UNIVERSITY OF GHANA

THE IMPACT OF CORPORATE GOVERNANCE ON ASSET QUALITY OF BANKS.A CASE OF THE GHANAIAN BANKING SECTOR

BY

ERIC OWURAKU TETTEH

(10636118)

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DECLARATION

I do hereby declare that this work is as a result of my own research and has not been presented by anyone for an academic award in this or any other university. All references used in my work have been fully acknowledged.

I bear sole responsibility for any shortcomings.

…… ……..

ERIC OWURAKU TETTEH **DATE**

(10636118)

CERTIFICATION

I hereby certify that this thesis was supervised in accordance with the procedures laid down by the University of Ghana.

……..... **……..**

PROF. KOFI OSEI **DATE**

(SUPERVISOR)

DEDICATION

This work is dedicated to God Almighty for His gift of life, wisdom and grace. He has provided me to go through this study successfully.

It is also dedicated to my family for their support.

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ABSTRACT

This study set out to assessed the impact of governance variables on asset quality of Ghanaian banks. Using thirty-two banks operating in Ghana from 2006 to 2016, the study investigates how corporate governance can influence the quality of asset among banks. The study employed random estimation technique strategy.

The findings for the study indicate that non-executive board member ratio has a significant inverse nexus on NPLs. The results suggest that the presence of outside directors tend to reduce the rate at which loan defaults. The regression results also indicate that board gender has a significant and a direct relationship on NPLs. It also established that as a board is composed of more female directors, loans tend to underperform leading to increase in NPLs. Meanwhile board size and board duality are not statistically significant even though both had negative relationship on NPLs. The size of a bank is also directly proportional to NPLs. Inflation variable is significant and has a positive relationship to NPLs of banks in Ghana.

It is recommended that non-executive directors and gender diversity which are governance variables should be given much attention since it can and structure in a way that can help reduce the rate at which loan default. It is also recommended that larger banks put in the necessary credit risk assessment measure to reduce the cost that comes with adverse selection and moral hazards. Finally, the government must ensure that, there is a moderate check on how goods and services prices persistently increase overtime as it positively impacts on non-performing loans in banks in Ghana.

CHAPTER ONE

INTRODUCTION

1.1 Study Background

Governance mechanism or structures in every organization is very essential because of its intermediation role in ensuring that shareholders' interests are carried out by management. Corporate governance is basically the framework of regulations and structures adopted to ensure accountability, transparency and fairness with all stakeholders of an institution. The agency, stewardship, transaction cost, stakeholder, resource dependency and the political theory are some theories that further help in understanding governance structures. Relevance to our study is the shareholder, the agency and the stakeholder theories.

The theories of agency and shareholder are on the assumption that the principal owners who are shareholders delegate the management of organizations to appointed managers or directors who serve as agents to the shareholders (Clarke, 2004). It further suggests that managers are expected to take decision that must be in the interest of shareholders aimed at maximizing shareholder wealth through profit maximization and increased shareholder value. Unfortunately, that is often not the case since managers themselves are naturally self- interest seeking individuals. Therefore, to protect the interest of shareholders, corporate governance structures purposely comes in to check on the activities of the managers (Padilla, 2000). On the other hand, the stakeholder theory observes the interaction of corporations with others who are affected by the management decisions either directly or indirectly. They include employees, customers, suppliers and creditors, investors, competitors, government, environmental interests and the society at large

rather than just the shareholders. The theories underpinning corporate governance in the financial sector is however not any different.

In many countries and particularly in Ghana, the banking sector has predominantly been the financial institution that brings together lenders and borrowers of funds (Singh, 2010). The sector continues to remain committed to providing funds through loans for financing economic activities and business in many different ways (Levine, Loayza, & Beck, 2000).

Lending in Ghana is evidenced in the large volumes of loans that form the majority of banks assets. However, financial performance in the sector is based on how well a loan performs. According to Kiel et al (2003), structure of the board has a direct influence on performance or asset efficiency of a firm which in this case is the performance of loans. This means that the quality of decisions directors takes on the principals/ shareholders behalf is influenced by the composition that characterizes the board. For instance, a poor-quality decision aimed at increasing shareholders' wealth through aggressive pricing of loans and poor credit risk management standards holding other controls constant affects the performance of loans.

Whether a loan will perform or not perform well can be influenced by the regulatory framework established by the system governing the industry. A governance system that is effective mitigates credit risk thus improves performance of loans while bad corporate governance increases credit risk thus make contributions to the non- performance of loans in the industry. It is on this note that it is imperative to delve more into corporate governance practices and how it can help banks effectively and efficiently manage loans that are not performing well in order to reduce the risk involve in having high amount of NPLs.

1.2 Problem Statement

One major activity of a bank is to give out credit facility to borrowers on an agreed terms and conditions. The decisions regarding resource allocation, capital structure and type of lending packages among others are taken by the Corporate Governance structure which includes the CEO.

A Nonperforming Loan (NPL) as defined by the IMF is "the sum of borrowed money upon which the debtor has not made his scheduled payment for at least 90 days". A NPLs can either be a loan that has defaulted or prospective for default. Over the past decades, there has been an intense scramble to get the unbanked population into the banking sector. The springing up of new banks has made the industry very competitive. As a result, the banks have developed innovative ways to get deposits from their customers and prospective ones through direct sales, cashless account openings, paperless transactions, instant loan services, credit cards among others. Some small-scale banks such as the micro finance companies send their employees round to mobilize deposits which serve as one of the major sources of funds for giving out as loans. The growing cash deposits resulting aggressive banking creates the need to give out loans so that depositors of the bank can receive compensation for their deposits.

According to Goldstein and Turner (1996), building-up of NPLs is mostly attributed to some economic conditions such as changes in economic indicators, economy recession, high cost of borrowing and many more. Also, sometimes in order to dominate in the sector; some managers encourage weak lending standards due to increasing pressure to deliver increasing returns. The high risk associated is reflected in the high pricing of their loans thereby encouraging loan defaults. These weak lending standards also makes them attract the wrong circle of borrowers with high credit risk and potential loan defaulters. It was reported by Reinhart and Rongoff

(2010) that most banking crisis started from default loans that is on the rise. Management's decision towards provisions for bad loans to be written off against profits reduces the wealth of shareholders in the long run.

According to the report published by the Bank of Ghana on the Banking Stability report in February 2017, NPL's recorded by banks increased from 4.7 billion to 6.4 billion over a period of twelve months representing a 36.17% increment. This has necessitated the tightening of risk management practices and put in effort to recover loans by management and directors who form the governing body. Usually management has little regard for the level of risk each sector possesses so long as there is a good prospect of making good returns from their investment.

According to Ponnu (2008), when governance structures are poor, is capable of influencing the performance of the firm and also affecting the shareholder's value. If a board constituted by board members or managers who seek to achieve their own selfish interest are not prevented, they could make dubious decisions aimed at profit maximization by lowering credit risk management standards in the face of competition. The high credit risk associated with the lower standard of risk assessment is then compensated for through higher pricing of loans. This could result in credit defaults thus non-performance of loans. Similarly, poor quality decision as a result of a poor composition of the board can also lead to misappropriation of funding credit to high risk bearing sectors of the economy without adequate credit risk management practices. This could be from lack of information, expertise or experience from board members.

The Basel Committee on Banking Supervision (1999), in a consultative paper encouraged the governing body of Banks to be interested in establishing and maintaining sound credit risk environment in order to adequately reduce their exposure to credit risk.

Clearly, it has been established that the major decisions of banks are taken by the board or management and this affects firm's performance which in this case performing or non-performance of loans. Hu et al. (2006) analyzed the association existing between ownership structure and NPLs among Taiwan banks and concluded that NPLs is low among banks that have a high government ownership.

Even though there has been a lot of literature advanced to assess corporate governance impact on performance of firms and the determinants of NPL's, there has however been little or no literature to assess governance structures can help improve on the amount of loans that goes into default and put measures to reduce the rate of default rate especially for banks in Ghana that has over the years recorded a rising NPLs.

1.3 Objectives of study

1. To examine the impact of governance structures on asset quality of Ghanaian banks.
2. Examine the trends in asset quality of banks in Ghana.

1.4 Research Questions

1. To what extent does corporate governance impact the asset quality of bank loans in Ghana?
2. What are the trends in asset quality of banks in Ghana?

