

**EFFECT OF CORPORATE GOVERNANCE ON
FINANCIAL PERFORMANCE OF LISTED
COMMERCIAL BANKS IN RWANDA**

BY

CHRISTELLE GATCHERIMA UMUTESI

UNITED STATES INTERNATIONAL UNIVERSITY-AFRICA

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**A Research Project Report Submitted to the School of
Business in Partial Fulfillment of the Requirement for the
Degree of Masters in Business Administration (MBA)**

UNITED STATES INTERNATIONAL UNIVERSITY-AFRICA

SUMMER 2017

STUDENT'S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University- Africa for academic credit.

Signed: _____

Date: _____

Christelle G. Umutesi (ID 647593)

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

Signed: _____

Date: _____

Prof. Elizabeth Kalunda

Signed: _____

Date: _____

Dean, School of Business

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DEDICATION

This project is dedicated to my dear lovely husband Calvin Emmanuel Munyarukato and Children, Keza Jenna Munyarukato and Heza Jonathan Munyarukato and my brother Claver Kayihura for their support throughout the research process.

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ABSTRACT

The purpose of the study was to examine effect of corporate governance structure on financial performance of listed commercial banks in Rwanda. The study aimed to answer three research questions: firstly, to what extent does board size affect listed commercial banks' financial performance in Rwanda? Secondly, how does directors' equity interest affect listed commercial banks' financial performance in Rwanda? Finally, how board gender diversity affects commercial banks' financial performance in Rwanda?

The study used the descriptive research design. The longitudinal survey research approach was used to collect data. The study relied on secondary sources of data to gather information for the variables. The study adopted the purposive sampling technique. The target populations for the study were listed commercial banks in the Rwanda Stock Exchange (RSE). The sample size for the study was 3 commercial banks listed in the RSE. The data was collected from annual reports and the banks' websites by a data collection sheet for each of the banks which collected the ROE, ROA, directors' equity interest, board gender representation and size of the board. Data analysis was done by the SPSS Version 21. Descriptive and Inferential statistics were used to analyse the data. These were Pearson correlation analysis and regression analysis.

In regard to board size, the study found that the average size of board size of the sampled banks was 10 board members. The correlation analysis indicated a positive and significant relationship between board size, director equity interest and board gender diversity but not with ROE. The regression analysis showed that an increase in board size, directors' equity interest and board gender diversity led to an increase in ROA and this was significant. However, this was not observed for ROE.

The study concludes that board size has a positive and significant effect on performance of commercial banks listed in the RSE; that director equity interest, board gender diversity had a positive effect on financial performance of commercial banks listed in the RSE but this was insignificant.

The study recommends that commercial banks should not exceed the average nine board members' as this may lead to decision-making problems which are characterized by larger board of directors; that director ownership should be implemented as an emolument strategy in commercial banks to improve on their performance and more inclusion of women in their boards to enhance board diversity which has been recommended as a best practice in the corporate governance research and practice.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

In today's business environment, shareholders in organisations are holding the board of directors to account for performance of the organisation. The collapse of large corporations around the world has focused their attention on the performance and behaviour of the board of directors of an organisation. The board of directors as the top management of the organisations is held accountable for the strategic direction that the organisation takes. Heracleous (2001) agrees that the importance of corporate governance in today's corporations has gained momentum owing to separation of ownership and management control in the firm. The shareholders' interests are in conflict with the manager's interest.

Corporate governance refers to making such set of laws and motivation through which administration of company is bounded and administered for profit maximization which ultimately adds the value for shareholders as well as for management (Ilyas & Rafiq, 2012). An effective corporate governance is important to the economics that have intricate business backgrounds and also influence entrepreneurship success. The last twenty years has seen focus of research in the discipline of finance in corporate governance.

According to Khan (2011) corporate governance is a definition of policies, laws, customs, processes and institutions that drive the firm and corporation in the way they control, administer and act in their operations. The aim of corporate governance is to manage the connection among stakeholders such as those of the shareholder, and board of directors while also aiming to achieve the goal of the organisation. Corporate governance also focuses on the accountability of the persons through a mechanisms which aims to reduce the principal-agent problem in the firm.

The goal of corporate governance is to make sure that firms are managed in the best interest of the shareholders and owners (Ahmed, Alam, Jafar & Zaman 2008). This is especially among listed companies where most of the shareholders do not participate in the everyday management of the organisation. Corporate governance can also be

understood to apply in other form of organisations such as companies with limited principal owners and smaller or large group of shareholders, public corporation, privately owned companies, partner owned organisations where ownership may be divided through inheritance in several or one generation (Ahmed et al., 2008).

Peters and Bagshaw (2014) believe that the control mechanisms and governance structure of a corporate unit influences the firm's ability to react positively to both external and internal factors and thus having an effect on performance. Several empirical studies have shown that the link between firm performance and corporate governance. Bebchuk, Cohen and Ferrell (2009) opined that firms that are well governed have a higher organisation performance.

Gompers, Ishii and Metrick (2003) study revealed that organisations with poor corporate governance quality have low stock returns than those with a governance quality that is high. The financial devastation experience of most corporations in United States, South East Asia and Europe has been explained on the failure of corporate governance (Peters & Bagshaw, 2014). Eyenubo (2013) explains financial performance as the achieving pre-defined targets, objectives and goals within a specified time period.

There are several corporate governance mechanisms that are implemented in the corporate world. Corporate governance mechanisms relate to instruments, techniques and tools through which accountability is achieved; it is the means through which shareholders shape and monitor behaviour to align with set objectives and goals. Adekoya (2012) sees mechanism of corporate governance as the systems and processes through which a nations' corporate governance codes and firm laws are enforced (p. 40). These mechanisms of corporate governance include board composition, board equity holding, board size, and more recently has included board gender diversity.

In regard to board size, the public debate on board structure has been from pressure to have smaller board sizes. Eyenubo (2013) opined that although larger board sizes allow key board functions, there comes a time when such boards suffer from

communication and coordination problems negatively affecting the effectiveness and overall affects organisation performance negatively (Eyenubo, 2013).

The idea of directors' equity ownership has been suggested as a potential beneficial way of regulating board behaviour. Zubadiah, Nurmala and Kamaruzaman (2009) argued that when members of the board have a share in the organisation, they develop shareholder-like tendencies and are less likely to participate in behaviour that may be detrimental to shareholders. This means that managerial ownership in the firm helps the board align the interests of managers and shareholders since the firm's performance increases and the managers also benefit through their equity ownership in the firm (Jensen & Meckling, 1976).

The issue of gender diversity is one that is lately mentioned in corporate governance circles was cited by Carter, Simkins and Simpson (2003) is that the issue that is facing shareholders, directors and managers today is the conventional corporate environment. This issue has also been discussed in the public limelight via advocacy groups, public policies from institutional investors and media. Most of the empirical research on this topic has been largely focused to western countries (Habbash, 2010; Kang, Cheng & Gray, 2007).

The Rwandan banking sector comprises of eleven commercial banks and five specialized banks made up of Microfinance Institutions (MFIs), a development bank, and a co-operative bank. Banking operations in Rwanda began in the year 1960. The Banque Commerciale du Rwanda (BCR) and Bank of Kigali made up the earliest banks in the country (Raissa, 2014). The banking penetration in the country is quite low, the total banking sector assets to GDP standing at 28% in local currency terms, and representing a massive growth opportunity.

The Bank of Kigali is the largest bank in the country, dominating all other banks. The commercial banks in Rwanda in terms of Return on Equity are the lowest in all of East Africa. The current most profitable bank in the country is I&M Bank Rwanda (Ibid.). Commercial banks are among the major institutions that have a significant role to maintain corporate governance in Rwanda. Commercial banks have strict rules for

borrowers that include list of directors, corporate structures, audited financial reports, and subjecting borrowers to much scrutiny (Mwika, 2012).

Commercial banks in Rwanda play an important role in the economic development of the country. One way to attain efficiency and effectiveness in the banking sector in Rwanda is through good corporate governance practices. Sound corporate governance practices will also bolster confidence in the capital market and the confidence of the Rwandan society in general, in the way in which business functions (Private Sector Federation of Rwanda, 2009).

1.2 Statement of the Problem

The financial sector is becoming the most vibrant sector in the East African Community. This has been propelled by innovation in financial services, blooming emerging markets, liberalization of economies and inclusion in the global financial systems (Rwangonga, 2017). Despite these developments there are cases of malpractice, misguided leadership and mismanagement of commercial banks in the region and this has been attributed to corporate governance. According to Kahiyura (2013) there have been several prevalent scandals in the financial sector. Most of the financial firms were declared insolvent around or before 2005 owing to poor corporate governance. The most recognizable ones were the Banque Continentale Africaine (BACAR) and The Bank of Commerce, Development and Industry (BCDI) and

There are several studies that have been conducted on corporate governance and its impact on financial performance in Rwanda. Raissa (2014) conducted a study on corporate governance on financial performance of banks in Rwanda. The study investigated the influence of board size, board composition, board sub-committees and board meetings on financial performance.

Gatsimbanyi (2015) conducted a study on Corporate Governance and Financial Performance of Commercial Banks in Rwanda. The study examined the influence of only ownership structure on performance of banks. Xavier, Shukla, Oduor and Mbabazize (2015) examined the effect of corporate governance on the financial performance of commercial banking industry in Rwanda. The study measured the

effect of board size, Chief Executive Officer (CEO) duality, and board composition and institution ownership on financial performance and found no effect of these variables on performance of commercial banks. The financial sector of Rwanda is blooming and still growing and there is need to identify the right mix of corporate governance mechanisms to catapult Rwanda's financial sector role in the region.

These studies however did not measure the influence of board size, director equity interest and board gender diversity on financial performance of commercial banks listed in Rwanda Stock Exchange (RSE) a gap that this study intends to fill. The study proposes to look at how board size, director equity interest and gender board diversity affects commercial banks performance in Rwanda.

1.3 Purpose of the Study

The purpose of the study was to analyse the effect of corporate governance on financial performance of listed commercial banks in Rwanda.

