KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI

Board Gender Diversity, Governance and Financial Performance of Firms Listed in Ghana

By

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(MBA, Finance Option)

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DECLARATION

I hereby declare that this submission is my own work towards the degree in Master of Philosophy (Finance Option) and that to the best of my knowledge, it contains no materials previously published by another person or group nor material which has been accepted for the award of any other degree of the university, except where due acknowledgement has been made in the test.

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Prof. J.M Frimpong …… ……

(Supervisor) Signature Date

Certified by:

Daniel Domeher (PhD) …… ……

(Head of Department) Signature Date

DEDICATION

I dedicate this thesis to Dr. Obed Obeng-Addae for being the pillar and source of encouragement to me. Finally, I dedicate this work to all my family members for their prayers in completing this thesis successfully.

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I would like to first and foremost thank God almighty, the author of knowledge and wisdom for his countless love. I would also like to express my profound gratitude to my supervisor, Professor Joseph Magnus Frimpong for his invaluable support, encouragement, supervision and useful suggestion throughout this project. Last but not the least, I am thankful and indebted to all those who helped me directly or indirectly in completion of this project.

ABSTRACT

The study examines the relationship between gender issues in corporate governance and financial performance of listed firms in Ghana. Specifically, the study determines the effect of female presence on boards on firm performance, investigates the effect of female presence on audit committee on firm performance, evaluates the effect of female CEO on firm performance and finally, explores the moderating effect of female CEO on female board membership financial performance. The study first and foremost employs an explanatory research design through the application of quantitative analysis in its presentation of results. The study samples 31 listed companies from the Ghana Stoch Exchange. The period under studying is between the year 2008-2019. By the application of unbalanced panel data estimation and ordinary least regression method, the study concludes that while there is a negative insignificant effect of female directorship on stock market performance which is being represented by Tobin's Q as a proxy, there is a negative significant effect of female board directorship on financial sustainability which is that of return on capital employed. Secondly, there is a reflection of a negative significant relationship between that of female audit committee member and financial performance of listed firms in Ghana. None of the estimation methods show any significant effect between that of female CEO and firm performance. Lastly, moderation estimation shows a negative significant relationship between female directorship and financial sustainability. The study recommends that firms should include women on their corporate boards. The study therefore recommends women should undergo relevant seminars and training. This will help them to contribute positively to the improvement of the stock performance of the firms they represent. GSE should make it a requirement for all listed firms to disclose corporate governance issues such as audit, nomination, compensation, gender composition.

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CHAPTER ONE

INTRODUCTION

1.0 Background to the Study

In recent years, corporate boards have become the most vital internal control mechanism in corporate governance that shareholders employ to control and monitor management in organizations. Prior studies by (Fama & Jensen 2013; Hermalin & Weisbach 2013) argue that one of the definitive aims of forming corporate boards is to identify and establish key organizational structures that may align and promote interests of stakeholders with that of management (Rose 2017). However, the efficacy of the board to monitor the performance as well as put management on their toes (Rose 2017) depends upon several factors that may include the board's diversity, qualifications and experience, involvement in a multiple directorship position, level of share ownership as well as the type of remuneration scheme offered to motivate the participation of the members.

However, research and government commissioned reports such as the Higgs (2013), Cadbury (1992) reports in the UK, Sarbanes–Oxley Act of 2002 in the US, and Erhardt, Werbel and Shrader (2013) have explicitly argued out on the importance of board diversity among other factors to the firm. Their empirical findings reveal that to enhance board effectiveness, corporate firms must continually solicit for expertise of gender diverse professional groups where women are better represented. However, the question that comes to mind is, does gender diversity make any difference in the corporate world? Compbell and Minguez-Vera (2018) note that the presence and participation of women on corporate boards in one way or the other may promote and enhance shareholder value due to their ability to bring additional viewpoints to the board. In light of Fondas' work on corporate boards which significantly

reiterates the importance of board of directors in the corporate world and how these influential actors make strategic directions and decision-making as well as undertake a monitoring role of management; Fondas (2018) asserts that presence of women directors on the board helps in the execution of strategic board function that may be aligned with the firm needs. Notwithstanding, research on the issue of diverse viewpoints among corporate teams advocates that teams with functional heterogeneity in terms of gender composition are more effective at solving problems than homogenous teams and hence may better respond to rapid dynamic changes in the corporate market. However, Erhardt (2013) examines that while diversity within corporate boards may be a highly visible effort to reduce gender discrimination as well as prevent glass ceiling in the firm, it is unclear if gender diversity has substantial impact on organizational performance.

Management literature examine that diversity in personality (Burke & Nelson 2012), ethnicity (Burke 2015; Elron 2016) as well as demography (Petersen, 2010; Timmerman, 2011) can improve the efficiency of the board as well as create strong network connections that will facilitate an increase in knowledge base, creativity and innovations in the organization hence firm performance (Bilimoria 2014; Burke & Nelson 2012). Shrader, Blackburn, Iles and Shrader (2017) consequently, examine top management gender diversity and firm financial performance for large firms. They find evidence for the existence of a positive association between the presence of women in management positions and firm financial performance, which they attribute to recruitment from a relatively larger talent pool that included females. This finding is confirmed by recent studies (Davies 2011; Sealy & Vinnicombe 2012). Although, gender diversity related research is well captured on developed economies, little evidence exists on developing economies such as Ghana in terms of how gender diversity in the boardroom influence firm performance. Medland (2014) reports that firms in Sweden are mandated to voluntarily reserve a minimum of 25 per cent of their board

seats for female directors whilst the FTSE companies in the UK similarly require firms listed on their market to have at least 25 per cent of female directors on their board by 2015 (Sealy & Vinnicombe 2012). However, the case is not different in Ghana. In 2001, the government of Ghana established the Ministry of Women and Children's Affairs (MOWAC) to liaise with all relevant stakeholders to ensure that gender is mainstreamed into all senior level positions in government sectors. The Provisional National Defense Council Government in 1997 endorsed the Affirmative Action Plan prepared by a coalition of gender activists groups pledging to support and achieve forty percent female representation on all corporate boards by 2000 (Boohene, Sheridan & Kotey, 2018). Despite efforts to increase the proportion of female representation in top and middle management, women in Ghana, are rarely represented hence the extent to which female participation influence firm performance. This study therefore, tends to re-examine the effect of board gender diversity, governance and firm financial performance using data from Ghana stock exchange.

