

**BOARD DIVERSITY AND FINANCIAL PERFORMANCE OF KENYAN
COMMERCIAL BANKS**

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DECLARATION

This research project is my original work and it has not been presented and submitted to any in university or college for examination.

Signed.....

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



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I acknowledge the assistance and guidance of my supervisor Professor Josiah Aduda whose critique provided knowledge and insight in my research project undertaking.

DEDICATION

I dedicate this research project to my family, their support both and financial enabled me complete my studies.

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LIST OF ABBREVIATIONS/ACRONYMS

BOD	-	Board of Directors
CEO	-	Chief Executive Officer
CG	-	Corporate Governance
CMA	-	Capital Markets Authority
RDT	-	Resource Dependency Theory
ROA	-	Returns on Assets
ROE	-	Returns on Equity
FP	-	Financial Performance

ABSTRACT

Board composition is a major determinant of an organization's financial performance. In the previous two decades, policy makers, scholars and professionals have engaged in discourse about role of boards as a major component of corporate governance. A section of scholars have highlighted how board directors' attributes can have significant impact on company performance due to their varying orientations. Accordingly, the typical attributes used to categorize the various board members includes age, education gender, and the individual's corporate experience. Board members chosen subjectively rather than by merit can fail to be objective with the interests of the organization. The objective of the study was to establish the impacts of having a company board that has embraced diversity and its short and long term impact on company's profitability with a focus on Kenyan commercial banks. It also aimed at reviewing the increasing body of theoretical and empirical studies that have endeavored to examine the range of magnitude and effects of board diversity on the financial performance of commercial banks. The target population was all the 42 licensed commercial banks. Secondary sources of data were employed. Panel data was utilized, data was collected for several units of analysis over a varying time periods. The research employed inferential statistics, which included correlation analysis and panel multiple linear regression equation with the technique of estimation being Ordinary Least Squares (OLS) so as to establish the relationship of board diversity and financial performance of commercial banks. The study findings were that board diversity significantly influences financial performance and it can be utilized to significantly predict financial performance. Further findings were that average board experience had both a significant positive association and relationship with financial performance. An additional finding is that directors' age has a significant positive association with financial performance but has an insignificant relationship with financial performance. The final finding was that both gender diversity and educational qualification neither had a significant association nor relationship with financial performance. Policy recommendations are made to the National Treasury and CBK to direct commercial banks, and by extension other financial institutions, to implement corporate governance principles that ensure appropriate board diversity and adhere to a corporate governance code. Recommendations are also made to commercial bank practitioners, and by extension other financial institutions practitioners and consultants to enhance board diversity in order to augment the financial institutions' financial performance and to mainly focus on the board diversity aspect that entails average board experience in order to enhance financial performance.

CHAPTER ONE

INTRODUCTION

1.1 Background

A company's board of directors typically comprise the control mechanism used by organizations internally to control the appointment, supervision and remuneration of top management in institutions besides strategy formulation (Minguez & Campbell, 2010). Ujunwa (2012) asserts that the boards' composition is a major determinant of an organization's financial performance. In the previous two decades, policy makers, scholars and professionals have engaged in discourse about role of boards as a major component of corporate governance (Tricker, 2009). A section of scholars have highlighted how board directors' attributes can have significant impact on company performance due to their varying orientations. Accordingly, the typical attributes used to categorize the various board members includes age, education gender, and the individual's corporate experience (Letting et al, 2012). Board members chosen subjectively rather than by merit can fail to be objective with the interests of the organization.

A majority of the boards constituted in organizations based in Kenya are usually male dominated as the appointments are done through closed networks such that the exiting male directors normally introduce their associates before the expiry of their term (Ekadah and Mboya, 2011). Such appointments prove detrimental to many women who seek opportunities with corporate boards thus depriving the organization of the services of women leadership (Ekadah & Mboya, 2011). Multiple study efforts impact of having boards that embrace diversity including gender balance and the effect on the organization's financial performance are yet to focus Commercial

Banks across Kenya. Due to the scant research focusing on Commercial Banks in Kenya, this task will focus on exploring this sector using secondary data sources from the Central Bank websites and the NSE.

Over the years, the Kenyan government has increased educational and employment opportunities for women and other marginalized groups. Further, recently, there has had been more push for women empowerment and for them to be given more prominent administrative roles which is expected to lead to more transformative changes. Laws and regulations are which push women from their traditional jobs of teaching and social care services to more male-dominated jobs such as heading company boards.

1.1.1 Board Diversity

Board diversity has been described as the proportion of racial minorities, ethnic and women constituting a board. (Wang & Cliff, 2009). Across the world, board diversity often includes age distribution, physical impairment, gender, educational qualification and other different forms of diversity have been the center of debate and scholarly interest. Consequently, many organizations are now implementing measures to increase the number of person from younger age groups, women, ethnic and racial minorities in their top leadership. This initiatives include focusing on corporate governance, networking for progress and setting diversity standards and appropriate metrics to measure progress. Chanavat and Ramsden (2013) such measures have seen a steady and significant increase of women in women taking positions on corporate boards. Freeman (1984) analyzed board assorted qualities from a gender, minor and ethnic point of view whereby he incorporates assortments of board aptitudes. Further, Marimuthu (2008) clarified that

a group having diversity attributes is characterized as having females, Asians, African American, Asian, and Hispanic. This sentiments was shared by Freeman (1984). Generally, corporate boards are a product of director characteristics, experience, viewpoints, and possessing the necessary skills perceived as suitable for the specific organization. The core attributes of the directors serving in the boards should address management experience, finance or accounting, customer- care experience, industry knowledge, disaster response, leadership and strategic planning capabilities. Freeman (1984) opines that have boards that have persons from diverse backgrounds boards are often beneficial to the organization.

1.1.2 Financial Performance of Companies

Financial performance is simply outlined in output terms as the accomplishment of quantified objectives (2006). Firm performance is typically multidimensional and comprise of four components (Alamet, 2011): Human resource execution, containing employee fulfillment; firm profitability, for example, time to market, supply chain adaptability, degree of innovation ; client based performance, such as consumer loyalty, and product or service execution ;financial and economic performance, including returns, market position, revenue, earning per share and cash-to-cash cycle time.

Market centric measures of company's execution were completed by Shah et al. (2011) such that monetary reporting was ROI and ROE. Other measures include return on assets, turnover ratio, operating margin, sales per worker, cash flows, operating income, sales and growth of assets (Bhagat & Black, 1999).

This research will focus critical measures that are necessary for commercial banks to attain their objectives. Therefore, this study would compute the financial the banks' financial performance by focusing on output ROE and ROA. ROA indicates the measure of net profit returned as a rate of the total assets. The ROE alludes to the measure of net pay returned as a rate of stockholder's equity. It measures an organization's bottomline by determining the amount of profit a bank produces with the funds contributed by shareholders.

1.1.3 Board Diversity and Its Link to Company Profitability

Various scholars are of the view that diversity can lead to positives benefits for the organization including enhanced performance (Marimuthu, 2008; Allen et al, 2008). Fan (2012) also concurs with this finding that indeed there is a positive correlation between the type of gender of persons making up the board and Tobin's Q ratio of financial execution. Allen (2008) established that organizational performance is linked critically to the diversity found in both the non-managerial and senior management levels of an organization. ROA and Tobin Q ratio have been used by Prihatiningtias (2012) to assess financial performance. The researcher noted that a firm financial execution was affected by gender diversity both adversely and affirmatively.

Conversely, studies between 2006 and 2008 focusing on Italian corporate boards found no statically considerable relationship between having female board members on listed firms and improved performance on the stock exchange (Schwizer et, al., 2012) .Mwatsuma et al. (2012) noted that there was a negative association between the number of persons making up a board and how organizations performed in the agricultural sector in Kenya. While it is generally perceived that there is exists affirmative link between an organization's profitability and board

diversity, various studies conducted across the world have demonstrated mixed findings. As a result, there is need to conduct further studies especially in the Kenyan context as there have been even fewer studies in the country meant to explore the relationship.

1.1.4 Kenya's Commercial Banks

These banks play a vital in Kenyan society as they add to the financial development of the nation by availing resources for investments in addition to financial deepening in the nation. In this study, all commercial banks are used because of the availability of information on their performance through their annual reports which are available freely to the public. Since the year 2000, the financial performance of banks has considerably improved. Data retrieved from the CBK database shows an improvement of growth and financial performance of all industries. While this is the case, some banks, especially the foreign banks, have been performing better than others.

Diversity has an affirmative outcome on boards in terms of effectiveness, especially its capability to participate in addressing issues and strategy formulation and implementation. Accordingly, boards in corporate banks are viewed as learning-based resource which adds significance for stockholders by connecting an company to the external environment .Due to their unconventional skills and values, different board members deliver scarce economic resources to their organizations which assist in the understanding of the bank's dynamic industry. To increase a company's understanding of its industry and enhance corporate performance, the presence of skills and knowledge is required to cater to boards' expert needs especially when boards match their diversity to that of customers and suppliers. The diversity found in boards may also provide

improved access to capital more so for companies that operate in a regulated industry such as banking and capital markets. Therefore, board diversity creates shareholder value in corporate governance in the market.

1.2 Research Problem

The issue of diversity on boards of companies has increasingly become an issue of debate in recent years due to the spotlight on boards after recent corporate failures. While there are those who argue that more diversity on boards contribute to better corporate governance practices which in turn leads to improved financial performance there are those who argue there is no significant relationship between the two. The debate has spilled from the boardrooms to academic halls where scholars have offered mixed opinions on the same issue. The debate is still open on the contribution of diverse boards with respect to the company's financial performance.

Management theories such as diversity management give theoretical explanations on why more women and other marginalized groups should be included on boards. The theory posits that more diverse boards lead to improved performance. The resource dependence and the agency theoretical frameworks advance that there exists a positive link between diversity in corporate boards and organizational profitability. Another section of scholars exploring the agency theory posit that diversity in boards is one measure of their independence (Jensen & Meckling, 1976). Muth and Donaldson, (2013) Others have argued that independent boards are more effective at their management function of monitoring and control and this may lead to a positive financial performance (Muth & Donaldson, 2013). Further studies done to explore the impact of company board diversity and how it influences how firms perform financially have provided inconsistent

and mixed evidence (Campbell & Minguez, 2010). Rose (2017) suggests board diversity can negatively impact financial performance. The mixed conclusions suggest that there should be more clarity about the impact having a diverse board on organizational financial performance.

Clarifying the impact and role of diverse boards on organizational financial performance would benefit from further empirical inquiry including this one. While many studies have focused on countries such as the U.K , U.S, Norway, Spain and numerous first world nations , the researcher found no studies focused on Kenyan banks (Adams & Ferreira , 2009). Additionally, most of the studies had not highlighted the specific percentage of minorities and women in the boards of companies that were investigated. Also, there were multiple cases of inconsistencies regarding the measure of company performance used.

Mwangi (2015) explains that despite the presence of overwhelming evidence with respect to the qualities women and minorities bring to a firm's board it is not yet clear about their impact on company's financial performance. The conflicting results of evidence suggest that study findings might be country specific. There is growing interest in Kenya with regard to the subject as companies seek to maximize shareholders wealth.

Due to the lack of conclusive findings and evidence with regard to diverse boards on company performance the researcher sought to explore the impact of having diverse boards on the firm's profitability by comparing firms whose boards are diverse with those that are not. The researcher then sought to establish which group had a superior performance.