1.4 Research Questions

The study aimed at answering the following research questions:

1.4.1 To what extent does board size affect listed commercial banks' performance in Rwanda?

1.4.2 How does directors' equity interest affect listed commercial banks' performance in Rwanda?

1.4.3 To find out how board gender diversity affects commercial banks' performance in Rwanda?

1.5 Significance of the Study

1.5.1 Policy Makers

The study will be of importance to policy makers in the commercial banking sector in Rwanda as it will make recommendations to policy makers on the regulatory framework for the financial sector relating to corporate governance. The findings of the study will also be of importance to the National Bank of Rwanda (NBR) as the regulator of financial services in Rwanda on the influence of corporate governance on financial performance of commercial banks. This information will be useful for NBR to play its role as the regulator of the sector.

1.5.2 Commercial Banks Top Management

The study will be of importance to the top leadership of commercial banks in Rwanda. The information from the study will lead to discussions on the role of corporate governance and its effect on their performance. This information can be used to guide leadership in selection and considerations to make in selection of a board of directors.

1.5.3 Shareholders and Investors

The study hopes to be of importance to shareholders and investors of the listed commercial banks as information will be insightful on some of the areas where the corporate governance can be altered to improve performance of the commercial banks thereby raising value of their investments.

1.5.4 Academicians/ Researchers

The study is significant to academics as it will contribute to the body of knowledge on corporate governance and financial performance of commercial banks. The study will also provide a source of reference for future researchers while also suggesting areas of further study for future research.

1.6 Scope of the Study

The study was limited to the influence of corporate governance mechanisms of board size, board gender diversity and directors' equity interest on financial performance of listed commercial banks in Rwanda. The study focused on the three (3) commercial banks listed in the Rwandan Stock Exchange (RSE). The research covered the secondary data from the year 2010 to 2016.

1.7 Definitions of Terms

1.7.1 Corporate Governance

This refers to the link between top management, board of directors and shareholders in an effort to determine the performance and direction of the firm (Kim & Rasiah, 2010). In this study, corporate governance refers to the mechanisms, structure and process of top management in a commercial bank.

1.7.2 Board Size

Board size is the number of directors in a board (Eyenubo, 2013). In this study, board size will refer to the number of members in a commercial bank board of directors.

1.7.3 Directors' Equity Interest

This refers to the board of director members' ownership of equity in a company (Uwuigbe, 2011). In this study, directors' equity interest will refer to the amount of equity that a director has in a commercial bank.

1.7.4 Board Gender Diversity

This refers to the presence and inclusion of women directors in boards (Ekadah & Mboya, 2012). In this research, board gender diversity will refer to the presence or non-presence of a female member of the board of directors.

1.7.5 Financial Performance

Financial performance can be defined in terms of maximizing the shareholder's wealth and is defined by the following measures such as profitability, market value, and return to shareholders (Borba, 2005). In this study, financial performance refers to Return on Equity (ROE) and Return on Assets (ROA) of listed commercial banks in RSE.

1.8 Summary

This chapter presented the background of the study elaborating the concept and importance of corporate governance in the modern firm. The study also gives a problem statement and research questions that the study aims to answer. The chapter also provides the significance of the research, scope of the study and defines the significant terms as they are used in this research. The second chapter of the study presented the literature review of the study. Chapter three of the study presented the research methods and techniques to answer the study research questions. The results and findings of the study are presented in chapter four. Chapter five of the study presented the summary of the findings, discussion, conclusions and study recommendations presented in line with the study research questions.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review of the study. The chapter is presented in three sections. These are on the relationship between board size, board equity interest and board gender diversity.

2.2 Board Size on Commercial Bank Performance

The 1980s saw more organized efforts of studying bank performance (Olweny & Shipho, 2011) with the use of Efficiency Structures (ES) and Market Power (MP) theories (Athanasoglou, Sophocles & Matthaïos, 2005). The ES theory argues that scale efficiency and improved managerial leads to a high concentration and then leads to high profitability. On the other hand, the MP theory states that more external market forces lead to profit. Moreover, the assumption suggests that only organisations with well differentiated product portfolio and large market share can earn monopolistic profit and win over their competitors.

2.2.1 Commercial Bank Performance

According To Olweny and Shipho (2011) the balanced portfolio theory has also been used in the study of bank performance. It argues that the portfolio composition of a financial institution, the return to its shareholders and its profit is the result of the management decisions and overall policy decisions. This theories show that it can be concluded that bank performance was influenced by both external and internal determinants. These internal factors include management efficiency, capital, bank size and risk management capacity (Athanasoglou et al., 2005). These researchers argue that the major external determinants that influence bank performance are macroeconomic variables including economic growth, inflation, interest rate, and other determinants like ownership.

The most popular metric for bank performance used by researchers (Arouri, Hossain & Muttakin, 2011; Grove, Patelli, Victoravich & Xu, 2011; Sufian, 2010) is Return on Assets (ROA). The ROA is often used as a metric of accounting performance or organisations. This shows how efficiently and effectively an organisation utilizes its

resources to get a good return. The second performance measure that is widely used in measuring bank performance is Tobin's Q which explains the link between current cost of replacing assets to the market value of the organizations' assets including share and stocks.

Ongore and Kuso (2013) confirmed that the overall aim of commercial banks is making profits and techniques, strategies and activities adopted are to achieve this main objective. In measuring commercial banks' profitability, there are different ratios that are used include Net Interest Margin (NIM), Return on Assets (ROA), and Return on Equity (ROE) are the most significant (Murthy & Sree, 2003; Alexandru, Genu & Romanescu, 2008).

Return on Equity (ROE) is a ratio formula that explains how much profit a firm has earned in comparison to the shareholder equity invested or in the balance sheet. The return on equity is the shareholders' interest in what they get in return. An organisation that has high ROE is more likely to have the ability to generate cash from internal sources. Hence, the higher the ROE means that the firm performs better in terms of generating profit.

Khrawish (2011) went further to explain that ROE is a ratio of the net income after taxation which is divided by equity capital. ROE represents the rate of return of earnings of the funds invested in the bank by its shareholders. The ROE shows how the management of an institution is effectively using the shareholders' funds. Hence, it can be seen that the better the ROE of a bank the more the management effectiveness in utilization of capital from shareholders.

Another ratio that has been used to show the profitability of bank is the Return on Assets (ROA). The ROA is a ration of income against its total assets (Khrawish, 2011). The ROA measure the bank management ability to generate income by utilizing the assets of the organisation at their disposal. The ROA indicates how effective use of the company's resources can be used to generate the income. The ROA further shows the management's efficiency of a firm in generation of net income from all resources of the company (Ibid). The higher the ROA means that the firm is efficient in using their resource.

The Net Interest Margin (NIM) is a measurement of the gap between net interest income that is generated by commercial banks and the amount of interests paid to their lenders (deposits), relative to the amount of their (interest earning) assets. The NIM is often expressed as a percentile of the earnings of financial organisations on loans in a period and other assets minus the interests paid on borrowed monies divided against the average amount of the assets where it earned income during that period (the average earning assets).

The Net Interest Margin is referred to as the net interest income which is divided against the total earnings of the assets of a firm (Gul, Faiza & Khalid, 2011). The NIM measures the space between the net interest incomes of the organisation receives on securities and loans and the costs of interest of borrowed funds. The NIM gives a reflection of the costs of bank intermediation services and the bank's efficiency. A high NIM means that there are higher bank's profits and the stability of the bank. Hence, the NIM is one of the important measures of profitability of the bank. However, a high NIM could also show the riskier lending practices linked with substantial loan loss provisions (Khravish, 2011).

The boards of directors of companies have a big responsibility in ensuring that the companies they are in charge of are well managed. It is therefore imperative that the relationship between the board size and bank performance be understood and how it affects corporate governance in the banks. There is much public opinion on the size of a board in company, with majority saying that the board size should be small. The following is a literature review on the study done on the relationship between board size and bank performance – which may be applied to commercial banks in Rwanda (Kahiyura, 2013).

2.2.2 Empirical literature

According to Isik and Ince (2016), indicate that there is a wide recognition that the size of the board is a significant internal mechanism for corporate governance and thus has a significant role in the organisation management. Due to this reason, the impact of the size of the board on organisational financial performance is one of the

most discussed issues in corporate governance. The agency theory on the other hand argues that the superior organisational performance can be linked to small board size.

In comparison to larger boards, small boards are less likely to experience difficulties in communicating and coordinating (Ruigrok, Peck & Keller, 2006). Moreover, a small board is more likely to be effective in monitoring the activities of management because it is not easily swayed by the CEO and hence the small board may have an effect on organisation financial performance. This argument lays emphasis on the significance of small boards, whereas the dependent view is in favour for larger sized boards. The hypothesis of the resource dependency theory argues that large board sizes may have an advantage in reducing the firm dependency on external resources owing to the fact that large boards can give greater opportunities for increase environmental links than small boards (Ruigrok et al., 2006).

The two most important roles of the board of directors are monitoring and advising in the firm (Raheja, 2005). Advisory role involves means providing expert advice the manager of the firm and also having access to important information (Fama & Jensen, 1983). There are members of the board who may be either external or internal and both of them are important since they both bring expertise and good decision making in the firm. Dalton and Dalton (2005) note that the larger the board size, the better the performance of the firm; this is due to the amount of expertise and valuable information that the size of the board has in its hand.

The second function of the board is monitoring and is quite important since it involves the monitoring of the managers in the firm to ensure that they follow and adhere to maximizing shareholders' interests. In this case, it is also to have board members who are outsiders since they provide an objective and independent view that is divergent from those of the insider board of directors, who are not independent from the manager in a firm (Raheja, 2005). From the above, we can note that the increased number of board size is vital for the performance of the bank while at the same time, the increased number of non-executive directors of the board is vital to the performance of the bank performance than the executive directors of the firm.

