EFFECT OF BOARD COMPOSITION ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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REG NO: D53/CTY/PT/28003/2014

A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE IN MASTER OF BUSINESS ADMINISTRATION (FINANCE) OF KENYATTA UNIVERSITY.

NOVEMBER, 2018
DECLARATION

I declare that this is my original work and has never been presented to any other institution at any time for an academic award.


Signature………………………………   Date……………………………………

This research project has been submitted for examination with my approval as the university supervisor.

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Signature………………………………   Date……………………………………
DEDICATION

To all my lecturers, friends and family

Thank you for all your support. This is what has made the completion of this course possible.
ACKNOWLEDGEMENTS

I appreciate all those who provided me with ethical and also sensible support in the production of this work. I additionally appreciate my parents and my family members for their understanding, support as well as motivation. I also thank my colleagues and lecturers in the MBA class and all those whose supported and encouraged me. Lastly, I acknowledge the contribution of my colleagues at work for their help, understanding and sitting in for me when I had to take time off to attend to this project.
# TABLE OF CONTENTS

Declaration ................................................................. ii  
Dedication .................................................................... iii  
Acknowledgements ...................................................... iv  
Table of contents ......................................................... v  
Abbreviations and acronyms ......................................... vii  
Operational definition of terms ........................................ viii  
Abstract .......................................................................... x  

**CHAPTER ONE: INTRODUCTION** ........................................ 1  
  1.1 Background of the Study ............................................. 1  
  1.2 Statement of the Problem ............................................ 7  
  1.3 Objectives of the Study .............................................. 9  
  1.4 Research Hypotheses ............................................... 9  
  1.5 Significance of the Study .......................................... 10  
  1.6 Scope of the Study .................................................. 10  
  1.7 Limitations of The Study .......................................... 11  
  1.8 Organization of the Study ......................................... 11  

**CHAPTER TWO: LITERATURE REVIEW** .............................. 13  
  2.1 Introduction .......................................................... 13  
  2.2 Theoretical Review ................................................. 13  
    2.2.1 Agency Theory ............................................... 13  
    2.2.2 Stewardship Theory ......................................... 14  
    2.2.3 Stakeholder Theory ......................................... 16  
    2.2.4 Group Diversity Theory ................................... 17  
  2.3 Empirical Literature ............................................... 18  
    2.3.1 Board Gender Diversity and Financial Performance .... 18  
    2.3.2 Board Members’ Technical Expertise and Financial Performance .... 21  
    2.3.3 Independence of Board Members and Financial Performance ....... 22  
    2.3.4 Nationality of Board Members and Financial Performance .......... 24  
    2.3.5 Age of board members and financial performance .................. 26  
  2.4 Summary of Literature and Gaps ................................. 28
2.5 Conceptual Framework ................................................................. 30
2.6 Operationalization of Variables .................................................. 31

CHAPTER THREE: RESEARCH METHODOLOGY ......................... 33
3.1 Introduction ............................................................................. 33
3.2 Research Design ..................................................................... 33
3.3 Target Population ................................................................... 34
3.4 Data Collection Instruments ..................................................... 34
3.5 Data Collection Procedure ....................................................... 34
3.6 Data Analysis and Presentation ................................................ 35
3.8 Ethical Considerations .............................................................. 38

CHAPTER FOUR: ANALYSIS, PRESENTATION AND DISCUSSION .......... 39
4.1 Introduction ............................................................................. 39
4.2 Exploratory Data Analysis ........................................................ 39
4.3 Descriptive Statistics ............................................................... 43
4.4 Post Diagnostic Tests ............................................................... 44
4.5 POLS Regression .................................................................... 46

CHAPTER FIVE: RESEARCH SUMMARY, CONCLUSION AND
RECOMMENDATIONS .................................................................... 53
5.1 Introduction ............................................................................. 53
5.2 Summary of the Study ............................................................. 53
5.3 Conclusions of the Study ......................................................... 55
5.4 Recommendations of the Study .............................................. 56
5.5 Contribution to Knowledge ...................................................... 57
5.6 Suggestions for Further Research .......................................... 57

REFERENCES ................................................................................. 59
APPENDICES .................................................................................. 64
Appendix I: Data Collection Form .................................................. 64
Appendix II: List of Commercial Banks in Kenya .............................. 65
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBK</td>
<td>Central Bank of Kenya</td>
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<tr>
<td>ROA</td>
<td>Return on Assets</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>ROE</td>
<td>Return on Equity</td>
</tr>
<tr>
<td>OLS</td>
<td>Ordinary Least Squares Regression</td>
</tr>
<tr>
<td>NSE</td>
<td>Nairobi Securities Exchange</td>
</tr>
<tr>
<td>ASX</td>
<td>Australian Stock Exchange Limited</td>
</tr>
<tr>
<td>STAR</td>
<td>Market segment of Borsa Italiana dedicated to mid-size companies</td>
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<tr>
<td>SPSS</td>
<td>Statistical package for social scientists</td>
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<tr>
<td>ISE</td>
<td>Istanbul Stock Exchange</td>
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<td>SOX</td>
<td>Sarbanes-Oxley</td>
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OPERATIONAL DEFINITION OF TERMS

Board Composition - The mix between non-executive (independent) and executive directors, and other desirable attributes, including the size of the board and gender diversity.

Board Size - The number of board members who have voting rights on the board of directors of a company.

Gender Diversity - How different genders are represented in the board, that is, the proportion of either the women or men in the board in relation to the board size.

Financial Performance – The extent to which the firm is able to attain its financial objectives measured by many aspects such as profitability, market share and competitiveness.

Independent Director - Member in the board of directors with no significant or commercial association with the firm or related persons, but for sitting fees.

Member independence – Ability not to be influenced by parties that have interest in the company or having no economic or social relationships with parties related to the company.

Member nationality – The state or country the member belongs to or is a citizen of.

Member’s age – The number of years from the data of birth of the member to the date that the company issued financial statements.

Technical expertise – Having high level knowledge or capabilities in a certain professional field.

Tobin Q – A measure of financial performance which is the proportion of the marketplace value of a firm's properties (as gauged by the market price of its
impressive supply and also financial obligation) separated by the replacement expense of the firm's properties (publication worth).
ABSTRACT

Many organizations around the world were currently facing corporate governance issues and challenges including poor risk management, corporate fraud and unreliable financial reporting. This is despite having corporate board of directors who are mandated to oversee ethical running of the business. The link between the composition of corporate board members and the financial performance of firms has attracted the attention of scholars around the world. However, some of the studies have conflicting findings and hence there is need to do a further study to establish how board members’ composition affect corporate performance in the Kenyan context. The purpose of the study was to investigate the effect of board composition on corporate financial performance of banks in Kenya. Despite tight regulatory framework, effective bank’s boards management continued to weaken in Kenya. This had resulted into closure of two commercial banks and placement of one under receivership by the regulator over the preceding 24 months. The study had the objectives of establishing the effect of board gender diversity, board members’ nationality, board members’ technical expertise, board members’ independence and board members’ age on financial performance of banks in Kenya. The study was based on the stewardship, agency, stakeholder and group diversity theories. The study applied a descriptive research design. The study targeted all the 42 commercial banks in Kenya. Secondary data from commercial banks that had data for five years (2011-2015) was used. This data was collected from the published financial statements of the banks, the companies’ websites, the Nairobi Securities Exchange (NSE) and the Central Bank of Kenya (CBK) bank supervision reports. The current study employed panel ordinary least squares regression in analysis and use Stata statistical software version 14. The study results indicated that gender diversity and board nationality diversity had a significant negative effect on financial performance of the commercial banks. The study findings also indicated that board technical diversity had a significant positive effect on financial performance of commercial banks in Kenya. However, board independence and board age diversity did not have a significant effect on performance of commercial banks. The recommendations made from these findings is that when selecting boards members, shareholders should consider having a board that is composed of members from different professions. Moreover, boards should have good representation of female directors to effectively lead and enable the firms to implement its strategies. Similarly, commercial banks should ensure that the diversity of the nationalities of the board members is controlled to ensure harmony.
CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Many organizations around the world currently are facing corporate governance issues and challenges including poor risk management, corporate fraud and unreliable financial reporting (Abdullah & Ismail, 2013). This study sought to investigate the effect of board composition and firm’s financial performance. The aspects of board composition that were the focus of the study included gender, independence, nationality, age and technical diversity.

Board make-up or composition can be in regard to the size of the board, the mix in between executive and also non-executive (independent) supervisors, as well as various other desirable qualities, including gender diversity, education and learning attainment of board members, nationalities, age of board members, and technical experience. Low, Roberts and Whiting (2015) contends that board gender diversity, in essence, is a purposeful initiative to demonstrate an absence of discrimination, yet it is actually uncertain whether it impacts business financial performance in any kind of method.

Offered the separation of ownership and monitoring, external directors exist to represent and also safeguard investors from inefficient decision- making. Prior research study has wrapped up that external directors can function as expert screens of administration, and that they have a positive relationship with performance (Hermalin & Weisbach, 2013). On the various other hand, various other researches have actually suggested no
organization between the presence of external directors and corporate performance (Bhagat & Black, 2012).