1.3 Study Objective

The key goal of this inquiry was to establish the impacts of having a company board that has embraced diversity and its short and long term impact on company's profitability with a focus on Kenyan commercial banks.

1.4 Significance of the Research

Previously done studies exploring the correlation between the extent of diversification of company boards and their profitability have often mostly focused on developed nations. For instance, Germany, Italy, the U.S and Australia have recently passed legislation that is concerned with a mandatory number of females sitting in board. The issue of diversity of boards and its influence on financial performance presents multiple opportunities for further academic research. This study will assist future researchers in providing reference materials with regards to the banking sector in developing countries like Kenya.

The conclusions of this empirical inquiry will reduce the knowledge gap concerning the composition of boards and its impact on maximizing stakeholder value as measured by employing different variables. The study findings will accord financial establishments, advisers and businesspersons with the suitable gear to their profitability. In addition, these conclusions will provide data that will provide a suitable guideline to the Kenyan Government concerning future legislation about mandatory gender requirements in Kenyan companies. Additionally, the study foundation for future investigation in theories about corporate governances concerning corporate governance targeting emerging countries because most studies investigating the issue have been hitherto focused on advanced countries.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter considers various literature that is related to the impact diverse company boards and the financial performance of commercial banks. Its presentation starts with the theoretical literature then empirical literature and the researcher's conclusion. According to Mugenda and Mugenda (2003), Literature analysis involves a systematic identification, position and examination of documents containing data linked to the study problem being examined. The objective was to get a deeper insight of the past, development and direction which provides justification in revealing the knowledge gap necessitating this study.

2.2. Theoretical Review

This part assesses the different theories related to Board Diversity. This includes the background to the economic empowerment of marginalized groups, agency theory, stewardship theory and shareholders theory.

Empowerment of commonly marginalized persons is fundamental in improving the quality of life among the most vulnerable groups in society, particularly women and children according to UNICEF. Discriminatory hiring practices aggravate both economic and social insecurity thereby undermining development achievements. Vast resources have been allocated by Non-Governmental organizations (NGOs), international agencies, and governments to curb practices that prevent marginalized persons from accessing work opportunities. Among the primary

objectives of these entities is to ensure that everyone has an equal chance of finding in a merit based system. The approach applied by policy makers and other relevant organizations to bring interventions to existing hiring conditions to ensure everyone has an equal chance of serving in any capacity in modern day workplaces including gender sensitivity as part of the women empowerment program.. Women's economic empowerment entails the process of increasing women's power in economic decisions which is dependent on economic resources and opportunities, financial services, employment opportunities, property or assets, and the developments of skills (Uzoamaka, et al., 2016) (Rahman, 2013). Women empowerment encompasses a multi-dimension structure that strives to transform the social, economic, political, cultural, legal and psychological perspective of women in the broader society (Fatile, et al., 2017)

The continued inclusion of women in economic spheres has led to multiple positive outcomes. For instance areas recovering from conflict violence principally in the Middle East has given rise to a large number of start-ups and social entrepreneurship for economic revival, social reconciliation and community building. According to data from the Women's Entrepreneurship report, women, through the assistance of international bodies, have pioneered new value chains to explore the dynamic market by engaging in innovative business ideas. The report further states that women entrepreneurs in the North Africa, sub-Saharan Africa and the Middle East region have a 60% higher aspect of formulating innovative solutions than males and an additional 30% have links in the international markets (Peace Science Digest, 2018a). The reports indicate that women have an inherent ability to transform the business they run into profitable entities. However, women still face many obstacles in many developing countries including high

illiteracy levels and lack of adequate training to efficiently devise entrepreneurial skills (Lockett & Bishop, 2012). Some cultural and structural elements have discriminatory features against women in terms of .Women are more prone to exploitive working conditions, for example, in rural farms, women are exposed to unpaid working conditions or are prejudiced against equal opportunities which limit their income levels for entrepreneurship.

2.2.1 The Agency Theory

This concept as advanced in the 1970s by Jensen and Meckling (1976) argues that in companies that have embraced equity tend to derail from shareholders expectation of maximizing their wealth, thereby creating the agency problem (Jensen & Meckling, 1976). The theory holds the proposition that in cases where there is information asymmetry, agent actions may end up hurting the owners. Eisenhardt (1989) states that the office agency issues emerge in cases where the wishes and aims of the principle and agent are not aligned, or when it is impossible or costly for the principle to understand their agents' operations.

The concern is that the principal can't check that the agent is acting properly and to his greatest advantage. According to Shleifer and Vishny (1997), office issues can be sorted out with regards to a businessman or manager who raises monies for entrepreneurs to put them into favorable use. Nevertheless, by what means can the financiers make certain that once they sink their assets they will get everything again from the manager?

Jensen and Meckling (1976) explained how entrepreneurs in publicly listed companies bring about expenses in checking and holding managers to the best interest of shareholders. They characterized the organization costs just like the total of expenses of bonding the principle (shareholder) to the agent; monitoring management; and the owing losses. The unmistakable ramifications of corporate governance taken from the agency hypothesis viewpoint is that the control and monitoring programs should be formed to shield stakeholders from having a management that only keen to advance its interests.(Fama & Jensen , 1983). As per the agency perspective, Boards of Directors are set up to screen management for the benefit of shareholders (Eisenhardt, 1989; Jensen &Meckling, 1976).

Agency issue may influence the estimation of an organization through two ways; the expected cash flows amassing to the organization and costs associated with the investment. Jensen (1986) proposes a theory that great administration lessens the assets under the control of managers and in an indirect way diminishes the chance of misappropriations by directors, likewise great administration diminishes the cost of capital either through the reduction of shareholders monitoring and appraisal costs. The share price that the shareholder (principal) pays reveals such agency costs. To magnify firm value one should balance the organization costs against the benefits anticipated that would accumulate to the firm by acquiring such expenses.

This theory was applied in the study as a board with diversity is expected to perform its functions better and therefore 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.

2.2.2 Stakeholder Theory

Clarkson (1994) points out that according to the stakeholder theory the firm comprises of a network of stakeholders that functions within a larger circle. This theory advances that administrators should choose choices that take into account the concerns of all the company's stockholders. Supporters of such an outlook resist, to the point that the current firms' constraints on administrative conduct, for example, non-official executives, the review procedure, the threat of buyout, are lacking to avert managers mishandling corporate supremacy. Shareholders protected by liquid asset markets are apathetic to everything with the exception of the most substantial of exploitations. The main goal of corporate governance entails magnifying the wealth creation of the company altogether (Clarkson, 1994).

In particular, a stakeholder is described as "any person or gathering who influence are impacted by the association's extent of accomplishing its goals" (Freeman, 1984,), and this is "intended to sum up the idea of stockholders as the main category management should focus on" (Freeman, 1984). These classifications form the premise that the modern-day firm is predisposed to vested parties such as stockholders, consumers, bankers, staff, merchants and administration, who are commonly mentioned to as the essential stockholders, who are known to be crucial to the existence and success of the organization. To these the establishment includes secondary stockholders, for instance, the media, the government, the courts, specific vested parties and the general public, that is whole society in general. From this point of view, corporate governance talks about frequently continuing with an obsession with the association between executives and shareholders, which believes that there is one right reply.

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 is better placed to satisfy the different stakeholders and thus making the firm to have good relationships with a myriad of stakeholders. This 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.

2.2.3 Group Diversity Theory

This concept was developed by Cox (1993) to inform the theory of cultural diversity within firms. Cox described diversity as the processes and functions that seek to include of group members who distinctly different cultural orientations and group affiliations. Earlier Cox et al. (1991) had used control groups to investigate inclusion and observed that diversity in various groups tended to improved group effectiveness. This created the idea concerning the concept of value-in-diversity which was improved to the group diversity concept. The theory advances that when groups made up of members from diverse backgrounds are more effective compared to conventional.

This study employs this concept to explore how diversity is related to performance. Categorically, the diversity issues investigated in this review include gender, age, professions and independence. However, not all types of diversity is effectiveness (Ekadah &Mboya, 2012). Following this debate, it is noted that globalization has increased the importance of diversity in

the workplace (Mazur, 2010). This is caused by the fact that companies are now required to address the needs of culturally mixed stakeholders. The present globalized market is therefore underlining the need for diverse workforces in companies including the directors. As a result, having a diverse labor force presents more opportunities to effectively meet stakeholders' needs who demand diversity. 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 Determinants Commercial Banks' Financial Performance

The term financial performance refers to measures of a firm's general monetary wellbeing within a given time allotment and can besides be utilized to research comparative organizations over a similar sector or consider organizations or sections in conglomeration. This study seeks to explore determinants of financial performance as follows:

2.3.1 Board Diversity

A section of scholars have argued that companies with more diversified boards have relatively better performance (Allen et al, 2017). Fan (2012) measured the diversity of boards in Singapore in terms of gender, ethnicity, race and profession and noted that there existed a positive link between boards with diverse members and profitability of companies.

Cognitive diversity of variables such as age, race, color, knowledge and education was studied by Erhardt et al. (2013) who explained that there exists an affirmative relationship between the percentage of women constituting a given board company profitability. Their finding was

contradicted by Daunfeldt and Rudhhlolm (2016) whose concluded that gender diversity had a negative impact on the Return on Total Asset.

2.3.2 General Macroeconomic Conditions

The general market conditions existing at a time affect the financial accomplishment of a firm (Arthur, 2015). In their study Harold et al, (2017) found that in periods of subdued general macroeconomic conditions firm performance declined considerably. They also found out that in periods of favorable macroeconomic conditions company's financial performance was reported to be favorable. Their study was carried out in the USA, Germany, Spain and South Africa where they looked at the economic cycles at different times and the company's financial performance at those times.

Kolade (2012) in his study of Nigerian firms noted deteriorating financial performance in periods of economic meltdown while the converse happened during periods of economic boom. Clair (2014) argued that the financial fulfillment of banks is strongly influenced by the business cycle in the country. She argued that during boom time households commits a significant proportion of their income to service debts hence the rise of income in banks during such periods.

2.3.3 Company size and Leverage

Leverage beyond a certain limit negative effect on the financial achievement of an organization due to the high interest costs associated with high leverage levels (Malenya and Muturi, 2013). Still in their research they identified company age and company size which have positive impact

on company profitability. This was attributed to the economies of scale enjoyed by the larger firms as opposed to small firms.

Chuthamas et al, (2015) in their paper argued that leverage significantly affects company performance as cheap credit acts as a cheap source of capital while expensive credit hinders firm growth and better financial performance as the firm will be bogged down by heavy interest cost. In their study that covered both small sized firms and big firms in Thailand they found out that small firms reported lower RoA and RoE due to the high cost of credit while large firms reported superior RoA and RoE due to cheap credit.

It has also been pointed out that size of a banks size has a considerable impact on its financial achievement (Ongore & Kusa, 2013). They scholars asserted that large banks could easily source of funding and thereafter advanced money to borrowers at relatively higher margins. On the other hand, small banks could only secure expensive funds as investors deemed them as having high risks.