1.1 Problem Statement

Female representation on boards has become the central focus of corporate governance renovate efforts around the world. Consequently, companies are being put under pressure to appoint female directors in their boards. For instance, in 2004 Norway implemented a compulsory gender quota law, which requires 40% positions in the boards of listed companies to be set aside for females (HKEC, 2012). This inventiveness encouraged many countries in Europe to follow suite; countries such as Belgium (2011), Finland (2015) and Spain (2017) are to be mentioned. This initiative has also led to the increase level of board gender diversity in countries in Asia-Pacific region such as Australia (2019), New Zealand (2012) and Singapore (2012). The theoretical explanation for including more women in the company boards comes from management theories or diversity management. According to

this theory, boards that are more diverse may cause improved firm performance. As a result, gender diversity as a corporate governance concept has in recent times caught the interest of policymakers, managers, directors, shareholders and academia (Johansen 2018). Theoretically, both agency theory and resource dependency theory predict that there will be a positive relationship between board diversity and company financial performance. Agency theorists advocate that the diversity of boards is one of the measures of their independence (Jensen & Meckling 2016), and independent boards are more effective at their function of managerial monitoring, and thus, may have a positive impact on financial performance (Muth & Donaldson 2018). However, whether gender diversity improves governance practices, which in turn can lead to better financial performance is an empirical question. Prior empirical research undertaken predominantly in the developed economies has revealed inconclusive results (Campbell & Minguez-Vera 2018; Rose 2017).

Again, Erhardt, Werbel and Shrader (2013) stress that the influences of gender diversity on financial performance remain unclear. Studies conducted by (Cartel et al. 2010; Rose 2017) provided an evidence of no significant relationship at all. Based on the different stances that have been taken by the various studies that have been undertaken in developed countries, it is necessary that the issue is also investigated in developing countries, since few studies have been carried out in the developing countries like Ghana. Particularly, prior studies in Ghana have mainly focused on board composition of listed firms (Amidu & Abor 2016). This current study focuse on gender diversity of listed firms in Ghana. This study is different from the previous studies in three ways: First, this is the first study that focuses on all the listed firms in Ghana without singling out. Second, this study has the highest sample size with longer period of study observation compare to previous studies. This study also introduces a moderating variable of gender (female CEO) which establish the relationship between female board membership financial performance.

1.2 General Objective

The main focus of this study is to examine the relationship between gender diversity of the board of listed firms in Ghana and financial performance of such firms.

1.3 Specific Objectives

Specifically, the study seeks to:

1. Determine the effect of female presence on boards on firm performance.
2. Investigate the effect of female presence on audit committee on firm performance
3. Evaluate the effect of female chief executive officer on firm performance.
4. Explore the moderating effect of female CEO on female board membership financial performance.

1.4 Research Questions

In order to achieve the stated objectives, the following questions must be addressed:

1. What is the effect of female presence on boards on firm financial performance?
2. To what extent does female presence on audit committee affect firm financial performance?
3. What effect does gender diversity of executive members of the board have on firm performance?
4. Is there any moderating effect of female CEO on female board membership financial sustainability?

1.5 Significance of the Study

This study examines the effect of board gender diversity on firm financial sustainability in Ghana. Examining the contributions of the women in line with the above firm performance although, does not only help to address the question of whether corporate boards should continue to restructure their board compositions to incorporate female participation but to show how the presence of female on corporate boards may improve firm performance in Ghana. In addition, the organizations employed in this study will appreciate the benefits associated with having women on their corporate boards in terms of financial performance. Similarly, it will send good signals to firms that are not captured in the sample in the same regard. Again, the study will uplift the image of board diversity research in Ghana since it would improve previous studies such as Amidu and Abor (2016) by looking at the impact on performance rather than mere representation. Moreover, the study will serve as a guideline to future studies on board gender diversity in developing economies with similar characteristics as Ghana. More so, the study will add to corporate governance literature on board diversity and firm performance globally. Lastly, the result of the study could be of importance to the academia, corporate bodies, shareholders and policy.

1.6 Scope of the Study

Although, there exist numerous and insightful board diversity variables, gender is chosen because issue of gender diversity is becoming more popular in policy debate, yet there is still relatively little research on gender diversity especially in developing countries as in the case of Ghana. Again, the sample is drawn from listed firms on the GSE and the results may not generalize all companies in the country (Ghana). The study is analysed based on 12-year of period between 2008-2019. The coverage of the firms comprised both financial and non-financial companies on GSE.

1.7 Organization of the study

The study is grouped into five chapters. The background information to the study, problem statement, general objective, specific objectives, research questions, significance of study, scope, limitations and lastly, organization of the study come under Chapter One. The Chapter Two captures the review of related literature and chapter three presents the methodology for the study whilst the fourth chapter covers analysis and discussions of findings. Detailed summary of findings, conclusions and recommendations end in chapter five.

1.9 Chapter Summary

The chapter begins with background information, problem statement, primary and secondary objectives, research questions, some significance of the study, scope of the study and ends with organization of the study. Board of directors of corporations has become very important tool in controlling, managing and direction corporate firms. That is, corporate boards are there to monitor the performance of managers and as well as put management on their toes. This experience of supervision or monitoring depends upon several factors that may include the board's diversity, qualifications and experience, involvement in a multiple directorship position, level of share ownership as well as the type of remuneration scheme offered to motivate the participation of the members. Meanwhile, some studies have explicitly argued out on the importance of board diversity among other factors to the firm.

Their assertion posits that to enhance board effectiveness, corporate firms must continually solicit for expertise of gender diverse professional groups where women are better represented. Female representation on boards has become the central focus of corporate governance renovate efforts around the world. Consequently, companies are being put under pressure to appoint female directors in their boards. Countries like Norway, Belgium, Finland, Spain and Asia-Pacific region such as Australia, New Zealand and Singapore are

being propelled to more female board representation as compulsory. However, whether gender diversity improves governance practices, which in turn can lead to better financial performance is an empirical question. Based on the different stances that have been taken by the various studies that have been undertaken in developed countries, it is necessary that the issue be also investigated in developing countries. Prior studies in Ghana particularly considers board gender composition of listed firms (Amidu & Abor 2016). The scant studies that exist in Ghana specifically, in the area of women representation has therefore necessitated the need to investigate the effect of board gender diversity on firm's performance in Ghana. Notwithstanding the fact that the gender issue is not a major challenge among firms in Ghana, the result of the study could be of importance to the academia, corporate bodies, shareholders and policy makers just to mention a few.