Regarding technical expertise of the board, the board can have members who are from different fields such as human resources, strategic management, project management, information technology and even social sciences. This gives the board an edge when dealing with cross cutting issues affecting the entity. In South East Europe, Fidanoski, Simeonovski and Mateska (2014) observed that companies which had board members that had more technical expertise and who had attained diverse professional standards were more profitable and more valuable in the market.

Lastly is the nationality of the board members. Regardless of the boosted likelihood of extra prices, the reasoning behind foreign board subscription is to secure freedom from managerial connections and also if so, management decisions are most likely to be made based on such experience or competence. Oxelheim, Alexsandra, Thomsend and Randoy (2013) posit that international board subscription also indicates securities market regarding a company's desire to apply either an innovative administration structure or the experience of foreign outdoors directors. In this sense, international board subscription is likely to cultivate independent tracking over management and give experience that is missing in the managerial atmosphere as well as hence, lead to better performance.
1.1.1 Board Composition

Board composition describe just how the board is made up as well as just how it associates with the company. Economic value of proper board composition has actually been a topic of scholarly research study for even more than 5 decades (Fan, 2012). It has actually been argued that firms with big percentages of outdoors directors in the board typically have much less company problems, and for that reason, exhibit a far better placement in between the interests of investors and those of administration (Kiel & Nicholson, 2013). Regarding gender diversity on boards, Marinova, Plantenga and Remery (2010) note that companies are currently beginning to experience substantial changes in pools of prospective candidates as ladies begin to compete for higher settings in companies, leading to gender diversity at the board level.

There is an enhancing awareness that the absence of females in the top echelons of administration and also boards of firms is destructive both to the social as well as the economic end results of those companies (Merendino, 2014). This has therefore, led business companies internationally ahead up with adjustments in corporate administration standards to integrate women in the governance framework of their business. However, local studies such as Wachudi (2014) established that board gender diversity has no effect on performance of banks in Kenya. A survey by Kenya Institute of Management (2015) revealed that the boards of listed firms in Kenya are composed of 12 percent women.

In relation to independent board members, there are varying, as well as often conflicting viewpoints regarding the effect of outdoors directors to a firm's financial performance
(Chen, Leung & Evans, 2015). It has actually been suggested that firms with huge proportions of outside supervisors in the board typically have much less firm troubles, as well as a result, display a better placement between the passions of investors as well as those of management (Fernandes, 2011). As a result, this may positively influence performance of the firm and eventually the share price (Rosenstein & Wyatt, 2012).

Technical expertise in the board entails having members of the board with requisite professional skills rather than having board members having not met required technical expertise (Fidanoski et al, 2014). For instance, the board can include members from different sectors such as telecommunications, manufacturing and even the service sector regardless of the sector that the firm is operating in. KIM (2015) notes that unlike domestic external directors, foreign external directors are not party to the sort of residential cronyism that exists with regionalism, college relationships as well as kinship with controlling shareholders. Consequently, they can be extra independent; such independence from administration and also regulating shareholders is the core aspect that should be boosted.

1.1.2 Financial Performance

The financial aim of any business is to enhance value and make profit. Firm performance is a multidimensional construct that includes 4 components (Kim et al. 2014): (i) customer-focused performance, consisting of client complete satisfaction, and services or product performance; (ii) financial and market performance, including earnings, earnings, market placement, cash-to-cash cycle time, and also earnings per share; (iii) personnel
performance, consisting of worker contentment; and also (iv) organizational performance, consisting of time to market, level of innovation, and also manufacturing as well as supply chain versatility.

Constant with the theoretical foundations in the capacities and also resource-based point of views, it is said that organizational capacities are rent-generating assets, and also they make it possible for firms to make above-normal returns. For instance, performance monitoring capability influences different measures of firm performance by permitting business leaders to evaluate and take corrective activities on any type of prospective or actual slippages proactively and also in a timely way (Anthony & Govindarajan, 2015). Previous researches in advertising and marketing and also method argue that client monitoring capacity (Fornell, Mithas, and Morgenson 2013) and also procedure monitoring capability (Cotteeleer and Bendoly 2016) affect a number of dimensions of company performance.

1.1.3 Board Composition and Financial Performance

Pertaining to gender diversity aboard, Garba as well as Abubakar (2014) note that companies are currently starting to experience substantial adjustments in swimming pools of possible candidates as females start to contend for higher positions in firms, resulting in diversity at the board degree. Fan (2012) nonetheless, contends that board diversity, basically, is a deliberate effort to show an absence of discrimination, yet it is really uncertain whether it influences business financial performance by any means. This debate would amount to an affirmative activity, which is largely political, and focused on boosting gender equilibrium in choice making in firms.
The way that the board is comprised is assumed to affect financial performance.

It has been suggested that companies with big proportions of outside directors in the board usually have much less company problems, and also as a result, show a better positioning in between the passions of shareholders and also those of administration. This might favorably influence performance. Horvath as well as Spirollari (2012) keep in mind that smaller sized boards are extra clever than bigger ones in terms of getting a greater market assessment, boosted return on assets and also return for sale. It must be kept in mind that bigger boards usually take longer in their considerations, and usually suffer the demerits related to laziness. Nonetheless, as well tiny a board will also refute the organization the requisite diversity and consequent harmony.

There are differing, and also sometimes clashing viewpoints regarding the effect of outside directors to a company's financial performance (Chen, Leung & Evans, 2015). Biggins (2012) observe that provided their unparalleled expertise of the firm, inside supervisors are better placed to question administration proposals than can their independent equivalents. Amoll (2015) indicates that independent directors are part-timers as well as consequently, do not possess requisite inside information about the company, as well as therefore, might not be skilled sufficient to carry out jobs appointed to them.
Abdullah and Ismail (2013) posit that the impact of board dimension on the money of a company is associated with the organization's demand to manage the varied stakeholder teams in the operating environment. Dagsson and Larsson (2011) say that interaction, control of tasks and also resolution-making effectiveness amongst a larger dimension of people is a little bit harder as well as requires a larger financial concern than a smaller team of individuals. European Commission (2010) presumes that whenever the dimension of the board exceeds 8 people, they are much less likely to operate efficiently and effectively.

1.2 Statement of the Problem

Wachudi (2014) notes that there has not been consensus on the link between board composition and financial performance of the firm. This is despite the fact that the link between the composition of corporate board members and the financial performance of the firm has attracted the attention of scholars around the world. However, some of these studies have conflicting findings and hence there is need to do a further study to establish how board members composition affect corporate performance in the Kenyan context.

Campbell and Minguez (2013) investigated the association between the gender diversity of the board and financial performance for Spanish firms. They established that board gender diversity has a favorable result on company value as gauged by Tobin’s Q. This study failed to include other board characteristics apart for gender and only use Tobin’s Q as a measure of performance disregarding other robust measures of performance such as ROA and ROE. Carter, Simkins and Simpson (2013) examined a sample of US firms and found a positive relationship between board members’ education levels and Tobin's Q.
This study only considered education but not other characteristics such as nationality and independence. Adams and Ferreira (2014) noted that there was an inverse association between Tobin's Q and the proportion of women on the board. Rose (2014) did not establish a significant association between Tobin's Q and board nationality diversity for a different sample of Danish firms. It is vital to observe that majority of these studies focus on gender diversity but not other board characteristics.

Locally, a study by Wachudi (2014) interrogated the influence of board gender diversity on financial performance of commercial banks in Kenya. He found that boards of commercial banks in Kenya are male-dominated. However, this study found that board diversity has no effect on performance of banks. This study only focused on gender diversity and disregarded other forms of diversity on independence, nationality and technical expertise which are also critical. Ongore, K’obonyo, Ogutu and Bosire (2015) later established that independent members of the board had no significant influence on financial performance, yet gender diversity did, actually, have considerable favorable effect on financial performance. Notwithstanding, the findings from the studies mentioned in this section, the studies on board composition and corporate financial performance have been inconclusive. This therefore means that the findings of these studies cannot be generalized. This study examined all commercial banks in Kenya for the period between the years 2011-2015.
1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to assess the effect of board composition influences financial performance of commercial banks in Kenya.

1.3.1 Specific Objectives

The study had the following objectives;

i) To establish the effect of board gender diversity on financial performance of commercial banks in Kenya.

ii) To assess the effect of board members’ nationality on financial performance of commercial banks in Kenya.

iii) To determine the effect of board members’ technical expertise on financial performance of commercial banks in Kenya.

iv) To investigate the effect of board members’ independence on financial performance of commercial banks in Kenya.

v) To establish the effect of board members’ age on financial performance of commercial banks in Kenya.

1.4 Research Hypotheses

i) Board gender diversity has no significant effect on financial performance of commercial banks in Kenya.

ii) Board members’ nationality has no significant effect on financial performance of commercial banks in Kenya.
iii) Board members’ technical expertise has no significant effect on financial performance of commercial banks in Kenya

iv) Board members’ independence has no significant effect on financial performance of commercial banks in Kenya

v) Board members’ age diversity has no significant effect on financial performance of commercial banks in Kenya.

1.5 Significance of the Study

The study findings will be significant to various parties. The study findings will be important to management of commercial banks as well as large corporate establishments as they will gain insight on impact of composition of board members and their effects on the firm’s financial performance.