2.4 Empirical Literature Review

Robinson and Dechant (1997) revealed that diversity advances an unrivaled perception of the industry in which an organization works. Because the market is inherently diverse, unique qualities will make it simpler for companies to enter these business segments. Robinson and Dechant (1997) comparably saw that diverse qualities in boards upgraded ingenuity and creative ability. This outlook in this way expresses the attitudes, convictions and intellectual working of people are not scattered in an arbitrary manner. Instead, they are systematically distributed using

factors such as ethnicity, age and gender. It is also seen that diversity encompassing the aspect of gender prompts more conspicuous critical thinking. This is because of various alternatives are meticulously assessed concerning advantages and disadvantages. A few researchers have contended argued that a board embraces gender diversity is inclined to have an affirmative influence on its performance. Diversity experts have gone to a similar presumption that board contrasts have a certifiable result on firm execution.

For instance, identified a similar situation in Spain (Minguez & Campbell, 2008). Disregarding the way that firm profitability was evaluated using Tobin's Q, the conclusion resembled those of bookkeeping metrics such as profit for resources as well as quantifiable profit. This evaluation did not concentrate all enterprises in Spain and firms were annulled from the specimen. This concentrate likewise tended to recorded in the financial segment of Madrid.

These studies involved huge listed firms in Australia between 2000 to 2001. Moreover, they connected 2 Stage Least Square (2SLS) strategy during the investigation of the impact of sexual orientation on firm execution. This indicates how deficient concerning the thought of assorted qualities is. (Bohrens & Stroum 2007) discovered an adverse association between board differences and firm profitability for Norwegian businesses. This was similar to similar studies by Randoy (2006) focusing on Scandinavian states.

Further, Randoy (2006) when conducting studies in several Nordic countries including Norway, Denmark and Sweden saw that varying qualities in diverse boards don't have much effect on the running of the businesses. They surveyed execution by the entry in resources. Meanwhile, a

research by (Rose, 2007) in Denmark set up relative findings to Randoy et al. (2006) highlighting that board differing qualities makes little difference to firm execution. Rose's concentrate however revolved around recorded firms and used Tobin's Q ratio as its execution measure as in opposition to studies by Randoy (2006) that employed profits for resources. This concentrate likewise thought around nations as they were.

Regardless of the examinations of Rose, (2007) and Randoy (2006) identified that board sexual orientation assorted qualities decidedly influences execution of organizations in Denmark. Their study rotated around extensive 2500 Danish firms between 1993-2001. In any case, their study utilized execution techniques, for instance, net value added to the net turnover, benefit on standard operations to the net turnover, traditional result to net resources and the net result after duty to net resources which may be seen to be feeble.

Adusei (2010) discovered that board measure influences bank execution in Ghana. He prescribed the way that littler sheets advantage the performance of the organization as assessed by the profit for value. In an extra study on board measure. It was also established that bigger banks distort the execution of banks in Europe (Staikouras et al., 2007). This along these lines demonstrates that boards with more minorities had better accomplishment of the bank. While a few studies have demonstrated that board measure influences execution, distinctive studies, for instance, those of Belkhir (2009), Adams & Mehran (2005); found no link between the number of persons making up a board and company execution. In particular, Belkhir (2009) undertook a study involving 174 US banks and speculation reserves associations did not express any positive link the number of persons making up a board. Company profitability was assessed using Tobin's Q.

Investigating board setup, Staikoras et al. (2007) discovered that corporates have no impact on company performance similar to Adusei (2010) whose study found no association between board synthesis and bank execution in Ghana paying little heed to the way that board game plan was found to emphatically influence the result of bank suitability. In the time being, there were more studies on 66 banks in various OECD nations between 1996 and 2003 by Gonzalez and Alonso (2006). They set up an adjusted U molded association between the evaluations of bank execution (ROA, Tobin Q the yearly market returns of shareholder) and the board's estimate, which they speculate legitimizes a broad board yet authorizing a viable breaking point on size. Their disclosures likewise demonstrate a positive association between the non-official executives and execution.

Busta (2007) attempted 69 recorded banks from the European Union keeping cash range between 1996-2005 in addition to 125 banks working in Switzerland and the EU. The disclosures for 70 recorded banks reveal that those that hired many foreign administrators have better performance correspondingly as the market return for contributed capital, within Continental Europe, while unfriendly results were found by virtue of UK banks. However, another study found no approval of an essential relationship between board synthesis and ROA (Busta, 2007). Also, the findings from various banking institutions indicate board's size has substantial association with the degree of profitability and conversely related to return on resources; regardless it is insignificant a great part of the time.

More studies assessed some 107 banks within 9 Asian markets for 12 months in 2004 (Zulkafli & Samad, 2007). Their discoveries suggest no basic relationship between execution measures including Tobin Q and the board's size or structure. At last, in perspective of a case of generally traded on an open market association on an open market US banks, it has been reported that cost capability and profit for resources are immaterial related to the rate of insider (outsider) officials (Pi & Timme, 1993).

Carter et al. (2003) conducted a scientific inquiry on the association between board differing qualities and firm execution with a unique thought on the operator speculation. The study uncovered that an expansion in the quantity of female chiefs may build the board's freedom. Smith et al. (2007), uncovered that board differing qualities enhances basic thinking as a pool of abilities and information rise from now on more decisions are assessed. Furthermore, a more differing board may similarly support an organization's favorable position gave it builds up the organizations picture and whether it decidedly influences customers' conduct and thusly on an association's execution (Smith et al., 2007).

Another study assessed whether board's gender diversity had any influence profitability of selected commercial (Mboya & Ekadah, 2012). The study's sample size was 32 Kenyan commercial banks. By employing stepwise regression, the researcher's established that there was no direct impact on financial performance due to board's gender diversity in the banks under study. The present stud differs from that in three ways. That study used data for the period between 1998 to 2009 at a time women representation in most corporate boards was generally

very low. Presently, women representation has increased to more than 12% compared to the 4% representation before 2010.

This study is in a position to provide between the association between women representation in corporate boards and organizational financial performance. Secondly, the previous research by used stepwise regression that was relatively less robust is not suitable for data that is in panel form. This study will use the panel regression framework. For this study, the researchers will include the bank size as well as the board size as the main control variables. These variables have been shown in previous studies as having an influence on performance. Additionally, the previous study also included national diversity and age as opposed to concentrating on gender diversity.

A study done in Kenya by Letting (2013) aimed to identify the link between board diversified boards and company's profitability. The variables that were used to test board diversity were gender diversity, nationality, and academic background and more particularly the impact of having women serving on board on the company's profitability. Semi structured questionnaire were used in the study. The questionnaires targeted company secretaries or the board chairpersons of all listed companies in the NSE . The researchers achieved an 85% response rate. The data on financial performance was accessed from the company's annual reports, and NSE publications. Descriptive statistics was employed to profile board membership of the firms. The years of study were between 2006 and 2009. The study found significant positive relationship between gender diversity, nationality & academic background with the financial performance of firms.

In a similar empirical inquiry Ambaka (2016) sought to explore the impact gender diversity at corporate board and financial performance of selected companies. The researcher focused on organization in Kenya's manufacturing sector with the population sample size coming from companies located within Nairobi's industrial area. The findings of the study indicated that organizations that with many women administrators had a slightly better performance. However, the researcher pointed out that the study's findings were not generalizable to all industries thereby necessitating more studies to establish the association between the two main variables.

2.5 Conceptual Framework

The conceptual framework is defined as the analytical instrument containing contexts and variations that assist the researcher to organize their study in simple and meaningful way (Shields & Rangarajan, 2013). The conceptual framework, therefore, will provide an understanding of how board diversity can influence commercial banks' profitability in Kenya. The conceptual framework will guide the research as highlighted in Figure 2.1. The conceptual framework provide a schematic association between the different study variables. For this study, the board diversity will be the independent variable. The variable is evaluated by age, sex of participant, education qualifications and personal experience. The dependent variable is performance, which is evaluated using the return on assets tool.

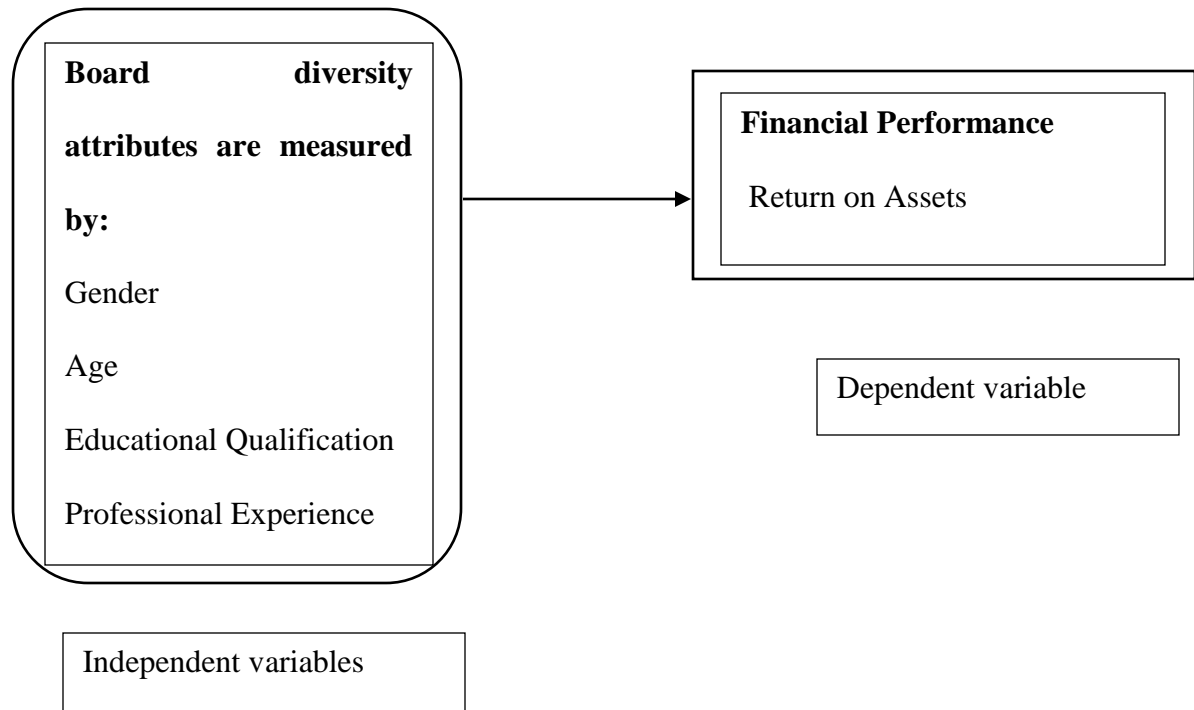


Figure 2.1: Conceptual Framework

2.6 Literature Review Summary and Knowledge Gap

The concepts explored in this chapter were Agency and Stakeholder theory. The theories are explored in great detail in order to understand the principles espoused and the arguments that support them. In agency theory managers are entrusted with maximizing shareholders (principals) wealth, there are agency costs involved since they are viewed to serving their interests leading to conflict of interest among the principals (Davis et al, 2015). To address the conflict of interest and the opportunity of self-seeking behavior a board of directors should be put in place in order to monitor and control the agents. Stakeholder theory posits that the greatest value is created when the interest of all stakeholders are taken into account. The stakeholders

include employees, suppliers, shareholders, local authorities, governments and other interest groups.

Empirical review of studies has been done covering countries both in Europe Asia, USA and Africa. The studies offers conflicting conclusions on the association between board diversity and the financial achievement of firms. The main aim of this task was to fill the knowledge gap concerning board diversity and its relationship to financial performance in Kenya. Besides, there are few studies focusing on the manufacturing organizations with no similar recent studies done on the commercial banks in Kenya this study aims to address these gaps.