First and foremost, specific research objectives of which the study focuses are to examine the gender composition of corporate boards of listed firms in Ghana, determine the effect of female presence on boards on firm performance in Ghana, investigate the effect of female presence on audit committee on firm performance, evaluate the effect of female executive members of the board on firm performance and lastly, explore the moderating effect of female CEO on female board membership financial sustainability. The scope of the study covers companies listed on the Ghana Stock Exchange. Although, there exist numerous board diversity variables, gender is the focus as far as women representation on board is concerned. All data are sourced from the Ghana Stock Exchange.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Generally, this chapter presents conceptual, theoretical and empirical review. It is as well encompasses conceptual framework and hypothesis development. Specific areas are corporate governance, corporate governance mechanisms, theories of corporate governance and as well as overview of banking sector in Ghana.

2.1 Conceptual Review

This section covers an overview of corporate governance in general, corporate governance code, the general corporate governance in Ghana, the concept of gender diversity and the business case for greater gender diversity of top management and on corporate boards. The below points give the detailed explanations.

2.1.1 Corporate Governance

According to the Cadbury Committee, the first establishment to tackle the subject of corporate governance defined it as a set of rules by which companies are directed and controlled (Cadbury, 1992). Essentially, corporate governance is concerned with solving the agency problem first recognized by Berle and Means (1932), and further developed by Jensen and Meckling in (2016) and various other academics. Corporate governance deals with and designs device that assure that suppliers of finance to corporations receive a high-quality return on their funds (Shleifer & Vishny, 1997), by reducing the agency divergence view. It is made up of series of mechanisms through which the interests of management, the board of directors, controlling shareholders, minority shareholders and other stakeholders may be associated. These devices can be internal or external to the corporation. Internal governance

mechanisms are ownership structure, the board of directors and creditor monitoring. External governance instruments consist of regulation, need for external capital, competitors and takeover markets (Denis & McConnell, 2003). The corporate governance literature lay emphasis that good corporate governance is one that helps generating long-term value creation for owners and other major stakeholders. It aims to provide incentives for the board and management to pursue the goals that are in the interest of the company and its shareholders. Good corporate governance needs therefore to be the result from the optimal interaction between owners, managers and the board of directors. The board of directors is an important governance instrument, even though the nature of the arrangement between different interest groups is also partly determined by the legal environment (Campbell & Minguez-Vera, 2007).

2.1.2 Gender Diversity

According to ILO (2009), female participation in labour markets worldwide grew substantially during 1970 and 1980s, even though this was not always correspondent to improvements in job quality. In most European countries, the labour force membership rate of women is lower than that of men (Curdova, 2005). Catalyst, a research and advisory services organization working to increase opportunities for women at work, has monitored the progress of women in U.S. board positions since 1995. In its 2005 Census of Women Board Directors of the Fortune 500, it reported that women held 14.7% of all Fortune 500 Board seats, up from 13.6% in 2003 and 9.6% in 1995 (Catalyst, 2007). Opinions for greater female boardroom representation can be split into two groups: ethical and economic. The former argues that it is decadent for women to be debarred from corporate boards on the grounds of gender and that firms should increase gender diversity to achieve a more equitable outcome for society. Those in favour of economic arguments, on the other hand, are of the

view that firms, which fail to select the most competent candidates for the board of directors, damage their financial performance, (Campbell et. al., 2007). Economic arguments further suggest that firms that select management without any discrimination are able to attract and maintain talent from a wider pool of human capital than those companies that fail to select the most proficient candidates due to some sort of discrimination (especially gender).

Bjarnadóttir (2013) reports that majority of academic literature on women in top management and on corporate boards is descriptive and does not plainly develop a theoretical framework. In a comprehensive literature evaluation of 180 published articles, working papers, and book chapters, Terjesen, Sealy and Sigh (2009) identified twenty theory-based studies on the subject of women on boards that apply a variety of frameworks at the individual, board, firm and environmental level. The prevailing standpoint at the firm level, which is the most important level as far as this work is concerned, are the resource dependency theory, agency theory, stewardship theory and leadership theory as well.

2.2.3 Corporate Governance Mechanisms

Corporate governance involves the set of institutional and market mechanisms that induce self-interested managers to increase the value of the residual cash flows of the company to optimal levels on behalf of the owners of the entity. To have the necessary impact, a governance mechanism should bridge the gap between the interests of management and shareholders, and must have a substantial and positive impact on corporate performance and value (Mark, 2012). Various mechanisms are therefore set in place with the view that they will ultimately enhance the firm's performance and maximize shareholder wealth.

2.2.3.1 Separation of CEO

The two highest positions in an organization are the CEO and the Chairman of the Board. When a single individual occupies both positions, it is presumed to be overly powerful, a situation that could affect the organization. According to Cadbury (2002), the combined leadership structure occurs when the CEO performs two different roles, first as a CEO and then as a board chairman. On the other hand, when two separate individuals occupy the position of chief executive and chairman of the council, then there is a separate leadership (Dalton, 2011). The distinction between the two roles of the CEO and the chairman of the board is based on agency theory. Since the main responsibilities of the board of directors include overseeing the management and safeguarding of the investor's investment, the merger of the functions of the CEO and the president will result in a person with too much power, potentially too dominant. They cause ineffective management monitoring by the board (Lam & Lee, 2008). It is believed that a separation of the two positions involves a more independent evaluation of the CEO and executive management as a whole, creating the environment for better responsibility (Monks and Minow, 2010).

2.2.3.2 Board Size

Jensen (1993) argue that the size of the boards should be limited, as a large table probably has many of its inactive (or free) members. When that happens, the board becomes more formal and less effective in its role as part of the management process. However, a too small tip in size may also lack the diversity of knowledge, skills and experience that can help the board to be effective. The British Combined Code is of the opinion that the board is large enough to meet business needs and that changes in the constitution of the board and in the composition of its committees can be managed without unnecessary dysfunctions. Nor should it be too big for not being properly managed to be effective in its role.

2.2.3.3 Board Composition

The composition of the Council refers to the way in which executive and non-executive directors, including non-executive directors, are represented in the Council. The Corporate Governance Code of Singapore (2012) indicates that there must be a strong element in the board, which can exert an independent and objective judgment on corporate issues. No person or small group of people should have the freedom of domination during the Council's decision-making process. The presence of executive directors in the board is very important. They carry their experience in specific areas and a great knowledge of the entity (Weir & Laing, 2001). However, according to (Daily & Dalton 1993), they are unable to monitor or discipline the CEO since they were reported.

