31, 377-397

Ainuddin, R. A., & Abdullah, N. (2001). Board characteristics and corporate governance of public listed companies in Malaysia. Working paper, University Kebangsaan Malaysia, Bangi.

Alton, R.G. and Hazen, J.H. (2001) As Economy Flounders, do we see A Rise in Problem Loans?

Ammann, M., Oesch, D., Schmid, M.M., 2011. Corporate governance and firm value: International evidence. Journal of Empirical Finance 18, 36-55

Amaranggana, A. (2009). Corporate governance bank structure empirical Bank Multinational Bank domestic. University of Indonesia Depok.

Atieno, O. T. T. (2012). The relationship between board monitoring and performance of the companies listed in the Nairobi Securities Exchange (Doctoral dissertation, school of business, university of Nairobi).

Azofra, V., & Santamara, M. (2011). Ownership, control, and pyramids in Spanish commercial banks. Journal of Banking & Finance, 35(6), 1464-1476.

Badar, M., & Javid, A. Y. (2013). Impact of macroeconomic forces on nonperforming loans: An empirical study of commercial banks in Pakistan. Wiseas Transactions on Business and Economics, 10(1), 40-48.

Barth, J.R; Caprio, G Jr and Levine, R (2004). "Bank Regulation and Supervision: What Works Best?.

Basel (1999). Principles for the Management of Credit Risk. Consultative paper issued by the Basel

Baysinger, B. D., & Butler, H. N. (1985). Corporate governance and the board of directors: Performance effects of changes in board composition. Journal of Law, Economics, & Organization, 1(1), 101-124.

Baysinger, B., & Hoskisson, R. E. (1990). The composition of boards of directors and strategic control: Effects on corporate strategy. Academy of Management review, 15(1), 72-87.

Beck, R., Jakubik, P., & Piloiu, A. (2013). Non-performing loans: What matters in addition to the economic cycle.

Bekiris, F. V. (2013). Ownership structure and board structure: are corporate governance mechanisms interrelated? Corporate Governance: The international journal of business in society, 13(4), 352-364.

Belkhir, M. (2006). Board structure, ownership structure, and firm performance: evidence from banking. Working Paper 02, Laboratoire d' Economies d' Orlans.

Berger, A. N., & DeYoung, R. (1997). Problem loans and cost efficiency in commercial banks. Journal of Banking & Finance, 21(6), 849-870.

Bernanke, B. S., Gertler, M., & Gilchrist, S. (1999). The financial accelerator in a quantitative business cycle framework. Handbook of macroeconomics, 1, 1341-1393.

Bernanke, B. S., Lown, C. S., & Friedman, B. M. (1991). The credit crunch. Brookings papers on economic activity, 205-247.

Bernstein, J. (2014). The CBPP Full Employment Project: Overview. Washington: Center on Budget and Policy Priorities.

Bhagat, S., & Black, B. (1999). The uncertain relationship between board composition and firm performance. The Business Lawyer, 921-963.

Bonin, J. P., & Huang, Y. (2001). Dealing with the bad loans of the Chinese banks. Journal of Asian Economics, 12(2), 197-214.

Boudriga, A., BoulilaTaktak, N., & Jellouli, S. (2009). Banking supervision and nonperforming loans: a cross-country analysis. Journal of financial economic policy, 1(4), 286-318.

Boyd, B. K. (1995). CEO duality and firm performance: A contingency model. Strategic Management Journal, 16(4), 301-312.

Brick, I. and Chidambaran, N.K. (2007), "Board meetings, committee structure, and firm performance",

Brickley, J. A., Coles, J. L., & Terry, R. L. (1994). Outside directors and the adoption of poison pills. Journal of financial Economics, 35(3), 371-390.

Brown, C. O., & Dinc, I. S. (2005). The politics of bank failures: Evidence from emerging markets. The Quarterly Journal of Economics, 120(4), 1413-1444

BrownBridge, M (1998). The Cause of Financial Distress in Local Banks in Africa and Implications.

Bussoli, C. (2013). Corporate governance and bank performance in Italy. Financial Systems in Troubled Waters: Information, Strategies, and Governance to Enhance Performances in Risky Times, 40.