CHAPTER THREE

METHODOLOGY

3.1 Chapter Introduction

This chapter indicates the methods of gathering data that will be used; the methodology in which the data collection procedure will follow and at the end gives the population that will be used in the arriving of the conclusions.

3.2 Research Design

This study involved a descriptive design. It has been argued that Cooper and Schindler (2013) in their paper argued that this design can be used to measure cause and effect relationships among different variables under inquiry. Such an approach was suitable for this study because the study's objective was to identify if there exists a link between board diversity in organizations and their profitability. The study used secondary data which was collected in the banks' websites, and the NSE website and investment banks reports.

3.3 Population and Sample

Commercial banks operating after approval by the Kenyan regulator provided the population of this study. Also, the study only restricted itself to only those banks that had been licensed by 31st December 2019. The study used the census approach and sampled the entire population in the study since it is scalable and feasible. A population has been described as a set of objects or individuals with similar observable characteristics (Mugenda and Mugenda, 2013). The

commercial banks licensed by the industry regulator formed the population of the study, these banks are highlighted in Appendix I.

3.4 Data Description and Description

The pertinent information necessary for the study was collected from secondary data sources. The data pertaining to gender, age and education attainment levels of all board members was gathered from the commercial banks' audited annual reports. Information concerning financial performance was accessed from secondary sources that involve Kenyan commercial banks' financial information. These include the NSE annual publications such as the NSE Handbook (2019). Other sources included the CBK website and banks' online reports.

3.5 Data Analysis

Data analysis involved correlation analysis which was applied to form the association between the top managements' diversity and the banks financial performance. Regression analysis was similarly used to evaluate the link between variables particularly the level to which the dependent variable plays as a function to one or multiple independent variables (Saunders et al., 2007; Hair et al., 1998). Regression model was used to analyze the quantitative data, which was used in developing the predictor model to be used in the study. Because panel data was employed for the study, STATA version 13 was the statistical analysis program utilized for the study because it is able to perform panel linear regression.

The study adopted a confidence interval of 95%. The results were set to be statistically significant at the 0.05 level, which indicated that the significance value should be less than 0.05. A statistical inference technique was used in making conclusions relating to the accuracy of the model in predicting financial performance. The model significance was tested using the significance values at 95% confidence. The meaning of the association amongst every predictor variable to the response variable was determined by the significance values.

3.5.1 Diagnostic Tests

For the validity of regression analysis, a number of assumptions are done in conducting linear regression models. These are; no multi-collinearity, observations are sampled randomly, conditional mean ought to be zero, linear regression model is “linear in parameters”, spherical mistakes: there exist homoscedasticity but no auto-correlation, and the elective assumption: error terms ought to be distributed normally. According to the Gauss-Markov Theorem, the first 5 assumptions of the linear regression model, the regression OLS estimators, are the Best Linear Unbiased Estimators (Grewal *et al.*, 2004).

The aforementioned assumptions are of great importance since when any of them is violated would mean the regression estimates will be incorrect and unreliable. Particularly, a violation would bring about incorrect signs of the regression estimates or the difference of the estimates would not be reliable, resulting to confidence intervals that are either too narrow or very wide (Gall *et al.*, 2006).

The diagnostic tests are conducted so as to guarantee that the assumptions are met to attain the Best Linear Unbiased Estimators. Regression diagnostics assess the model assumptions and probe if there are interpretations with a great, unwarranted effect on the examination or not. Diagnostic examinations on normality, linearity, multicollinearity, and autocorrelation were done on the collected data to establish its suitability in the formulation of linear regression model. Normality was tested by the Shapiro-Francia test, which is suitable for testing distributions of Gaussian nature, which have specific mean and variance. Linearity indicates a direct proportionate association amongst dependent and independent variable such that variation in independent variable is followed by a correspondent variation in dependent variable (Gall et al., 2006). Linearity was tested by determining homoscedasticity, which was determined by the Breusch-Pagan Cook-Weisberg Test for Homoscedasticity.

Tests for multicollinearity of data was carried out using variance inflation factors (VIF) to determine whether the predictor variables considered in the research are significantly correlated with each other. According to Grewal *et al.* (2004) the main sources of multicollinearity are small sample sizes, low explained variable and low measure reliability in the independent variables. Auto-correlation test was carried out through the Durbin-Watson Statistic.

Additionally, to avoid spurious regression results unit root test was carried out on the panel data. The aim of conducting unit root test is to check whether the macroeconomic variables under study are integrated of order on (1, 1) or not before estimation procedure can be proceeded into. Unit root test was conducted through the Fisher-type unit root test. The study also utilized the Hausman specification test to ascertain if the variables used in the study possess fixed influence

overtime or if they have varying and random influence over time. The null hypothesis is that that the variables have a random effect and the alternate hypothesis is that the variables have a fixed effect. If the significance value is less than α (0.05), the null hypothesis will consequently be rejected and if the significance value is greater than α (0.05), the null hypothesis will not be rejected.

3.5.2 The Model of Analysis

The objectives of the research were attained through use of a multiple linear regression analysis, which tested whether predictor variables have any effect on the default rate. The statistical tests were conducted at 95% significance level meaning that the study allowed for a margin of error of up to 5%. The model is illustrated as shown;

$$(Y) = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e_{it}$$

Where;

$Y =$ (ROA)

e_{it} = random error term

X_1 = directors' age

X_2 = average experience

X_3 = board members gender

X_4 = board members' education level.

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = independent variables' coefficients.

α_0 = X intercept variable associated with the organization

Table 3.1: Operationalization of the Study Variables

Variable	Measurement
Financial Performance	Denoted by ROA; Net Income/Total Assets (Khrawish, 2011).
Board Independence	Denoted as; In Average Directors age
Average Board Experience	Denoted as Ln Average Experience of the board
Board Gender Diversity	Denoted as; No. of Female Directors/Total Directors on the Board (Kang et. al., 2007).
Educational Qualification	Denoted by the number of professions in the board

3.5.3 Tests of Significance

The study will adopted a confidence interval of 95%. The results were set to be statistically significant at the 0.05 level, which indicates that the significance value should be less than 0.05. A statistical inference technique was used in making conclusions relating to the accuracy of the model in predicting financial performance. The model significance was tested using the significance values at 95% confidence. The meaning of the association amongst every predictor variable plus response variable was also determined by the significance values, which illustrates how much standard error indicated that the sample deviates from the tested value.

CHAPTER FOUR

DATA ANALYSIS, RESULTS, AND FINDINGS

4.1 Introduction

The section involves analysing the data, interprets the findings and discusses the results. The chapter is further categorized in four sub sections that are diagnostic tests, inferential statistics, and interpretation and the arguments regarding the outcomes. More specifically the chapter provides the summary of data presentations, analysis, interpretations, and discussions.

4.2 Response Rate

All the 42 licensed commercial banks, whose list is provided in Appendix I, were the target population in the study. The study employed a census approach and the entire population was to be examined. However, three banks were expunged from the analysis because they became licensed after the study period or ceased operations within the study period. Thus, 39 commercial banks were utilized for this analysis.

4.3 Diagnostic Tests

Diagnostic tests that are a precursor to conducting linear regression were conducted. Diagnostic tests done in this study included; normality tests, homoscedasticity tests, multicollinearity tests, and autocorrelation tests. Normality test was carried out using the Shapiro-Francia test and the homoscedasticity test was conducted through the Breusch-Pagan Cook-Weisberg Test for Homoscedacity. Test on Multicolinearity of data was carried out using Variance Inflation Factors (VIF) while the autocorrelation test was done through the Durbin-Watson statistic. Unit root test

was conducted through the Fisher-type unit root test. Additionally, the Hausman test was conducted to determine whether fixed or variable effects panel regression should be conducted.

4.3.1 Normality Test

Table 4.1 below shows the findings of the normality tests of the variables used in this study.

Table 4.1: Shapiro-Francia Test for Normality

Variable	Obs	W'	V'	Z	Prob>z
ROA	185	0.62206	57.578	8.338	0.00001
DirectorsAge	185	0.98328	2.547	1.923	0.02721
AverageExp~e	185	0.96309	5.624	3.553	0.00019
BoardGende~y	185	0.97124	4.382	3.039	0.00119
Educationa~s	185	0.88768	17.111	5.842	0.00001

In the test, the null hypothesis holds that the data has a normal distribution. The level of significance adopted in the study is 5%. The significance values of all the data series employed in the study are less than α (0.05), thus the null hypothesis is rejected. Hence, the data series of the variables are not normally distributed. Thus, the variables were standardized as a remedy for normalizing skewed data.

4.3.2 Homoscedacity Test

The homoscedacity tests for all the predictor variables employed in the study are enlisted in Table 4.2. The null hypothesis is that there is homoscedasticity. The level of significance adopted in the study is 5%. Since the significance value obtained in the study (Prob>chi2= 0.0000) is less than α (0.05), the null hypothesis is rejected. Hence, the data series of all the predictor variables are heteroscedastic. Thus, robust standard errors', which is a technique to obtain unbiased standard errors of OLS coefficients under heteroscedasticity, was applied.

Table 4.2: Breusch-Pagan/Cook-Weisberg Test for Homoscedacity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance
Variables: fitted values of ROA
chi2(1) = 157.07
Prob > chi2 = 0.0000

4.3.3 Test for Multicollinearity

Results on Test for Multicollinearity of data carried out using Variance Inflation Factors (VIF) are displayed in Table 4.3.

Table 4.3: VIF Multicollinearity Statistics

Variable	VIF	1/VIF
AverageExp~e	2.02	0.494947
DirectorsAge	2	0.499521
BoardGende~y	1.05	0.95013
Educationa~s	1.01	0.992876
Mean VIF	1.52	

The common rule in statistics is that the VIF values should be less than 10 and greater than 1. The findings indicate that the individual VIF values for all the predictor variables employed in the study and mean VIF value fall below 10 and are greater than 1. Hence, there is no presence of multicollinearity amongst the predictor variables utilized in the study.

4.3.4 Tests for Autocorrelation

Test for Autocorrelation of data was carried out using the Durbin Watson statistic. The findings displayed that Durbin-Watson d-statistic (5, 185) = 1.033641. The Durbin-Watson statistic ranges from point 0 and point 4. If there exist no correlation between variables, a value of 2 is shown. If the values fall under point 0 up to a point less than 2, this is an indication of an

autocorrelation and on the contrast a negative autocorrelation exist if the value falls under point more than 2 up to 4. As a common rule in statistics, value falling under the range 1.5 to 2.5 is considered relatively normal whereas values that fall out of the range raise a concern (Shenoy & Sharma, 2015). Field (2009) however, opines that values above 3 and less than 1 are a sure reason for concern. Therefore, the data used in this panel is not serially autocorrelated since it meets this threshold.

4.3.5 Unit Root Test

The results for the unit root test conducted for the data series financial performance is displayed in Table 4.4. The null hypothesis is that financial performance has a unit root and the alternate hypothesis is that the variable is stationery. Since the significance values for the P, Z, L* and Pm tests are all less than the critical value (α) at the 5% confidence level, then the null hypothesis is rejected. Thus, the panel data series is stationery.