Therefore, Dalton et al. (1998) state that most of a properly functioning committee should consist of non-executive directors who are expected to do better because of their independence from entity management. The studies conducted show that non-executive directors are more willing to protect the interests of the entity's owners because of the need to preserve their reputation within corporate environments. This opinion is supported by (Stulz 2011), which states that non-executive directors are more effective in overseeing delegates because of their concern to maintain their reputation. While some studies have shown that there is a positive correlation between the composition of the board with multiple non-executive and independent performance directors, other studies have shown the opposite, that is, there is no inverse relationship between a high percentage of members of the external council and the performance of a company (Weir & Laing, 2011).

2.2.3.4 Board Committees

Board committees, within the organizations organized, play a key role in providing impartial and unbiased supervisory and consultancy services to the company in order to preserve

stakeholder interest. In many jurisdictions, there is now a need for company councils with committees that carry out certain key functions. The Swiss Code provides that a board of directors of a company elect its members' committees to carry out a detailed analysis of certain aspects of the company before making recommendations to the Board to act as part of its oversight functions of the mandate. The Committee remains responsible for all the necessary measures, which have been informed by the work of its committees.

It is widely accepted that well-governed organizations should have audit, compensation and appointment boards of the board of directors to help provide a system for objective monitoring of business activities. This will increase the extent to which the company remains responsible and continues to act in the best interests of the company's owners. The United Kingdom Combined Code describes the role of the various committees. The Audit Committee is responsible, inter alia, for accountable accounting, auditing of the internal financial control of the organization, and checking and reviewing the independence and effectiveness of internal and external auditors.

The remuneration committee, composed of two or more independent non-executive directors, has the power to determine the level of remuneration and incentives to be given to executive directors and the Chairman. The role of the nomination committee is to evaluate the mix of experience, experience and independence in the board of directors and, based on this assessment, express responsibilities and competences linked to a specific appointment. (Keong 2012) argues that council committees may be useless and ineffective if their members are not objective and impartial, well informed and have access to expert advice. They must also have an appreciable level of financial acumen.

2.2.3.5 Director Remuneration

A key provision of some corporate governance codes, including the Dutch code, the United Kingdom and Singapore, has to do with executive compensation. The compensation and incentive packages assigned to members of the board of directors and top management must be sufficiently attractive for courts and keep those with the required qualifications and experience. The wage structure, including remuneration, should not be complex and should promote the company's medium and long-term interests.

Therefore, the system should be such that members of the board of directors and board members would dissuade themselves from acting on their egoistic interest rather than on the company's own and that members of the defaulting board would not be rewarded for their incompetence at the end of his appointment. Verbeek (2012) alluded that the highest levels of remuneration and other forms of financial incentives should have a positive impact on business performance. However, (Jensen and Murphy 1990) show that executive salary is not an effective mechanism to increase the value of the organization. (Brennan, 2011) also states that financial packages are insufficient to ensure complete harmony between the interests of executives and company owners.

2.2.4 Corporate Governance in Ghana

Country specific initiatives and directives from multi-lateral organizations such as the World Bank, IMF, International Finance Corporations and such Para-national organizations (Rossouw, Van der Watt, & Malan, 2002) have motivated the campaign and advocacy for good corporate governance in Africa. Ghana like most other developing countries has embraced the concept of corporate governance as a fundamental tenant of accountability in both public and private sector business dealings (Otuo & Castellini, 2015). Corporate governance structures have found expression in constitutional and legislative prescriptions in

the country and a strong civil society and a vibrant media augment these. The Companies Code, 1963 Act 179 has copious provisions dealing with the roles, rights, duties and nature of the relationship between the various organs of the company. Company law and its related jurisprudence in Ghana also firmly ground corporate governance structures in almost all public interest business situations. For instance, the company's code has placed the sole responsibility for the preparation and presentation of financial information on management.

This suggest that, the board of directors are responsible for the selection of an accounting policy for preparation and fair presentation of the financial statements in accordance with relevant IFRSs. In addition, for such internal control as the board of directors determine is necessary to enable the preparation of financial statements that are free from material misstatement whether due to fraud or error. As opined by (Fligstein & Choo, 2005), the design of corporate governance structures is influenced by particular political, economic and social conditions which contextualize their focus, direction and interpretation.

In the particular case of Ghana, some of these factors include but not limited to; the nature and structure of ownership interests, a less developed capital market, and the increased participation of government in business through it majority ownership interest in companies operating in strategic sectors of the economic (Abor & Biekpe, 2007). For example, as opined by (Haselip, Desgain, & Mackenzie, 2014), Ghana's economic environment is dominated by the SME sector, in which businesses are tightly owned and controlled by close families and or friends. This situation affects to some degree the functionality of corporate governance mechanisms. To give effect to the critical role that corporate governance plays in the corporate environment of Ghana, various laws and institutions have been set up to that effect. Some of these include; the companies Code, 1963, Act 179, Securities and Industry Law, 1993 (PNDL Law 333), and the Securities and Exchange Commission. The SEC and the

Ghana Stock Exchange (GSE) are primarily responsible for implementing good corporate governance within listed companies. For example, the SEC recognizes the need for an audit committee and provides guidelines for its composition and function. Specifically, SEC requires that all listed firms on GSE to have an AC and the AC must have at least three independent directors on the committee. It must further be noted that, it is the responsibility of AC to propose an external auditor for approval at annual general meeting and it is the AC responsibility to supervise the work of the external auditor.

This particular provision in the law is an indication of the importance of governance structures in the financial reporting environment in the country. It also identifies the importance of balancing the board members into executive and non-executive members since the Companies' Code is silent on these issues. Other non-mandatory schemes towards enhancing corporate governance practices in Ghana includes the Institute of Directors (IoD), Institute of Economic Affairs, Private Enterprise Foundation, Commonwealth Association of Corporate Governance and Ghana Centre for Democratic Development which undertakes non-certification training for company directors, and the monitoring role of civil society including the media. This effort to some extent underscores the importance of the governance structures in the operations of companies.

The ROSC (2005) report on Ghana indicates that, aspects of the corporate governance regime are commendable. The report further stipulates that basic shareholder rights are generally well observed and information is available in a timely and regular manner. An adverse notion was however advanced in the area of enforcement, disclosure of material facts, and monitoring for content was lacking. Furthermore, the ROSC observed lack of awareness of corporate governance, lack of policy framework, enforcement and compliance issues. Incompetent governing boards, weak parliament, ministerial, and public oversight, and

excessive political interference (ROSC, 2005). Therefore, to ensure quality accounting and reporting practices, corporate governance must be improved in Ghana with regular review of the system and legislation in place (Kyereboah-Coleman, & Biekpe, 2005). ROSC (2005) the World Bank in its report, however, suggested that the SEC improve enforcement of corporate disclosure practices of a country. Consequently, these national systems are examined vis-a-vis their effects on disclosure practices. It is therefore believed that, the growth of the private sector hinges on capital markets (Pardy, 1992).