Hermalin and Weisbach (2003) study reported that the size of the board has negative link with an organisations financial performance and the decision-making quality. Mak and Kusnadi (2005) revealed that the size of the board has a negative link with organisation value in Malaysia and Singapore. Guest (2009) study on a large sample of firms listed in the LSE found that there was a strong negative link of board size on an organisation profitability (using Tobin Qs and Stock Returns) while controlling for the differences in endogeneity. Isik and Ince (2016) research on board composition, board size and performance in Turkish banks used a panel fixed regression analysis that showed that size of the board had a significant and positive impact on financial performance.

O'Connell and Cramer (2010) found a negative link between size of the board and the performance of an organisation measured by Tobins Q and ROA among firms listed in the Irish Stock Market. In a sample of service organisations listed in the Toronto Stock Exchange. Gill and Mathur (2011) uncovered a negative relationship between organisation profitability and board size. Nguyen, Locke and Redding (2014) conducted an investigation of a sample of 257 non –financial firms listed yin the Singapore Exchange from 2008-2011 and concluded that the size of the board has a negative and significant effect on firm performance. In contrast, Linck, Netter and Yang (2008), Coles, Daniel and Naveen (2008), Boone et al. (2008), Lehn, Sukesh and Mengxin (2009) and concluded that some organisation gain advantage from having a large size of the board of directors.

The main problem incurred when examining the impact of the board size on a firm's performance is endogeneity (Wintoki, 2007). There are cases in which the firm's performance as well as the board size may be determined by unknown variables – which results in unobserved heterogeneity. A firm's board size is determined by the firm's performance in the present as well as the past performance, which results in dynamic endogeneity and simultaneous endogeneity. The problem with this is that it still results in an inverse relationship between the organisation performance and size of the board, when a firm asset fixed model is employed. (Ibid.) argues that the best way to eliminate these affects is through employment of generalized method of

Moments (GMM) estimator which eliminates endogeneity. This will result in a positive relationship between a firm's performance and the board size.

The effect of size of the board on performance can be expected to be varied not just to organisation specific characteristics but also in countries. This is because of the policies in different countries which recommend different size of the board. The expected issues of large boards depend on the particular effectiveness and functions of boards and this differs according to the legal and institutional environment (Guest, 2009).

The board size of a firm is affected by several variables within the firm, including: financial leverage, the age of the firm, the industry of the firm, and other variables. Research has provided evidence firm-specific factors have a strong influence on the size of the board and which all aim at maximizing the firm's value. The impact of the board size is therefore relevant in the financial performance although this is dependent on the type of firm (Coles et al., 2008).

The role of the board of directors is to decide on important issues, to manage the management's behaviour in favour for the owner's welfare, hiring of administrative officers and oversee that firms stick to the rules while taking responsibility for supervising and managing (Akinyomi, 2013). The board uses its powers responsibilities and powers in the structure of main contracts, legislation, policies and regulations and represents the firm in line with the authority given to it at shareholders' annual meeting (Dogan & Yildiz, 2013). The economic value of a firm can further be improved as the board performs its functions of supervising the operations of administrative officers and selecting the staff of an organisation, monitoring and appointing the activities of an autonomous auditor to increase the value of the firm (Uwuike, 2011).

An increase in board membership leads to a possibility for different opinions and views which lead to confusion among the membership of the board (Dar, Naseem, Rehman & Niazi, 2011; Adegbeni, Donald & Ismail, 2012). Earlier studies on board sizes revealed that firms section of board sizes is to create a balance between the requirements for timely advice and the financial results of having to maintain a large

size of the board (Akinyomi, 2013). The board performs its mandate in the form that it should ensure and give a long term and earning stability of the company shareholders while aiming to maximize market facilities by the firms (Dogan & Yildiz, 2013). The board includes external and internal directors (Akinyomi, 2013); whose functions include organisational administrators, CEOs regulations in an effort to improve the economic value of the firm (Uwuigbe, 2011).

Topal and Dogan (2014) conducted a study on the impact of board size on the financial performance of manufacturing firms. The study used panel data for ten years belonging to 136 manufacturing firms. The findings of the analysis indicated that there was a positive link between ROA, Z Altamn score and size of the board. The study further indicated that board size did not have an effect on the Tobin Qs and ROE. Ayorinde, Toyin and Leye (2012) studies the impact of corporate governance on financial performance of commercial banks indicated that there was a strong and negative correlation with ROE and size of the board. This findings suggests that a large board size did not have a positive link with the financial performance of commercial banks in Nigeria.

In Ghana, Adusei (2010) found that the size of the board has an impact on bank performance. The study argued that the smaller board sizes had positive impact on the performance of the organisation where ROE was used as a performance measure. In Europe, Staikouras et al. (2007) found that larger board sizes can affect bank performance. This suggests that the smaller the board size the higher the bank performance. Despite these findings, there are others that have found no relationship between organisation performance and board size (Adams & Mehran, 2005; Belkhir, 2009). In the United States, Belkhir (2009) conducted a study among 174 savings and bank institutions and did not find any evidence of a positive link between performance and size of the board where Tobin's Q was used to measure performance.

In their study among 66 banks from 1996-2003 in OECD countries, Alonso and Gonzalez (2006) found that there was an inverted association between the performance of banks (Tobin's Q, the annual market return of a bank shareholder,

ROA) and size of the board. These findings also showed a positive link between performance and non-executive directors.

Busta (2007) study found that there was a significant relationship between ROA and board composition. This result showed that the size of the board had a positive effect but this was insignificant. The data was collected from 125 commercial banks which indicated that there was a positive association between ROI and market-to-book ratio was negatively associated with ROA but this was insignificant. Zulkafli and Samad (2007) study found that there was no significant link between performance and board size among 107 banks in 9 Asian markets in 2004. The performance measures used were ROA and Tobin's Q and board composition and size.

2.3 Directors' Equity Interest on Commercial Bank Performance

This dimension of corporate governance has also been referred to as insider ownership. The proposition of insider ownership refers to the interest in shareholding from the board of directors in the company. High levels of inside ownership can bring together external shareholders and managers' interest which would reduce agency problems. Eng and Mak (2003) concluded that inside ownership had a positive link with organisation performance.

A significant determinant that can reduce shareholder-manager conflicts is stock ownership among the members of the board both non-executive and executive. This means to the extent that members of the board have a share in part of the organisation and develop interests like shareholders and are less likely to behave in a way that may harm the interests of the shareholders (Kapopoulos and Lazaretou, 2007).

In other words, when managers have ownership in the firm helps in aligning the managers and shareholders' interests since and the firm performance improves, the managers gain advantage through their equity ownership in the organisation (Jensen & Meckling, 1976). Thus, managers' ownership is proposed to be inversely related to agency conflicts between shareholders, and managers and is positively related to organisation performance.

2.3.1 Directors' Equity Interest

There are several studies that have been conducted on the influence of director equity on firm performance but these have been inconclusive. There is a group of studies that find a significant and positive link between firm performance and management ownership. Krivogorsky (2006), and Kapopoulos and Lazaretou (2007) found a positive link between managerial share ownership and organisation performance for Greek and European public organisations.

Mangena and Tauringana (2008) concluded that directors' share ownership is positively linked to financial performance of firms listed in the ZSE from 2002-2004. Bhagat and Bolton (2008) also found a positive and significant link between organisation performance and directors' equity ownership.

Researchers have also shown evidence of a negative link between organisation performance and directors' share ownership. Ho and Williams (2003) revealed a negative link between intellectual capital performance and physical and directors' shareholdings among 84 listed firms in South Africa. In Malaysia, Haniffa and Hudaib (2006) showed supporting evidence to the relationship between organisation performance and directors' share ownership was negative.

2.3.2 Empirical Literature

Olayinka (2010) and Sanda et al. (2010) also found a negative and significant relationship between organisation performance and directors' share ownership. Another strand of literature finds no evidence of a link between firm performance and directors' equity. Demsetz and Lehn (2001) study of 511 organisations in the United States found no link between insider shareholding and accounting returns on organisation performance.

Similarly, El Mehdi (2007) showed evidence which confirmed that managerial ownership in the firm has no direct effect on the financial performance of the organisation. The study was conducted among 24 listed organisation in Tunisia and 250 United Kingdom listed firms. Bhabra (2007) study revealed that there was no linear relationship between organisation performance and directors' equity interest.

In Nigeria, Uwuigbe (2011) examined the link between financial performance and corporate governance of commercial banks and used secondary data in finding the link between financial performance and corporate governance of 21 listed banks in the NSE. The study established a positive and significant correlation between the directors' equity ownership and the performance of the commercial banks.

Ayorinde, Toyin and Leye (2012) study on the performance and corporate governance in the banking sector of Nigeria. The findings found a positive correlation between corporate governance and directors' equity interest. The study suggests that persons who are part of the bank's management and also have equity ownership are compelled to business interest to manage them efficiently and also leads to improvement in performance.

Okwuchukwu et al. (2015) conducted a study on corporate governance influence banking sector performance in Nigeria. The study showed that directors' shareholding has a positive coefficient on return on equity from the regression result. This implies that an increase in the directors' shareholding will translate to better banks' performance.

Ayorinde, Toyin and Leye (2012) focused their research on performance and corporate governance of the banking sector in Nigeria. The investigation revealed that there was a correlation between director equity ownership and performance and this was positive. This indicated persons who comprise of the management of commercial banks where they also have equity interest and are compelled to have an interest in the better performance of the banks.

Kiruri (2013) study on the effects of ownership structure on bank profitability in Kenya revealed that individual domestic ownership of commercial banks had a positive and significant effect on the performance of commercial banks. Sanda et al. (2008) study showed that there exists a positive correlation between directors' share ownership and firm performance. (Ibid.) argue that giving the board of directors an opportunity to have a stake in the organisation leads to a motivation of improving performance metrics and to also have the interests of the shareholders at heart.

Isaac and Nkemdilim (2016) research on performance and the corporate governance of Nigerian banks and established that a negative relationship existed between composition of the board, size of the board and the financial performance of banks. The research also found a significant and positive association between commercial bank performance and directors' equity interest and concluded that the directors' equity interest in improving the performance of banks.