Table 4.4: Unit Root Test for Financial Returns

Fisher-type unit-root test for ROA			
Based on augmented Dickey-Fuller tests			
Ho: All panels contain unit roots		Number of panels =	39
Ha: At least one panel is stationary		Avg. number of periods =	4.74
AR parameter: Panel-specific		Asymptotics: T -> Infinity	
Panel means: Included			
Time trend: Not included			
Drift term: Not included		ADF regressions: 0 lags	
Statistic		p-value	
Inverse chi-squared(78)	P	256.9325	0.0000
Inverse normal	Z	-5.2260	0.0000
Inverse logit t(184)	L*	-9.2694	0.0000
Modified inv. chi-squared	Pm	14.3261	0.0000

The results for the unit root test conducted for the data series directors' age is displayed in Table 4.5.

Table 4.5: Unit Root Test for Directors' Age

Fisher-type unit-root test for DirectorsAge

Based on augmented Dickey-Fuller tests

Ho: All panels contain unit roots	Number of panels	=	39
Ha: At least one panel is stationary	Avg. number of periods	=	4.74
AR parameter: Panel-specific	Asymptotics: T -> Infinity		
Panel means: Included			
Time trend: Not included			
Drift term: Not included			
ADF regressions: 0 lags			
		Statistic	p-value
Inverse chi-squared(78)	P	0.0000	1.0000
Inverse normal	Z	.	.
Inverse logit t(4)	L*	.	.
Modified inv. chi-squared	Pm	-6.2450	1.0000

The null hypothesis is that directors' age has a unit root and the alternate hypothesis is that the variable is stationary. Since the significance values for the P and Pm tests are greater than the critical value (α) at the 5% confidence level, then the null hypothesis is not rejected. Thus, the panel data series has a unit root.

The results for the unit root test conducted for the data series average board experience is displayed in Table 4.6.

Table 4.6: Unit Root Test for Average Board Experience

Fisher-type unit-root test for Average Experience

Based on augmented Dickey-Fuller tests

Ho: All panels contain unit roots	Number of panels	=	39
Ha: At least one panel is stationary	Avg. number of periods	=	4.74
AR parameter: Panel-specific	Asymptotics: T -> Infinity		
Panel means: Included			
Time trend: Not included			
Drift term: Not included	ADF regressions: 0 lags		
		Statistic	p-value
Inverse chi-squared(78)	P	119.4062	0.0018
Inverse normal	Z	4.1763	1.0000
Inverse logit t(174)	L*	2.2689	0.9877
Modified inv. chi-squared	Pm	3.3152	0.0005

The null hypothesis is that average board experience has a unit root and the alternate hypothesis is that the variable is stationary. Even though the significance values of both the Z, L* are greater than critical value (α) of 0.05, the significance values for both the P, and Pm tests are all less than the critical value (α) at the 5% confidence level. In case of conflict in the tests, the Inverse chi-squared and Modified inv. chi-squared are picked. Thus, then the null hypothesis is rejected.

The panel data series is stationary.

The results for the unit root test conducted for the data series board gender diversity is displayed in Table 4.7 below.

Table 4.7: Unit Root Test for Board Gender Diversity

Fisher-type unit-root test for BoardGenderDiversity

Based on augmented Dickey-Fuller tests

Ho: All panels contain unit roots	Number of panels	=	39
Ha: At least one panel is stationary	Avg. number of periods	=	4.74
AR parameter: Panel-specific	Asymptotics: T -> Infinity		
Panel means: Included			
Time trend: Not included			
Drift term: Not included	ADF regressions: 0 lags		
		Statistic	p-value
Inverse chi-squared(78)	P	141.4153	0.0000
Inverse normal	Z	-1.9218	0.0273
Inverse logit t(184)	L*	-3.2449	0.0007
Modified inv. chi-squared	Pm	5.0773	0.0000

The null hypothesis is that board gender diversity has a unit root and the alternate hypothesis is that the variable is stationary. Since the significance values for the P, Z, L* and Pm tests are all less than the critical value (α) at the 5% confidence level, then the null hypothesis is rejected. Thus, the panel data series is stationary.

The results for the unit root test conducted for the data series educational qualifications is displayed in Table 4.8 below. The null hypothesis is that educational qualifications has a unit root and the alternate hypothesis is that the variable is stationary. Since the significance values for the P, Z, L* and Pm tests are all less than the critical value (α) at the 5% confidence level, then the null hypothesis is rejected. Thus, the panel data series is stationary.

Table 4.8: Unit Root Test for Educational Qualifications

Fisher-type unit-root test for EducationalQualifications

Based on augmented Dickey-Fuller tests

Ho: All panels contain unit roots	Number of panels	=	39
Ha: At least one panel is stationary	Avg. number of periods	=	4.74

AR parameter: Panel-specific Asymptotics: T -> Infinity
Panel means: Included
Time trend: Not included
Drift term: Not included ADF regressions: 0 lags

		Statistic	p-value
Inverse chi-squared(78)	P	264.4722	0.0000
Inverse normal	Z	-8.6222	0.0000
Inverse logit t(124)	L*	-14.0704	0.0000
Modified inv. chi-squared	Pm	14.9297	0.0000

4.3.6 Test for Random and Fixed Effects

The Hausman test was conducted to establish whether the variables have a fixed effect over time or whether the variables have a changing and random impact over time. Before the Hausman test was conducted, the variables had to be transformed because they did not meet the conditions of normality, homoscedasticity, and stationarity. All the variables employed in the study did not meet the condition of normality and were standardized as a remedy for rectifying normality. Due to the predictor data series employed in the study displaying heteroscedasticity, ‘robust standard errors’, which is a method to find out unbiased standard errors of OLS coefficients under heteroscedasticity, was utilized. The data series directors’ age had unit root, thus it was first differenced as a remedy for unit roots. The finding on the Hausman test of specification is presented in Table 4.9.

Table 4.9: Hausman Test of Specification

	---- Coefficients ----			
	(b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
DirectorsAge	.0124173	-.0254797	.037897	.0322907
AverageExp~e	1.594996	.9451307	.6498656	.2077257
BoardGende~y	.0138047	-.0004275	.0142322	.0130005
Educationa~s	.0003565	-.004586	.0049425	.

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\chi^2(4) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

2.14

Prob>chi2 = 0.7103
 (V_b-V_B is not positive definite)

The null hypothesis assumes that variables have a random effect and the alternate hypothesis is that the variables have a fixed effect. If the significance value is less than the α (0.05), the null hypothesis is consequently rejected; if it is greater than the α (0.05), subsequently, the null hypothesis will not be rejected. When the Hausman chi-square test statistic is negative, the alternate hypothesis is adopted because asymptotically, the p value is equal to 1. From the findings in the study (Prob>chi2=0.6674), the variables have a random effect and a random effect panel model shall be utilized. This is because the significance value is greater than the α (0.05), hence the null hypothesis is not rejected.

4.4 Inferential Statistics

Inferential statistics were used in determining the direction, relationship, and strength of the association between the predictor variables and the response variable. The section entails the inferential statistics employed in the study, which included correlation and panel multiple linear regression analysis.

4.4.1 Correlation Analysis

Correlation analysis shows whether there is a relationship amongst two variables. The relation ranges from strong negative correlation to perfect positive correlation. This study utilized Pearson correlation. This study employed a Confidence Interval of 95% and a two-tail test. The correlation test was done to ascertain the association between board diversity and financial performance.

Table 4.10: Correlation Analysis

	ROA	Director~e	Averag~e	BoardG~y	Educat~s
ROA	1.0000				
DirectorsAge	0.2935* 0.0001	1.0000			
AverageExp~e	0.5025* 0.0000	0.6933* 0.0000	1.0000		
BoardGende~y	0.0655 0.3754	-0.0647 0.3818	0.1056 0.1527	1.0000	
Educational~s	-0.0613 0.4070	0.0047 0.9498	0.0535 0.4692	0.0604 0.4144	1.0000

Table 4.10 displays that directors' age and average board experience are significantly correlated at the 5% significance level to financial performance. They both have a positive association with financial performance. Board gender diversity and educational qualification do not have a significant association with financial performance at the 5% significance level.

4.3.2 Multiple Linear Regression

The random effects panel regression model assessed the effect of the valuation ratios and firm size on stock returns. The regression analysis was established at the 5% significance level. The significance critical value exhibited from the Analysis of Variance and Model Coefficients were compared with the values obtained in the analysis. The findings are displayed in Table 4.11.

Table 4.11: Panel Multiple Linear Regression

Random-effects GLS regression	Number of obs	=	145
Group variable: A	Number of groups	=	39
R-sq: within = 0.1800	Obs per group: min =		2
between = 0.3265	avg =		3.7
overall = 0.2530	max =		4
	Wald chi2(4)	=	71.40
corr(u_i, X) = 0 (assumed)	Prob > chi2	=	0.0000
	(Std. Err. adjusted for 39 clusters in A)		

ZROA	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
dZDirectorsAge	-.0075138	.0276389	-0.27	0.786	-.0616851	.0466575
ZAverageExperience	.6003753	.1935371	3.10	0.002	.2210495	.9797012
ZBoardGenderDiversity	.0148469	.0748916	0.20	0.843	-.1319379	.1616317
ZEducationalQualifications	-.0649463	.0398448	-1.63	0.103	-.1430407	.013148
_cons	-.0253912	.1099214	-0.23	0.817	-.2408331	.1900507
sigma_u	.65446638					
sigma_e	.58391633					
rho	.5567852	(fraction of variance due to u_i)				

Overall, R^2 shows changes in the response variable as a result of variations in the predictor variables. The overall R^2 value is 0.2530, a discovery that 25.30% of the deviations in financial performance are caused by board diversity. Other variables not included in the model justify 74.7% of fluctuations in financial performance.

The null hypothesis is that the model consisting of board diversity does not significantly influence financial performance. The significance value established in the study ($\text{Prob}>\chi^2=0.0000$) is below the 0.05 critical value. Hence, the null hypothesis is rejected. Thus, board diversity influences financial performance. Thus, it can be utilized to significantly financial performance.

The null hypothesis was that there was no significant relationship between the board diversity aspects utilized in the study in isolation to financial performance. The study findings exhibited that only board average experience has a significant relationship with financial performance. This is because its significance value is less than the critical significance value (α) of 0.05. Thus, the null hypothesis is rejected. It has a significant positive effect on financial performance. Directors' age, board gender diversity, and educational qualifications however do not have a significant effect on financial performance. This is because their significance values are greater than the critical significance value (α) of 0.05. The following model was thus developed;

$$Y = -0.0253912 + 0.6003753X_1$$

Where;

Y = Financial Performance

X₁ = Average Board Experience

This implies that when average board experience is equal to zero, a financial performance of -0.0253912 is exhibited. Subsequently, when average board experience by one unit, there is an increase in financial performance by 0.6003753 units.

4.4 Interpretation and Discussion of Findings

The study endeavored to establish the effect the impacts of having a company board that has embraced diversity and its short and long term impact on company's profitability with a focus on Kenyan commercial banks. All the variables employed in the study did not meet the condition of normality and were standardized as a remedy for rectifying normality. Due to the predictor data series employed in the study displaying heteroscedasticity, "robust standard errors", which is a method to find out unbiased standard errors of OLS coefficients under heteroscedasticity, was utilized. The data series directors' age had unit root, thus it was first differenced as a remedy for unit roots.