If properly run, these markets can increase confidence and thereby help attract capital for the development of a country's economy. Well-developed capital markets promote good accounting and disclosure practices (Adhikari, & Tondkar,1992; Gray, et al,1990; Pratt, & Behr, 1987) they also oblige companies to make available to the public their annual reports and financial reports (Camfferman, & Cooke 2002). Other points worth noting in relation to disclosure is the adoption by Ghana of IFRS in corporate reporting by public interest entities, the requirement that every public company's financial statements should be subject to audit by an independent auditor, and talks about expanding the reporting scope of the auditors. These matters are all germane to the quest to improve and entrench systems of good corporate governance in the financial reporting supply chain of Ghana.

2.2.5 Legal and Regulatory Framework of Corporate Governance in Ghana

The regulatory framework for an effective corporate governance practice in Ghana is contained in the following documents: Companies code 1963 (Act 179), Securities Industry Law 1993 (PNDCL 333) as revised by the Securities Industry (Amendment) Act, 2000 (Act 590) and the listing regulations, 1990 (L.I. 1509) of the Ghana Stock Exchange. Agyemang et al (2013) used six major categories in describing corporate governance in Ghana. These are the mission, responsibilities and accountability of the board; board committees; relationship

to shareholders and stakeholders, and the rights of shareholders; auditing and financial affairs; financial disclosures and code of ethics. The various sections of the regulatory framework of Ghana are discussed below:

2.2.5.1 Mission, Responsibilities and Accountability of the Board of Directors

Board of directors look at managing the company and ensuring that shareholders value is maximized. The board has responsibility towards the stockholders, the industry in which it operates and the law. Interests of other stakeholders are expected to be looked at aside shareholders. An integrative view is thus taken by corporate governance expectations on boards in Ghana. The regulatory framework lays on the board the primary responsibility of ensuring that good corporate governance operates within companies.

In accordance with the regulatory framework, the board is expected to carry the following functions. Firstly, the board is in charge of the strategic direction of the corporate entity in ensuring that its goals are achieved, secondly, the management of the corporation also falls in the hands of the board. Thirdly, risk management represents a critical role to be carried out by the board through identification of risk and systems to manage it. Fourthly, appointments, training, remuneration and finding right replacement of senior management is done by the board. Furthermore, oversight and supervision of internal control systems is to be done by the board. Lastly, the board has to ensure that communication and information dissemination policy of the corporation is maintained.

The principle also reflects the sovereign rights of shareholders, since the boards of directors, who are to ensure that effective corporate governance prevails, are accountable to shareholders. The board size is stated in this legal framework even though no specific number is stated. However, board size of between 8-16 members is recommended (Agyemang et al, 2013). Appointment of board of directors is expected to be transparent and free of corrupt

practices. Shareholders are to be provided with adequate information on all persons to be appointed. These information ranges from name, age and country of residence. The appointment should specify whether the new director is executive and if so the job description, working experience and other information including anything that can cause conflict of interest in is roles. The leadership structure of the corporate organization is clearly stated in this section of the principle. It thus touches on the issue of CEO and board Chairmanship duality role. The regulatory framework states in clear terms that there should be a separation of the roles of the chairperson and the CEO.

In addition, in the event of this separation, the relationship between the CEO and the Chairperson with their respective responsibilities should be formally defined or stated. The regulatory framework touches on the composition of the board. It states that the board should have a balance of executive directors and NEDs with a complement of independent NEDs being at least one third of the total membership of the board. The appointments of the NEDs is to be done by the board and the selection procedure ought to be based on merit. Independence of a director is defined by regulatory framework based on some parameters.

Specifically, the director should not be a substantial stockholder of the corporate entity; is not an employee of the corporate business, is not a professional advisor or consultant to the corporate entity; is not a supplier or customer; no contractual connections with the corporate business; and free from any other relationships with the corporate entity, which may interfere with his or her ability to carry out his/her responsibilities independently. The regulatory framework emphasizes that all directors both Executives and NED should be given unrestricted access to corporate information. The board in discharging its duties is expected to meet regularly and in the case of listed companies at least six times in a year. Board committees are expected to meet frequently to ensure that their duties are carried out

effectively and efficiently. NEDs in particular are expected to be consistent in attending meetings to guarantee their continued stay on the board.

2.2.5.2 Board committees

The board is allowed to constitute committees, as it may deem appropriate to help it in carrying out its duties. The membership on the committees formed can extend to outsiders or those who are not on the board but the caveat is decisions made lay responsibility on only those on the board. It is also expected that a board's committees and their members be to be published in the company's annual report. The regulatory framework specifies sub-committees the board can constitute. These are the audit committee and remuneration committee. The audit committee should compose of at least three directors, of whom the majority should be NEDs. The membership of the committee should have adequate knowledge on finance, accounts and the fundamental elements of the laws under which the company operates. There is an explicit provision that the chairperson of the audit committee should be a NED. The primary functions of the audit committee are listed also in Ghana's legal framework for corporate governance.

2.2.5.3 Relationship to Shareholders and Stakeholders

The corporate governance framework in Ghana also emphasizes other stakeholders aside the shareholders. The rights of shareholders are also enumerated under this section of regulatory framework. The rights include: secure methods of ownership registration; transfer shares; obtain information on the firm; vote; elect board members; participate in the profits of the corporate business. Shareholders have the right to partake in, and to be made aware of the changes that occur in the company such as amendments to statutes and laws regarding the company's operations and the regulations of the company. Other important documents such

as these are not to be concealed from shareholders. The principle of equitable treatment of all shareholders is also highlighted in this section.

2.2.5.4 Auditing and Financial Affairs

The role of the board with regard to corporate financial reporting and auditing is also enumerated in the regulatory framework of the country for corporate governance. Matters concerning audit reports, possible deviations from standards are mentioned in the company. There is mentioning of rotation of audit personnel and removal or resignation of an auditor. The board of directors as part of the internal control system management protects company's assets. The board also ensures that statutory payments are made on time. Other functions in this respect of the board are there (Agyemang et al, 2013).