1.5 Scope of Research

This study assesses the impact of governance structures on NPLs of banks in Ghana. Both local and foreign banks will be considered in this study over the period of 2006-2016. Governance characteristics are the variable of interests which are measured using four proxies namely the size of the board, independent or outside directors, board gender and board duality.

1.6 Chapter Disposition

Chapter one is about the study background, research problem, study objectives, the significance of the study, scope and limitation and chapter disposition. In Chapter two, the study will analyze what has been done before regarding this area under study. Chapter three is about the explanation of the methodologies used in this study and its justification. The research design, the research sample and also model specification and data analysis techniques. Chapter four entails research analysis and discussion of results. Lastly, chapter five focuses on summary of the study, conclusions, recommendations and directions for future studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter details the empirical and theoretical literature that is of essence to the topic under study covering issues of corporate governance and the structures that characterize it as well as literatures on NPLs. The section also discusses the theories, concepts, principles, models and assumptions on governance structures and NPLs. The chapter also presents definition to some theoretical and operational terms and phrases that are used in the study. It also looks at the various components that characterizes governance structures. It also mentions empirical findings about determinants of NPLs and how governance level impacts the performance of loans in Ghana.

2.2 Concepts Definition

2.2.1 Corporate Governance

The governance of corporations over the years has become dominant and in the long run impacts on the economy in which the corporations operate. Government influence on corporations is decreasing overtime and globalization makes it necessary for shareholders to demand for accountability in other to protect their interest (Crane and Matten, 2007). Therefore, governance mechanism should work effectively to hold managers accountable to their shareholders. It is of essence to really understand the meaning of corporate governance even though there has not been a single definition that is generally accepted in the literature. Kim, Prescort and Kim (2005) define corporate governance as varieties of mechanisms that are employed to direct and control all the activities in an organization. Corporate governance could also mean the process through

which corporate decisions are made and implemented. According to Ching, Tan and Chi Ching (2006), corporate governance are set of rules that is used to govern the relationship that exists between shareholders, management and all stakeholders within and outside the corporation. In effect, corporate governance serves as a set of rules, principles and system for effectively administering of an organization.

This paper reviews various theories that explain the concept corporate governance.

2.2.2 Non-Performing Loans

A loan is a financial asset of every bank thus forms the major component of every bank's assets which generates revenue through interest income on loan advances given to borrowers. A loan that is in default or close to default is seen as not performing. A default loan on the other hand is a loan in which the borrower fails to pay back the loan upon its due time (Balogun and Alimi, 1988). IMF (2009) defines a NPLs as a loan for which payment of principal and interest is over 90 days or even though repayment may not be due, there is reasons to believe that borrower cannot or will not be able to make full payment. Once a loan has not received payment for more than 3 months and cease to generate income for the bank or lender, it may be considered to be a NPLs irrespective of the terms of agreement (Mikko, 2003).

According to Woo (2000), when non-performing loans increase overtime, it has the ability to destabilize the whole economy resulting from financial crisis rather than the lending function. As a result, many banks as part of the managerial functions use different loan or credit policies, appraisals and recovery procedures to mitigate the risk. A credit policy is basically the set of principles and or conditions for which a lending firm may decide to lend money to its borrower to be repaid at another date with an interest. Banks use appraisals to determine whether a loan will be default or not. They do that by assessing the accuracy, capacity, cash flow and honesty of

the borrower. The loan recovery procedures also serve as a means for reducing the probability of a loan going bad. Poor loan recovery procedures contribute greatly to the non-performance of loans whereas strict loan recovery procedures mitigate the risk on NPLs. Espinoza and Prasad (2010) identified that the cause of NPLs can be generally grouped into two main categories namely; macro-economic and bank level variables.

However, the issue of loans not performing in Ghana is not any different. The BoG Sector Report as at June 2017 reported that the total stock of loans that banks fear may go bad has risen to about 8 billion Ghana cedis as compared to June 2016 showing an increase in NPL ratio of about 2.4 percent point increase. The report attributes the increase in NPL's to the energy sector debt and other expenses. It was also revealed that the private owed about 90% of the debts increasing its debt component from 87.3 to 94.9 percent over a one year period from June 2016 to June 2017.

2.3. Theories on Corporate Governance

2.3.1 Agency Theory

The agency theory was propounded by Jenseng and Meckling (1976) and has since then been further developed by many scholars. The theory is used to describe the association that exists among principals and their agents employed by the shareholders to run the business in their stead. The running of the business has been delegated by the principal to the agent, administration and directing of the business to the managers or directors (Clarke, 2004). Daily, Dalton and Canella (2003) have identified two main facets of the concept. Amongst this is that, firstly, the theory reduces the participants in an organization to just two people. That is the principal (shareholder) and the agent (manager). Secondly, the theory suggests that even though the agents who have the responsibility of making decisions that should benefit their principals,

themselves by nature are rational and self- interest seeking individuals (Padilla, 2000). The theory continues to portray an employee or agent who is seeks for his own interest and individualistic bounded by rationality. It may give in to opportunistic behavior, self-interest and short of aspiration that is between the principal and his agents even with the understanding and approach towards risk. Additionally, there may be agency problems coming from the shareholders and the managers. Managers themselves may be opportunistic and may have a different approach towards risk in the face of keen competition and demands to meet shareholder expectations. Even though shareholders want increasing returns they may be risk averse thus accepting less risk while the demands on managers may force them to accept risky projects in order to deliver as expected of them. In spite of the setbacks of the theory, it was introduced as a result of ownership separation and control or the administration of affairs (Bhimani, 2008). This made it necessary for agents or managers actions to be controlled through rules and systems aimed at aligning the management goals to that of the owners (Clarke, 2004). It suggests that managers or employees are held responsible for their actions and as this should constitute an effective governance to secure the interest of their principals.

2.3.2 Stewardship Theory

The theory is in contrast with that of agency theory. Indeed, agency theory presents an interpretation to the relationships that exist within an organization and views managers (agents) as rational and opportunistic. The stewardship looks beyond just economic activities and allows some non-financial aims for managerial activity which includes the need for high performance and self-fulfillment and an internal satisfaction. According to Davidson and Davis (1991), stewards when appointed must work to the benefit of the shareholders. A steward must maximize and protects shareholders value via performance which in turn the steward derives satisfaction

and a sense of fulfilment. In this theory managers are empowered and entrusted to make decisions that are congruent with organizational objectives as well as maximizing the wealth of shareholders. Daily et al. (2003) believes that directors are poised to operate the firm to maximize financial performance and profits and for their reputation be protected as the decision makers of the organization for which they derive satisfaction for it high performance. The issue of agency or transaction cost controlling and monitoring the actions of directors or managers is low since manager perceives themselves as stewards thus derive intrinsic rewards or satisfaction from high performing organizations.

2.3.3 Stakeholder Theory

The theory on the other hand focuses much more on the relationships between management with all other stakeholders rather than just shareholders. The theory can be defined as any group of individuals whose actions directly or indirectly affects the performance of the firm. It looks at a broader and wider relationship beyond just that of shareholders to include customers, creditors, suppliers, employees, competitors as well as the society. Sundaram & Inkpen (2004) argue that the needs of every stakeholder can be addressed by this theory. Smallman (2004) believes it is usually difficult to identify who the genuine stakeholders are and that an attempt to meet theirs wants of all of them may encourage corruption activities. Some proponents of the theory have advocated that there should be a fair representation of each stakeholder group on a board, that way, anytime there is a board meeting, it meets the expectation of all stakeholder groups (Ping, Cheng and Wing, 2011).

2.4 Theories on Nonperforming Loans

2.4.1 The theory of Asymmetry

This theory explains that it is usually difficult in distinguishing who a good and bad borrower is thereby leading to wrong decisions (Auronen, 2003 and Richard, 2011). Auronen (2003) continued to assert that whenever there is a transaction, the party that has more information may be in a good standing to negotiate for optimal terms of the contract unlike the one with less knowledge thus may make the right or wrong choice. Bester (1994) claims that rising NPLs could be attributed to inefficient choices among banks.

2.4.2 Agency Theory

The agency problem that is associated with the agency relationship can be best monitored through establishing of appropriate managerial incentives. It elaborates more on conflict of interest among shareholders resulting in risky or projects that are not well assessed (Smith and Stulz, 1987). The theory also starts that the defined hedging policies can have an effect firm's value of the firm (Fite and Pfleiderer, 1995).