Caprio, G. and Klingebiel, D. (1999) Episodes of Systemic and Borderline Financial Crises,

Castro, V., 2013. Macroeconomic determinants of the credit risk in the banking system: The case of the Gipsi. Economic Modeling 31, 672-683

Chaibi, H., Ftiti, Z., 2015. Credit risk determinants: Evidence from a cross-country study. Research in International Business and Finance 33, 1-16

Choe, H., & Lee, B. S. (2003). Korean bank governance reform after the Asian financial crisis. Pacific-Basin Finance Journal, 11(4), 483-508.

Choudhury, T. Ahmed and Adhikary, B. Kumar. 2002. "Loan Classification, Provisioning Requirement and Recovery Strategies: A comparative Study on Bangladesh and India,"

Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance1. Journal of financial economics, 51(3), 371-406.

Cornett, M. M., McNutt, J. J., & Tehranian, H. (2009). Corporate governance and earnings management at large US bank holding companies. Journal of Corporate finance, 15(4), 412-430.

Dahya, J., McConnell, J. J., & Travlos, N. G. (2002). The Cadbury committee, corporate performance, and top management turnover. The Journal of Finance, 57(1), 461-483.

Daily, C. M., Dalton, D. R., & Cannella, A. A. (2003). Corporate governance: Decades of dialogue and data. Academy of management review, 28(3), 371-382.

Dalton, D. R., Daily, C. M., Ellstrand, A. E., & Johnson, J. L. (1998). Meta-analytic reviews of board composition, leadership structure, and financial performance. Strategic management journal, 19(3), 269-290

Dehaene, A., De Vuyst, V., & Ooghe, H. (2001). Corporate performance and board structure in Belgian companies. Long range planning, 34(3), 383-398.

Dowell, G. W., Shackell, M. B., & Stuart, N. V. (2011). Boards, CEOs, and surviving a financial crisis: Evidence from the internet shakeout. Strategic Management Journal, 32(10), 1025-1045. Economic and Political Weekly, 429-435.

Elloumi, F., & Gueyie, J. P. (2001). Financial distress and corporate governance: an empirical analysis. Corporate Governance: The international journal of business in society, 1(1), 15-23.

Elyasiani, E., & Jia, J. J. (2008). Institutional ownership stability and BHC performance. Journal of Banking & Finance, 32(9), 1767-1781.

Ermina, P., & Maria, P. (2010). Corporate governance and bank performance. International Hellenic University. Greece.

Espinoza, R. A., & Prasad, A. (2010). Nonperforming loans in the GCC banking system and their macroeconomic effects (No. 10-224). International Monetary Fund.

Ezzamel, M., & Watson, R. (1993). Organizational form, ownership structure and corporate performance: A contextual empirical analysis of UK companies. British Journal of Management, 4(3), 161-176.

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. The Journal of Law & Economics, 26(2), 301-325.

Farrell, K. A., & Whidbee, D. A. (2000). Search in. Journal of Business, 73(4), 597-627. Federal Reserve Bank of St. Louis.

Fich, E. M., & Slezak, S. L. (2008). Can corporate governance save distressed firms from bankruptcy? An empirical analysis. Review of Quantitative Finance and Accounting, 30(2), 225-251.

Firth, M., Peter M. and Oliver M. (2006). Ownership, Board structure, and the in formativeness of earnings-Evidence from an emerging market. Journal of Economics Literature classification: G34; J63; L14.

Fofack, H. (2005) Non-Performing Loans in Sub-Saharan Africa: Causal Analysis and Ghabayen, MA 2012, Board characteristics and firm performance: Case of Saudi Arabia, International Journal of Accounting and Financial Reporting, vol.2, no.2 pp.168-200.

Fraser, D. R., Zhang, H., & Derashid, C. (2006). Capital structure and political patronage: The case of Malaysia. Journal of Banking & Finance, 30(4), 1291-1308.

Gillan, S. L., & Starks, L. T. (2000). Corporate governance proposals and shareholder activism: The role of institutional investors. Journal of financial Economics, 57(2), 275-305.

Gomez, E. T., & Jomo, K. S. (1999). Malaysia's political economy: Politics, patronage and profits. CUP Archive.

Greuning, H and Bratanovic, S.B (2003). Analyzing and Managing Banking Risk: A Framework for

Grove, H., Patelli, L., Victoravich, L. M., & Xu, P. T. (2011). Corporate governance and performance in the wake of the financial crisis: Evidence from US commercial banks. Corporate Governance: An International Review, 19(5), 418-436.

Hermalin, B. E., & Weisbach, M. S. (1991). The effects of board composition and direct incentives on firm performance. Financial management, 101-112.