The tremendous role of external auditor of a company is also explicitly stated in the regulatory framework. Auditors are expected as a legal obligation to give an objective, independent and effective opinion on financial statements of the company. The auditor is advised to use diligence, objectiveness and independence in the execution of his or her duties (Agyemang et al, 2013). Also, the auditor ensures that the audit is done in accordance with the standards set by Institute of Chartered Accountants, Ghana (ICAG). Not only is the auditor expected to conduct the audit in accordance with the standards set by the regulatory accounting body ICAG, but he is also expected to make a disclosure in audit report rendered that the audit has been conducted in accordance with the standards set by ICAG.

In executing his role as the auditor if he lights on any material departure from the standards, the external auditor is to bring it out to see if it is intentional or otherwise and the right thing done accordingly. To ensure effective and fair audit, which a third party outside the relationship between the management and the auditor can say that audit report reflects the real events on the ground, it is recommended that auditors should be rotated. Finally, the

section provides in a situation where there is withdrawal, resignation or refusal by a company's auditor to stand for re-election, an acceptable explanation should be given so that the explanation can be delivered to shareholders.

2.2.5.5 Financial Report Disclosures

There is a responsibility laid on the board of a company to furnish shareholders with financial information on the company and other stakeholders. Specifically, the financial and operating outcomes of the corporate business; the objectives of the corporate business; major share ownership and voting rights; material issues concerning employees and other stakeholders and board members and key executives, and their remuneration (Agyemang et al, 2013).

The code also agrees with the establishment of remuneration committee with NEDs as majority of its members. It is also stated that executive directors who find themselves in the remuneration committee should not partake in decision-making process regarding decisions on the remuneration packages. The regulatory framework discloses the primary responsibilities of the remuneration committee. To start with, the committee is responsible for laying down clear procedures on executive compensation.

Secondly, the structures required by the organization to be instituted to compensate managers for performance improvement has to be done by the committee. (Agyemang et al, 2013). The committee is also responsible for contracts supervision to satisfying themselves that contracts of executives are bereft of provisions that possibly will make the company suffer loss when there is early termination of contracts. In the annual reports of companies, a disclosure is expected to be made in respect of the number of members in the audit committee and their working policies. The fees and other entitlements of the members are also expected to be disclosed in the annual report.

2.2.5.6 Code of Ethics

In ensuring proper implementation of corporate governance in the country, companies are advised to have code of ethics in place and a statement of business practices as part of their corporate governance practices. Boards of directors are responsible for the formulation of such document. However, its content is applicable to the board and all employees. The board has to lay also in place mechanisms to see to the compliance of the code of ethics (Agyemang et al, 2013). The summary or key points summed up in the principles of corporate governance in Ghana gravitates more towards the shareholder model (Agyemang et al, 2013).

This is because the principles are reflection of the sovereign rights of shareholders because the board of directors in charge of ensuring effective corporate governance in companies also account to shareholders. Again, it can also be said that the principles focus more on the traditional view of corporate governance where the board is regarded as representatives of shareholders. The principles make clear mention of the elements that see to proper corporate governance in companies. These elements are the composition of the board, independence of the board, the leadership structure (CEO duality or otherwise), board committees such as the audit committee and remuneration committee, and access to timely and regular information by directors.

2.2.6 Practical Issues of Corporate Governance in Ghana

Agyemang et al (2013) conducted a research on corporate governance practices in four largest publicly held corporate organisations in Ghana. The researchers employed a qualitative case study methodology in their study. The shareholders' perspective of corporate governance puts forth that, the objective task of an organization ought to focus only on those who have monetary share of the organisation. It considers organisations as devices for shareholders to maximize their investment returns, on the basis that shareholders theoretically

are seen as residual claimants (Jensen & Meckling, 2016). In their study looking at corporate governance as a mechanism in which the agency problem is checked, they looked at the practical issues regarding corporate governance in Ghana. Specifically, the ownership structure and control and board independence were looked at in finding out how those structures are able to check agency problem.

2.2.6.1 Ownership Structure and Control

In the four publicly listed corporations used in the research in Ghana, the researchers found out that controlling shareholders act as monitors and controllers of the managerial behaviour. Controlling shareholders in corporations through the powers they have are able to manage the behaviour of management by having the capacity to even sack personnel. This helps reduce the agency problem. In almost all organisations, controlling shareholders possess the final say because of their control. This gives these shareholders the power to influence the behaviour of management. The authors argued that this feature of ownership concentration found using the four listed companies characterized all companies on the Ghana stock exchange. Denise and McConnell (2003) believe that large or controlling shareholders have the capacity to use resources to control managers in order to have their interests met. In conclusion, it is observed that the presence of large shareholders is essential in the success of corporate governance in developing countries (Berglof & Claessens, 2004).

2.2.6.2 Board Effectiveness

On the board, the authors study focused on elements in connection with the board established to mitigate agency cost. The elements examined in their study were board composition, leadership structure of the board, director independence, meetings of board, board audit committee and board remuneration committee. The study revealed that independent directors dominate board composition in listed companies in Ghana. It was however detected that the

extent to which board composition has effect on board effectiveness in mitigating the agency cost is low in three organisations studied. In the three organisations, it was found that boards are not able to exert control since controlling shareholders handle that. The results on the three companies confirms the literature that the existence of large shareholders weakens other corporate governance mechanisms (Berglof & Claessens, 2004). Only one of the companies studied showed board control effectiveness in the midst of controlling shareholders.

In the one case detected to have board control as effective, the board's non-executive directors do carry out all the crucial elements pertaining to board control in the organization. This therefore adds to the debate in the literature on boards' effectiveness as a control mechanism (Berglof & Claessens, 2004; Denise & McConnell, 2003). However, their study emphasizes that boards can executive their role effectively if large shareholders allow them to executive their role freely. The finding in relation to the non-executive directors on companies' board in all organisations studied meets the recommendations of the principles of corporate governance of Ghana, which states that at least one-third of board members should be non-executive directors.

The influence of the independence of directors on board control was also assessed to be high among the companies. Independence of director is able to translate into effective board control. It was also observed that though directors are independent, in the presence of controlling shareholders boards face difficulties. Shareholders are given the right to select shareholders and this phenomenon still creates an issue. This fact adds to the literature that large shareholders have authoritative way of selecting boards and this affects board independence (Berglof & Claessens, 2004). It was concluded by the researchers that the aspect of director independence in all four organisations met the recommended guidelines by the principles of corporate governance of Ghana. Separation or merging of the two roles

namely CEO position and the board Chairman Position in all the companies studied did not have influence on board control. The research however confirmed that the division of the two positions confirms the provisions of the regulatory framework of Ghana's company's code. However, the separation does not still break the link between controlling shareholders and the board Chairman Positions.