2.4.3 Transaction Cost Theory

The theory is the cost that is associated with the dividing work into various components. Williamson (2000) indicated that cost is incurred when there is a movement of goods or services between medium that are distinct and separate. The theory does not ignore the assumption of a market that is complete but rather it is based on the different technologies for transaction purposes. The financial intermediaries in this case act as group of individual lenders in the transaction technology.

2.4.4 Stakeholder Theory

This particular theory focus on corporate policy that is aimed at establishing equilibrium between the conflicting interests between all stakeholders. Customers tend to have trust in companies that are able to continue providing services into the foreseeable future and in return contribute to increase the value of the firm. The value of the implicit claims tends to increase the cost of bankruptcy and financial distress.

2.5 The Corporate Governance Structures

According to Fernando (2009), the concept of governance has gone far not just for securing the interest of shareholders, employees, customer and or bankers but also as a pillar upon which a strong nation and economy can prevail. OECD (1999) explain governance as a system is used by corporations to direct and control their activities so as to ensure the interest of the owners are safeguarded and ensured. Governance also involves the systems and structures that have been established to reduce the issue of agency problems that arise among shareholders and management of a corporation. For governance to be effective, the system put in place must necessarily align the interest of managers to that of maximizing shareholder value (Denis, 2001). The effectiveness of a board in executing its supervisory and administrative duties to a large extent are influenced by some other external factors that are particularly specific to the board. These factors are board size, duality, board gender and educational qualification. The discussion however is limited to some factors which include board duality, board composition and board gender and board size.

2.5.1 Board Duality

The CEO been same as the chairman of the board is the central issue for board duality. According to Cardbury (2002), CEO duality occurs when the CEO of an organization also serves

or acts as the board chairman. In this regard, the CEO assumes absolute power and the issue of dominance arises. Rechner et al (1991), believe that the CEO must be different from the board chairman to ensure separation and distinction of clearly defined roles. The Boards primary role is to supervise and make sure that the interest of shareholders is protected according (Lam and Lee, 2008). Separating the role of the Board Chairman and CEO will enhance accountability as the independent board will serve as a check on the activities and decisions through joint participation thereby ensuring that shareholders interest is well protected (Monks and Minow, 2004).

Even though Coles, Daniels and Naveen (2008) believe that both board duality and separation of roles have their own costs and benefits related to each of them, Suryanarayana (2005) argues that merging both positions will encourage a strong leadership in the organization thereby ensuring consistency in corporate decisions and in the long run enhance corporate performance. Similarly, Dahaene, De Vuyst and Ooghe (2001) believe when there is board duality and management dominance, there exist a direct link among corporate efficiency and performance.

2.5.2 Board Composition

Board composition is define as the ratio of outsiders who are brought to be represented on a board to the total size of board in any given period (Enobakhare 2010). Board composition can also be referred to how the board of directors which form the governing structure is composed. The board involves both members who are executive members and other non-executive members. Executive directors are those directors who hold an office as employees in the organization while serving on its board. Executive directors contribute to the performance of the organization by bringing to bear their expertise, knowledge and experience (Weir and Laing, 2001). According to Daily and Dalton (1993), executive directors are usually susceptible to

influence thus impeding on their independence on the board. However, to provide better performance and monitoring, the board must be made up of more outside directors.

An outside is one who;

- Is not in employment by the company nor affiliated to its related parties
- Do not work as an executive of other corporation where none of the executive is serving on the board of the company in question
- Not a controlling person of the company

Since outside directors does not occupy any executive position in the corporation, they are more interested in the protection of their reputation by making sure owners they represent interest are protected (Weisbach 1988). However, Wier and Laing, 2001 report that when the board has a more outside directors performance will be adversely affected. Carpenter and Westphal (2001) believe some of these independent outside directors must have a high level of education preferably a PhD qualification. He believes that the governance function will have a mix of competencies, capabilities, skills and knowledge in the execution of its role.

2.5.3 Board Gender

The concept of board gender looks at the gender composition of the board particularly the proportion of women represented on the corporate board. Traditionally, most boards are comprised of only males. Carter, Simkins and Simpson (2003) report that it is widely accepted that there is more of independency among female directors than male directors since they do not usually form networks of ‘’old boys’ associations’’. Diversification on a board enhances

performance since it presents different perspectives and approach to issues as well as a good and equal representation of gender balance, equity as well as fairness (Huse & Solberg, 2006).

2.5.4 Board size

Enobakhane, (2010) explain the size of a board of a corporation as the total number of directors represented on a board that makes its board structure. The issue of the right and optimal board size in organizations has a major concern as it has been discussed for many years yet still inconclusive as to the right board size to adopt. The size of a board is mostly used for advisory and monitoring role (Klein, 1998). However, Jensen (1993) believes that a board size that is large do not only increase board cost, board redundancy and the issue of free-riding from inactive board members but also unnecessary board disputes arising from disagreements.

A smaller board size on the other hand deprives the board from drawing on a large array of knowledge, skills, and experience and also expertise to make viable decisions on behalf of the firm. It also limits the board's effectiveness to control powerful executive managers including the CEO.

2.6 Corporate Governance in the Banking Industry

A bank is an entity that has the license to mobilize funds through the collection of deposits and making funds available to the public through loans. Banks provides not just financial services nut also non-financial services such as trustees for properties for their clients on behalf and offers advisory services. The main difference between a financial and non-financial service firm is that financial services have not just complex activities but also has multiple stakeholders. The interest of clients or customers such as depositors is of primary concern since they form the primary stakeholders for banks. Unlike other non-financial firms whose primary concern may be its stakeholders, banks activities are directly influenced by its most powerful stakeholder that is

customers (depositors). Thus, the governance structure of banks compare to other organizations must be unique. Governance among banks seeks not just to protect the interest of its shareholders only but also the interest of their customers and the general public.

In Ghana, the role of Bank of Ghana and the SEC cannot be undermined in the banking industry. The central bank oversees to all the other operating commercial banks in the nation. One of the mandates, is to ensures the smooth and uninterrupted operations in the industry through regulation, monitoring, formulation and implementation of policies aimed at ensuring financial stability (World Bank ROSC Report, 2010). The activities of banks are regulated by the central Bank. As at 2014, the minimum capital requirement for all banks were increased from an initial of sixty (60) million Ghana cedis to a one hundred and twenty (120) million Ghana cedis (PWC, 2014). Currently, the minimum capital requirement for banks have been increased to four hundred (400) million) Ghana cedis and the dead line for the recapitalization is December 31, 2018.

The rise in competition among banks to get the unbanked population has made it necessary for the adoption of technologically advanced systems. This is aimed at improving the service delivery to bring satisfaction to customer. Additionally, the development of innovative products in the face of keen competition to improve on maximizing profits and shareholders' value.

2.7 Overview of Bank Loans and Lending

Banks especially commercial ones play a role in the financial sector of all nations. They are the most important depository in an economy (Leroy and Vahoos, 2006). They create money through the granting of loans to individuals and corporation and the purchase of securities from monies collected in the form of deposits (Thomas, 2006). They sometimes invest in assets that give returns higher than what is paid on depositors account (Zewdu (2010). The banks giving out

credit facility to customer is one way it makes income which is derived from the interest paid up on these loans. That way management earns income and at the same time providing the community with financing options (Reed and Gill) cited in Zwedu (2010). Lending through the provision of credit facilities (loans) is the central income generating activity in the industry representing about 50 to 75 percent of most banks assets with corresponding high risk exposure. Most banks have exposure to high risk and credit defaults from borrowers resulting in the non-performance of loans thus impeding the bank performance.

2.8 Determinants of Non-Performing Loans

Goeter and Bloem (2001) studied to determine the causes of the loans not performing and how the NPLs are treated. The researchers found out that the reason for a rise in NPLs was due to the increment in the interest rate. A study on macro-economic and bank specific factors that influence the performance of loans by Espinoza and Prasad (2010) noticed that high interest rates influence the performance of loans even though it influences is significantly less. On the other hand, Salas and Saurina (2002) identify an inverse association among the size of the bank and NPLs drawing evidence that large banks are able to diversify more and this was supported by empirical evidence by Hu, Li and Chiu (2004).

The academic literature has established a strong relationship between many macro-economic factors as well as NPL. These economic variables include the exchange rate, the growth of loans and the rate of inflation, the real interest rate, annual GDP growth rate, rate of unemployment as well as the money supply (M2). The macro environment influences borrower and their capacity to access a loan. Where growth in an economy rises, revenues also rises and there is a corresponding decrease in financial distress. Due to this, when real GDP increases the amount of NPLs decreases. Also, when there is increased employment among the populace, the amount of

NPLs recorded by the banks also decrease thus both real GDP growth and employment having a positive relationship with NPLs.