The study findings established directors' age and average board experience are significantly correlated at the 5% significance level to financial performance. They both have a positive association with financial performance. Board gender diversity and educational qualification do not have a significant association with financial performance at the 5% significance level. Additionally, the study findings revealed that board diversity influences financial performance and it can be utilized to significantly predict financial performance. Further findings were that only board average experience has a significant relationship with financial performance. It had a

significant positive effect on financial performance. Final findings were that directors' age, board gender diversity, and educational qualifications however do not have a significant effect on financial performance.

The study finding that that board diversity influences financial performance and it can be utilized to significantly predict financial performance is convergent with the diversity management theory, which posits that more diverse boards lead to improved performance. The resource dependence and the agency theoretical frameworks advance that there exists a positive link between diversity in corporate boards and organizational profitability. This also affirms the current study finding.

Various scholars are of the view that diversity can lead to positives benefits for the organization including enhanced performance (Marimuthu, 2008; Allen et al, 2008). Ujunwa (2012) asserts that the boards' composition is a major determinant of an organization's financial performance. Fan (2012) also concurs with this finding that indeed there is a positive correlation between the type of gender of persons making up the board and Tobin's Q ratio of financial execution. Allen (2008) established that organizational performance is linked critically to the diversity found in both the non-managerial and senior management levels of an organization. These are in tandem with the current study finding.

Robinson and Dechant (1997) revealed that diversity advances an unrivaled perception of the industry in which an organization works. Because the market is inherently diverse, unique qualities will make it simpler for companies to enter these business segments. Robinson and

Dechant (1997) comparably saw that diverse qualities in boards upgraded ingenuity and creative ability. This outlook in this way expresses the attitudes, convictions and intellectual working of people are not scattered in an arbitrary manner. Instead, they are systematically distributed using factors such as ethnicity, age and gender. It is also seen that diversity encompassing the aspect of gender prompts more conspicuous critical thinking. This is because of various alternatives are meticulously assessed concerning advantages and disadvantages.

The finding that gender board diversity neither has a significant association nor relationship with financial performance is in contrast to Prihatiningtias (2012), who noted that a firm financial execution was affected by gender diversity both adversely and affirmatively. However, studies between 2006 and 2008 focusing on Italian corporate boards found no statically considerable relationship between having female board members on listed firms and improved performance on the stock exchange (Schwizer et al., 2012). This affirms the current study finding.

Cognitive diversity of variables such as age, race, color, knowledge and education was studied by Erhardt et al. (2013) who explained that there exists an affirmative relationship between the percentage of women constituting a given board company profitability. Their finding was contradicted by Daunfeldt and Rudhhlolm (2016) whose concluded that gender diversity had a negative impact on the Return on Total Asset. The former finding concurs with the current study finding while the latter contradicts it.

A few researchers have contended argued that a board embraces gender diversity is inclined to have an affirmative influence on its performance. Diversity experts have gone to a similar presumption that board contrasts have a certifiable result on firm execution. For instance some identified a similar situation in Spain (Minguez & Campbell, 2008). Disregarding the way that firm profitability was evaluated using Tobin's Q, the conclusion resembled those of bookkeeping metrics such as profit for resources as well as quantifiable profit. This evaluation did not concentrate all enterprises in Spain and firms were annulled from the specimen. This concentrate likewise tended to recorded in the financial segment of Madrid.

Bohrens and Stroum (2007) discovered an adverse association between board differences and firm profitability for Norwegian businesses. This was similar to similar studies by Randoy (2006) focusing on Scandinavian states. Further, Randoy (2006) when conducting studies in several Nordic countries including Norway, Denmark and Sweden saw that varying qualities in diverse boards do not have much effect on the running of the businesses. They surveyed execution by the entry in resources. Meanwhile, a research by (Rose, 2007) in Denmark set up relative findings to Randoy et al. (2006) highlighting that board differing qualities makes little difference to firm execution.

Regardless of the examinations of Rose, (2007) and Randoy (2006) identified that board sexual orientation assorted qualities decidedly influences execution of organizations in Denmark. Their study rotated around extensive 2500 Danish firms between 1993-2001. In any case, their study utilized execution techniques, for instance, net value added to the net turnover, benefit on

standard operations to the net turnover, traditional result to net resources and the net result after duty to net resources which may be seen to be feeble.

Adusei (2010) discovered that board measure influences bank execution in Ghana. He prescribed the way that littler sheets advantage the performance of the organization as assessed by the profit for value. In an extra study on board measure. It was also established that bigger banks distort the execution of banks in Europe (Staikouras et al., 2007). This along these lines demonstrates that boards with more minorities had better accomplishment of the bank. While a few studies have demonstrated that board measure influences execution, distinctive studies, for instance, those of Belkhir (2009), Adams & Mehran (2005); found no link between the number of persons making up a board and company execution. In particular, Belkhir (2009) undertook a study involving 174 US banks and speculation reserves associations did not express any positive link the number of persons making up a board. Company profitability was assessed using Tobin's Q.

Investigating board setup, Staikoras et al. (2007) discovered that corporates have no impact on company performance similar to Adusei (2010) whose study found no association between board synthesis and bank execution in Ghana paying little heed to the way that board game plan was found to emphatically influence the result of bank suitability. In the time being, there were more studies on 66 banks in various OECD nations between 1996 and 2003 by Gonzalez and Alonso (2006). They set up an adjusted U molded association between the evaluations of bank execution (ROA, Tobin Q the yearly market returns of shareholder) and the board's estimate, which they speculate legitimizes a broad board yet authorizing a viable breaking point on size. Their

disclosures likewise demonstrate a positive association between the non-official executives and execution.

Busta (2007) attempted 69 recorded banks from the European Union keeping cash range between 1996-2005 in addition to 125 banks working in Switzerland and the EU. The disclosures for 70 recorded banks reveal that those that hired many foreign administrators have better performance correspondingly as the market return for contributed capital, within Continental Europe, while unfriendly results were found by virtue of UK banks. However, another study found no approval of an essential relationship between board synthesis and ROA (Busta, 2007). Also, the findings from various banking institutions indicate board's size has substantial association with the degree of profitability and conversely related to return on resources; regardless it is insignificant a great part of the time.

More studies assessed some 107 banks within 9 Asian markets for 12 months in 2004 (Zulkafli & Samad, 2007). Their discoveries suggest no basic relationship between execution measures including Tobin Q and the board's size or structure. At last, in perspective of a case of generally traded on an open market association on an open market US banks, it has been reported that cost capability and profit for resources are immaterial related to the rate of insider (outsider) officials (Pi & Timme, 1993).

Carter et al. (2003) conducted a scientific inquiry on the association between board differing qualities and firm execution with a unique thought on the operator speculation. The study uncovered that an expansion in the quantity of female chiefs may build the board's freedom.

Smith et al. (2007), uncovered that board differing qualities enhances basic thinking as a pool of abilities and information rise from now on more decisions are assessed. Furthermore, a more differing board may similarly support an organization's favorable position gave it builds up the organizations picture and whether it decidedly influences customers' conduct and thusly on an association's execution (Smith et al., 2007).

Another study assessed whether board's gender diversity had any influence profitability of selected commercial (Mboya & Ekadah, 2012). The study's sample size was 32 Kenyan commercial banks. By employing stepwise regression, the researcher's established that there was no direct impact on financial performance due to board's gender diversity in the banks under study. The present stud differs from that in three ways. That study used data for the period between 1998 to 2009 at a time women representation in most corporate boards was generally very low. Presently, women representation has increased to more than 12% compared to the 4% representation before 2010.

A study done in Kenya by Letting (2013) aimed to identify the link between board diversified boards and company's profitability. The variables that were used to test board diversity were gender diversity, nationality, and academic background and more particularly the impact of having women serving on board on the company's profitability. The years of study were between 2006 and 2009. The study found significant positive relationship between gender diversity, nationality & academic background with the financial performance of firms.

In a similar empirical inquiry Ambaka (2016) sought to explore the impact gender diversity at corporate board and financial performance of selected companies. The researcher focused on organization in Kenya's manufacturing sector with the population sample size coming from companies located within Nairobi's e industrial area. The findings of the study indicated that organizations that with many women administrators had a slightly better performance. However, the researcher pointed out that that the study's findings were not generalizable to all industries thereby necessitating more studies to establish the association between the two main variables.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This section shows the study findings summary, offered conclusions, and recommendations on the effect of board diversity on the financial performance of Kenyan commercial banks. Additionally, the research limitations and further research suggestions are also outlined.

5.2 Summary of Findings

The study endeavored to assess the effect of board diversity on the financial performance of Kenyan commercial banks. The study also sought to establish the effect of board diversity aspects that entail; directors' age, board average experience, board gender diversity, and educational qualifications on the financial performance of Kenyan commercial banks. The study employed the use of correlation and regression analyses. Unit period of analysis was annual and data was collected for the period from 2015 to 2019. The period comprised of five years and the data was collected for 39 commercial banks, which constituted the study response rate. The study population was all the licensed commercial banks. Three banks were expunged from the analysis because they became licensed after the study period or ceased operations within the study period.

The correlation analysis employed in the study established that directors' age and average board experience are significantly correlated at the 5% significance level to financial performance. They both have a positive association with financial performance. Board gender diversity and

educational qualification do not have a significant association with financial performance at the 5% significance level.

The fixed effects of panel multiple linear regression revealed that board diversity influences financial performance and it can be utilized to significantly predict financial performance. Further findings were that only board average experience has a significant relationship with financial performance. It had a significant positive effect on financial performance. Final findings were that directors' age, board gender diversity, and educational qualifications however do not have a significant effect on financial performance.

5.3 Conclusion

In this section, the conclusion of the study is given; the conclusion is affiliated to the study objective, which was to establish the influence of board diversity on the financial performance of Kenyan commercial banks. The study also sought to determine the effect of board diversity aspects that entail; directors' age, board average experience, board gender diversity, and educational qualifications on the financial performance of Kenyan commercial banks. The study conclusion was that that board diversity influences financial performance and it can be utilized to significantly predict financial performance. Further study conclusions were that average board experience had both a significant positive association and relationship with financial performance. An additional conclusion is that directors' age has a significant positive association with financial performance but has an insignificant relationship with financial performance. The conclusion is that both gender diversity and educational qualification neither had a significant association nor relationship with financial performance.

The study conclusion that that board diversity influences financial performance and it can be utilized to significantly predict financial performance is convergent with the diversity management theory, which posits that more diverse boards lead to improved performance. The resource dependence and the agency theoretical frameworks advance that there exists a positive link between diversity in corporate boards and organizational profitability. This also affirms the current study finding.

5.4 Recommendations

The study findings will aid in further researches to be conducted on the field of board diversity together with its influence on financial performance. Later scholars keen in research on board diversity and its impact on financial performance will use the study findings as referral. Policy recommendations are made to the National Treasury and CBK since it has been established that board diversity influences financial performance and it can be utilized to significantly predict financial performance and several board diversity elements have a noteworthy influence on the financial performance of commercial banks in Kenya, the policy makers should direct commercial banks, and by extension other financial institutions, to implement corporate governance principles that ensure appropriate board diversity and adhere to a corporate governance code. The recommendation will guide government regulators in making policies and practices to boost the financial system and mitigate the default rates.

The finding of the study that board diversity influences financial performance and it can be utilized to significantly predict financial performance and several board composition elements have a significant effects on the financial performance of commercial banks will help the

commercial bank practitioners, and by extension other financial institutions practitioners and consultants to enhance board diversity in order to augment the financial institutions' financial performance. The additional findings that directors' age, board gender diversity, and educational qualifications do not significantly impact on financial performance calls for the recommendation that the commercial bank practitioners should mainly focus on the board diversity aspect that entails average board experience in order to enhance financial performance.