2.2.7 Financial System in Ghana

The financial system includes the various mechanisms for storing, paying and transferring funds within the financial markets through the help of financial institutions. It consists of five fundamental components: money, financial instruments, financial markets, financial institutions and central banks. Mensah (2007) asserts that an effective financial system must have three attributes; Monetary system, large-scale capital formation and market for the transfer of financial assets. For independents, Ghana began to cover all three attributes of the efficient financial system by issuing the first Treasury business in 1954 by the then Banco de Costa de Oro which was hired in 1952 to meet the financing needs of Ghanaian Indians.

After independence, four development banks have been set up. These development banks were the National Investment Bank, 1963, (Industry); Agriculture and Cooperative Bank 1965 (Agriculture); Housing and Construction Bank, 1972 (Housing); The Merchant Bank (1972) to offer unique business banking services, including stock trading and venture capital supply. State insurance was created in 1962. In 1976, the first rural bank was set up with the aim of extending banking services to rural areas. The year saw the birth of the National Trust Holding Company (NTHC), set up with a legislative tool to operate as a national fund, with the aim of supporting the government's indigenization program (Mensah, 2007). In the context of the reform of the Ghana market economy, several non-bank financial institutions were authorized under the Financial Sector Adjustment Program (FINSAP). The Ghanaian

financial system also assisted the establishment of the Ghanaian Stock Exchange (GSE) under the 1979 stock exchange law (Law 384) in October 1990. Although the idea of its creation was foreseen in the Pearl 1968 report. Built In 1989 under the Companies Act (Act 179) 1963 in 1993, the Law of Value Industries (PNDCL 333) [SIL] was approved as amended by industry law (Amendment), 2000 (Law 590). It set up the creation of the Securities and Exchange Commission (SEC), then the Securities Regulatory Commission (SRC) to supervise the securities business. The SEC was inaugurated in September 1998. Previously, the Bank of Ghana carried out the functions of enforcing the provisions of the securities sector law. The SEC and GSE are the two most indispensable institutions in the securities industry in Ghana (Mensah, 2007).

2.2.8 Women on Boards

Campbell and Minguez- Vera (2007), arguments for greater female boardroom representation can be split into two categories: ethical and economical. The former argues that it is immoral for women to be excluded from corporate boards on the grounds of gender and that firms should increase gender diversity to achieve a more equitable outcome for society. Economic arguments, on the other hand, are based on the proposition that firms, which fail to select the most able candidates for the board of directors, damage their financial performance.

In their study of UK, corporate boards Brammer et al. (2007) find that the highest rates of female directors are associated with sectors with a close proximity to final consumers such as retailing, banking, the media and utilities. While producer-oriented sectors such as resources, engineering and business services (characterized by isolation from final consumers and male-dominated workforces) have significantly fewer female directors. The situation is not different in the U.S as (Vinnicombe, 2000; Davidson & Cooper, 1992; Singh & Vinnicombe, 2003) observes that women managers tend to occupy particular types of management

positions, being more likely to hold support roles in personnel, training, or marketing, rather than performing critical operating or commercial functions. Numerous studies have explored the relationship between women presence on boards and firm performance. There however exist different arguments, which encompass both positive and negative associations between the presence of women on the board of directors and firm value, so the impact of gender diversity cannot be determined a priori.

2.2.9 Corporate Governance and Firm's Performance

The relationship between firm's performance and corporate governance has also been looked at. Arguments and empirical findings have gone both ways. Some researchers argue that internal governance mechanisms such as board size, outside directors, CEO duality, managerial ownership, and ownership concentration have a positive effect on firm performance, whereas other researchers oppose such claims by arguing that these mechanisms have a negative effect on firm performance. For instance, Mashayekhi and Bazaz (2008) reported a negative relationship between board size and firm performance whiles Jackling and Johl (2009), Abor and Biekpe (2007), and Kiel and Nicholson (2003) found a positive relationship between board size and corporate performance.

Mohd Ghazali (2010) using Malaysian firms found no relationship between board size and corporate performance. On outside directors, Jackling and Johl (2009), Mashayekhi and Bazaz (2008), and Rosentein and Wyatt (1990) have shown that outside directors on the boards are positively related to firm performance. Abor and Biekpe (2007) in a research conducted on companies in Ghana found a positive relationship between CEO duality and profitability but Ehikioya (2009) found that CEO duality adversely affect firm performance in a research conducted on Nigerian companies. Jackling and Johl (2009) and Mashayekhi and Bazaz (2008) found that leadership structure and firm performance have no relationship

meaning that the separation or merging of the two positions has no influence on performance. Managerial ownership has also been assessed in the literature to see whether it has influence on performance or otherwise. In Ghana, Abor and Biekpe (2007) found that managerial ownership increases profitability of companies. Sarkar and Sarkar (2000), McConnell and Servaes (1990), and Morck et al. (1988) on ownership structure found a non-linear relationship between management ownership and performance.

In the case of Florackis et al. (2009), it was found that managerial ownership has no influence on performance but there is initial percentage of 15%, which aligns the interest of managers to that of shareholders. Ownership concentration in the literature has also been looked at on its effect on performance. Lehmann and Weigand (2000) found that ownership concentration reduces profitability of companies. On the contrary, Wiwattanakantang (2001) found that ownership concentration improves corporate performance measured by return on assets and sales to assets ratio. Nadeem et al (2013) in a research focused on Pakistan firms found out that a board with high levels of links to external environment would improve a firm's access to various resources, hence, positively affecting firm's performance.

2.3 Theoretical Review

Several theories have been propounded to explain corporate governance and gender diversity as a whole. The main among them are resource dependency theory, agency theory, stewardship theory, stakeholder theory, managerial hegemony theory, market myopic theory, neo-institutional theory and institutional path dependence. All these theories have their unique contribution to corporate governance issues and the the way in which institutions should be governed. For the purpose of the study, the focus is on three main theories, which are the reources dependency theory, agency theory and the stewardship theory.

2.3.1 Resource Dependency Theory

The resource dependency theory, one of the most prominent theories in organizational theory and strategic management, was proposed first by Pfeffer and Salancik in 1978. The theory views firms as operating in an open system and needing to exchange and acquire certain resources in order to survive, making the firms dependent on external units in their environment. The corporate governance literature argues that firms seek relationship with the most beneficial resources and structure membership on the corporate board on this basis. Pfeffer and Salancik (1978) suggest that directors bring four merits to organizations: advice and counsel, channels of information, access to resources and legitimacy.