Also, when there is a high level of unemployment, the amount of NPLs increases over time do to loan defaults and non-reliance on any source of income for the repayment of borrowed loans. There are several empirical studies that have found an inverse relationship for GDP growth rate and NPLs. The evidence shown in the empirical literature imply that when GDP growth improves, usually borrowers have a good standing to repay loans which contributes to reduce debt. In a case where there is an economic downturn where the economic growth or GDP growth is slowed, the level at which bad debts have reached is bound to increase with time.

Interest rates are another macro- economic factor that affects NPLs (Bofondi and Ropele, 2011). Among SSA nations in Africa, growths in the economy and in real interest rates are dominating factors for non-performing loans (Fofack, 2005). He however establishes that the nexus existing among macroeconomic variables and doubtful debts of debt holders with the undiversified economic environment of most economies coupled with high external exposure of shocks.

Jemenez and Saurina (2006) provide evidence that for the Spain banking industry, GDP growth, real interest rate and also the conditions of credit can help give explanation to the NPL ratio. Khemraj and Pasha (2009) also found what determines NPLs among banks of Guyanese to be exchange rates that have a direct impact on default loans indicating that the NPL portfolios of the financial institutions is likely to be high anytime there is a rise in the value of the local currency. Additionally, they identified that anytime banks lend excessively to customers with a high interest rate, they are usually expected to have high levels of loan defaults.

The economic variables do influence two types of people and that is businesses and the individuals (Bofondi and Ropele, 2011). They assessed by considering the connection amidst the quality of loans and the nature of its borrowers. Using banks in Italy over 20 years from 1990 to 2010 identified that macro-economic variables of the country, loan quality is always affected by the borrowing cost and the level of debts in the country.

Similarly, Louiz et al. (2010) among Greek banks examined for each category of loan the determinants of NPL. They used macro-economic variables such as unemployment, real rate of GDP growth and rate of interest and the findings reveal that loans impaired are related to macro-economic factors and that of quality management.

In addition to the macro-economic variables, other empirical studies have shown that there are some other factors that are specific to the bank and also impact on the performance of loans in a particular bank. These bank factors which can also be referred to as factors that determines NPLs include the bank size, bank efficiency, terms of credit, share of market power and lastly the risk nature of the firm.

The rate of credit growth, ratio of capital, market power and bank size are some factors that explain the changes in bad debts in Spain (Salas and Saurina, 2002). Hu et al. (2004) looked at the structure of ownership in the banking sector in Taiwan and its relationship with bad loans and noticed that not only are impaired loans having a negative relationship when there is government ownership but that the size of the bank has an inverse link with NPLs. Managerial inefficiency is another bank specific factor that may affect the performance of loans. Mismanagement involving weak operating cost and loan monitoring can bring about high level of losses of capital which may positively affect the growth of NPL's. According to Podpiera and Weill (2008), the regulatory bodies for financial institutions should concentrate on ensuring managerial efficiency

to ensure stability since managerial inefficiency has a direct positive impact on NPL's. Following this same assumption of mismanagement, Berger et al (1997) claim that it is impossible for managers to control risk associated with new customers to who loans are granted to especially when there is not absolute information on customer credibility.

The internal conditions of banks such as excessive lending and interest rates increase the rate if loan losses in banks (Sinkey and Greenwalt, 1991). When banks lend excessively to customers, they increase their chances of recording high impaired or loan defaults. Similarly, high interest rates on excessive loans also increase the veracity of loans thus becoming impaired.

Pesola (2007) believes that one key factor which is loan loss affects how some financial institutions function properly. Loan losses reserves are used by most banks to control risks on loan defaults. Managers use loan loss reserves (which are determined by the provisions made for loan losses as a result of past experience) as means of showing their financial strength (Ahmad, Takeda &Thomas, 1999**).** He said that banks that banks that usually predict high capital losses on loans usually make huge provisions so as to reduce the effect on earnings to its holders of value. In situations where banks perceive high non-performing loans or loan defaults, they make huge provisions for the losses on loans through high loan loss reserves (Hasan and Wall, 2004). Boudriga, Boulila & Jellouli (2009) believe that a good and efficient environmental supervision can positive impact on the performance of loans thus decreasing loan defaults with translate into impaired loans or NPLs.

Another bank factor that influence NPLSs is the credit growth. Credit growth in banks and other credit institutions is related with loan defaults or impairment. There is a high scrabble by banks to get the unbanked population and this has necessitated the banks to make funds available to existing and prospective customers to attract them into the banked population. This excessive

borrowing or loans from banks is said to be the main determinant or cause of non-performing loans (Jimenez and Saurina, 2006).

Sometimes in view of addressing the agency problem, most managers in a period economic of distress or downturn are forced to lend excessively to be able met the demands of maximizing the wealth from their principals or shareholders (Jimenez and Saurina, 2006).

Mensah and Adjei (2015) assessed what determines NPL's among banks in Ghana's with the use of regression and revealed bank variables like interest margin, bank size, outstanding NPL's and the current growth in loan as well as macro-economic variables like real exchange rate, inflation and GDP affect the NPL's of large banks. They also identified that even though bank specific factors are necessary to determine NPL's, the macro-economic factors are not necessarily needed when assessing the NPL's for small banks.

2.9 Corporate Governance and Non-Performing Loans

According to Ponnu (2008), governance that is bad in nature has the ability to influence performance of the firm negatively and also affecting shareholder's value. An effective governance system is evidenced in the qualification of the directors and also management of the firm. Sub-quality boards and management are susceptible to behaviors that are bad suck as the misappropriation of the wealth of shareholder's, non-performance, the lack of commitment and remuneration (Sandra et al., 2008). The basic duty of the board is to monitor, control, provide counsel, and ensure compliance with applicable laws (Monks and Minow, 2004).

In other to be effective, the board must consist of individuals who are willing and able to combine their capabilities and skills to represent the social capital of the firm they belong to. This is executed in the direction of the governance function (Carpenter and Westphal, 2001). Kiel and Nicholson (2003) believe that the link between the performance of a firm and the board

structure or composition is positive. Ineffective governance system can negatively affect firm's performance (Carter et.al. 2007).

The risks that are associated with the non-performance of bank loans has become a major concern to many banks in the industry. Oyejide and Soyibo (2001) opined as evidenced in the Nigerian banks that one of the major assets of banks is the loans that they grant to their customers (loan portfolio) and that the effective management of their loan portfolio (measure of bank performance) continues to remain a big and challenging task for them.

Even though currently some studies have analysed the bearing of governance system on firms 'performances, there is an issue with the right measure for governance since there is no generally accepted measure for the concept (Calabrese, Costa, Meninchini, Rosati & Sanfelice, 2013). In order to measure governance, the board structure can be the best option to be used in this regard (Yakasai, 2001). Romano, Ferretti & Quirici (2012) on the other hand believes that once the variable of governance has a direct impact on corporation's performance it can be used for the analysis.

Nworji, Olagunju & Olanrewaju (2011) examined the issues, problems and the opportunities that were associated with corporate governance in Banks and what causes bank failures. They found out that corporate governance is important if banks seek to operate efficiently without running into distress. Their study suggests that the governance code for banks can help avoid bank failures when there is effective implementation.

Maria, Manthos & Panagiotis (2009) in their empirical study of the consequence of board size and the composition of the board on bank efficiency among 57 Europeans bank over a period of 2002-2006. Using NPLs ratio as a measure of efficiency, they found out that anytime the board size was high, the board was less efficient. The conclusion was not any different from that of

Simpson and Belkhir, (2006) and Altunbas, et al (2001) as they also provided similar evidence that the high the board size the low the performance of banks which is reflected in the amount of NPLs attributable to these banks. Vuyst and Ooghe (2001) and Skully, (2002) proved in their empirical research, most boards that had outsiders represented on the board usually does well than the ones without outsiders represented on the board.

Bussoli (2015) in his attempt to explore the link amongst governance structures and the performance of bank loans and noticed that the size of the board negatively affects the quality of loans that led to their nonperformance. They explain that as there is a rise in board size, decisions regarding the quality of loan may be influenced greatly as there is a wider representation of varied opinions and interest on the board which in the long run affects the performance of the loans. After using different regression models, methods and indicators also found that anytime the board size was improved (increased), it will have a negative impact on the performance of the bank (Trabelsi, 2010).