Hermalin, B. E., & Weisbach, M. S. (2003). Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature (Digest Summary). Economic Policy Review, 9(17-26)

Hoque, M. Z., & Hossain, M. Z. (2008). Flawed Interest Rate Policy and Loan Default: Experience from a developing country. International review of business research papers, 4(5), 235-246.

Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. the Journal of Finance, 48(3), 831-880.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of financial economics, 3(4), 305-360.

John, K., &Senbet, L. W. (1998). Corporate governance and board effectiveness1. Journal of Banking & Finance, 22(4), 371-403.

Joseph, M. T., Edson, G., Manuere, F., Clifford, M., & Michael, K. (2012). Non-performing loans in commercial banks: a case of CBZ Bank Limited in Zimbabwe. Interdisciplinary Journal of Contemporary Research in Business, 4(7), 467-488.

Juliana, M. (2006). Study of relationship between corporate Governance and Financial Performance of companies listed on the NSE. Unpublished MBA Project. University of Nairobi

Kajola, S. O. (2008). Corporate governance and firm performance: The case of Nigerian listed firms. European journal of economics, finance and administrative sciences, 14(14), 16-28.

Keasey, K., & Wright, M. (1993). Issues in corporate accountability and governance: An editorial. Accounting and business research, 23(sup1), 291-303.

Khemraj, T., & Pasha, S. (2009). The determinants of non-performing loans: an econometric case study of Guyana.

Kiel, G. C., & Nicholson, G. J. (2003). Board composition and corporate performance: How the Australian experience informs contrasting theories of corporate governance. Corporate Governance: An International Review, 11(3), 189-205.

Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. Journal of accounting and economics, 33(3), 375-400.

KyereboahColeman, A. (2007). Corporate governance and shareholder value maximization: An African perspective. African Development Review, 19(2), 350-367.

La Porta, R., LopezdeSilanes, F., & Shleifer, A. (2002). Government ownership of banks. The Journal of Finance, 57(1), 265-301.

Lamichhane, S., & Li, L. (2002), Corporate Governance AND Performance in Commercial Banks in Nepal.

Larcker, D. F., Richardson, S. A., & Tuna, I. (2007). Corporate governance, accounting outcomes, and organizational performance. The accounting review, 82(4), 963-1008.

Lasfer, M. A. (2006). The interrelationship between managerial ownership and board structure. Journal of Business Finance & Accounting, 33(78), 1006-1033.

Leung, S. and Bertrand H. (2007). Is Concentrated Management Ownership Value Increasing or Decreasing? Evidence in Hong Kong during the Asian Financial Crisis. Journal of Economics Literature classification: G34; G10; G32; 120.

Li, Y., Hu, J. L., & Liu, H. W. (2009). Non-performing loans and bank efficiencies: an application of the input distance function approach. Journal of Statistics and Management Systems, 12(3), 435-450.

Lipton, M., & Lorsch, J. W. (1992). A modest proposal for improved corporate governance. The business lawyer, vol.7, no.3, 59-77.

Louzis, D. P., Vouldis, A. T., & Metaxas, V. L. (2012). Macroeconomic and bank-specific determinants of non-performing loans in Greece: A comparative study of mortgage, business and consumer loan portfolios. Journal of Banking & Finance, 36(4), 1012-1027.

Maggi, B., & Guida, M. (2011). Modeling non-performing loans probability in the commercial banking system: efficiency and effectiveness related to credit risk in Italy. Empirical Economics, 41(2), 269-291.

Mak, YT & Li, Y 2001, Determinants of corporate ownership and board structure: Evidence from Singapore, Journal of Corporate Finance, vol.7, no.3, pp.235-256

Maria-EleniAgoraki, Manthos D Delis & Panagiotis Staikouras. (2009). The effect of board size and composition on bank efficiency. Munich Personal Repec Archive. 8 October 2009.

Mark, R. (2004). The Institutions of Corporate Governance. Harward John M. Olin center for Law, Economics, and Business, 8, 2-6.

Masibo, J. (2005), "The relative power of CEO's and Boards of Directors: Associations with Corporate performance", Strategic Management Journal, 12(2), pp.20

McConnell, J. J., & Servaes, H. (1990). Additional evidence on equity ownership and corporate value. Journal of Financial economics, 27(2), 595-612.

Micco, A., Panizza, U., & Yanez, M. (2007). Bank ownership and performance. Does politics matter? Journal of Banking & Finance, 31(1), 219-241. Mimeo, World Bank.