Adigwe, Nnwana and Issac (2016) study on effect of corporate governance mechanisms on performance of banks in Nigeria found that directors' equity interest have a positive and significant effect on financial performance of banks. The study concluded that having part ownership in a bank forces the directors to act and make decision in the interest of the shareholders and themselves.

Despite the positive effect of director equity interest on financial performance of banks. There is evidence of studies that have found no significant effect of director equity on financial performance of firms. Earlier research by Morck, Shleifer and Vishny (1988) the high levels of director equity ownership may reduce in the financial performance since the management with higher ownership equity have so much power and then may become less interested in the wellbeing of the shareholders.

This issue arises when managers with high equity and have important rights for voting and they are involved in making judgements on running the organisation. This can lead to a situation where they can make decisions that meet their interests rather than those of the stakeholders (Zubaidah, Nurmala & Kamaruzaman, 2009). In contrast, Lin (2007) and Akinyomi and Olutoye (2015) revealed that there was no positive association between the equity held by directors' and organisation performance.

Zubaidah et al. (2009) study Board Structure and Corporate Performance in Malaysia found that revealed that there was not enough evidence to indicate that there was a direct link between directors' equity ownership in the firm and the value added efficiency of the organization's total resources. The findings indicated that board of directors was not motivated by owning interests in the organisation.

Fogelberg and Griffith (2000) examined the link between organisation performance and management ownership from a sample of commercial bank holding companies. The study found a significant relationship between management ownership and firm economic value but this does not influence an increase or decrease.

In Tunisia, Mnasri (2015) conducted a study on board structure, ownership structure and performance in the Tunisian banking industry. The study found that the coefficient on management stock ownership had a direct link with performance using ROA only. In Pakistan, Chughtai and Tahir (2015) conducted research on the effects of corporate governance on organization performance in the banking sector also found that there was a positive relationship found between director equity interest and bank performance.

2.4 Board Gender Diversity on Commercial Bank Performance

The Organisation of Economic Development (OECD) principles of corporate governance, the mandate of the board directors is to ensure that there is integrity in a corporates' financial reporting and accounting systems. This includes the appropriate systems of control are in place and the independent audit. Specifically, these are systems of operational and financial control, risk management and compliance with relevant standards and the law. In efforts to fulfil their role and mandate, it is important for the board of directors to have gender diversity (OECD, 2004).

According to Boyle and Jane (2011), gender diversity is part and parcel of board diversity. The role of boards requires them to have the right mix to provide different perspectives. A board that has more women representation possesses additional perspectives and skills that may not be present in an all-male board. Board diversity enhances more effective problem-solving and monitoring.

As a major form of internal control mechanism in corporate firms, the board of directors is responsible for supervising, appointing and remunerating the top leadership in the organisation and also mandated with strategy formulation (Campbell & Minguéz Vera, 2010). There are many studies that have examined the effect of the composition of boards on the performance of organisations mostly focusing on the

proportion of non-independent directors, board meetings, shares held by directors, tenure of boards and board size (Vafeas, 2000).

2.4.1 Role of Board Gender Diversity

The areas under investigation have often been learning styles, values, education, expertise, age and managerial background. In the field of corporate governance, the concept of board gender diversity refers to presence and inclusion of women directors in boards. The study adopts this definition of board gender diversity and its focus is on commercial banks because this is an area not explored by previous studies in a developing country context (Tanna, Pasiouras, & Nnadi, 2008).

Carter, Simkins and Simpson (2003) argued that one of the governance issues that are being discussed among managers, directors and shareholders in modern corporate environment is gender. The issues of gender in corporate organisation have been brought to discussion to the public through advocacy groups, media, investors, public policies. Despite the pressure on modern firms, the studies that have focused on the effect of board gender diversity on organisation performance have had varying results (Randoy, Thomsen & Oxelheim, 2006). The relationship between organisation performance and board gender diversity has been inconclusive in non-financial industry studies.

2.4.2 Empirical Literature

According to Ekadah and Mboya (2012), board gender diversity means the presence or non-inclusion of women directors in boards. Today's organisations are discussing and contemplating board gender diversity as a source of value in corporate governance and organization strategy. It has been argued that gender diversity in boards promotes an improved comprehension of the marketplace where an organisation operates. Since the marketplace is diverse, gender diversity comes in handy for organisations to penetrate these markets (Marinova, Plantenga, & Remery, 2010).

Several researchers have proposed that diversity in the board in terms of gender contributes to more problem solving as it provides an opportunity for different alternatives are often evaluated in regard to pros and cons. Thus, a board that

incorporates board gender diversity is more likely to have a positive effect on its performance.

A research conducted by Erhardt, Werbel, & Shrader (2003) revealed that organisations with minorities and women in their boards had a direct impact on their performance. This study was conducted over a period from 1993-1998 and performance of the organisation was measured by ROA and ROI. The study included large firms in all sectors in the United States and although they found positive results but it was hard to attribute these findings to women directors owing to inclusion of minorities in the sample. The minority also included male directors who were from minority groups or tribes.

This finding has also been supported by other studies, for example, Minguez-Vera & Campbell (2008) in Spain found that there was a negative impact of gender diverse boards on firm performance where firm performance was measured by Tobins Q. these studies show evidence of the inconclusiveness of the effect of gender diversity. Bøhren and Strøm (2007) found a negative link between firm performance and board gender among Norwegian organisations. Gulamhussen & Santa (2010) found a positive link between board diversity and banks' performance among OECD nations' banking sector.

Randoy et al. (2006) study in Sweden, Denmark and Norway found a board diversity in corporate boards does not have any impact on organisation performance. The study concluded that gender diversity did not have any impact on performance of these organisations where firm performance was measured by ROE in a region that saw policies to push for 40 % female representation in board seats.

In the United States, Adams and Ferreira (2009) investigated the link between board diversity and organisation financial performance and they established negative and positive link of financial performance and board gender diversity. The positive effect of a gender diverse board had on financial performance was measured by takeover defenses, weak governance while there was a negative effect on firms with strong governance and also measured in takeover defenses. The study concluded that there was no reason to encourage gender quota legislation

In Hong Kong, Fan (2012) did a research on the link between board diversity and organisation financial performance among firms listed in the Hong Kong Stock Exchange. The study examined both nationality and gender of boards and found evidence to indicate that a board that is diverse is more likely to have better organisation independence and organisation performance.

Reguera-Alvarado, de Fuentes and Laffarga (2015) study among 9 organisations listed in the Madrid Stock Exchange revealed that female improved the financial performance of the organisation owing to skills, views and new ideas. The authors argued that female on boards led to attraction of human talent and social visibility.

In Denmark, Rose (2007) concluded that board gender diversity did not have an impact on organisation performance. This study focused on companies listed in the stock exchange and used Tobin Qs as an indicator of performance which was different from Randoy et al. (2006) who used return on assets and only focused on one nation.

Contrary to the research of Rose, (2007) and Randoy et al. (2006), Smith, Smith and Verner (2006) found that gender diversity in the board had a positive impact on performance of organisation in Denmark. The sample of this study was from 1993-2001 among 2500 Danish firms. This study used performance indicators as net turnover, gross added values and ordinary results to net result and net asset after tax to net assets which can be referred to as weak indicators of performance. These studies focused on non-financial organisations.

Other researches that have found no link between board gender diversity and organisation performance comprise Kochan et al. (2003) study among US organisations. Bøhren and Strøm (2010) studied gender diversity effect on financial performance in Norway where there is already policy that promotes boardroom gender quotas. The researcher found a negative relationship in the performance-diversity relationship when measured by firm value.

Based on these findings, the authors argued that politicians should encourage less diversity in gender. The study also revealed that directors who were employees contributed to a negative effect on creation of firm value. Mateos de Cabo, Gimeno

and Nieto (2011) conducted a study among 612 European banks and found no clear relationship between performance and board gender diversity but found patterns such as women sat on boards in low risk banks.

In a study on the effect of board gender diversity on the financial performance of organisations in India among 148 public listed organisations, Sanan (2016) analysed information from firms in different sectors for a period of five years 2008-2013. The results showed that some of the organisations that had no independent women directors were significantly lower over the five years which was attributed to external pressure from stakeholders. The findings also revealed that number of organisation with independent women directors over the research period.

Manini and Abdillahi (2015) conducted research on the effect of board size, board gender diversity and audit committee as mechanisms of corporate governance on profitability of the financial sector in Kenya in 2014 and found that board gender diversity had no significant influence on the profitability of banks in Kenya.

2.5 Chapter Summary

This chapter presented the literature review of the study. The chapter was presented in sections aligned to the study research questions. These were board size and financial performance, directors' equity of interest and board gender diversity and financial performance. The literature included empirical studies of the study variables that would be useful in designing the research methodology in the next chapter.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter of the study justifies the research approaches and techniques chosen to answer the study research questions. The chapter is presented in sections that address the research design, population and sampling design, data collection, research procedures and data analysis methods.

3.2 Research Design

The study selected the descriptive research design as the blueprint for the research. According to Robson (2002), a descriptive research is a study that seeks to “present an accurate profile of events, persons or situations” (p. 59). The descriptive research design was preferred for this study as it sought to establish the effect of corporate governance on financial performance of listed commercial banks in Rwanda.

Research designs can be categorized into two approaches, the cross-sectional research and longitudinal research survey. A cross-sectional study investigates a specific problem at a defined period of time (Saunders et al., 2007). A study can also be longitudinal where a specific phenomenon is investigated at different periods of time (Malhotra & Birks, 2007). The researcher adopted the longitudinal study as it sought to analyse effect of corporate governance mechanisms (board size, directors’ equity interest, gender board diversity) on financial performance of commercial banks listed in the Rwandan Stock Exchange from the year 2010-2016.

3.3 Population and Sampling Design

3.3.1 Population

Cox (2010) defines target population as the complete group of units for which the research data are used to make conclusions. Hence, the target population refers to units for which the findings of a study are meant to generalize (Lavrakas, 2008). The target population for this study was the listed 3 commercial banks in the Rwandan Stock Exchange (RSE). These are Bank of Kigali, Kenya Commercial Bank (KCB) and Equity Bank of Kenya.