Boyd, Chang & Smith, (1998) also explained that if the ownership of the bank is among the people who provide large funds to the organization, it would be difficult to monitor and control NPLs. Caprio, Laeven & Levine (2007) and Azofra & Santamaria, (2011) also established that there is a positive and direct nexus amongst governance variables and banking performance.

Ahmad, et al (2016) examined the role governance plays on loans that are non-performing in Pakistan by using banks owned by the state, private individuals, as well as foreign naturals and organizations operating within the country. Analyzing data from 1996 to 2007 using the regression method discovered that governance is essential since it affects NPLs significantly. The size of board has a direct effect on NPLs while the concentration of ownership and the board independence has a negative relationship or effect.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The chapter of the paper describes the research methodology that was employed for the study as well as the type of study and the reasons for employing these methods of research. It also provides details on the population, sample and justification for the sampling technique that was adopted. The paper further discusses the model specification, explaining the variables that are specified in the model as well as providing reasons for the choice of factors in the model. Furthermore, it also gives details on the estimation strategy, data collection which includes the data type and source, the procedure for collecting data and the tools for analyzing the data.

3.2 Research Design

The choice of a design whether quantitative, qualitative or the mixed depends on the objectives of the study or research. Even though the quantitative research design has its own challenges, the research design is not only appropriate when the number of entities under a study is numerous, but also useful when the researcher wants to limit his or her influence on the findings or results (Yauch and Steudel, 2003). Yauch and Steudel explained that the procedures and processes employed in this design is rigorous and rigidly accurate allowing little or no deviations that makes the situation very understandable as well as the results can be generalized. Dudwick,et al (2006) also presented a similar view and conclude the results from the quantitative design is reliable and can be generalized. Hence, this study employs the quantitative research design.

3.3 Population

A population in simple terms can be defined as the entire aggregation of objects from which samples can be drawn. The research topic that is, assessing the impact of governance on NPLs and the study objectives made it necessary to select all licensed Universal banks in Ghana for the period of 2006 to 2016 for which the total number of banks was thirty- two (32) as at 2016.

3.4 Sample and Sampling Technique

The number of banks used in the model which purposely assesses the effect of governance system on NPLs in Ghana for all banks licensed in the country that falls within the period under study. The procedure for choosing the bank whether it is a local or foreign bank is that, the bank must be licensed and regulated by BOG. Secondly, the bank must be operating for at least more than a year or two. Also, the data on the explanatory variables for each bank should be sufficient and more than the number of explanatory variables employed. Lastly, once that data for the bank is available and can be obtained, it qualifies to be considered for the research analysis.

3.5 Model Specification

The study seeks to find how governance system can influence on the performance of loans in Ghana from the period of 2006 to 2016. The reason to comprehend the variables behind the cross-sectional variation in bank specific data alongside the time series variation in the macroeconomic factors affecting banks in Ghana cannot be underestimated or emphasized. Hence the study employs panel analytical method to attain the stated research objectives. The choice of analytical method is necessitated by empirical investigation into the impact of governance on NPLs which revealed that the performance or non-performance of bank loans is not only affected by bank factors but also the economic factors that are peculiar to the economy understudy over the considerable period. The study reveals that the bank data that influence

performance of bank loans varies across entities whereas the macro economic factors vary across time thus the use of the panel analytical method which accounts for variations both across entity and time in the analysis.

According to Stock and Watson (2001), the panel analytical method does not only exploit the advantages of both time and cross-sectional series method but also makes up for the weakness that are prevalent with the adoption of any of the two latter techniques. Additionally, it also helps to control variables that have not been included in the estimation but may have either a short- or long-term impact on the reliability of the finding from the study.

The general form of a panel data model is $Y_{it} = \alpha_i + y_t + \beta X_{it} + \mathcal{E}_{it}$ …….. (Eq. 4.1)

The study uses a panel approach to establish the link existing between the variables so as to realize the objectives of the study.

The specific model is stated as:

$$AQ_{it} = \beta_o + \beta_1 DUAL_{it} + \beta_2 SIZ_{it} + \beta_3 NONEXEC_{it} + \beta_4 GEND_{it} + \beta_5 BKE_{it} + \beta_5 CAP_{it} + \beta_6 GDPG_t + \beta_7 INF_t + \varepsilon_{it} \ldots\ldots\ldots\ldots (Eq)$$

Where AQ represent Asset Quality, DUAL is CEO duality, SIZ is board size, NONEXEC is non executive directors, GEND is gender, BKE is bank size, CAP is capital adequacy, INF is inflation and GDPG is growth of gross domestic product.

3.5.1 Variable Selection and Justification

The section defines and provides reasons or justification for the choice of dependent and explanatory variables for Asset quality of banks. It also specifies the expected sign for each

independent with the dependent variable (AS) stating the measurement and source of data supported by other empirical studies.

3.5.2 Dependent Variable – Asset Quality

The study employs NPLs as a proxy for asset quality as the dependent variable which measures as a ratio of NPLs to total loans or advances (NPL ratio). Loans is a key bank asset. A loan is said to be nonperforming when it ceases to generate interest income to the lender and that there is a high probability of a default by the borrower. According to IMF (2009), a NPLs is a loan for which repayment is for more than 90 days or even though repayment may not be due, there is reasons to believe that payment cannot or will not be fullypaid. The conditions that impact the performance of loans are classified under both bank and economic factors (Espinoza and Prasad, 2010). When Non-performing loans increase overtime, it does not only affect the financial performance of the bank (bank specific) but also has the tendency to destabilize the whole economy causing investors to lose confidence in the banking system due to the financial crisis that will prevail in the economy (Woo, 2000). Mwangi (2012) postulates that anytime the NPLs of banks increases, the financial performance of the bank declines. ALso, if the NPLs of banks decline, the financial performance is increased thus a conflicting link for NPLs and financial performance. He explained that the performance of banks depended on the management practices (Governance Practices) and that if best practices in the management of loan is adopted, performance will be enhanced.

3.5.3 Independent Variables for Asset Quality

The section provides definition to the variables of interest (bank and economic variables) that have an effect on the NPLs. Based on theoretical and empirical studies, the section provides the

measurement for each of the variable indicating the expected signs of the variables with the explained variable (NPL).

3.5.3.1 Board Duality

Board duality occurs when the CEO adds leadership as the chair of a board (Cardbury, 2002). It is measured by 1 if the CEO doubles as the board chair or 0 if otherwise. Suryanarayana (2005) postulates that when the CEO beccomes the board chairman, a stronger leadership is enforced which encourages consistency in decision making to achieve set objectives. Dahaene, De Vuyst and Ooghe, (2001), also agrees that there is deemed to be management efficiency and a higher return on asset (ROA) when there is management dominance or board duality However, the board's primary role is to guarantee accountability and the protection of shareholders' interest. That can be achieved when the board is independent from the CEO (Rechner and Dalton (1991); Lam and Lee (2008) & Monk and Minow (2004)). The study expects that when there is board duality and the CEO dominate over management, if loans were not performing before, the issue will be no different as the Non-performing loans will increase with time. For this reason, there is an expected positive relationship between NPL and Board Duality.

3.5.3.2 Board Size

Board size can be explained as the maximum or minimum portion of directors that make up the board of directors for an organization or firm (Enobakhane, 2010). The overall number of board members on the board is used as the measure for board size. A relatively small board size may deprive the board of requisite skills and experience when it comes to decision making. A smaller board may also not provide sufficient check on the CEO. Jensen (1993) postulates that a larger board size is less effective and may bring issues of conflict and free-riding. Meanwhile, a larger

board will bring to bear a wider set of skills and experience which become useful in the process of making decision. The larger board size will also provide sufficient check on the CEO. For this reason, the expectation of this study is an inverse association among NPL and board size.

3.5.3.3 Non-Executive Directors

The essence of the presence of outside directors on corporate board cannot be undermined as these directors are mostly experts and carry some skills that can make the board effective. For a better performance and a reduction in the amount of NPLs, majority of the board should be comprised of outside directors since they do not hold any position in the firm and for that reason their judgement is less likely to be influenced by the executives in an attempt to meet their targets. The presence of non-executive directors will ensure shareholders' interest are protected because of the need to preserve their reputation (Weisbach, 1988). For this reason, as a board consists of more outside directors, the less the non-performance of loans which tend to decrease shareholders' wealth through loan loss provision.