To the academic researchers and scholars; there is very little literature if any in the area of composition of board members and their relationship with firm’s financial performance especially in the developing countries. The study will benefit the scholars and researchers who will gain insight on effects of firm’s financial performance and composition of its board members. The study will form a corner stone to a researcher who wishes to carry out further research on composition of board members and its effects on a firm’s financial performance.

1.6 Scope of the Study

This study sought to assess the effect of board composition on financial performance of commercial banks in Kenya. The study focused on the 42 commercial banks and included
factors that had not been focused on in various studies locally and internationally which include technical expertise. The study focused on commercial banks due to the critical role they play on the economy and also the trends in ethical practices in commercial banks in Kenya which has forced some banks into liquidation and others to be placed under receivership. The variables included in this study were limited to technical expertise, age, gender, independence, and nationality of board members. This ensured that the study covered more variables than similar studies in Kenya. The target population for this study was 42 commercial banks (CBK, 2017). The study applied secondary data for 2011 – 2015 which was the most current data at the time of the study.

1.7 Limitations of The Study

The study faced several limitations. The first is availability of data where some commercial banks lacked data on some of the variables under study. Where some data was missing, those banks were excluded from the study. The second limitation was generalization of the findings. This study focused on commercial banks and hence the generalizability of the findings to other sectors is limited.

1.8 Organization of the Study

The project has five chapters. Chapter one provides the introduction to the project which discusses board composition and financial performance. The chapter also presents the statement of the problem, research objectives, questions and significance of the study. The chapter also presents the limitations of the study ad scope.
Chapter Two presents the literature review. This includes the theoretical review which discusses the theories that the study was based on. The chapter also presents previous studies which have been conducted in relation to board composition and financial performance. The research gaps and the conceptual framework are also presented in this chapter.

Chapter three presents the study methodology that was applied. The chapter also presents the study population, sample, sampling technique, data collection instruments and the procedure for data analysis. Chapter four of the study include the analysis of data, presentation and discussion. Chapter five presents the summary of results, conclusions and recommendations.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter covers literature review which contains the theoretical and conceptual framework that will guide the study. The chapter also covers a review of empirical literature and hence indicating the gaps that the current study sought to fill.

2.2 Theoretical Review

The current study was based on the stewardship, agency, stakeholder and group diversity theories. These theories provide the theoretical basis for understanding the influence of board members composition on corporate financial performance. The three theories are discussed hereunder in detail.

2.2.1 Agency Theory

Agency theory seeks to harmonize the interest of management and those of shareholders (Jensen and Meckling, 1976). The theory posits that the board has a monitoring role which aligns the objectives of the management with those of the owners of the business hence ensuring that management acts according to the interest of the shareholders. The theory further posits that when the board is well composed, it will be in a better position to deal with agency problem between management and shareholders and hence ensure that the firm performs effectively (Fama & Jensen, 1983). Moreover, the board ensures conformance of management to the interests of other stakeholders such as creditors, employees and customers. It does this by ensuring that there are other processes such as
internal audit and management reports that ensure transparency and accountability of management in carrying out its functions.

The purpose of the board is to avoid corporate governance and performance problems that can emanate from management not carrying out its functions with prudence and responsibility (Hendry, 2005). The board hence acts as a control measure to prevent management excesses and ensure management conducts their activities responsibly and competently and it does not use its discretion inappropriately. This theory stems from neoclassical economics that, since management as agent and shareholders as principal seek to maximize their utility, management is therefore likely to act in a way to jeopardize the interest of shareholders. However, this theory faces criticism as it is based on the selfish individual motivation for being self centred. This is being contested in current organizational setting of mutual benefit (Perrow, 1986). This theory was applied in the study as a board with diversity is expected to perform its functions better and hence lead to improvement of financial performance and vice versa. The theory posits that a board with many independent members would be in a better position to have objective oversight. It was hence expected that commercial banks with a high proportion of independent members in their boards would perform better.

### 2.2.2 Stewardship Theory

Stewardship theory was developed by Donaldson (1990) after disagreeing with the premises upon which agency theory was based. Stewardship theory challenges the assumption that managers are always self centered and will always act in their own
interest forgetting the interests of all other stakeholders. The stewardship theory assumes that people are inherently motivated to do good as long as the conditions in the organization are conducive enough. The stewardship theory hence posits that the interests of managers are aligned with the interest of the shareholders and other stakeholders. The role of the board of directors in such a context is therefore to provide leadership, design strategies and guide management towards organizational advancement and competitive advantage (Cornforth, 2003).

As such, the composition of the board will influence management and organizational performance not by monitoring, but by providing leadership which will lead to investments that will add value to the organization (Davis, Schoorman & Donaldson, 1997). This therefore calls for a board that has wide professional experience in the industry, have diversity in age and gender but with a high ratio of inside directors. Having a board with a high proportion of executive directors is expected to lead to high performance as management and the board of directors is expected to work side by side since their interests are aligned. Although Davis, Schoorman and Donaldson (1997) are proponents of the stewardship theory; they nevertheless criticize it indicating that empirical studies have mixed evidence which do not unanimously support the theory. Moreover, Nicholson and Kiel (2007) indicate that stewardship theory can expose firms to governance risks by playing down the monitoring role of boards. This theory was applied in this study to test whether the composition of the board influences financial performance of firms. The theory supported the board to have members with high technical expertise.
2.2.3 Stakeholder Theory

The stakeholder theory was developed by Blair (1995) who was seeking new models of corporate governance for the 21st century. The premise of the theory is that focus on shareholders has not provided exhaustive and effective corporate governance. This theory hence advocates for the inclusion of interested parties, financial institutions, consumer groups, media, employees and the public in devising an effective corporate governance model that will be able to make the organization effectively accountable to all interested parties. Focusing on shareholders only in thinking about corporate governance leads to a corporate governance mechanism that is flawed and ineffective.

According to Donaldson and Preston (1995), the role of the board members as posited by the stakeholder theory is to understand the different interests of the organizational stakeholders and ensure that the organization works towards reasonably satisfying the interests of the different groups. The different stakeholders whose interests should be catered for include management, employees, customers, government, suppliers, regulators, media and even the general public. Clarkson (1995) intimated that a corporate governance mechanism based on all stakeholders of an organization will drive an inclusive approach which will ensure that a variety of opinions, priorities and inclusion will be focused on effectively.

Considering all stakeholders in corporate governance also ensures that no stakeholder dominates or overlooks the interest of the other. However, Hill and Jones (1992) criticized this theory by indicating that an organization can have a myriad of stakeholders
and seeking to satisfy their interest becomes impossible as some of their interests can be conflicting. To deal with this challenge, Hill and Jones advocated for the board to identify the key stakeholders and focus on satisfying their interests.

The implication of this theory to this study is that a diverse board is expected to understand the different stakeholders better. This hence indicates that a diverse board will be in a better position to satisfy the different stakeholders and thus making the firm to have good relationships with a myriad of stakeholders. This is in turn is expected to open new opportunities for the firm thus improving its financial performance and enhancing its competitiveness in the market place (Clarkson, 1995). The study expected firms with diverse boards in terms of nationality to represent a variety of local and foreign investors or stakeholders and hence perform generally better than those firms with less diverse boards.

2.2.4 Group Diversity Theory

Cox (1993) developed the group diversity theory to inform the concept of cultural diversity in organizations. Cox defined diversity as the inclusion in a group of members with distinctly different cultural significance and group affiliations. Cox, Lobel and McLeod (1991) had earlier observed from filed and laboratory settings that diversity within groups had improved the effectiveness of the group. This created the notion of value-in-diversity concept. Cox (1993) then later developed this concept to the group diversity theory. This theory postulates that when a group is made up of individuals from
diverse backgrounds, that group becomes more effective than a group made up of individuals from similar backgrounds.

This study applies this theory to inform how diversity is expected to relate to performance. Board performance is then linked to firm performance. The diversity issues focused on in this study include age, gender, independence and professions. However, Ekadah and Mboya (2012) observed that not all cases of diversity breed effectiveness. Following this debate, Mazur (2010) noted that diversity in the work place is becoming more important with the advent of globalization. This is because organizations are now finding themselves required to cope with needs of stakeholders that are more culturally mixed. The global market place is hence underlining the need that the workforce of companies, including their board of directors, need to be more diverse. This places a diverse workforce at a position to effectively meet the diverse needs of the stakeholders. This theory hence informed the gender diversity variable in the study as it presumes that boards with high gender diversity perform more efficiently.

2.3 Empirical Literature

2.3.1 Board Gender Diversity and Financial Performance

In United Kingdom (UK), Chen, Leung and Evans (2015) investigated how board gender diversity influences innovation and firm performance. The study was conducted retail firms in Cardiff. They relied on secondary data and established that firms with boards that were more gender diverse performed better innovatively than those firms that had less diverse boards. Innovation performance was measured by the number of new
products introduced into the supply chain. This pointed to the possibility that female members of the board increased monitoring on management thus increasing incentives for managers to innovate. However, the study did not find any relationship between board gender diversity and financial performance which was measured using ROA. This study was conducted on retail firms in UK whereas the current study was conducted on commercial banks in Kenya. Moreover, the study only considered gender diversity whereas the current study included other board diversity aspects.