3.3.2 Sampling Design

3.3.2.1 Sampling Frame

A sampling frame is a list of all population units from which the sample of a study is drawn (Cooper & Schindler, 2006). There are 3 commercial banks that are listed in the Rwandan Stock Exchange and this was the sampling frame of the study.

3.3.2.2 Sampling Technique

The study adopted a purposive sampling technique. The purposive sampling technique was preferred because the researcher was interested in commercial banks listed in the RSE. Purposive sampling provides biased estimate and it is not statistically recognized. This technique can be used only for some specific purposes (Ajay & Micah, 2014).

3.3.2.3 Sample Size

The sample size for the study is the three (3) listed commercial banks in the Rwandan Stock Exchange. These are Bank of Kigali, Kenya Commercial Bank and Equity Bank. The observations that the research is interested in is board size, gender board diversity, director equity interest and financial performance (ROE).

Table 3.1: Sample Size

S/No.	Commercial Bank
1	Bank of Kigali
2	Kenya Commercial Bank
3	Equity Bank

Source: Rwanda Stock Exchange Ltd (RSE)

3.4 Data Collection

The study relied on secondary data to investigate the relationship between board size, board equity interest and board gender diversity and firm performance of selected banks in Rwanda. Secondary data refers to data which was collected for other purposes but is useful in the present study (Kothari, 2010). Secondary data was appropriate for the study as it is readily available and has been used to study corporate governance and financial performance of firms.

The study used data from annual financial statements reports that show the number of directors in order to measure the influence of board size on bank performance. The

Pearson correlation was used to measure the degree of association between predictors and response variables. Further analysis included regression analysis to measure the impact of board size on financial performance of the listed banks. This approach has been used in previous studies (Uwuigbe & Fakile, 2012). The operating performance data was collected from financial statements, while corporate governance mechanisms were collected from annual reports available on the banks' websites.

The variable of director's equity interest was measured by members of the board of directors having equity in the listed commercial banks. Directors' equity interest will be measured by using Zainal-Abidin et al. (2009) and Sanda et al. (2010) where the proportion to outstanding shares and the net shares directors' own

There are different ways in which gender diversity has been measured in past studies. In order to measure the variable of board gender diversity, Edakah and Mboya (2012) measured board gender diversity by indicating the inclusion of women directors taking one if there is at least a woman in the board and zero if there is not. This method had also been adopted by Shafique et al. (2014) to determine the influence of gender presence or exclusion in boards on firm performance.

The study used accounting-based performance indicators as dependent variables. In the literature, there are two different performance indicators that are used as indicators of the dependent variable of financial performance (Adusei, 2011; Bino & Tomar, 2012). These are Return on Equity (ROE) which is an accounting-based financial performance indicator. In this study, ROE and ROA were adopted as measures of financial performance.

3.5 Research Procedures

The research process began with collection of secondary data from financial data reports of the banks, banks websites and RSE website and National Bank of Rwanda website. The study used secondary data that was available in the public domain. The data was from financial and accounting reports of the target population of the research. The researcher gathered these information from the Rwandan Stock Exchange (RSE) on financial performance indicators of the three commercial banks listed in the exchange.

The researcher further gathered data from annual reports from the Equity Bank-Rwanda, Kenya Commercial Bank-Rwanda and Bank of Kigali. The information required for the study was readily available from their websites. However, additional information may be sought. For this reason, the researcher sought a letter of authorization from United States International University-Kenya to collect data. This letter was useful to seek additional information from the banks.

3.6 Data Analysis Methods

Data analysis refers to the process of making sense from raw data collected during the course of the study. The data for the study was collected from secondary sources and was entered into Version 20 of the Statistical Package for Social Sciences (SPSS) = to conduct analysis. In data analysis, the type of statistical analysis can either be descriptive or inferential and depends on the objectives of a study.

The objective of the study was to establish the relationship between corporate governance structures on financial performance of commercial banks in Rwanda. First, descriptive statistics was used to summarize the data. Secondly, inferential statistics were favoured as the type of analysis. According to Creswell and Plano Clark (2007), this type of analysis allows researchers to compare the effect of independent variables by analyzing changes in the dependent variable.

The study used regression and correlation analysis to measure the strength of relationship and direction of the relationship between financial performance and corporate governance mechanisms (Gender diversity, board size, directors' equity ownership). A multiple regression analysis was then performed to establish the magnitude of the predictor variables on the response variable. The dependent variable was measured by ROE. The proposed regression model is:

$$Y_1 = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \dots \mu$$

Where:

Y= Return on Equity (ROE) & Return on Assets (ROA)

X₁ = Board Size

X₂ = Directors' Equity Interest

X₃ = Board Gender Diversity

$\beta_1, \beta_2, \beta_3$ = Partial regression coefficient attached to variables

μ = error term

3.7 Chapter Summary

This chapter presented the research approach, techniques and tools that the researcher will take to answer the question. The study adopts the cross-sectional survey approach, the target population was listed commercial banks in the RSE and the sampling technique used was census sampling. The study will use secondary data and will use regression and correlation analysis which will be presented in tables and researcher's interpretations.

CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter presents the study results and findings of the study. The chapters is presented in subsections of the study objectives and include influence of board size affect listed commercial banks' performance in Rwanda; directors' equity interest affect listed commercial banks' performance in Rwanda and board gender diversity affects commercial banks' performance in Rwanda.

4.2 Descriptive Statistics

The dependent variable for the study was financial performance of commercial banks listed in the RSE. The indicators for financial performance were Return on Equity (ROE) and Return on Assets (ROA) and are analysed and discussed in this subsection.

4.2.1 Financial Performance (ROE and ROA)

Figure 4.1 shows the analysis of the return on equity and return on assets shows that there was a gradual increase in ROE and ROA of the sampled banks from 2011 to 2014 but then the ROE and ROA drops between the 2014/2015 financial year and showed a flat trend to 2015/2016 financial year. This findings is attributed to the financial growth that the Rwandan economy has been experiencing. Rwanda's macroeconomic environment remains conducive for financial sector growth. The strong economic growth creates investment opportunities for banks, and increases the ability of households and companies to service their loans.

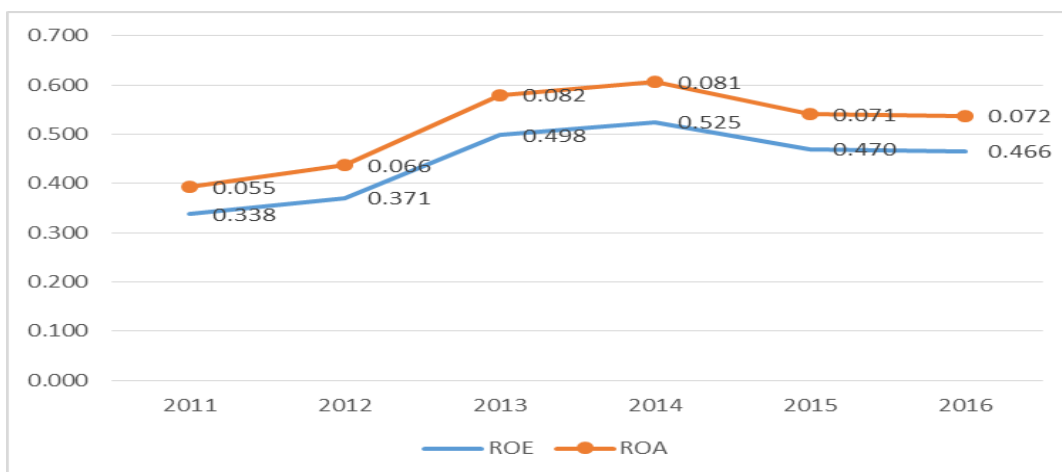


Figure 4.1: Analysis of ROE and ROA

4.2.2 Board Size

Figure 4.2 shows the analysis of board size among the sampled banks from 2010-2016. The results show that the average size of the board size among the sample was 10 through this period.

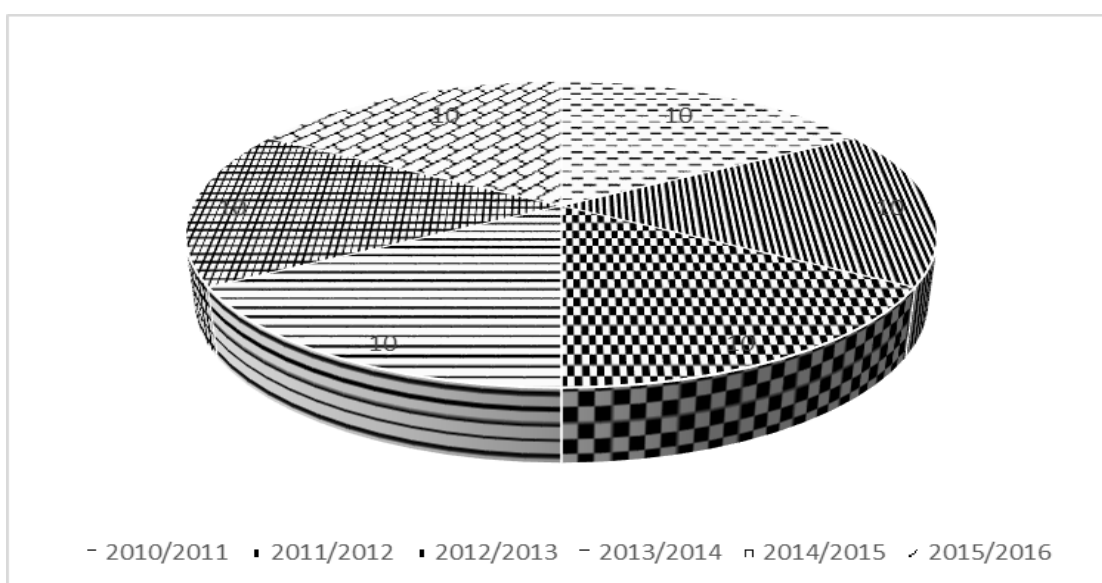


Figure 4.2: Analysis of Board Size

4.2.3 Directors' Equity Interest

Figure 4.3 depicts the directors' equity share among the sampled banks. The results indicate that the directors' equity ownership at the commercial banks stood at 0.2 from financial year 2010/2011 to 2014/2015 financial year and the equity ownership rose from 0.2 to 3.5 in 2015/2016 financial year.