3.5.3.4 Board Gender

Board gender is number of female directors that is represented on a board which is measured as proportion of females on board to the total number of directors on a board. Over the years, various boards are made up of only males which does promote diversity and gender balance. Fonda and Sassalos (2000) argue that, when there is diversification on the board, performance is enhanced since it draws on a wider perspective of ideas and approach to issues. Female directors are perceived to take less risk as compared to male directors. Ryan and Haslam (2005), reported that females are more independent and likely to be put in high positions when there is an economic downturn. A larger representation of women on a board will mean that shareholders interest will be protected thus banks assets (in this case bank loans) will be put to efficient use

thereby reducing the probability of loan defaults which increase NPL ratio within banks. In view of this, there is an expected an inverse correlation among the board gender and NPLs within banks.

3.5.3.5 Bank Size

Bank size measured as the log of total assets and is expected to have a direct association with NPLs of bank. Empirical evidence provides a negative relationship between bank size and NPL's (see Biekpe, 2011). Implicitly, banks with larger sizes have higher potentials to make loans available to the economy. As a result, they assume different types and levels of credit risk and loan defaults as compare to smaller banks which have small or very little capital available to be loaned. Additionally, as banks increase in size, supervision, evaluation and monitoring of loans become cumbersome and as a result assume higher credit risk which results in increased NPL's.

3.5.3.6 Capital Adequacy

Capital adequacy which is measured as the ratio of total equity to the total assets of banks refers to availability of enough capital in banks to cater for losses from loans that have been made available to borrowers. Banks with inadequate capital are unable to absorb losses from loans that are not performing. On the other hand, when banks are well capitalized, credit risk associated with borrowed funds declines through the use of both monetary and human resources to monitor, control and recover borrowed funds (Zangina and Bopkin, 2012). Hence, negative association is expected between capital adequacy and NPLs.

3.5.3.7 Inflation

Inflation is the consistent increase in prices of goods and services within the country. It is measured by the using the year on year price index. Many literatures including Fofack (2005) have identified a direct nexus between inflation and bank credit in SSA nations. When there is

inflation, it diminishes the ability of borrowers of loans to repay for the borrowed funds. Additionally, loans that are probable for defaults also increase in value due to the inflationary effect thus require more provisions for such probable losses. Hence this study anticipates a direct nexus between inflation and NPLs.

3.5.3.8 Gross Domestic Product

Gross Domestic Product is mostly use to measure the performance of the economy in a country usually for a period of one year and it is perceived to have to have a negative correlation with NPLs. Some findings present an inverse relationship between GDP and NPLs (credit risk). They observe that anytime the economy grows well which is seen in increase GDP, it reflects in the incomes of individuals and organizations thereby increasing their ability to pay back loans causing a reduction in the probability of loan defaults. Keeton (1999) believes that is a positive growth in GDP, the increased incomes for individuals and businesses reduces the demand for bank loans by individuals and organizations as they will begin to depend more on funds generated internally (assumption from the Pecking Order Theory) as internally generated fund offer cheaper or no cost of capital. This causes the banks to reduce or loosen their credit policies thereby increasing their credit risk or exposure to NPLs.

3.6 Estimation Strategy

There are many approaches that can be used to estimate the panel model. The choice of an appropriate approach will depend on the correlation that exist between the independent variables and the error term which is also referred to as the idiosyncratic term as well as the nature or compositional structure of the error term.

According to Brooks (2008), the pooled ordinary least square estimation approach ignores or does not take into consideration the panel nature of the data set and assumes that the observations

are not correlated across entities and time. Despite the limitation of the pooled ordinary least square estimation technique that the expects the number of observations across entities (i) and time (t) should at least be as large as the total number of observations (N), the pooled ordinary least square estimation technique is most appropriate for zero correlation between the data set across time and entity. In view of this, the Fixed and Random Effect Panel Estimation Technique will be used in this study.

The Fixed Effect (FE) model decomposes the error term $\mathcal{E}_{it}$ in to both μ_{it} and v_{it}. While the μ_{it} captures the individual specific effects, the v_{it} also captures all other disturbance or idiosyncratic terns that vary across time and entity. For this reason, the FE can be rewritten as $y_{it} = a + \beta X_{it} + \mu_i + v_{it}$.

The Random Effect (RE) model assumes a different intercept but constant over time assuming that the correlation amongst the dependent and independent factors are the same and temporal across the entities. For this model, the intercept for each crossectional unit is assumed to be from a common intercept including a random variable ε_{it} varying across entities but constant in relation to time. The RE model is therefore estimated as:

$$y_{it} = \alpha + \beta X_{it} + \omega_{it} \quad but\ \omega_{it} = \mathcal{E}_i + v_{it}$$

The $\mathcal{E}_i$ term requires the assumptions that it is autonomous of the error term v_{it}, has a constant variance σ_ϵ^2 , assumes a zero mean and finally independent of the explanatory variables X_{it}.

3.7 Data Type

Panel data makes use of both crosssectional and time-series data (Brooks, 2008). Unlike the panel data, the cross-sectional data make use of variations in variables in a point in time but across different entities while the time series data looks at variable variations across different

times and not entities. Even though the panel data has its own shortcomings, it combines both the strengths and overcomes the weakness of the two individual data types. Hence this research used panel approach to achieve the research objectives.

3.8 Data Source

The source of data can either be primary and secondary. The choice of the data source is influenced by the availability of data to the researcher for the topic understudy. Usually, if the data needed for the study is readily available (collected by another researcher other than the current user), then the source of data is considered to be secondary. Also, where data is not readily available (data is purposely collected directly or for a first-time experience), then the source of data becomes a primary data source. Wooldridge (2008) and Brooks (2008) explained that when a researcher gathers information which has undergone not less than one layer of analysis before it is used in a current study, the data obtained is said to be a secondary data. For the purpose of this research, data is obtained from annual reports of the various banks and the Statistical Service (GSS), hence secondary data is employed because it has a reliable data source.

3.9 Conclusion

The chapter discussed the research design that was used for the study giving justification for the choice of design. It also discussed the research population which is banks sample and sampling techniques employed. Furthermore, the chapter provides the model specification, justification for the choice of variables, the estimation strategy and the data collection procedure

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CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This part of the research discusses the analysis and findings of the research of the impact of governance on quality assets among banks. The discussion in the chapter encompasses the summary of variables that were used in the study as well as the correlation matrix and the regression results.

4.2 Descriptive statistics

The table below gives the descriptive summary of each variable used to measure governance systems and NPLs in Ghana for the period of 2006 to 2016. The table also gives a descriptive statistic of the sample observation, the mean, average standard deviation and the maximum and minimum values of the factors that were used in the study.

The average AQ is 6.1681 with a deviation of 9.1765 and a maximum and minimum values of 48 and -16 respectively. The average for CEO Duality is 0.0978 with a deviation of 0.2977 and a maximum and minimum of 1 and 0 respectively. Board size is averaged 8.995 with a deviation of 4.5183 and a maximum and minimum of 23 and 1 respectively. On the average, the non-executive members represented on the board of directors is 0.2229 with a deviation of 0.2400, maximum and minimum of 0.7 and 0. Gender has an average of 0.1202 with a deviation of 0.1067 and a maximum and minimum of 0.3750 and 0. Bank size which is measured as the log of total assets is averaged at 5.7915 with a deviation of 0.5366 and a maximum and minimum of 6.9045 and 4.0373 respectively. Capital adequacy has an average of 0.1703 with a deviation of

0.1368 and a maximum of 0.9952 and 0 minimum. Also, the GDP growth has an average of 0.0500 with a deviation of 0.0269 and a maximum and minimum of 0.0144 and 0.1242 respectively. Lastly, the average inflation is 0.1376 with a deviation of 0.0344 and a minimum and maximum of 0.0873 and 0.1925 respectively.

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
AQ	119	6.1681	9.1765	16	48
DUAL	225	0.0978	0.2977	0	1
SIZ	225	8.9956	4.5183	1	23
NONEXEC	225	0.2229	0.2400	0	0.7000
GEND	225	0.1202	0.1067	0	0.3750
BKE	261	5.7915	0.5366	4.0373	6.9045
CAP	255	0.1703	0.1368	0.0000	0.9952
GDPG	275	0.0500	0.0269	0.0144	0.1242
INF	275	0.1376	0.0344	0.0873	0.1925

Source: Author's estimation 2018: AQ represents Asset Quality ratio, dual represents the duality of the board, siz represents the board size, nonexec represents the number of non-executive directors on the board, gend represents the gender composition of the board measured as the ratio of female members on the board of director, bke represents bank size, cap represents capital adequacy, gdpg represents GDP growth, inf represents inflation.