Moinescu, B. G. (2012). Determinants of nonperforming loans in Central and Eastern European Countries: macroeconomic indicators and credit discipline. Review of Economic and Business Studies, (10), 47-58.

Muniappan, G. P. (2002). Indian Banking: Paradigm Shift-A regulatory point of view. In Address at the Bank Economist Conference, Kolkata January (Vol. 14, p.2002).

Nkusu, M., (2011). Nonperforming loans and macro financial vulnerabilities in advanced economies. IMF Working Papers, 1-27

OECD Study, OECD Principles of Corporate Governance, www.oecd.com, [Accessed 29.09.2006], 1999.

Ooghe, H., & De Vuyst, V. (2001). The Anglo-Saxon versus the Continental European Corporate Governance Model: Empirical Evidence of Board Composition in Belgium (No. 2001-6). Vlerick Leuven Gent Management School.

Pathan, S., Skully, M., & Wickramanayake, J. (2007). Board size, independence and performance: an analysis of Thai banks. Asia-Pacific Financial Markets, 14(3), 211-227.

Piesse's (2005), Corporate Governance and Firm Performance in an International Perspective conflicting Empirical Evidence, University Press, Princeton, NJ Prudential Policy. Unctad/ Osg/Dp/132.

Rajaraman, I and Vasishtha, G (2002). Non-Performing Loans of PSU Banks: Some Panel Results.

Rajha, K. S. (2016). Determinants of Non-Performing Loans: Evidence from the Jordanian Banking Sector. Journal of Finance, 4(1), 125-136.

Ree, J. J. K. (2011). Impact of the global crisis on banking sector soundness in Asian low-income countries.

Richard, E; Chijoriga, M; Kaijage, E; Peterson, C and Bohman, H (2008) Credit Risk Management.

Ross, P. S (1997). Money and Capital Markets: Financial Institutions and Instruments in a Global.

Santomero, A.M (1997) Commercial Bank Risk Management: An Analysis of the Process. The Wharton School of the University of Pennsylvania.

Shen, C. H., & Lin, C. Y. (2012). Why government banks underperform: A political interference view. Journal of Financial Intermediation, 21(2), 181-202.

Shingjergji, A. (2013). The impact of bank specific variables on the non-performing loans ratio in the Albanian banking system. Research Journal of Finance and Accounting, 4(7), 148-152.

Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. The journal of finance, 52(2), 737-783.

Siamat , Dahlan, (2005). Manajemen, Lembaga Keuangan. Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.

Simpson, W.G., & Gleason, A.E. (1999). Board structure, ownership, and financial distress in banking firms. International Review of Economics and Finance, 8, 281-292.

Skully, M. T. (2002). Banking and corporate governance: some prudential issues. In Second International Conference on Banking and Finance in Greece.

Soebagio, Hermawan. (2005). Analysis factor yang Non Performing Loan (NPL) Bank emerging System of a Commercial Bank in Tanzania. International Journal of Emerging Markets, 3 (3), 323-332.

Tarchouna, Ameni, Jarraya, Bilel, Bouri, Adelfettah, (2016). How to explain non-performing loans by many corporate governance variables simultaneously? A corporate governance index is built to US commercial banks. Research in International Business and Finance 2 (5), 32-38.

Wanyama, D., & Olweny, T. (2013). Effects of corporate governance on financial performance of listed insurance firms in Kenya. Public policy and administration research, 3(4), 96-120.

Waweru, N. M and Kalani, V. M (2009). Commercial Banking Crises in Kenya: Causes and Remedies.

Westphal, J. D., & Fredrickson, J. W. (2001). Who directs strategic change? Director experience, the selection of new CEOs, and change in corporate strategy. Strategic Management Journal, 22(12), 1113-1137.

Woo, D., (2000). "Two Approaches to Resolving Nonperforming Assets during Financial Crisis." IMF working paper 00/33, March: 2-5.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. Journal of financial economics, 40(2), 185-211.

Yoshikawa, T., & Phan, P. H. (2003). The performance implications of ownership-driven governance reform. European Management Journal, 21(6), 698-706.

Yung, C. M. Fung. (2009). The relationship between corporate governance and bank performance in Hong Kong. Auckland University of Technology. New Zealand.

Zahra, S.A. and Pearce, J.A. (1999), Boards of Directors and Corporate Financial Performance: A Review and Integrative Model, Journal of Management, 15,pp.291-334.