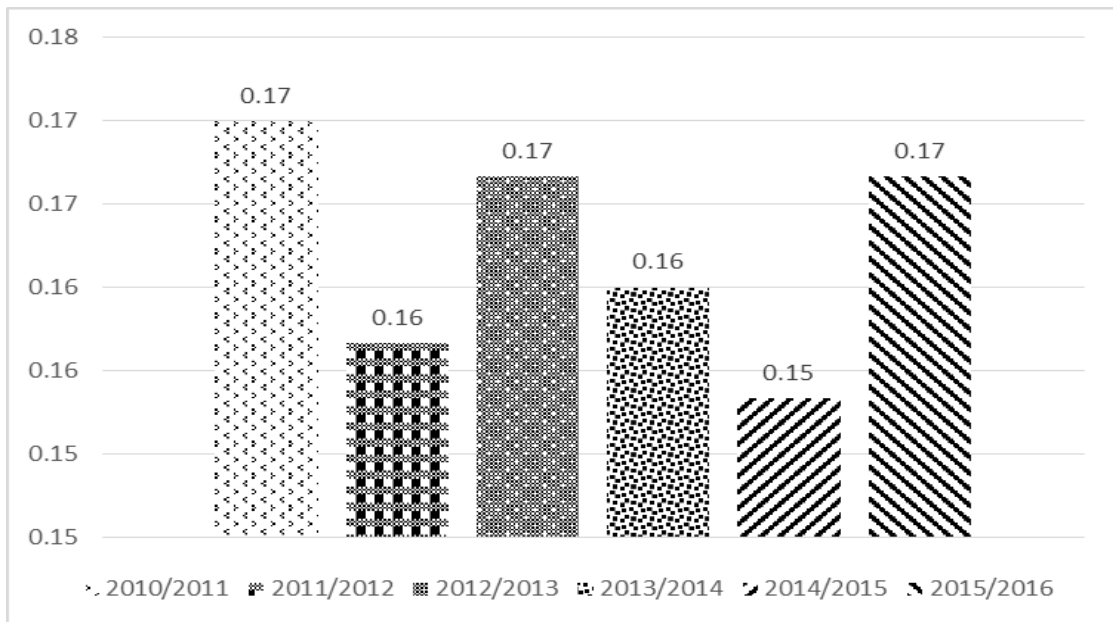


Figure 4.3: Analysis of Directors' Equity Interest

4.2.4 Board Gender Diversity

The study conducted an analysis of board gender diversity and the findings show that there was a larger representation of male directors in the boards as compared to women. Figure 4.4 shows that 65.0 % of board directors were male and 35.0 % was female in the commercial banks listed in the RSE from 2010-2016.

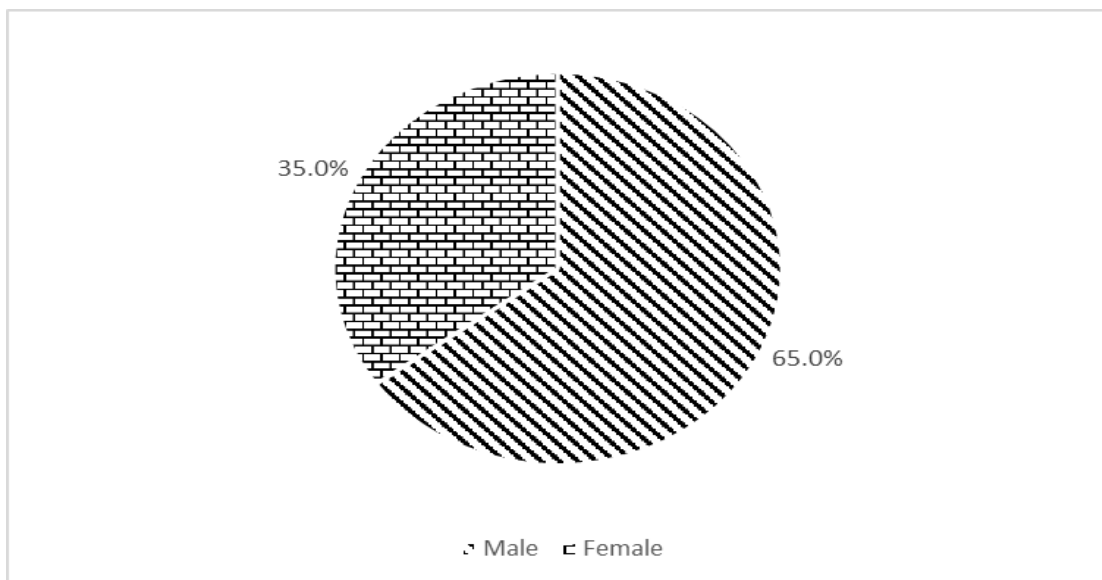


Figure 4.4: Analysis of Board Gender Diversity

4.3 Correlation and Regression Analysis

This section of the study presents the correlation and regression analysis of the independent and dependent variables. The section is presented in subsections which include board size and financial performance,

4.3.1 Board Size on Financial Performance

The first objective of the study was to establish the effect of board size on financial performance of commercial banks listed in the RSE. This subsection of the analysis presents the descriptive statistics of the independent variable (board size), the correlational analysis between board size and financial performance and regression analysis of the independent and dependent variables.

4.3.1.1 Correlation Analysis

The study conducted a correlation analysis between board size and the dependent variables (ROA and ROE). The findings (Table 4.1) show that there was a positive link between board size and ROA ($r = 0.0642$, $p = 0.004$) and this was significant. The findings further revealed that there was a positive relationship between board size and ROE but this was insignificant ($r = 0.326$, $p = 0.186$). This finding indicated that board size has an association with ROA that needs further investigation as compared to ROE.

Table 4.1: Board Size and Financial Performance Correlation

Variables	Board Size	ROA	ROE
Board Size	1		
	18		
ROA	.642(**)	1	
	.004		
	18	18	
ROE	.326	.457	1
	.186	.056	
	18	18	18

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

4.3.2 Directors' Equity Interest on Financial Performance

The second objective of the study was to measure the influence of directors equity ownership on financial performance of commercial banks listed in the RSE. This subsection of the analysis presents the descriptive statistics of the independent variable (directors' equity interest), the correlation analysis between financial performance and directors' equity interest.

4.3.2.1 Correlation Analysis

Table 4.2 shows the correlational analysis between directors' equity interest and financial performance (ROE and ROA). The findings indicate that there was relationship between director' equity interest and ROA ($r = 0.662, p = 0.003$) and this was significant. The findings further show that there was a weak relationship between director equity interest and ROE and this is insignificant ($r = -0.130, p = 0.606$). this finding further suggests that there is a positive relationship between director equity interest and ROA but not with ROE.

Table 4.2: Directors' Equity Interest and Financial Performance Correlation

	Director Equity Interest	ROA	ROE
Director Equity Interest	1		
	18		
ROA	.662(**)	1	
	.003		
	18	18	
ROE	-.130	.457	1
	.606	.056	
	18	18	18

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

4.3.3 Board Gender Diversity on Financial Performance

The third objective of the study was to measure the influence of board gender diversity on financial performance of commercial banks listed in the RSE. This subsection of the analysis presents the descriptive statistics of the independent

variable (board gender diversity), the correlational analysis between financial performance and board gender diversity.

4.3.3.1 Correlation Analysis

The correlation analysis shows a positive and statistically significant relationship between gender board diversity and ROA ($r = 0.084$, $p = 0.041$) but had a negative but insignificant relationship between board gender diversity and ROE ($r = -0.091$, $p = 0.721$) as shown in Table 4.3.

This finding indicates that gender diversity has an effect on the efficiency of the board of directors in utilizing the resources at their disposal. This implies that inclusion of female directors provides an opportunity for the board to have a diverse point of view in regards to investment decision-making and innovativeness in the Rwandan banking sector.

Table 4.3: Board Gender Diversity and Financial Performance Correlation

	Board Gender Diversity	ROA	ROE
Board Gender Diversity	1		
	18		
ROA	.084	1	
	.041		
	18	18	
ROE	-.091	.457	1
	.721	.056	
	18	18	18

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

4.4 Multiple Regression Analysis

The study conducted a multiple regression analysis between the study three independent variables (board size, directors' equity ownership and board gender diversity) on financial performance (ROE and ROA).

4.4.1 Return on Assets (ROA)

This subsection of the study presents the multiple regression analysis. Table 4.4 shows the model summary of the regression analysis indicates that the model explained 43.7 % of change in the ROA of commercial banks listed in the RSE.

Table 4.4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.661(a)	.437	.317	.015208

a Predictors: (Constant), Board Size, Board Gender Diversity, Director Equity Interest

The analysis of variance results of the multiple regression analysis shows that the model was statistically significant ($F = 3.627, p = 0.040$) in explaining the variation in the ROA of commercial banks listed in the RSE as shown in Table 4.5.

Table 4.5: ANOVA ^(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.003	3	.001	3.627	.040(a)
	Residual	.003	14	.000		
	Total	.006	17			

a Predictors: (Constant), Board Size, Board Gender Diversity, Director Equity Interest
b Dependent Variable: ROA

Table 4.6 shows the multiple regression analysis which shows that board size ($\beta = 0.007, p = 0.105$), director equity interest ($\beta = -0.246, p = 0.443$) and Board Gender Diversity ($\beta = -0.104, p = 0.567$). This findings imply a positive relationship between board size and ROA but this is insignificant, an inverse relationship was found between director equity interest and a positive but insignificant relationship was found board gender diversity in the multiple regression analysis.