4.3 Correlation Matrix

The Correlation is useful in understanding the relation between NPLs and corporate governance. It also tests and identifies multicollinearity that may exist between any of the independent variables included in the study.

The table 4.2 below gives the results from correlation for some of the factors that explain NPLs. The correlation coefficient shows the index of both the magnitude and direction of the correlation that exist amongst any two variables without casual implication. The absolute values of the coefficient indexes represent the magnitude of the relationship between the variables while

the sign (positive or negative) represents the direction of the association between the variables. The concept of multicollinearity is tested using the correlation matrix to identify the explanatory variables that are highly correlated with each other. The test for multicollinearity is essential in order to identify which of the explanatory variables has a greater influence the dependent variable (AQ). Multicollinearity is evident when all the p-values of the coefficients in the regression model are insignificant but the overall model is significant.

According to Kennedy (2008) of the correlation, high multicollinearity between any two variables is set at a threshold of 0.7. Smith et al. (2009) suggested that if any variable has a variance inflation factor (VIF) greater than ten (10), it should be excluded from the empirical model. Also, if any pair of variables has a variance inflation factor (VIF) of less than ten (10) but multi-collinear, drop the variable with the highest variance inflation factor (VIF). From table 4.2.2 above, even though gend and nonexec has the highest correlation coefficient of 0.5491, none of the variables has a correlation coefficient greater than 0.7 in accordance with Kennedy (2008).

Table 4.2.: Correlation Matrix

	NPL	DUAL	SIZ	NONEXEC	GEND	BKE	CAP	GDPG	INF
AQ	1								
DUAL	-0.0572	1							
SIZ	0.044	-0.498	1						
NONEXEC	0.0997	-0.3457	-0.0131	1					
GEND	0.3193	-0.3948	0.2366	0.5491	1				
BKE	0.4146	-0.0161	0.0129	0.3554	0.3874	1			
CAP	-0.1394	-0.028	0.2365	-0.0755	-0.0808	-0.2879	1		
GDPG	-0.1024	-0.0343	-0.0584	0.0602	0.0173	-0.1795	-0.2101	1	
INF	0.131	0.002	-0.0014	0.0111	-0.0001	-0.1998	-0.0292	0.445	1

AQ represents Asset Quality ratio, dual represents the duality of the board, siz represents the board size, nonexec represents the non-executive directors, gend represents board gender, bke represents bank size, cap represents capital adequacy, gdpg represents gross domestic product growth and inf represents inflation.

4.4 Regression Results using Robust Random Effect Model

The study anticipated a fixed effect model or random effect model for the estimation strategy. However, the choice of estimation strategy largely depended on the findings from the Hausman Test. The test revealed that the random effect model was the appropriate estimation strategy for the study. However, although the random effect model proved to be the appropriate estimation strategy according to the Hausman test, this study used the robust random effect model since it gives a more accurate estimation of the findings.

Table 4.3: Random Effect Model Regression Results

AQ	Coef.	Robust Std. Err.	z	P>z
DUAL	-1.3977	1.9515	-0.7200	0.4740
SIZ	-0.1075	0.1193	-0.9000	0.3680
NONEXEC	-7.3560	4.2719	-1.7200	0.0850*
GEND	21.1508	10.9338	1.9300	0.0530*
BKE	8.2704	1.7265	4.7900	0.0000***
CAP	-2.4318	3.9091	-0.6200	0.5340
GDPG	42.7191	28.6712	-1.4900	0.1360
INF	62.8819	30.8868	2.0400	0.0420**
Cons	46.9316	11.8315	-3.9700	0.0000
Observation	106			
R square	0.2907			
Wald chi (8)	56.35			
Prob> chi	0.0000			

Source: Author's estimation: Significance level: 1% (***), 5% (**), 10% (*). AQ represents Asset Quality ratio, dual represent board duality, siz represents board size, nonexec represent non-executive directors' ratio, gend represents board gender, bke represents bank size, cap represents capital adequacy ratio, gdpg represent gross domestic product growth, inf represents inflation rate.

From table 4.2.3 above, CEO duality is negative and insignificantly related to AQ. The coefficient of board size is negative and insignificantly related to asset quality which is NPLs.

The non-executive coefficient significant at 10%. The presence of non-executive members on board has a negative relationship with NPLs which means that a unit increase in the ratio of non-executive directors will lead to a 7.3560 unit decrease in the NPLs. Meaning that when a board is composed of more outside directors, independence on the board is encouraged since the outside directors are do not involve actively in managing of the bank. The independent directors are therefore able to make decisions which will be beneficial to the owners whom they represent without compromising on their sense of judgement. Additionally, the presence of outside directors brings on board a broad mix of competencies, capabilities, skills and knowledge to the board. These skills are harnessed for making effective decisions that are in the best interest of the shareholders. For instance, independent or outside directors ensure the maximization of shareholder wealth through the establishment of effective and efficient loan collection policies aimed at improving the performance of loans. This results in a reduction in the amount of NPLs recorded by the bank and a general increase in the bank performance. The inverse association between the ratio of outside board members and NPLs is in line with the results of Carpenter and Westphal (2001) and Weisbach (1988).

Board gender on the other hand is also directly related to NPLs. Board gender represents the gender composition of the board and is measured as the ratio of the number of female directors to the total number of board members. A correlation of 21.1508 of board gender with NPLs means that anytime a female board member is introduced on the board, non-performing loans will increase by 21.1508 units. Female directors are perceived to be more susceptible to emotional appeals and more compassionate as compared to their male counterparts. Their susceptibility to emotional appeals and compassionate nature makes them in most cases take on more risk by granting loans to customers that appeal to their emotions. It therefore becomes

difficult for most female directors to turn down these individual customers with potentially high credit risk once these customers appeal to their emotions. Therefore, as a board is comprised of more female directors, the amount of NPLs is likely to rise overtime thus a positive correlation between NPLs and board gender.

Bank size is highly and significant at 1% significance level with a positive correlation of 8.2704 with the dependent variable NPLs. Bank size represents the size of the bank whether large, medium or small and its measurement is log of total assets of the bank. A positive correlation of 8.2704 for bank size and NPLs indicates that a unit increase in the size of a bank will result in an 8.2704 unit increase in NPLs. This means that as banks increase in size, they tend to have a higher potential to make loans available to various sectors of the economy assuming various levels of risks as compared to relatively smaller banks. Additionally, when banks increase in size, the process of credit risk assessment, loan evaluation, loan supervision and monitoring become much complex and cumbersome compared to the smaller banks. The coefficient of the capital adequacy variable is negative and insignificantly related to NPLs.

The coefficient of the Gross domestic product growth is also not significant even though it is positive. Gross domestic product variable was introduced in the regression model to assess the influence of economic activities on the ability of borrowers to repay borrowed funds.

Finally, inflation which measures the insistent increase in aggregate price levels of goods and services within an economy usually over a period of one year is also significant at 5% significance level with a positive correlation coefficient of 62.8819 with NPLs. A unit increase in inflation will result in a 62.8819 increase in the amount of NPLs. The relationship defines a positive association between inflation and NPLs. This means that, anytime there is inflation where there is a persistent increase in the average price of goods and services, the value of

borrowed funds increases overtime especially in a situation where the loan is an indexed loan or was loaned at a fluctuating interest rate. Additionally, at the same time when there is inflation it reduces the ability of customers or borrowers of funds to make repayments for the borrowing funds as it reduces their loan paying ability. The banks on the other hand during periods of persistent inflation tend to price their loans higher in an attempt to cater for potential risks. This makes the loans very expensive to the borrowers increasing their associated credit or default risk which in the long run increases the amount of NPLs recorded by the banks. The research findings are consistent with the findings of Fofack (2005) who also identified a direct connection among inflation and bank credit in SSA African countries. Fofack further explained that inflation does not only have an inflationary effect by increasing the value of borrowed funds but also lessens the capability of borrowers to pay back their debts.

The second objective of the research is to examine the trends in NPLs in banks in Ghana. The continuous increase in the amount of NPLs loans recorded by the Ghanaian banks can be attributed to a number of factors such as economic downturn, interest rate volatility, exchange rate volatility, excessive dependence on high-priced inter-bank borrowings, and adverse selection of customers with high credit risk, moral hazards, weak lending standards and poor credit risk management practices.