Low, Roberts and Whiting (2015) assessed the influence of board gender diversity on firm performance. This study utilized data from a sample of Asian firms specifically in Malaysia, Hong Kong, Singapore and South Korea. The study utilized ROE as the measure of performance and did a comparative analysis of the four nations. The study utilized panel data of 2011-2014. The study established that the proportion of female members in the board was positively related with improved firm performance. The conclusion from the study was that increasing the number of women in the board of directors is expected to improve firm performance. However, the study noted that this positive effect was diminished in those countries with high participation of women in the economy. This study was conducted in the developed markets of Asia and hence cannot be generalized to the Kenyan situation due to the vast differences between Asia and Kenya.

In a study of Danish and Dutch firms, Marinova, Plantenga and Remery (2010) assessed gender diversity and its effect on firm Performance. The study utilized empirical data
from 186 firms of which 102 were from Netherlands while 84 were from Denmark. Around 40 percent of these firms had at least one woman in the board. However, within all the firms that participated in the study, women made only 5.4 percent of the board members. The study applied two-stage least-squares regression method where Tobin’s Q was applied as the measure of performance. The findings indicated that board gender diversity did not have any significant effect on firm performance. This hence did not support the business case for increasing female members in the board. The context of this study (Netherlands and Denmark) is different from the environment in Kenya and hence its findings cannot apply in Kenya.

Locally, Ekadah and Mboya (2012) assessed the effect of board gender diversity on the performance of commercial banks. This study had the purpose of analyzing the effect of gender diversity of boards on performance of commercial banks in Kenya. The study focused on a period of 12 years (1998-2009). The study utilized the step wise regression model. Results from the study indicated that most of the boards of commercial banks in Kenya were male dominated with very few women participating in these boards. Further, findings indicated that the ratio of women directors to total board size was 1:8. However, the study established that gender board diversity did not have a significant effect on performance of commercial banks in Kenya. This study only focused on board gender diversity while the current study included additional four variables namely gender, technical expertise, proportion of independent directors, age and nationality.
Another local study was by Letting, Aosa and Machuki (2012) which examined board diversity and its effect on performance of companies Listed in NSE. In the study, independent variables were board member’s age, gender, study specialization, and educational qualifications. Performance of the companies was the dependent variable which was measured through Dividend yield, price earnings ratio, ROA and ROE. Analysis was through OLS regression method. The results indicated that there was no significant effect between board gender diversity and all the measures that were used for financial performance. This study focused on all the firms listed in the NSE without considering the peculiarities that exist between firms of different sectors. The current study considered only commercial banks which have standardized practices and have common regulatory framework.

### 2.3.2 Board Members’ Technical Expertise and Financial Performance

Gaur, Bathula and Singh (2015) investigated the relationship that exists between firm performance and firm-level governance mechanisms. This study applied the resource dependency theory, agency theory, stakeholder theory and stewardship theory. This study focused on a sample of the listed firms on the New Zealand Stock Exchange. The data collected for the study was for the years 2004-2007. The researchers employed the random effects and the generalized least square estimation model. The study determined that presence of professional directors leads to superior firm performance. This study focused on only listed firms and excluded non-listed firms. The current study included both listed and non-listed banks.
Fan (2012) conducted a study in Singapore which was aimed at investigating whether board diversity is important in determining board independence and firm performance. This study used data from firms listed in Singapore. The independent variables in the study include discipline of study of the board members among other variables such as gender and ethnicity. The dependent variable was financial performance which was measured using Tobin’s Q. The study established that financial performance of the firms was induced by diversity in disciplines that the board members had studied. This study was conducted in a developed market which may have differing characteristics with the local market and hence the current study on Kenyan commercial banks was justified.

Locally, Letting, Aosa and Machuki (2012) had established that board members from different specializations or professions did not have any significant effect on ROA, ROE and PE ratio but had a positive effect on the dividend yield. This study focused only on technical expertise of board members and disregarded other key characteristics such as independence, age, gender and nationality.

### 2.3.3 Independence of Board Members and Financial Performance

Merendino (2014) conducted a study on Italian listed firms which sought to establish the relationship that exists between the board of directors and firm performance. The justification for the study was that previous studies had focused more on the emerging markets of Asia, Anglo-American countries and a few European countries. Few studies had been conducted in Italy even though it is considered an interesting case due to the diversity of its corporate governance model which borrows from both the Asian and
American models. The study was based on the agency theory and applied econometric modeling. The study specifically sought to establish the effect of board composition (the proportion of independent, executive and non-executive directors) on financial performance of firms listed in the STAR exchange in Italy. This study applied to measures of financial performance; Tobin’s Q (market value) and Return on Equity (ROE). The study established that there was no relationship or effect of board composition on financial performance. The study concluded that firm financial performance is not influenced by increase or decrease of non-executives directors. These findings therefore did not concur with the agency theory (Randøy et al., 2013). This study was conducted in Italy which has different political, legal and social characteristics from Kenya. Moreover, the study focused on independence only whereas the current study focused on other board characteristics.

A study in Australia by Kiel and Nicholson (2013) found a positive relationship between market-based measure of firm performance (Tobin’s Q) and the proportion of inside directors. However, number of inside directors had no significant correlation with the accounting-based measure of financial performance (ROA). Data for this study was collected for the top 500 companies trading on the Australian Stock Exchange Limited (ASX) in 2006. Statistical package for social scientists (SPSS) was used for analysis. The study applied Tobin’s Q and Return on Assets (ROA) as the measures of performance. A three-year average for the measures of performance (2006, 2007 and 2008) was used. Ordinary least squares regression was applied. This study was conducted in a foreign developed market and hence its findings may not be generalizable to the Kenya situation.
Duztas (2008) in a study in Turkey investigated the effects of board composition on company performance. The study focused on the 314 firms that were listed in the Istanbul Stock Exchange (ISE). The study had proportion of outside directors as independent variable among other independent variables. Company performance was measured through Tobin’s Q and ROA. Data for the study was collected through questionnaires and secondary sources. Analysis applied OLS regression where SPSS was utilized. The study established that there was a significant but weak correlation (0.283) between Tobin’s Q and ratio of outside directors in the board. The study also reported a significant positive correlation between ROA and Outside Director Ratio (0.235). this study only considered listed firms and combined firms from different sectors which could cloud the findings.

2.3.4 Nationality of Board Members and Financial Performance

In Japan, Nakano and Nguyen (2014) conducted a study to examine whether board members from different nationalities affect firm performance. The results revealed a significant negative relationship. The study used OLS regression where the measures of performance that were applied were ROA and Tobin’s Q, The model used controlled firm size and established that board nationality had a significant negative effect on performance of the firm. The more mixed a board was in terms of having different nationalities, the poor the performance. The study was conducted in a developed economy (Japan) and hence its findings could not be generalized to a developing economy like Kenya.
Horvath and Spirollari (2013) in a study in the US assessed how board of directors’ characteristics such as nationality diversity influenced firm’s performance. The study used a sample of 136 large U.S firms for the period 2005-2009. The study was conducted on the premise that nationalities of the Board of Directors matters, as boards with people from different countries are expected to consider various factors in decision making than boards with members from few nationalities. Moreover, board members from diverse nationalities are expected to undertake various structural changes in the company to try to align it with the vision they have for the business in future. Financial performance in the study was measured using price of shares. The study established that nationalities of the board members did not have any effect on performance of the firms. This study was conducted from data collected from diverse firms which could be facing different regulatory factors and hence the findings could be clouded.

In Malaysia, Abdullah and Ismail (2013) investigated nationality diversity of the boards of large Malaysian firms and the effect on their financial performance. Nationality diversity of 100 Malaysian non-financial and its influence on firm performance was assessed with data collected for 2007 from financial reports. Financial performance in the study was measured using Tobin’s Q and ROA. Multiple linear regression was applied in the study to establish the effect of nationality diversity on financial performance. The study established that nationality diversity was negatively associated with ROA. These findings imply that firms which had board members from different nationalities were able to report better performance than those firms with board members from fewer nationalities. The study was conducted on non-financial firms and the findings may not
reflect the position in financial firms. This study was conducted in non-financial forms and hence could not be generalizable to financial firms.

Van Ness, Miesing and Kang (2010) conducted a study that investigated the effect of board of directors’ composition and financial performance in a Sarbanes-Oxley world. The study’s purpose was to make a contribution to the literature by examining how corporate boards influence firm financial performance in the new era of Sarbanes-Oxley (SOX). The dependent variable in the study was financial performance which was measured using ROA and market price to book ratio. Data was collected for Standard and Poor’s (S&P) 500 companies. Data for the period 2006-2007 was considered in the study. OLS regression model was utilized for analysis. The study’s results indicated that there was significant effect of board nationalities on any of the two measures of financial performance. This study had been conducted more than ten year prior to the current study and hence the environment and context might have changed.

2.3.5 Age of board members and financial performance

The study by Van Ness et al. (2010) established that there was no significant impact of average board age on financial performance. This was despite the assertion that younger board members are more amenable to change, have superior technical knowledge and greater receptivity to risk-taking. Moreover, younger board members are also said to be more innovative and more efficient in governance oversight which is expected to lead to improved financial performance. Older board members on the other hand are also argued to affect performance of a firm through their experience, enhanced independence, and
long-term connections leading to stronger corporate performance. The study applied ROE as the measure of performance rather than applying the more robust ROA which the current study applied.