Table 4.6: Coefficients ^(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	.033	.081		.404	.692
	Director Equity Interest	-.246	.312	-.245	-.790	.443
	Board Gender Diversity	.104	.011	.148	.586	.567
	Board Size	.007	.004	.485	1.734	.105

a Dependent Variable: ROA

4.4.2 Return on Equity

The study conducted a multiple regression analysis between board gender diversity, board size, director equity interest and ROE. Table 4.7 shows the model summary which indicates that the R^2 is 0.114 which means that the model explains 11.4 % variation in ROE.

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.337(a)	.114	-.076	.110757

a Predictors: (Constant), Board Gender Diversity, Board Size, Director Equity Interest

The analysis of variance results from the regression analysis indicates that the model is significant ($F = 2.599$, $p = 0.026$) in explaining change in the dependent variable. This finding suggests that board gender diversity, board size, director equity interest are predictors of ROE of commercial banks listed in the RSE.

Table 4.8: ANOVA ^(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.022	3	.007	2.599	.026(a)
	Residual	.172	14	.012		
	Total	.194	17			

a Predictors: (Constant), Board Gender Diversity, Board Size, Director Equity Interest

b Dependent Variable: ROE

Table 4.9 shows the regression coefficients between Board Gender Diversity, Board Size, Director Equity Interest and ROE. The findings show that there was a strong relationship between board size ($\beta = 0.026$, $p = 0.424$), board gender diversity ($\beta = 0.025$, $p = 0.763$), and financial performance measured by ROE. The study findings showed that director equity interest ($\beta = -0.347$, $p = 0.898$) has a weak effect on ROE of commercial banks listed in the RSE.

Table 4.9: Coefficients ^(a)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
(Constant)	.225	.654		.344	.736
Board Size	.026	.032	.296	.823	.424
Director Equity Interest	-.347	2.648	-.059	-.131	.898
Board Gender Diversity	.025	.081	.113	.307	.763

a Dependent Variable: ROE

4.5 Chapter Summary

This chapter presented the results and findings of the study. the results are presented in subsections based on the study research questions. The analysis is presented in sections that include the descriptive statistics, correlation and regression analysis for each of the research questions.

CHAPTER FIVE

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion, conclusion and recommendations of the study. The chapter presents a summary of the study, discussion of the findings and study conclusions based on the study objectives. The recommendations are given for improvements and areas for further study.

5.2 Summary

The purpose of the study was to examine effect of corporate governance structure on financial performance of listed commercial banks in Rwanda. The study aimed to answer three research questions: to what extent does board size affect listed commercial banks' financial performance in Rwanda? How does directors' equity interest affect listed commercial banks' financial performance in Rwanda? How board gender diversity affects commercial banks' financial performance in Rwanda?

The study used the descriptive research design. The longitudinal survey research approach was used to collect data. The study relied on secondary sources of data to gather information for the variables. The target population for the study was listed commercial banks in the Rwanda Stock Exchange (RSE). The sample size for the study was 3 commercial banks listed in the RSE. The data was collected from annual reports and the banks' websites. The data analysis was done by the SPSS Version 21. Descriptive and Inferential statistics were used to analyse the data. These were Pearson correlation analysis and regression analysis.

The descriptive statistics of financial performance showed that that the mean score for return on assets was 0.071 and a standard deviation of 0.018 while the median score for return on assets was 0.77. In regard to return on equity, the mean score was 0.44 and a standard deviation of 0.107 and the median score was 0.47. The analysis of the return on equity and return on assets shows that there was a gradual increase in ROE and ROE of the sampled banks from 2011 to 2014 but then the ROE and ROA drops between the 2014/2015 financial years and showed a flat trend to 2015/2016 financial year.

In regard to board size, the study found that the average size of board size of the sampled banks was 10 board members. Correlation analysis showed that there was a positive and statistically significant relationship between board size and ROA ($r = 0.0642, p = 0.004$) and a positive but insignificant relationship between board size and ROE ($r = 0.326, p = 0.186$). The regression analysis showed that board size explained 41.2 % of variation in ROA, and this was significant ($F = 11.189, p = 0.003$) and a unit increase in board size leads to a 0.010 increase in ROA. The findings revealed there was a positive association between board size and ROE ($\beta = 0.026, p = 0.424$) but this was insignificant.

In terms of directors' equity interest, director equity ownership among the RSE listed commercial banks is an average of 0.16%. The correlation analysis showed a positive and statistically significant relationship between director' equity interest and ROA ($r = 0.662, p = 0.003$) while an inverse relationship between director equity interest and ROE and this was insignificant ($r = -0.130, p = 0.606$). The regression analysis indicated that director equity interest explained 21.5 % variation in ROA and this was statistically significant ($F = 4.378, p = 0.043$) and a unit increase in director equity interest led to a 0.466 increase in ROA and -.347 increase in ROE.

In regard to board gender diversity, the correlation analysis shows that a positive and statistically significant relationship existed between board gender diversity and ROA ($r = 0.084, p = 0.041$) but had a negative but insignificant relationship between board gender diversity and ROE ($r = -0.091, p = 0.721$). The regression analysis showed that board gender diversity explained 43.3 % of variation in the ROA and this was statistically significant ($F = 12.205, p = 0.003$). A unit increase in board gender diversity leads to a 0.104 increase in ROA of commercial banks listed in the RSE and this was statistically significant ($p = 0.003$) and a 0.025 increase in ROE and was insignificant ($p=0.763$).

5.3 Discussion

5.3.1 Board Size and Financial Performance of Commercial Banks

The study sought to find out the effect of board size on financial performance of commercial banks listed in the RSE. The correlation analysis showed that there was a

statistically significant and positive link between ROA and board size. The linear regression analysis revealed that board size had a statistically and positive effect on ROA. This findings support international and regional studies that have established a positive and significant relationship between board size and financial performance of commercial banks. The findings also showed that that there was a link between board size and profitability as measured by ROE but this insignificant.

This finding corroborates Topal and Dogan (2014) did research among 136 manufacturing firms for a decade and used this panel data to measure the effect of size of the board on financial performance. The findings of the analysis indicated that there was a positive link between ROA, Z Altamn score and size of the board. In Turkey, Isik and Ince (2016) study on board size, board composition and performance applied panel fixed effects regression and the findings revealed that board size had a positive and significant impact on the financial performance of banks.

Ayorinde, Toyin and Leye (2012) studies the impact of corporate governance on financial performance of commercial banks indicated that there was a strong and negative correlation with ROE and size of the board. This findings suggests that a large board size did not have a positive link with the financial performance of commercial banks in Nigeria. Similarly, Adusei (2010) study in Ghana found that the size of the board has an impact on bank performance. The study argued that the smaller board sizes had positive impact on the performance of the organisation where ROE was used as a performance measure.

In Europe, Staikouras et al. (2007) found that larger board sizes can affect bank performance. This finding suggested that the smaller the board size the higher the bank performance. Despite this findings, there are others that have found no relationship between organisation performance and board size (Adams & Mehran, 2005; Belkhir, 2009). This finding was also supported by Busta (2007) research which discovered that there was a significant relationship between ROA and board composition. This results showed that the size of the board had a positive effect but this was insignificant.

The findings indicated that the average size of board of directors among listed commercial banks in the RSE was 9. In comparison to larger boards, small boards are less likely to experience difficulties in communicating and coordinating (Ruigrok, Peck & Keller, 2006). Moreover, a small board is more likely to be effective in monitoring the activities of management because it is not easily swayed by the CEO and hence the small board may have an effect on organisation financial performance.

This argument lays emphasis on the significance of small boards, whereas the dependent view is in favour for larger sized boards. The hypothesis of the resource dependency theory argues that large board sizes may have an advantage in reducing the firm dependency on external resources owing to the fact that large boards can give greater opportunities for increase environmental links than small boards (Ruigrok et al., 2006). An increase in board membership leads to a possibility for different opinions and views which lead to confusion among the membership of the board.

5.3.2 Directors' Equity Interest and Financial Performance

The study conducted a regression analysis to determine the influence of director equity interest and financial performance as measured by ROE and ROA. The findings confirmed a positive and significant effect of directors' equity interest on ROA while there was a weak relationship between directors' equity interest and ROE.

This finding corroborates Okwuchukwu et al. (2015) study on corporate governance influence on banking sector performance in Nigeria which concluded that directors' shareholding has a positive coefficient on return on equity from the regression result. Other studies that have found similar findings include, Uwuigbe (2011) study used secondary sources of data to establish the link between financial performance and corporate governance of 21 commercial banks listed in the NSE and revealed a positive and significant correlation between directors' equity interest and financial performance measured with ROA.

Ayorinde, Toyin and Leye (2012) focused their research on performance and corporate governance of the banking sector in Nigeria. The investigation revealed that there was a correlation between director equity ownership and performance and this was positive. This indicated persons who comprise of the management of commercial

banks where they also have equity interest and are compelled to have an interest in the better performance of the banks.

Isaac and Nkemdilim (2016) research on performance and the corporate governance of Nigerian banks and established that a negative link was observed between composition of the board, size of the board and the profitability of banks. The research also found a significant and positive link between commercial bank performance and directors' equity interest and concluded that the directors' equity interest had an effect on the improved performance of commercial banks.

Adigwe, Nnwana and Issac (2016) research on financial performance and mechanisms of corporate governance in Nigeria indicated that directors' equity ownership had a significant and positive link on financial performance of banks. The research reached the conclusion that when directors' have share ownership in the bank will obviously do their best to the improved performance of the bank.

Other studies that found a link between directors' equity interest and financial performance include: Krivogorsky (2006), and Kapopoulos and Lazaretou (2007) found a positive link between managerial share ownership and organisation performance for Greek and European public organisations. Mangena and Tauringana (2008) concluded that directors' share ownership is positively linked to financial performance of firms listed in the ZSE from 2002-2004. Bhagat and Bolton (2008) also found a positive and significant link between organisation performance and directors' equity ownership.

This finding support Jensen & Meckling (1976) theory that a significant determinant that can reduce shareholder-manager conflicts is stock ownership among the members of the board both non-executive and executive. This means to the extent that members of the board have a share in part of the organisation and develop interests like shareholders and are less likely to behave in a way that may harm the interests of the shareholders.