In 2011, there was a fall in the NPL ratio recorded by the banks from 5.8667 in 2010 to 3.1667. The decrease in the NPL's for 2011 can be attributed to attempts by the banks to reduce the amount of NPL's they record. This was achieved through the drastic reduction in the loanable amounts given to customers. Also, the banks employed some credit risk management practices to reduce credit defaults among their borrowers thereby reducing the risks associated with issues of adverse selection and moral hazards. The reduction in NPL ratio for the year can also be

attributed to attempts by the government to stabilize economic variables such as a favorable interest rate, reduce exchange rate volatility and controlling of inflation rate. These favorable conditions do not only result in a lower pricing of loans but also increase the ability of borrowers to repay loans they borrow from their banks. This resulted in the decrease in the NPL's recorded by the banks.

However, the situation in 2012 changed as NPL's started to increase again from time to time due to the increase in competition among banks to get the unbanked population into the banking sector and to increase their market share. It can also be attributed to the increasing pressure from shareholders to pay high or increasing returns on their investments. This encourages the banks to make more loans available to their customers which increases the risk of defaults thus increasing the amount of NPLs recorded by the banks.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter of the study presents a summary of the findings made from the study conducted as well as the conclusions that were drawn based on the research findings. The chapter also presents some necessary recommendations for policy implementation and use by future researchers in some research areas or topics to be researched on later in the future.

5.2 Summary of Findings

The role of the banks in the development and the growth of national economies can in no way be undermined. As a result, there has been numerous reforms and policies over the past years to guarantee for the firmness of the financial system for the purpose of supporting investment. banking, in addition to other business activities. Amongst the various reforms and policies by the regulator of the banking sector, Ghana's central bank; Bank of Ghana recently increased the minimum capital requirement of all commercial banks from 120 million Ghana cedis to 400 million Ghana cedis effective by the end of December 2018. The move by the central bank is to sift out bad performing banks and to protect deposits of customers. Financial performance in the bank is primary measured by the amount of loans created and the effective and efficient collection of these loans when they are due. In Ghana and over the years, huge stocks of non-performing loans and management malpractices have been the main causes for bankruptcy in banks as recently evidenced in the case of UT Bank, Capital Bank and some few other banks.

Hence this study addressed the effect of governance structure on the nonperformance of loans in Ghana from 2006 to 2016.

Using the robust random effect panel data estimation regression model made of the bank, industry and economic factors, the study finds that corporate governance variables had a significant effect on the performance of loans in banks. The study finds the ratio of non-executive directors and board gender to be statistically significant on the NPLs of banks in Ghana but finds board duality and board size having a negative but insignificant relationship on the NPLs. The findings from the bank variables also indicate that bank size is significant and positively related to NPLs of banks but capital adequacy ratio was insignificant.

Finally, on the macroeconomic variables, the study finds GDP growth to have an insignificant relationship on NPLs but finds inflation to be significantly related to NPLs of banks in Ghana.

5.3 Conclusions

This study sought to establish how impactful corporate governance structures are on loans that are non-performing within the Ghanaian banking sector during the periods of 2006 to 2016. The data that used to achieve this objective was gathered from the Ghana Statistical Service (GSS) and the annual reports of banks. The study finds that corporate governance structures statistically impacts non-performing loans in a significant way in banks in Ghana in accordance with other empirical findings.

The findings made provides evidence that the presence of outside directors in the composition of the board of directors that form the corporate governance of banks helps to reduce issues related to the non-performance of loans. Largely, this is as a result of the independence of the outside directors in decision making and ensuring the protection of the interests of the shareholders

whom they represent. Additionally, having female directors tends to increase the amount of NPLs that are recorded by banks due to their perceived susceptibility to emotional appeals and compassion as compared to their male counterparts.

It is also evident that banks that are bigger in sizes tend to have large assets and large capital base and can make loans readily available to borrowers. Since loans form the major assets of banks, larger bank they tend to have more loans portfolios and are more susceptible to credit default risk as compared to smaller banks. The increase in bank complexities and complication and time factor for the necessary checks on customer credit risk, loan evaluation, supervision and monitoring increase the risk of adverse selection and moral hazard by the bank thereby encouraging loan defaults and increase in NPLs.

Similarly, in an economy where general prices of goods and services consistently increase overtime, it impacts on the ability of borrowers to repay borrowed funds due to the inflationary effect of the price increment. This tends to increase the risk of credit default thereby increasing NPLs recorded by most banks in Ghana.

The results show that after changes are made in the governance structures in banks in Ghana, the performance of loans in banks will be improved and banks will record very low amounts of NPLs in Ghana.

5.4 Recommendations

The above result points out that some corporate governance variables economically impact the profitability of banks and as such the corporate governance of banks should be well structured in a way that can be beneficial to banks in terms of helping to reduce NPLs in the bank portfolio thereby making them more efficient in their performance.

This study also recommends that banks are that are large in size should institute some form of measures necessarily for risk assessment in order to reduce issues of adverse and moral selection. The effective and strict implementation of risk assessment measures will help reduce issues related to credit risks while the performance of loans improves all of which be of benefit to the Ghanaian banking sector.

5.5 Future Research

Similar studies in future can consider researching into the effect governance structures have on NPLs in relatively much smaller banks such as micro- finance banks and the savings and loans companies.

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APPENDIX

Table 1: Summary of Variable

Classification	Description	Expectations
Dependent variable		
Asset Quality (AQ)	The ratio of Non – performing loans to total loans or advances	
Independent variables (Variables of interest)		
The Duality of the Board (DUAL)	Is equal to 1 if CEO is the same as board chairman otherwise 0	+
The Size of the Board (SIZ)	represents the number of board members	+/-
The number of Non-Executive Directors (NONEXEC)	Represents the ratio of non-executive members to total board members	-
The Gender Composition of Board (GEND)	Represents the ratio of female members of the board of directors	+/-
Control variables		
Bank specific and macroeconomic variables		
Bank size (BKE)	Log of total assets	+
Capital adequacy (CAP)	The ratio of total equity to total assets	-
Gross Domestic Product (GDP)	The yearly GDP Per Capita	+
Inflation (INF)	This represents the increase in prices	+/-

Table 1: Normality Test

Variable	Obs	W	V	z	Prob>z
npl	119	0.7435	24.5080	7.1640	0.0000
dual	225	0.9264	12.1690	5.7840	0.0000
siz	225	0.9419	9.6150	5.2380	0.0000
nonexec	225	0.9564	7.2170	4.5740	0.0000
gend	225	0.9799	3.3280	2.7830	0.0027
bke	261	0.9784	4.0770	3.2770	0.0005
cap	255	0.7201	51.6500	9.1860	0.0000
gdpg	275	0.7754	44.2990	8.8610	0.0000
inf	275	0.9313	13.5470	6.0920	0.0000

Table 2: Variance Inflation Factor

Variable	VIF	1/VIF
gend	1.73	0.5770
nonexec	1.73	0.5783
dual	1.72	0.5810
siz	1.59	0.6298
bke	1.55	0.6459
gdpg	1.38	0.7264
cap	1.29	0.7757
inf	1.28	0.7816
Mean VIF	1.53	

Table 3: Regression results from Ordinary Least Squares

npl	Coef.	Std. Err.	t	P>t
dual	-1.3977	3.2467	-0.4300	0.6680
siz	-0.1075	0.2176	-0.4900	0.6220
nonexec	-7.3560	4.0446	-1.8200	0.0720
gend	21.1508	8.8230	2.4000	0.0180
bke	8.2704	2.1918	3.7700	0.0000
cap	-2.4318	7.4694	-0.3300	0.7450
gdpg	-42.7191	26.7164	-1.6000	0.1130
inf	62.8819	21.4149	2.9400	0.0040
cons	-46.9316	13.1675	-3.5600	0.0010
Observation	106			
F (8,97)	4.97			
R square	0.2907			
Root MSE	7.4474			

Table 4: Hausman Test

	---- Coefficients -- --			
	(b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
bke	8.0781	8.2704	-0.1923	3.3282
cap	10.9862	-2.4318	-8.5544	6.7655
gdpg	43.6901	42.7191	-0.9709	8.7409
inf	61.3113	62.8819	-1.5706	7.2440

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg
Test: Ho: difference in coefficients not systematic
chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
4.21
Prob>chi2 = 0.3785