Dagsson and Larsson (2011) explored the relationship between diversity and firm performance by studying the companies listed on the OMX Stockholm exchange between 2005 and 2009. The researchers selected a third of the companies to participate in the study. The study assessed how age diversity on the board (given by standard deviation of ages) influenced financial and market performance (given by ROA and Tobin’s Q respectively). The study results established that age diversity significantly affected firm performance as measured by ROA, but not as measured by Tobin’s Q. The results of the study also established that effects were only evident when the company belonged to the small-cap category with a market cap below EUR 150 million. This study was conducted in a developed market (Sweden) and hence the findings may not be generalizable to Kenya.

A study by Horvath and Spirollari (2012) examined the relationship of selected board of directors’ characteristics and firm’s financial performance. Using a sample of large US firms in 2005 to 2009, the study established that age of the board of directors mattered, to a certain degree. Younger members were probably willing to bear more risk and to undertake major structural changes to improve firm’s future prospects. This study was conducted in US which has varied differences with the local market.
Amoll (2015) explored the effect of board of directors’ composition on financial performance of companies listed in Nairobi Securities Exchange. The target population for the study comprised board executives and members in all listed companies quoted at the NSE for the period of five years from 2010 to 2014. The sample size included 65 board management and executives from the firms. A standard multiple regression model was used to establish the influence of board composition on performance of the firms listed under the NSE. The findings revealed that age had a positive and significant contribution to the performance of the firms in the NSE. This study was conducted on all the firms at the NSE without considering the uniqueness of the different segments. This study hence addressed that by

2.4 Summary of Literature and Gaps

Corporate boards of directors have actually been the emphasis of a steady stream of management research for greater than a century, providing a rich base to the governance literature. Maybe the unfaltering rate of interest in board research study is sustained by such problems as the essential governance oversight function that boards are expected to play, the presumed frequency with which they are irresponsible in this function, and also their association with prominent company failures.

Additionally, the composition of the board has been established to have an effect on performance of firms in some studies whereas others have indicated no significant effect. Nonetheless, despite the unwavering rate of interest and large study right into the relationship in between business boards as well as solid performance, empirical results
present an impressive lack of agreement. This hence informed this study to assess how board composition influences performance of commercial banks in Kenya.

Table 2.1: Summary of Literature Review and Research Gaps

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Context</th>
<th>Findings</th>
<th>Research gaps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chen, Leung and Evans</td>
<td>Board Gender Diversity, Innovation and Firm Performance</td>
<td>Retail firms in Cardiff, UK</td>
<td>Firms with boards that were more gender diverse performed better innovatively than those firms that had less diverse boards</td>
<td>Conducted in retail firms in a developed country which is different from the local market. Focused only on gender diversity.</td>
</tr>
<tr>
<td>Low, Roberts and Whiting</td>
<td>Board gender diversity and firm performance: Empirical evidence from Hong Kong, South Korea, Malaysia and Singapore</td>
<td>Asian firms specifically in Malaysia, Hong Kong, Singapore and South Korea</td>
<td>Proportion of female members in the board was positively related with improved firm performance</td>
<td>Conducted in Asian Market. Focused on gender diversity only. Used ROE and current study used ROA.</td>
</tr>
<tr>
<td>Letting, Aosa and Machuki</td>
<td>Board Diversity and Performance of Companies Listed in Nairobi Stock Exchange</td>
<td>Firms listed in NSE</td>
<td>There was no significant effect between board gender diversity and financial performance</td>
<td>Used OLS regression whilst the current study utilized the robust panel data model. Focused on all firms whilst the current study was more focused on commercial banks.</td>
</tr>
<tr>
<td>Merendino</td>
<td>Corporate Governance: the relationship between Board of Directors and Firm Performance. Empirical evidence of Italian listed</td>
<td>Listed companies in Italy</td>
<td>There was no relationship between board independence and financial performance</td>
<td>Was conducted in a developed market which is different from the local market.</td>
</tr>
<tr>
<td>Authors</td>
<td>Variables</td>
<td>Sample</td>
<td>Findings</td>
<td>Notes</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
<td>--------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>Kiel and Nicholson (2013)</td>
<td>Board composition and corporate performance: how the Australian experience informs contrasting theories of corporate governance</td>
<td>Top 500 companies trading on the Australian Stock Exchange Limited</td>
<td>Number of inside directors had no significant correlation with the accounting-based measure of financial performance</td>
<td>The study applied cross sectional data which does not consider changes over time</td>
</tr>
<tr>
<td>Gaur, Bathula and Singh (2015)</td>
<td>Ownership concentration, board characteristics and firm performance: A contingency framework</td>
<td>Listed firms on the New Zealand Stock Exchange</td>
<td>Presence of professional directors leads to superior firm performance</td>
<td>Conducted in a different context from the current study</td>
</tr>
<tr>
<td>Horvath and Spirollari (2013)</td>
<td>Do the board of directors´ characteristics influence firm´s performance? The US evidence</td>
<td>136 large U.S firms for the period 2005-2009</td>
<td>Nationalities of the board members did not have any effect on performance of the firms.</td>
<td>Study focused on a developed market whose results may not be applicable in local context</td>
</tr>
<tr>
<td>Dagsson and Larsson (2011)</td>
<td>How age diversity on the Board of Directors affects Firm Performance</td>
<td>Companies listed on the OMX Stockholm exchange between 2005 and 2009</td>
<td>Age diversity significantly affected firm performance as measured by ROA</td>
<td>Study conducted in Europe which has a different business environment to the local context</td>
</tr>
</tbody>
</table>

Source: Author (2018)

2.5 Conceptual Framework

The theoretical framework recognizes the variables that when placed with each other explain the problem of issue. The theoretical framework is consequently the set of wide
ideas made use of to describe the association between the predictor variables (nationality diversity, technical expertise, age, independence of board members and gender diversity) and the dependent variable (firm financial performance). The study can be presented in a conceptual framework as shown in the Figure 2.1.

### Independent Variables

**Gender diversity**
- Proportion of male or female directors

**Technical diversity**
- Study specialization
- Education qualifications
- Profession of the director

**Independence of board members**
- Executive directors
- Non-Executive directors

**Age diversity**
- Age in years
- Experience of the member

**Diversity in Nationality**
- Kenyan director
- Non-Kenyan director

### Dependent Variable

**Firm Financial performance**
- ROA

**Figure 2.1: Conceptual Framework**

Source: Author (2018)

#### 2.6 Operationalization of Variables

The variables that were included in the study include gender, technical expertise, age, nationality and proportion of independent directors in the board. Nationality of board members was measured using the number of different nationalities of individual board
members. Gender of the boards was measured using the proportion of male board members to the board size (total number of directors in the board). Technical expertise was measured using the aggregate number of years of professional experience of all board members. Age was measured using an average of the ages of all the board members. Independence of directors was measured using the proportion of independent directors to board size (Van der Walt, Ingley, Shergill & Townsend, 2014). Lastly, financial performance was measured using return on assets (net profit/total assets), return on equity and Tobin’s Q.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

Outlined in this chapter is the research methodology that was applied to conduct this study. Included in this chapter is the research design that was applied, the population that was targeted in the study, and the sampling methods that were applied. Further, the chapter presents the data collection procedure and also discusses the empirical model that was applied. The chapter also presents a discussion on how variables were operationalized. Lastly, the chapter presents the procedures that were applied in data analysis and how the analyzed data was presented.

3.2 Research Design

The study applied a descriptive research design. Babbie (2011) defines a descriptive study design as the research procedures which depict the study subjects or participants as they are in an accurate way. This design assisted in establishing the relationship that exists between board composition and financial performance. Descriptive research is a study designed to depict the study units in an accurate way. More simply put, descriptive research is all about describing units of analysis in a research. There are three ways a researcher can go about doing a descriptive research project. These include observational (method of viewing and recording the participants), case study (in-depth study of an individual or group of individuals) or survey (a general view, examination, or description of a research unit or units) (Maddala, 2012). This study was conducted through the survey approach which involved collecting information of various commercial banks for five years.
3.3 Target Population

The study targeted all the 42 commercial banks (CBK, 2016). The list of these companies was availed from the Central Bank of Kenya (CBK) which registers and regulates commercial banks. The banks which had been in operation between 2011 and 2015 were included in the study. The study did not conduct any sampling and all the 42 commercial banks in Kenya were included in the study. Those commercial banks which lacked data for the five years were excluded in the study.

3.4 Data Collection Instruments

The study applied a data collection schedule which included the commercial banks and a checklist of all the variables being assessed in the study. The data collection schedule was a contingency table with the five years in the rows and the variables under study in the columns for each bank. This ensured that all variables for each year and for each bank were captured correctly.

3.5 Data Collection Procedure

Secondary data was utilized in this study and was collected using a data collection schedule (Appendix I). Data collected included data on gender of the board members, proportion of independent directors, age, technical qualifications and nationalities of the board members. Further, data on financial performance of the firms was collected. This data was collected from the published financial statements of the companies, the companies’ websites, the NSE and the Capital Markets Authority (CMA). Only audited
results from these companies were utilized to ensure reliability and quality of data collected. The data collected was entered into statistical software that aided in analysis.