This implies that when managers have ownership in the firm helps in aligning the managers and shareholders' interests since and the firm performance improves, the

managers gain advantage through their equity ownership in the organisation (Jensen & Meckling, 1976). Thus, managers' ownership is proposed to be inversely related to agency conflicts between shareholders, and managers and is positively related to organisation performance.

5.3.3 Board Gender Diversity and Financial Performance

The study conducted a regression analysis to show the effect of board gender diversity on financial performance (ROE and ROA). The regression analysis showed that board gender diversity had a positive effect on ROA. The findings further revealed that board gender diversity had a weak relationship with ROE and this was insignificant. This study finding supports previous research that showed that an increase in gender diversity in the board had a positive effect on financial performance.

This findings agrees with Fan (2012) research on the link between board diversity and organisation financial performance among firms listed in the Hong Kong Stock Exchange. The study examined both nationality and gender of boards and found evidence to indicate that a board that is diverse is more likely to have better organisation independence and organisation performance. This study finding is also supported by Adams and Ferreira (2009) investigated the link between board diversity and organisation financial performance and they established positive link between financial performance (measured by ROA) and board diversity.

Reguera-Alvarado, De fuentes and Laffarga (2015) study among 9 organisations listed in the Madrid Stock Exchange revealed that females in the board of directors improved the financial performance of the organisation owing to skills, views and new ideas. The authors argued that female on boards led to attraction of human talent and social visibility. In the Netherlands, Lu'ckerath-Rovers (2011) research on presence and absence of women in board of directors and firm performance among 99 organisations. The study confirmed that organisations that had women directors performed better than those without female representation in their boards.

This finding also supports Christiansen, Lin, Pereira, Topalova, and Turk (2016) study analysis which revealed that organisations that have a bigger presentation of women in senior management has a positive effect on ROA. The study showed that

having one woman in place of a man in senior positions and in the board of directors led to 8-13 points increase in ROA.

In Malaysia, Abdullah, Ismail and Nachum (2015) study found that there was a positive and significant association between women present in the board of directors and financial performance as measured by ROA. This study results corroborate those of Petpairote and Chancharat (2015) conducted among Thai firms on women representation in board of directors' which confirmed a positive and significant relationship between board gender diversity and financial performance as measured by ROE.

Gulamhussen & Santa (2010) found a positive link between board diversity and banks' performance among OECD nations' banking sector. Smith, Smith and Verner (2006) found that gender diversity in the board had a positive impact on performance of organisation in Denmark. In Kenya, Letting, Aosa and Machuki (2012) study on performance and board diversity of companies listed in Nairobi Stock Exchange revealed that a statistically significant positive relationship exists between women on the board and performance of companies listed in the NSE. This finding also supports Ongore et al. (2015) study on board composition and financial performance which confirmed that gender diversity did, in fact, have significant positive effect on financial performance.

5.4 Conclusion

5.4.1 Board Size and Financial Performance of Commercial Banks

The study sought to answer the question as to whether board size affected listed commercial banks' performance in Rwanda. The study conducted correlation and regression analysis and found that board size had a positive and significant effect on financial performance (ROA) of commercial banks listed in the RSE. The study therefore concludes that board size has a positive and significant effect on commercial performance of commercial banks listed in the RSE.

5.4.2 Directors' Equity Interest and Financial Performance

The study sought to answer the question as to whether director equity interest had an effect on listed commercial banks in Rwanda. The study conducted correlation and regression analysis and found that director equity interest had a positive and significant effect on financial performance (ROA). The study therefore concludes that director equity interest in commercial banks has an impact on their performance.

5.4.3 Board Gender Diversity and Financial Performance

The study sought to establish whether board gender diversity had an effect on the financial performance of listed commercial banks in Rwanda. The study conducted correlation and regression analysis and found that there was a weak relationship between board gender diversity and financial performance measurements of ROE and ROA. The study therefore concludes that board gender diversity has a weak effect on financial performance of commercial banks listed in the RSE. The study therefore concludes that inclusion of female members in board does not have a significant effect on bank performance.

5.5 Recommendations

5.5.1 Recommendations for Improvements

5.5.1.1 Board Size and Financial Performance of Commercial Banks

The study recommends that commercial banks' listed in the Rwandan Stock Exchange should strive to have a lower number of members in their boards. The study found that the average size of the board of directors in the sampled banks was nine members. The study recommends that commercial banks should not exceed this figure as this may lead to decision-making problems which are characterized by larger board of directors.

5.5.1.2 Directors' Equity Interest and Financial Performance

The study recommends that the commercial banks listed in the Rwandan Stock Exchange should increase and support directors' equity interest to improve their financial performance. The study recommends that director ownership should be implemented as an emolument strategy in commercial banks to improve on their performance.

5.5.1.3 Board Gender Diversity and Financial Performance

The study recommends that there should be efforts by commercial banks listed in the Rwandan Stock Exchange to include more women in their boards to enhance board diversity which has been recommended as a best practice in the corporate governance research and practice.

5.5.2 Recommendations for Further Study

The purpose of the study was to examine effect of corporate governance structure on financial performance of listed commercial banks in Rwanda. The study was limited to studying commercial banks listed in the RSE. The study recommends for further research among non-listed commercial banks in Rwanda. The study was limited to corporate governance mechanisms of board size, board gender diversity and directors' equity interest. The study recommends for further research on the other corporate governance variables effect on financial performance of commercial banks in Rwanda.

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APPENDICES

APPENDIX 1: LETTER OF INTRODUCTION

Dear Respondent

RE: PARTICIPATION IN ACADEMIC RESEARCH

I am a graduate student at the United States International University – Africa. In partial fulfilment of a Master of Business Administration in Finance I am conducting a research on *EFFECT OF CORPORATE GOVERNANCE ON FINANCIAL PERFORMANCE OF LISTED COMMERCIAL BANKS IN RWANDA*

Your bank has been selected to participate in the study as a commercial bank listed in the Rwandan Stock Exchange industry in Rwanda. I would appreciate if I was granted access to data of the selected commercial banks. The data shall be used for academic purpose only and it will be treated with confidentiality. In case you need any information on the study please feel free to contact the researcher through the contact information below.

Thanks for your cooperation.

Yours Faithfully

CHRISTELLE G. UMUTESI

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APPENDIX 2: DATA COLLECTION SHEET

Bank of Kigali

Variables	Source	2010	2011	2012	2013	2014	2015
Board Size	Annual Reports	9	9	10	9	9	9
Number of directors		9	9	10	9	9	9
Shareholders' Equity		31,465,000	29,233,000	29,584,000	32,372,000	38,355,000	39,716,000
Board of Directors Equity	Annual Reports						
Equity by each director		0.18	0.14	0.18	0.19	0.16	0.15
Total equity		31,465,000	29,233,000	29,584,000	32,372,000	38,355,000	39,716,000
% of equity							
Board Gender Diversity	Annual Reports	0.22	0.22	0.3	0.33	0.33	0.33
Male		7	7	7	6	6	6
Female		2	2	3	3	3	3
Financial Performance	Financial Statements						
Total Assets (TA)		197,676,646	287,899,874	322,794,214	422,360,073	482,607,964	561,226,400
Total Liabilities (TL)		165,806,759	226,315,542	259,686,921	351,596,389	393,060,230	421,100,414
Annual Net Income		12,186,074	16,595,444	23,731,174	35,194,844	39,255,227	46,239,769
Stakeholders' Equity (TA-TL)		31,869,887	61,584,332	63,107,293	70,763,684	89,547,734	140,125,986
ROE		0.382	0.270	0.376	0.497	0.438	0.330
ROA		0.061	0.058	0.074	0.083	0.081	0.082

Equity Bank

Variables	Source	2010	2011	2012	2013	2014	2015
Board Size	Annual Reports	12	11	12	12	11	11
Number of directors		12	11	12	12	11	11
Shareholders' Equity		40,876,445	45,162,658	52,926,225	61,763,039	72,167,339	73,434,332
Board of Directors Equity	Annual Reports						
Equity by each director		0.14	0.15	0.15	0.13	0.15	0.17
Total equity		40,876,445	45,162,658	52,926,225	61,763,039	72,167,339	73,434,332
% of equity							
Board Gender Diversity	Annual Reports	0.25	0.18	0.16	0.16	0.27	0.27
Male		9	9	10	10	8	8
Female		3	2	2	2	3	3
Financial Performance	Financial Statements						
Total Assets (TA)		143,018	196,294	243,170	277,729	344,572,	428,063
Annual Net Income		11,713	16,223	23,964	26,491	29,175	34,124
Stakeholders' Equity (TA-TL)		27,204	34,285	42,196	51,555	63,766	72,136
ROE		0.430	0.473	0.567	0.513	0.457	0.473
ROA		0.081	0.082	0.098	0.095	0.084	0.079

Kenya Commercial Bank

Variables	Source	2010	2011	2012	2013	2014	2015
Board Size	Annual Reports	9	9	9	10	9	9
Number of directors		9	9	9	10	9	9
Shareholders' Equity		901,090	1,311,496	1,366,491	1,565,645	2,624,923	3,467,228
Board of Directors Equity	Annual Reports						
Equity by each director		0.19	0.18	0.17	0.16	0.15	0.18
Total equity		901,090	1,311,496	1,366,491	1,565,645	2,624,923	3,467,228
% of equity							
Board Gender Diversity	Annual Reports	0.44	0.44	0.33	0.5	0.44	0.55
Male		5	5	6	5	5	4
Female		4	4	3	5	4	5
Financial Performance	Financial Statements						
Total Assets (TA)		7,337,443	9,026,178	9,648,255	10,361,410	15,749,542	19,445,236
Annual Net Income		170,743	538,905	707,144	678,621	750,659	1,061,577
Stakeholders' Equity (TA-TL)		840,656	1,454,828	1,279,251	1,199,998	1,460,165	1,785,269
ROE		0.203	0.370	0.552	0.565	0.514	0.594
ROA		0.023	0.059	0.073	0.065	0.047	0.054