5.5 Limitations of the Study

As a result of time and cost confines, the research scope was restricted to five years, between 2015 and 2019. Thus, it has not been resolute if result findings would hold for a lengthier time frame. Moreover, it was undefined whether comparable results would hold past 2019.

Since the research employed secondary sources of data, some of this data was not readily available, especially data on certain firms, and it took great lengths and costs to obtain it. Some information could not be implemented in their raw state, for instance the ROA, and further calculations and manipulations of the data was required. Consequently, delay was impending as information was to be collected and additionally, processed before researcher could compile it.

The study intended to utilize the whole population of the forty-two listed firms but three banks were expunged from the analysis because they became licensed after the study period or ceased operations within the study period. There are several aspects of board diversity, but the study only included four, which entailed; directors' age, average board experience, board gender diversity, and educational qualifications. The model used did not explain much deviations in

financial performance as exhibited in the study's model summary. Many additional factors affect financial performance, which were not included in the model.

5.6 Recommendations for Further Study

Based on information collected and knowledge acquired from this research, the researcher has recommended further research studies. First, other factors impact on financial performance apart from the board diversity elements employed in the study. Further research can be done to identify and analyze them. The current study's scope was limited to five years; further research can be done beyond five years to ascertain if the findings would hold. Thus, prospect researches could use a wider time array, like, 1970 to present which could be useful to confirm or object the results of this research. Scope of this research was also restricted to Kenyan commercial bank's context, the similar research could be done across other financial firms to ascertain if the research would hold. This research was conducted in the Kenyan context only, additional researchers can be done out of Kenyan context. Scholars in other countries can conduct the research in these jurisdictions to establish if the present research findings would hold.

In this study Secondary data was used, further study should use primary sources of data like in-depth questionnaires and structured interviews to be administered to all the stock market participants. These can then support or condemn the current study findings. Multiple linear regression and correlation analysis were implemented in the research, future studies may adopt use of other techniques like factor analysis, discriminant analysis, cluster analysis and granger causality.

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APPENDICES

Appendix I: List of Licensed Banks in Kenya

ABC Bank (Kenya)
Bank of Africa
Bank of Baroda
Bank of India
Barclays Bank of Kenya
Chase Bank Kenya (In Receivership)
Citibank
Commercial Bank of Africa
Consolidated Bank of Kenya
Cooperative Bank of Kenya
Credit Bank
Development Bank of Kenya
Diamond Trust Bank
Dubai Islamic Bank
Ecobank Kenya
Equity Bank
Family Bank
First Community Bank
Giro Commercial Bank
Guaranty Trust Bank Kenya
Guardian Bank
Gulf African Bank
Habib Bank AG Zurich
Housing Finance Company of Kenya
I&M Bank
Imperial Bank Kenya (In receivership)
Jamii Bora Bank

Kenya Commercial Bank
Mayfair Bank
Middle East Bank Kenya
National Bank of Kenya
NIC Bank
Oriental Commercial Bank
Paramount Universal Bank
Prime Bank (Kenya)
SBM Bank Kenya Limited
Sidian Bank
Spire Bank
Stanbic Bank Kenya
Standard Chartered Kenya
Trans National Bank Kenya
United Bank for Africa
Victoria Commercial Bank

Appendix III: Research Data

	COMPANY	Year	Net income	Total assets	ROA	Directors Age	Average Experience	Board Gender Diversity	Educational Qualifications
1	ABC Bank	2015	182655	22617744	0.008076	1.609438	1.228766	0.45578	0.60206
1		2016	66847	22864968	0.002924	1.609438	1.229045	0.341121	0.69897
1		2017	166143	25586668	0.006493	1.609438	1.231917	0.300785	0.69897
1		2018	11508	27925990	0.000412	1.609438	1.234139	0.366607	0.69897
1		2019	68958	29395753	0.002346	1.609438	1.235437	0.25037	0.69897
2	Bank of Africa	2015	-1023361	69280267	-0.01477	2.197225	1.256566	0.140646	0.60206
2		2016	10470	55995671	0.000187	2.197225	1.251414	0.185831	0.69897
2		2017	67618	54191291	0.001248	2.197225	1.250616	0.049129	0.69897
2		2018	173073	49080859	0.003526	2.197225	1.248194	0.097735	0.69897
2		2019	-2039838	43996118	-0.04636	2.197225	1.245503	0.08974	0.69897
3	Bank of Baroda	2015	2026117	68177548	0.029718	1.791759	1.256179	0.525061	0.69897
3		2016	2946759	82907475	0.035543	1.791759	1.260864	0.510959	0.69897
3		2017	3922996	96132100	0.040808	1.791759	1.264375	0.545007	0.30103
3		2018	3929580	1.23E+08	0.031944	1.791759	1.270162	0.480539	0.60206
3		2019	4092768	1.43E+08	0.028559	1.791759	1.273708	0.4533	0.60206
4	Barclays Bank	2015	8401000	2.41E+08	0.034877	2.833213	1.285553	0.245258	0.30103
4		2016	7399000	2.6E+08	0.028489	2.833213	1.287244	0.484903	0.69897
4		2017	6926000	2.72E+08	0.025503	2.833213	1.288243	0.397802	0.69897
4		2018	7416000	3.25E+08	0.022797	2.833213	1.292263	0.276666	0.69897
4		2019	7456077	3.74E+08	0.019937	2.833213	1.295341	0.229708	0.60206
5	Bank of India	2015	1107937	42162947	0.026278	2.079442	1.244452	0.638179	0.69897
5		2016	1640905	47815075	0.034318	2.079442	1.247552	0.664973	0.69897
5		2017	2088671	56630656	0.036882	2.079442	1.251688	0.6089	0.60206
5		2018	1935113	62689134	0.030868	2.079442	1.254154	0.660352	0.60206

5		2019	2341091	62543244	0.037432	2.079442	1.254098	0.573227	0.60206
6	Citibank	2015	3400960	88147287	0.038583	1.609438	1.262321	0.389044	0.69897
6		2016	3432189	1.03E+08	0.033218	1.609438	1.266076	0.327588	0.69897
6		2017	3910416	98231911	0.039808	1.609438	1.264885	0.164565	0.60206
6		2018	3161772	85638687	0.03692	1.609438	1.261635	0.139971	0.60206
6		2019	2932682	96570193	0.030368	1.609438	1.264482	0.178053	0.60206
7	Commercial Bank of Africa	2015	3592324	2.16E+08	0.01666	2.197225	1.283054	0.190083	0.60206
7		2016	6592725	2.29E+08	0.028747	2.197225	1.284446	0.165615	0.69897
7		2017	5686595	2.46E+08	0.023137	2.197225	1.286006	0.053454	0.69897
7		2018	5542081	2.45E+08	0.022611	2.197225	1.285944	0.245705	0.69897
8	Consolidated bank	2015	44422	14135528	0.003143	1.609438	1.216541	0.462548	0.69897
8		2016	-211360	13917895	-0.01519	1.609438	1.216131	0.530862	0.69897
8		2017	-335681	13455744	-0.02495	1.609438	1.215239	0.362549	0.69897
8		2018	-540034	12887332	-0.0419	1.609438	1.214095	0.287122	0.69897
8		2019	-531292	11861651	-0.04479	1.609438	1.21189	0.23584	0.30103
9	Credit bank	2015	-59795	10287085	-0.00581	1.94591	1.208076	0.753383	0.69897
9		2016	109605	12237889	0.008956	1.94591	1.212721	0.75196	0.69897
9		2017	134080	14510677	0.00924	1.94591	1.217231	0.799359	0.69897
9		2018	248537	17904609	0.013881	1.94591	1.222731	0.771517	0.30103
9		2019	212019	21660616	0.009788	1.94591	1.227656	0.818065	0.69897
10	Co-operative bank of Kenya	2015	11705559	3.42E+08	0.034177	2.484907	1.293402	0.139979	0.69897
10		2016	12676210	3.52E+08	0.03603	2.484907	1.293995	0.270022	0.60206
10		2017	11405065	3.87E+08	0.029481	2.484907	1.296085	0.372891	0.30103
10		2018	12732486	4.14E+08	0.030779	2.484907	1.297554	0.214868	0.69897

1		2019	14311247	4.57E+08	0.031315	2.484907	1.29973	0.364812	0.60206
1	Development	2016	61715	16411435	0.00376	2.197225	1.220461	0.503078	0.69897
1	Bank of Kenya	2017	27658	16309057	0.001696	2.197225	1.220297	0.604177	0.69897
1		2018	114445	15323111	0.007469	2.197225	1.218663	0.722276	0.69897
1		2019	1079115	15358069	0.070264	2.197225	1.218723	0.764672	0.69897
1	Diamond Trust	2015	6599806	2.72E+08	0.024299	1.791759	1.288246	0.840757	0.60206
2	Bank	2016	7728140	3.28E+08	0.023558	1.791759	1.292448	0.820038	0.60206
1		2017	6925040	3.63E+08	0.019061	1.791759	1.294703	0.789926	0.69897
1		2018	7082115	3.78E+08	0.01875	1.791759	1.29556	0.790098	0.60206
1		2019	7269592	3.86E+08	0.018822	1.791759	1.296049	0.787852	0.60206
1	Dubai Bank	2017	-599847	2610309	-0.2298	1.609438	1.169527	0.580188	0.69897
1		2018	-625754	5250614	-0.11918	1.609438	1.189599	0.500991	0.69897
1		2019	-571658	8987918	-0.0636	1.609438	1.204429	0.573723	0.60206
1	Ecobank	2015	90373	52426513	0.001724	2.197225	1.249808	0.315569	0.69897
1		2016	-2023883	47123839	-0.04295	2.197225	1.247195	0.252287	0.60206
1		2017	-1115332	53455760	-0.02086	2.197225	1.250282	0.148603	0.69897

4									
1 4		2018	198053	54463878	0.003636	2.197225	1.250738	0.256718	0.60206
1 4		2019	159495	75377851	0.002116	2.197225	1.25859	0.269936	0.69897
1 5	Equity Bank	2015	17327000	4.28E+08	0.040478	2.564949	1.298302	0.518577	0.69897
1 5		2016	16602529	4.74E+08	0.035048	2.564949	1.300511	0.506208	0.60206
1 5		2017	18918051	5.24E+08	0.036071	2.564949	1.302718	0.491392	0.69897
1 5		2018	19824000	5.73E+08	0.034574	2.564949	1.304643	0.57521	0.30103
1 5		2019	24366293	6.74E+08	0.036169	2.564949	1.3081	0.529047	0.69897
1 6	Family bank	2015	1982946	81281366	0.024396	2.302585	1.260392	0.241266	0.69897
1 6		2016	352279	69491684	0.005069	2.302585	1.256639	0.20963	0.69897
1 6		2017	-1000788	69134935	-0.01448	2.302585	1.256515	0.183957	0.30103
1 6		2018	244216	67011065	0.003644	2.302585	1.255764	0.062577	0.30103
1 6		2019	949836	78857125	0.012045	2.302585	1.259669	0.117223	0.69897
1 7	First Community Bank	2015	-12114	14564631	-0.00083	1.791759	1.217329	0.283151	0.60206
1 7		2016	-55734	14962089	-0.00373	1.791759	1.218037	0.251371	0.69897
1		2017	151797	17359968	0.008744	1.791759	1.221927	0.286605	0.60206