### 3.6 Data Analysis and Presentation

The current study employed panel regression analysis model since the data employed had longitudinal and cross-sectional properties. The data collected was entered into a statistical software that aided in analysis. Stata statistical software package was applied. Maddala (2012) observes that using panel regression analysis model enables the data to consider the attributes of the data in relation to differences in entities and changes over time. Further, Hsiao, Lahiri and Lee (2009) noted that panel regression analysis is the best technique to deal with data that has time series and cross-sectional properties. Panel regression analysis has two independent approaches which can be utilized in analyzing data regarding some observation of entities over time. These include random effects model and the fixed effects model (Maddala, 2012).

The random effects model assumes that there are some unique attributes that are constant over time for the different entities. These unique attributes of the different entities are constant over time and are not related with the independent variables applied in the regression model. This model is hence useful when inferences are required for the whole population not just the sample under consideration.

The equation for the random effects model is;

\[
Y_{it} = \alpha + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \beta_5 X_{5t} + u_{it} + \varepsilon_{it}
\]

Where;
\( \alpha \) is the unknown intercept for all the listed firms.

\( Y_{it} = \) Financial performance (ROA) where \( i = \) firm and \( t = \) time.

\( X_1 = \) Gender diversity  
\( X_2 = \) Technical diversity  
\( X_3 = \) Independence of board members  
\( X_4 = \) Age diversity  
\( X_5 = \) Diversity in nationality  

\( \beta \) is the coefficient for the independent variables  
\( u_{it} \) is the between-entity error  
\( \epsilon_{it} \) is the within-entity error

Lastly, the fixed effects model assumes that there are some unique attributes of the study entities which are not the result of random variation of the firms. The fixed effects model further assumes that these unique attributes do not vary across time and also that they are correlated with the independent variables. The fixed effects model is adequate when there are some unobservable characteristics which are assumed to remain constant over the time period (Hsiao et al., 2009).

The equation for the fixed effects model is:

\[
Y_{it} = \alpha_i + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \beta_5 X_{5t} + u_{it}
\]

Where

\( \alpha_i \) (\( i=1\ldots42 \)) intercept for each entity.

\( u_{it} \) is the error term

All other variables are as indicated earlier
To establish which of the two models may be suitable for the data that was collected, a Hausman test was conducted which enabled the decision making on which of the two (fixed or random effects model) was suitable for the analysis (Hsiao, Lahiri & Lee, 2009).

The measures used for the collected data are as indicated in Table 3.1

**Table 3.12: Measurement of Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Notation</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age diversity</td>
<td>AD</td>
<td>Average age of the board members for each specific year</td>
</tr>
<tr>
<td>Gender diversity</td>
<td>GD</td>
<td>Male board members /board size</td>
</tr>
<tr>
<td>Technical diversity</td>
<td>TD</td>
<td>The variety of different professions in the board divided by the board size</td>
</tr>
<tr>
<td>Independence of board members</td>
<td>Ind</td>
<td>Number of independent directors /board size</td>
</tr>
<tr>
<td>Diversity in nationality</td>
<td>ND</td>
<td>Number of different nationalities in the board divided by board size</td>
</tr>
<tr>
<td>Financial performance</td>
<td>FP</td>
<td>Return on assets (net profit/total assets)</td>
</tr>
</tbody>
</table>

*Source: Author (2018)*
The data analysed was in form of descriptive and inferential statistics. This data was presented in tables and figures. Figures were used to show the trend while tables were used to present the results from diagnostic tests done and also the results of the panel data model. Further, discussion of the findings ensued which compared and contrasted the study findings with earlier empirical studies on the subject area.

3.8 Ethical Considerations

This study used secondary data. Therefore, several ethical issues that concerns primary data-based studies such as informed consent, confidentiality and approval did not apply in this study. The only ethical issues that were considered are those that focus on data management and communication of results. In managing the data, care was taken to ensure that only verifiable and authentic sources of data were used. The study hence used audited financial statements, periodical accounts and other freely available information of commercial banks in Kenya. This ensured that accurate information was used. Moreover, data entered into the analysis software was counterchecked to ensure that there were no errors.

The second ethical consideration entailed communication of results. The study ensured that results were reported as received from the analysis. The findings derived were as a result of the analysis of steps as outlined in the data analysis section. The study was lastly conducted after permission was granted from Kenyatta University and all other relevant authorities.
CHAPTER FOUR

ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

The chapter presents the steps that were taken in analyzing the data, the results and the discussion of the results. First, the chapter presents the exploratory analysis where visual plots for return on assets which was the dependent variable are provided. Moreover, the chapter also presents the pre-analysis diagnostic tests and also the posttest diagnostic tests. The model that was applied in analysis is then provided where the results are interpreted and discussed. The analysis relates to data of the 38 commercial banks that were operational between 2011 and 2015. These banks had all the variables for all the years. Four banks lacked complete data for all the five years.

4.2 Exploratory Data Analysis

The study conducted exploratory data analysis with the aim of comparing the trends of ROA for all the commercial banks. The exploratory analysis was important to establish whether there were significant variations within the commercial banks. This output helped to determine whether to use POLS or panel data models. The results are presented in Figure 4.1. These results revealed that there were not many variations in the commercial banks except in bank 18, 28 and 36. The other commercial banks showed ROA that was not changing much over the five years. This data indicated that POLS could be appropriate for this data.
The study also provided the overlain plots for all the commercial banks that showed the differences among the commercial banks. The results are presented in Figure 4.2. This indicated that the intercepts for the different commercial banks may not be materially different apart from two commercial banks which indicated significant differences with the others. Since the basic model assumes that the intercept is the same for all firms, this was indicated to apply for this data. The overlain plot in Figure 4.2 also indicated that there seemed to be no time related fixed effects as most of the plots seemed to move in the same direction.
Figure 4.23: Overlaid Plots of ROA

The study then tested the collinearity among the variables using a correlation matrix. The correlation matrix is presented in Table 4.1. The study sought to apply a linear regression methodology and hence no two variables could have very high correlation. This hence was done to preclude the problem of multicollinearity. Results in Table 4.1 indicate that the relationship among the independent variables gender diversity (GD), technical diversity (TD), independence of board members (Ind), age diversity (AD) and diversity in nationality (ND) were not high as the highest correlation was -0.5597. This hence precluded multicollinearity.
Table 4.13: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>AD</th>
<th>GD</th>
<th>TD</th>
<th>Ind</th>
<th>ND</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AD</td>
<td>0.0469</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GD</td>
<td>0.0713</td>
<td>0.2282</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TD</td>
<td>-0.0871</td>
<td>-0.1379</td>
<td>0.1770</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ind</td>
<td>-0.0871</td>
<td>-0.1379</td>
<td>0.1770</td>
<td>1.0000</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>ND</td>
<td>0.0045</td>
<td>0.1062</td>
<td>-0.5597</td>
<td>-0.2395</td>
<td>-0.2395</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

To confirm whether there was multicollinearity, the Variance Inflation Factors (VIF) was applied. Results are presented in Table 4.2. These results indicated that there was no multicollinearity as no variable had VIF of above 5.

Table 4.24: Variance Inflation Factors

<table>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>GD</td>
<td>1.68</td>
<td>0.596863</td>
</tr>
<tr>
<td>ND</td>
<td>1.62</td>
<td>0.619020</td>
</tr>
<tr>
<td>AD</td>
<td>1.18</td>
<td>0.850129</td>
</tr>
<tr>
<td>TD</td>
<td>1.09</td>
<td>0.920351</td>
</tr>
</tbody>
</table>

| Mean VIF | 1.39 |

To test for serial correlation, the Wooldridge test for autocorrelation in panel data was applied which has the null hypothesis of no first order serial correlation. Results are presented in Table 4.3. The results indicate that there was no first order serial correlation (F = 0.571; p > 0.05).
Table 4.3: Test for Serial Correlation

<table>
<thead>
<tr>
<th>Wooldridge test for autocorrelation in panel data</th>
</tr>
</thead>
<tbody>
<tr>
<td>H0: no first-order autocorrelation</td>
</tr>
<tr>
<td>F( 1, 37) = 0.571</td>
</tr>
<tr>
<td>Prob &gt; F = 0.4546</td>
</tr>
</tbody>
</table>

4.3 Descriptive Statistics

The study also provided the descriptive statistics of the variables under study for all the 38 commercial banks. The descriptive statistics indicate the distribution of the panel data on the means, standard deviations minima and maxima. The results are presented in Table 4.4. The average ROA for the commercial banks was 4.87% while the average male proportion (GD) was 0.87. Results also established that technical diversity (TD) was 0.5 while proportion of independent directors (Ind) was 0.789. Moreover, results indicated that average age (AG) was 54.51 years while nationality diversity was 0.5858.
Table 4.46: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>4.868063</td>
<td>8.419801</td>
<td>-23.12</td>
<td>55.62</td>
<td>N = 190</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>7.869026</td>
<td>-15.322</td>
<td>37.204</td>
<td>n = 38</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>3.206553</td>
<td>-5.615937</td>
<td>23.28406</td>
<td>T = 5</td>
</tr>
<tr>
<td>GD</td>
<td>0.8691823</td>
<td>0.1306143</td>
<td>0.375</td>
<td>1</td>
<td>N = 190</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>0.1228178</td>
<td>0.525</td>
<td>1</td>
<td>n = 38</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.0479074</td>
<td>0.7091823</td>
<td>1.024182</td>
<td>T = 5</td>
</tr>
<tr>
<td>TD</td>
<td>0.4997003</td>
<td>0.0888283</td>
<td>0.3</td>
<td>0.8</td>
<td>N = 190</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>0.0703244</td>
<td>0.3621212</td>
<td>0.64</td>
<td>n = 38</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.0552233</td>
<td>0.3397002</td>
<td>0.6597003</td>
<td>T = 5</td>
</tr>
<tr>
<td>Ind</td>
<td>0.789019</td>
<td>0.0950958</td>
<td>0.5</td>
<td>0.916667</td>
<td>N = 190</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>0.0950054</td>
<td>0.5</td>
<td>0.916667</td>
<td>n = 38</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.01443</td>
<td>0.6414</td>
<td>0.839019</td>
<td>T = 5</td>
</tr>
<tr>
<td>AD</td>
<td>54.50913</td>
<td>3.66251</td>
<td>49</td>
<td>73</td>
<td>N = 190</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>3.535262</td>
<td>49.73333</td>
<td>71.36</td>
<td>n = 38</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>1.086467</td>
<td>50.7758</td>
<td>57.7758</td>
<td>T = 5</td>
</tr>
<tr>
<td>ND</td>
<td>0.5858495</td>
<td>0.1307636</td>
<td>0.375</td>
<td>1.333333</td>
<td>N = 190</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>0.1029543</td>
<td>0.4464286</td>
<td>0.9142857</td>
<td>n = 38</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.0819991</td>
<td>0.3858495</td>
<td>1.032516</td>
<td>T = 5</td>
</tr>
</tbody>
</table>

4.4 Post Diagnostic Tests

After the selected POLS model was run post estimation diagnostics were conducted to establish whether the model was a good fit. First, the test of homoscedasticity was conducted using the white test. The results are presented in Table 4.5. The results indicate that the null hypothesis for homoscedasticity could not be rejected (chi square = 15.56; p > 0.05). This is because the significance was greater than the 5% significance level applied. This indicated that the residuals had equal variances.
Table 4.57: Tests for Homoscedasticity

<table>
<thead>
<tr>
<th>Source</th>
<th>chi2</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heteroskedasticity</td>
<td>15.56</td>
<td>20</td>
<td>0.7437</td>
</tr>
<tr>
<td>Skewness</td>
<td>3.56</td>
<td>5</td>
<td>0.6145</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>2.74</td>
<td>1</td>
<td>0.0979</td>
</tr>
<tr>
<td>Total</td>
<td>21.86</td>
<td>26</td>
<td>0.6966</td>
</tr>
</tbody>
</table>

The test for the normality of residuals was graphically tested using the Norma QQ plots for residuals. The results are presented in Figure 4 which indicates that the residuals did not deviate significantly from normal distribution.
After the post tests, it was established that the model was a good fit and was reliable and is presented in the following section.

4.5 POLS Regression

The POLS regression was justified as there seemed to be few differences in the firms on ROA and the firms also seemed to have the same intercepts. Moreover, the board diversity characteristics were not expected to change materially in the firms as board is not expected to materially change from year to year. The results of the developed POLS model are then presented in Table 4.6.
Table 4.68: POLS Model

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>Number of obs = 190</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>897.598208</td>
<td>5</td>
<td>179.519642</td>
<td>F( 5, 184) = 2.64</td>
</tr>
<tr>
<td>Residual</td>
<td>12501.1868</td>
<td>184</td>
<td>67.9412326</td>
<td>Prob &gt; F = 0.0247</td>
</tr>
<tr>
<td>Total</td>
<td>13398.785</td>
<td>189</td>
<td>70.8930424</td>
<td>R-squared = 0.0670</td>
</tr>
</tbody>
</table>

| ROA | Coef. | Std. Err. | t  | P>|t| | [95% Conf. Interval] |
|-----|-------|-----------|----|-----|----------------------|
| GD  | -37.93688 | 15.52519 | -2.44 | 0.015 | -68.56716 -7.306594 |
| TD  | 73.64861  | 23.38893 | 3.15 | 0.002 | 27.50365 119.7936 |
| Ind | -11.93853 | 6.662314 | -1.79 | 0.075 | -25.08288 1.205822 |
| AD  | -.055541  | .1786831 | -.31 | 0.756 | -.4080722 .2969902 |
| ND  | -51.69858 | 18.27104 | -2.83 | 0.005 | -87.74625 -15.6509 |
| _cons | 43.7747  | 17.48951 | 2.50 | 0.013 | 9.26893 78.28046 |

Table 4.6 presents the results of the POLS model. The r squared of the model was 6.70 percent indicating that the model explained 6.7% of the variation in financial performance of the 38 commercial banks. This r squared was justifiably low because there were various other factors which significantly influence performance including management efficiency, assets, working capital management, employee efficiency and use of technology.

The results in Table 4.6 indicate that the model was statistically significant (F = 2.64; p < 0.05). This indicates that the board diversity factors that had been included in the model could provide important predictive power on financial performance of the firms. These findings indicate that have high proportion of male directors in the board could lead to reduced financial performance of the commercial banks. The implication of these
findings is that having a high number of female directors in the board is good for financial performance if the commercial banks. The study results on the significant effect of gender diversity on financial performance concur with findings by Nakano and Nguyen (2014) that proportion of male board members had a significant negative effect on performance of the firm. The findings also agree with the findings by Abdullah and Ismail (2013) which established that gender diversity was positively associated with ROA.

The study results in Table 4.6 indicated that gender diversity (GD) ($\beta = -37.9369; p < 0.05$) was a significant negative predictor of financial performance of commercial banks. These findings indicate that have high proportion of male directors in the board could lead to reduced financial performance of the commercial banks. The implication of these findings is that having a high number of female directors in the board is good for financial performance if the commercial banks. These findings indicated that demographic diversity of the board had a significant effect on financial performance. These results enabled the study to test the null hypothesis that board gender diversity has no effect on financial performance of firms listed in the NSE. At 5% significance level, this hypothesis was rejected.

The study results in Table 4.6 also indicated that board technical diversity (TD) had a significant positive effect on financial performance of the commercial banks ($\beta = 73.6486; p < 0.05$). These results indicated that commercial banks with a huge diversity of skills in their boards performed significantly better than those commercial banks that
had fewer skills in their boards. These results enabled the study to test the null hypothesis that board technical diversity has no influence on financial performance of firms listed in the NSE. This null hypothesis was rejected. These results indicated that commercial banks with a huge diversity of skills in their boards performed significantly better than those commercial banks that had fewer skills in their boards. The results of the significant effect of board technical diversity on financial performance concur with the proposition of the group diversity theory by Cox (1993). This theory advocates that inclusion of members with distinctly different cultural and technical significance and group affiliations can enhance the group’s effectiveness. Similarly, this theory postulates that when a group is made up of individuals from diverse backgrounds, that group becomes more effective than a group made up of individuals from similar backgrounds. This study established that having a board that is diverse in skills had a positive influence on financial performance. The study results, however, disagree with results from a study by Chen et al. (2015) in UK that there is no relationship between board technical diversity and financial performance. The study results also support the findings by Marinova et al. (2010), Horvath and Spirollari (2013), and Ekadah and Mboya (2012) which all found insignificant effect of technical diversity on financial performance. The study results also supported the findings by Fan (2012) that financial performance of the firms was induced by diversity in disciplines that the board members had studied. The study results however, contradicted the findings by Letting et al. (2012) who established that board members from different specializations or professions did not have any significant effect on ROA.
The results in Table 4.6 also indicated that board independence (Ind) did not have a significant effect on financial performance of the commercial banks (β = -11.9385; p > 0.05). This indicated that boards of commercial banks that had a high proportion of independent directors may negatively affect performance though that effect was not significant. The results enabled the study to test null hypothesis that the proportion of independent board members in corporate boards of commercial banks has no effect on financial performance of those commercial banks. The hypothesis was tested at 5% significance level and accepted. This indicated that boards of commercial banks that had a high proportion of independent directors may negatively affect performance though that effect was not significant. These results did not support the agency theory (Jensen and Meckling, 1976).

Agency theory depicts that a board of directors have a monitoring role which aligns the objectives of the management with those of the owners of the business hence ensuring that management acts according to the interest of the shareholders. This theory hence depicts that independent directors are more able to do the monitoring role that executive directors. The theory further posits that when the board is more independent, it will be in a better position to deal with agency problem between management and shareholders and hence ensure that the firm performs effectively. The findings however, indicated that the independence of the board did not significantly influence financial performance. This contradicts the findings by Bhatt and Bhattacharya (2015) and Gaur et al. (2015) that found significant positive relationship and also with Kumar and Singh (2013) which
established significant negative relationship between board independence and financial performance.