7									
17		2018	-212062	17880462	-0.01186	1.791759	1.222696	0.272885	0.69897
17		2019	190927	18762844	0.010176	1.791759	1.223947	0.283219	0.60206
18	Guaranty Trust Bank	2015	388936	40964878	0.009494	1.94591	1.243738	0.213638	0.69897
18		2016	419283	32165405	0.013035	1.94591	1.237705	0.921773	0.60206
18		2017	212945	31877965	0.00668	1.94591	1.237479	0.208042	0.69897
18		2018	90739	37944853	0.002391	1.94591	1.241836	0.252272	0.60206
18		2019	572158	29082395	0.019674	1.94591	1.235166	0.247391	0.69897
19	Guardian Bank	2015	229330	14609492	0.015697	1.791759	1.21741	0.20962	0.69897
19		2016	230127	14705350	0.015649	1.791759	1.217582	0.209582	0.60206
19		2017	160022	15802759	0.010126	1.791759	1.219472	0.217766	0.69897
19		2018	225568	16185963	0.013936	1.791759	1.220099	0.213661	0.69897
19		2019	183658	16386450	0.011208	1.791759	1.220421	0.203943	0.60206
20	Gulf African Bank	2015	728619	24706595	0.029491	2.197225	1.231025	0.211024	0.477121
20		2016	498321	27156264	0.01835	2.197225	1.233431	0.216773	0.30103
20		2017	153653	31316228	0.004906	2.197225	1.237032	0.200511	0.60206

2		2018	131589	33325575	0.003949	2.197225	1.238594	0.213418	0.60206
2		2019	167000	35122982	0.004755	2.197225	1.239909	0.235843	0.60206
2	Habib Bank Ltd	2015	298584	10229979	0.029187	1.609438	1.207926	0.473935	0.69897
2		2016	306165	12508025	0.024477	1.609438	1.213302	0.330436	0.60206
2		2018	225996	21520666	0.010501	1.609438	1.227489	0.367788	0.477121
2		2019	239949	24823459	0.009666	1.609438	1.231146	0.369548	0.69897
2	Housing finance Company ltd	2015	1196969	71659434	0.016704	2.484907	1.257377	0.309957	0.60206
2		2016	905829	71930140	0.012593	2.484907	1.257468	0.30073	0.69897
2		2017	126216	67541116	0.001869	2.484907	1.255954	0.39602	0.69897
2		2018	-598218	60549350	-0.00988	2.484907	1.253313	0.540812	0.69897
2		2019	-110108	56454918	-0.00195	2.484907	1.251613	0.495754	0.69897
2	I&M Bank	2015	7144411	1.92E+08	0.037264	2.302585	1.280386	0.481121	0.69897
2		2016	7760162	2.11E+08	0.036858	2.302585	1.282513	0.473556	0.60206
2		2017	7264249	2.4E+08	0.030254	2.302585	1.285481	0.505236	0.60206
2		2018	6552909	2.49E+08	0.026355	2.302585	1.286266	0.517292	0.60206

2									
3		2019	8942877	2.74E+08	0.032635	1.609438	1.288445	0.55982	0.69897
2	Jamii Bora								
4	Bank Ltd	2015	17737	16781543	0.001057	1.609438	1.221043	0.352856	0.60206
2									
4		2016	-167704	15779873	-0.01063	1.609438	1.219434	0.562012	0.30103
2									
4		2017	-473037	12882646	-0.03672	1.609438	1.214086	0.586696	0.69897
2									
5	KCB Bank	2015	19623071	5.58E+08	0.035161	2.484907	1.30406	0.582629	0.69897
2									
5		2016	19722447	5.95E+08	0.033134	2.484907	1.305448	0.505575	0.69897
2									
5		2017	19705130	6.47E+08	0.030472	2.484907	1.307225	0.550148	0.69897
2									
5		2018	23994970	7.14E+08	0.033592	2.484907	1.30935	0.411464	0.60206
2									
5		2019	25165168	8.99E+08	0.028006	2.484907	1.314211	0.323801	0.69897
2	Middle East								
6	Bank (K) Ltd	2016	-66285	5233522	-0.01267	1.386294	1.189507	0.424812	0.477121
2									
6		2017	-25188	5121036	-0.00492	1.386294	1.188897	0.417687	0.69897
2									
6		2018	2611	5360864	0.000487	1.386294	1.190181	0.33984	0.69897
2									
6		2019	3614	8466284	0.000427	1.386294	1.202804	0.384503	0.69897
2	M-Oriental								
7	bank ltd	2016	33686	9920247	0.003396	1.609438	1.207098	0.19886	0.477121
2									
7		2017	96510	10576525	0.009125	1.609438	1.208821	0.078542	0.69897
2									
7		2018	82446	10515015	0.007841	1.609438	1.208665	0.089582	0.69897

7									
2 7		2019	-21948	12393776	-0.00177	1.609438	1.213058	0.144985	0.60206
2 8	National Bank of Kenya	2015	-1153477	1.25E+08	-0.0092	2.079442	1.270617	0.268957	0.30103
2 8		2016	70953	1.12E+08	0.000633	2.079442	1.267987	0.236361	0.69897
2 8		2017	785082	1.1E+08	0.007145	2.079442	1.26752	0.317379	0.60206
2 8		2018	-84901	1.15E+08	-0.00074	2.079442	1.268558	0.467326	0.69897
2 8		2019	-895064	1.12E+08	-0.00799	2.079442	1.267975	0.48681	0.69897
2 9	NIC Plc bank	2015	4485125	1.66E+08	0.027053	2.197225	1.277064	0.460755	0.477121
2 9		2016	4330396	1.69E+08	0.025554	2.197225	1.277566	0.571371	0.69897
2 9		2017	4144418	2.06E+08	0.020102	2.197225	1.282038	0.538438	0.60206
2 9		2018	4228370	2.08E+08	0.020289	2.197225	1.282282	0.426344	0.60206
3 0	Paramount Bank Ltd	2015	158025	10525709	0.015013	1.94591	1.208692	0.042465	0.30103
3 0		2016	106439	9427841	0.01129	1.94591	1.205723	0.18813	0.60206
3 0		2017	117498	9541086	0.012315	1.94591	1.206046	0.18468	0.60206
3 0		2018	236292	9886573	0.0239	1.94591	1.207006	0.187514	0.30103
3 0		2019	91601	10443296	0.008771	1.94591	1.208481	0.134087	0.60206

3 1	Prime Bank	2015	2023189	65001313	0.031125	1.791759	1.255029	0.425334	0.69897
3 1		2016	1903776	65335455	0.029138	1.791759	1.255153	0.586765	0.477121
3 1		2017	2245143	77987909	0.028788	1.791759	1.259404	0.388699	0.60206
3 1		2018	2274052	1E+08	0.02271	1.791759	1.265338	0.41243	0.69897
3 1		2019	2619348	1.09E+08	0.024078	1.791759	1.267286	0.469216	0.477121
3 2	SBM Bank	2015	-785330	1.46E+08	-0.00539	2.197225	1.274105	0.201916	0.69897
3 2		2016	-1859568	9697204	-0.19176	2.197225	1.206484	0.269253	0.60206
3 2		2017	-330104	11533313	-0.02862	2.197225	1.211141	0.123436	0.60206
3 2		2018	1324205	70654062	0.018742	2.197225	1.257038	0.188835	0.69897
3 2		2019	904102	72519356	0.012467	2.197225	1.257663	0.141418	0.477121
3 3	Sidian Bank	2015	372320	19106556	0.019487	1.94591	1.224418	0.440869	0.69897
3 3		2016	28048	20875499	0.001344	1.94591	1.226705	0.514154	0.30103
3 3		2017	-421810	19301752	-0.02185	1.94591	1.224681	0.500936	0.69897
3 3		2018	-377883	25308924	-0.01493	1.94591	1.231639	0.515432	0.60206
3 3		2019	107738	26451638	0.004073	1.94591	1.232763	0.574992	0.30103
3	Stanbic Bank	2015	4905734	2.08E+08	0.023534	2.197225	1.282287	0.455505	0.477121

4	Kenya Ltd								
3									
4		2016	4418589	2.15E+08	0.020582	2.197225	1.282954	0.59842	0.60206
3									
4		2017	4309494	2.49E+08	0.017325	2.197225	1.286275	0.676577	0.69897
3									
4		2018	6227166	2.81E+08	0.022164	2.197225	1.289002	0.621475	0.60206
3									
4		2019	6176072	2.93E+08	0.0211	2.197225	1.289916	0.608582	0.69897
3	Standard								
5	Chartered Bank	2015	6342427	2.34E+08	0.027108	2.397895	1.284897	0.391338	0.60206
3									
5		2016	9049307	2.5E+08	0.036128	2.397895	1.286432	0.380652	0.69897
3									
5		2017	6914098	2.86E+08	0.024198	2.397895	1.289378	0.353306	0.60206
3									
5		2018	8099193	2.85E+08	0.028378	2.397895	1.289353	0.289298	0.69897
3									
5		2019	8236773	3.02E+08	0.027262	2.397895	1.290622	0.317493	0.60206
3									
6	Spire Bank Ltd	2015	-486382	14469562	-0.03361	1.609438	1.217156	0.455722	0.69897
3									
6		2016	-751623	13802498	-0.05446	1.609438	1.215911	0.287789	0.69897
3									
6		2017	-1126048	11147949	-0.10101	1.609438	1.210232	0.369483	0.69897
3									
6		2018	-2254919	9223078	-0.24449	1.609438	1.205129	0.355485	0.69897
3									
6		2019	-472037	6860301	-0.06881	1.609438	1.19704	0.379537	0.60206
3	Transnational								
7	Bank	2015	168030	10452691	0.016075	1.791759	1.208505	0.202555	0.60206

3 7		2016	109130	10372441	0.010521	1.791759	1.208298	0.288758	0.60206
3 7		2017	36433	10241368	0.003557	1.791759	1.207956	0.260858	0.30103
3 7		2018	-71841	10235524	-0.00702	1.791759	1.207941	0.277101	0.60206
3 7		2019	-83944	9318142	-0.00901	1.791759	1.205407	0.213116	0.60206
3 8	UBA Kenya Bank Ltd	2015	-262653	7781237	-0.03375	1.609438	1.200501	0.687626	0.30103
3 8		2016	24298	5601281	0.004338	1.609438	1.191409	0.633518	0.60206
3 8		2017	18609	6504732	0.002861	1.609438	1.195569	0.626717	0.69897
3 8		2018	53063	15332118	0.003461	1.609438	1.218679	0.614037	0.69897
3 8		2019	67588	16088319	0.004201	1.609438	1.219941	0.674417	0.69897
3 9	Victoria Commercial Bank	2015	713800	20020072	0.035654	1.791759	1.225626	0.340857	0.60206
3 9		2016	592395	22403481	0.026442	1.791759	1.228522	0.402207	0.30103
3 9		2017	617177	25985160	0.023751	1.791759	1.232311	0.327092	0.60206
3 9		2018	437004	32336955	0.013514	1.791759	1.237838	0.183538	0.477121
3 9		2019	527145	36072410	0.014614	1.791759	1.240575	0.220363	0.60206