The results that board independence was negatively related with financial performance supports the stewardship theory that was developed by Donaldson (1990). The stewardship theory assumes that people are inherently motivated to do good as long as the conditions in the organization are conducive enough. The stewardship theory hence posits that the interests of managers are aligned with the interest of the shareholders and other stakeholders. The role of the board of directors in such a context is therefore to provide leadership, design strategies and guide management towards organizational advancement and competitive advantage. This hence indicates that a board with more executive members would play this role better due to the insider insight that executive members provide the board with.

The study results in Table 4.6 also indicated that board age diversity (AD) did not have a significant effect on commercial banks performance (ROA) ($\beta = -0.0555; p > 0.05$). These results indicated that the ages of the board members did not influence the financial performance of the commercial banks. These results led to acceptance of the null hypothesis of the study that board age diversity has no effect on financial performance of commercial banks. These results indicated that the ages of the board members did not influence the financial performance of the commercial banks. These findings indicated that age diversity did not have any significant effect on financial performance. These results supported the results from a study by Letting et al. (2012) which established that
that there was no significant effect between board age diversity and financial performance.

Lastly, the study results in Table 4.6 established that board nationality diversity (ND) had a significant negative effect on financial performance of the commercial banks ($\beta = -51.6986; p < 0.05$). This indicated that commercial banks with boards which comprised members from many nationalities performed poorly than those commercial banks with boards members from fewer nationalities. The results enabled the study to test null hypothesis that the board nationality diversity has no effect on financial performance of those commercial banks. The hypothesis was tested at 5% significance level and was rejected. This indicated that commercial banks with boards which comprised members from many nationalities performed poorly than those commercial banks with boards members from fewer nationalities. These results agree with the findings by Merendino (2014) who established that there was no relationship or effect of board nationality diversity on financial performance. The study concluded that firm financial performance is not influenced by increase or decrease of board members from different nationalities.
CHAPTER FIVE

RESEARCH SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Presented in this chapter is a summary of the research findings, discussion of the results, conclusion and the recommendations that are made in the study. The summary of the findings provides the major results that were derived from the study and also offers a discussion of these key findings. The discussion is also provided in relation to the theories and previous empirical studies on board diversity and financial performance.

5.2 Summary of the Study

The results show that gender diversity (GD) was a significant negative predictor of financial performance of commercial banks ($\beta = -37.9369; p < 0.05$). These findings indicate that having a high proportion of male directors in the board could lead to reduced financial performance of the commercial banks. The implication of these findings is that having a high number of female directors in the board is good for financial performance if the commercial banks.

The study results revealed that board technical diversity (TD) had a significant positive effect on financial performance of the commercial banks ($\beta = 73.6486; p < 0.05$). These results imply that commercial banks with a huge diversity of skills in their boards performed significantly better than those commercial banks that had fewer skills in their boards. These results enabled the study to test the null hypothesis that board technical diversity has no influence on financial performance of firms listed in the NSE. This null hypothesis was rejected. These results indicated that commercial banks with a huge
diversity of skills in their boards performed significantly better than those commercial banks that had fewer skills in their boards.

The results indicated that board independence (Ind) did not have a significant effect on financial performance of the commercial banks ($\beta = -11.9385; p > 0.05$). This implied that boards of commercial banks that had a high proportion of independent directors may negatively affect performance though that effect was not significant. The results enabled the study to test null hypothesis that the proportion of independent board members in corporate boards of commercial banks has no effect on financial performance of those commercial banks. The hypothesis was tested at 5% significance level and accepted.

Study findings indicated that board age diversity (AD) did not have a significant effect on commercial banks performance (ROA) ($\beta = -0.0555; p > 0.05$). These results suggested that the ages of the board members did not influence the financial performance of the commercial banks. These results led to acceptance of the null hypothesis of the study that board age diversity has no effect on financial performance of commercial banks.

Lastly, the study results established that board nationality diversity (ND) had a significant negative effect on financial performance of the commercial banks ($\beta = -51.6986; p < 0.05$). This indicated that commercial banks with boards which comprised members from many nationalities performed poorly than those commercial banks with boards members from fewer nationalities. The results enabled the study to test null hypothesis that the
board nationality diversity has no effect on financial performance of those commercial banks. The hypothesis was tested at 5% significance level and was rejected.

5.3 Conclusions of the Study

Guided by the study findings, the study makes the following conclusions. First, the study concludes that board gender diversity was a significant factor in explaining performance of commercial banks in Kenya. Having a high proportion of male board members had a negative effect on performance. The implications of these findings are that increasing the female gender in the board is expected to have a positive effect on financial performance of commercial banks.

Secondly, the study concludes that board technical diversity positively influences financial performance of the commercial banks. firms listed in the NSE (β = 73.6486; p < 0.05). Therefore, commercial banks with boards that have a huge diversity of skills would perform significantly better than those commercial banks that have fewer skills in their boards.

Third, the study concludes that board independence does not significantly affect financial performance of the commercial banks. This implies that board members are inherently motivated to do good as long as the conditions in the organization are conducive enough and this is not determined by their independence. The board of directors regardless of their independence are able to provide leadership, design strategies and guide management towards organizational advancement and competitive advantage.
Fourth, board age diversity did not have a significant effect on financial performance of commercial banks. The implication of this is that having n=board members from diverse ages will not have any considerable effect on the financial performance of commercial banks. The mix of ages of the board members is hence not material.

Lastly, the study concludes that having board members from very diverse nationalities would have a negative effect on financial performance of the commercial banks. This indicates that commercial banks with board members from less diverse nationalities are expected to enable the bank to perform better.

**5.4 Recommendations of the Study**

Guided by the study conclusions, the study makes the following recommendations. Technical diversity, gender diversity and nationality diversity were the only significant factors influencing financial performance of the commercial banks. The recommendations made from these findings is that when selecting boards members, shareholders should consider having a board that is composed of members from different professions which is expected to provide a diverse view of issues. Moreover, boards should have good representation of female directors to effectively lead and enable the firms to implement its strategies. Moreover, commercial banks should ensure that the diversity of the nationalities of the board members is controlled to ensure harmony.

The study also recommends to the shareholders of the commercial banks to ensure that age diversity is informed by the interests of the banks not just for the sake of having a demographically diverse board. On independence, commercial banks should ensure a
board of optimum mix between inside and outside directors to enable it effectively to carry out its mandate. This can only be arrived at after careful consideration on what the activities of the boards in the commercial banks are.

5.5 Contribution to Knowledge

This study contributed immensely to knowledge as it was able to empirically test the effect of board diversity aspects on financial performance of commercial banks in Kenya. the study focussed on five board aspects including gender, age, nationality, technical competence and independence. This is unlike previous studies that focussed so much on gender diversity and hence not providing information about other board composition aspects. This study hence provides critical information to policy makers and corporate leadership regarding compositions of boards for effectiveness.

5.6 Suggestions for Further Research

This study investigated the influence of board composition on financial performance of commercial banks in Kenya. Specifically, the study interrogated the effect of board gender diversity, board members’ nationality, board members’ technical expertise, board members’ independence and board members’ age on financial performance of commercial banks in Kenya. the study provided key findings that can be vital in informing board composition in financial institutions. The findings of the study can however be only generalizable to financial institutions that have regulatory, economic and contextual environments that are similar to commercial banks. To provide empirical evidence that can be generalizable to non-financial firms, a study is suggested on these
firms. Future studies on effect of board composition on firm performance can focus on manufacturing, commercial firms and even medium firms.
REFERENCES


van der Walt, N.T. & Ingley, C.B. (2014). Board dynamics and the influence of professional background, gender and ethnic diversity of directors. Paper presented at 5th International Conference of Corporate Governance and Direction, Henley Management College, 8 - 10 October, UK.


APPENDICES

Appendix I: Data Collection Form

Commercial Bank

<table>
<thead>
<tr>
<th>Yr</th>
<th>Total age of board members</th>
<th>Number of members in the board</th>
<th>Female members</th>
<th>Number of professional skillsets</th>
<th>Non-executive directors</th>
<th>ROA (return on assets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
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<td></td>
<td></td>
</tr>
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<td>2014</td>
<td></td>
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<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix II: List of Commercial Banks in Kenya

1. Barclays Bank of Kenya
2. Equity Bank
3. Standard Chartered Kenya
4. Bank of Africa
5. Diamond Trust Bank
6. African Banking Corporation
7. Citibank
8. Bank of India
9. Giro Commercial Bank
10. Consolidated Bank of Kenya
12. Credit Bank
14. Dubai Bank
15. Ecobank Kenya
16. NIC Bank
17. CfC Stanbic Bank
18. Spire Bank
19. Family Bank
20. Fidelity Commercial Bank Limited
21. Chase Bank Kenya (In Receivership)
22. First Community Bank
23. Guaranty Trust Bank Kenya
24. Cooperative Bank of Kenya
25. Guardian Bank
26. Paramount Universal Bank
27. Gulf African Bank
28. Oriental Commercial Bank
29. Habib Bank AG Zurich
30. United Bank for Africa
31. Imperial Bank Kenya (In receivership)
32. Jamii Bora Bank
33. Middle East Bank Kenya
34. Bank of Baroda
35. Kenya Commercial Bank
36. Prime Bank (Kenya)
37. Sidian Bank
38. Trans National Bank Kenya
39. Habib Bank
40. I&M Bank
41. Commercial Bank of Africa
42. Victoria Commercial Bank