Most scholars emphasize the important resources gained from a director' human capital and social capital. Diversity of scholars use the resource dependency theory to argue that today's increasingly complex and dynamic environment requires leadership from diverse groups of individuals who can provide a broad set of resources that will fit into the new business culture. Stiles (2001) suggests in particular, that board diversity might make easy access to resources vital to the firm, which indicates that diversity, relating to age, gender and nationality, can have a positive impact on performance.

A more diverse board can benefit from a greater understanding of its customers (Carter, Simkins and Simpson, 2003) or other stakeholders. According to estimates, women are responsible for about 70% of global consumer spending. Taking that into consideration, having more women in management positions could provide a more extensive insight into customer needs and choices which could lead to market share gains through innovation of new products and services that better suits consumers' needs and preferences. Increased diversity will also tap more information sources, but sometimes at the expense of less decisiveness (Randöy, Thomsen & Oxelheim, 2006). Resource dependency theory therefore

concludes that it is likely the best performing management teams consist of members that represent variety in terms of experience, working background, age, ethnicity, and gender. Lastly, an underrepresentation of women in top management could be regarded as discrimination, which is both unethical and suboptimal. An unprejudiced selection of management enables companies to attract and retain talent from a wider pool of human capital (Gallego-Álvarez, García-Sánchez and Rodríguez-Dominguez, 2010).

2.3.2 Agency Theory

The concept of agency theory emerged from the work of Berle and Means in 1932. Agency theory describes the relationship between one party, the principal (e.g. shareholder), that delegates work to another, the agent (e.g. managers). It explains their variances in behavior or decisions by observing that the two parties often have different goals and, regardless of their respective goals, might have different attitudes towards risk. Jensen and Meckling (2016) further shaped the work of Berle and Means in the context of the risk sharing and developed the agency theory as a formal concept.

Jensen and Meckling built a school of thought arguing that corporations are structured to minimize the agency cost, or the cost of getting agents to follow the directions and interests of the principals. An accepted assumption within the agency theory is that outside directors will act independently from their inside counterparts and will therefore act as good monitors for shareholders' best interests. A good argument for diversity is therefore greater independence: diversity may lead to an improvement in monitoring management, because of greater boardroom independence and a more complex and complete decision-making progress. Carter et al. (2003) drew on agency theory in their study to explore the link between gender diversity on corporate boards and firm value and found a positive relationship between the percentage of gender diversity on Fortune 1000 boards and firm value. Studies

(Franke et al., 1997) show that the quality of corporate governance and ethical behavior is high in companies with a high proportion of women on boards. Specifically, a study conducted by the Conference Board of Canada (2002), called 'Not just the right thing, but the bright thing' found that boards consisting of three or more women showed very different governance practices than all male boards. The boards with more gender diversity were more likely to determine standards to measure strategy, monitor its implementation, follow guidelines about conflict of interests and adhere to a code of conduct. They were also more likely to arrange for better communication and concentrate on non-financial performance measures, such as corporate social responsibility, employee and customer satisfaction and diversity. Lastly, they were more likely to have new director induction programs and better monitoring of board accountability and authority.

In a recent study by search consultancy firm Heidrick and Struggles (2009) and conducted by Harvard Business School, researchers revealed a sharp difference between men and women in the boardroom. The study suggests that women directors appear to be more assertive on numerous important governance issues such as evaluating their own board's performance and greater supervision of boards in general, especially in the area of setting appropriate executive compensation levels. It is the researchers' opinion that this changing dynamic may bring in a new era of strengthened governance.

2.3.3 Stewardship Theory

This theory, arguing the theory of agency, hypothesizes that managerial opportunism is not relevant (Donaldson et al 2018). According to management theory, the goal of a manager is primarily to maximize the company's performance because the satisfaction of the manager's need for success and success is satisfactory when the company works well. A distinctive feature of management theory is that it replaces the lack of trust that the agency's theory

relates to authority and the inclination towards ethical behaviour. Management theory believes the following summary is essential to ensure effective corporate governance in any entity. Board of Directors: The participation of non-executive directors (NEDs) is considered essential to improve the effectiveness of board activities, as executive directors are fully aware of their business. Therefore, it is considered that the appointment of NED will improve decision-making and ensure the sustainability of the business. Leadership: Contrary to agency theory, custody theory requires that the positions of executive director and board chairperson should be focused on the same individual.

The reason is that it gives the CEO the opportunity to make the decision quickly without the obstacle of an undue bureaucracy. Rather we must note that this position has been found to create higher agency costs. The argument is that when government structures work effectively, there should be no undue bureaucratic delays in any decision-making process. Finally, it is stated that the size of small businesses should be encouraged to promote effective communication and decision-making. However, theory does not provide a rule for determining the optimal size of the board and what does it matter to be small?

2.3.4 Stakeholder Theory

Freeman (2010) stresses that stakeholders are a group of people who have the potential to influence or may be influenced by the company's activities to achieve the company's goals. Other goals in addition to maximizing the wealth of shareholders may arise from the presence of stakeholder groups within the organization. These stakeholder groups, including employees, customers, creditors and the immediate community, will have diverging views on what business goals should be (Watson and Head, 2007). The stakeholder theory assumes that the needs of the various actors in an organization are different and that the organization must strive to meet these different stakeholder needs. Critics of stakeholder theory point to

the problem of identifying who are the real shareholders of a company. Smallman (2012) argues that an effort to meet the needs of all stakeholders can be a route to corruption, as it can only be a means of leading wealth to investors elsewhere. Supporters of the stakeholder theory argue that representatives of various business administration board members successfully meet their demands (Ping, Cheng & Wing, 2011).

Representatives should act in the interest of their respective groups in order to improve corporate governance as the board of directors converges to meet the needs of all stakeholders, including the primary goal of maximizing shareholder wealth. The stakeholder theory has become more important as many researchers have recognized that the activities of a corporate entity affect the outside environment, requiring the organization's responsibility to a wider audience than its shareholders do. For example, McDonald and Puxty (1979) have suggested that companies are no longer the instrument of shareholders but exist within the company and therefore have responsibilities for that company.

However, it should be noted that a great recognition of this fact has been quite a recent phenomenon. In fact, he realized that people who volunteered and collaborated to improve everyone’s position (Freeman et al., 2004) created economic value. Jenson (2001) criticizes the stakeholder theory to assume a single value goal (profits obtained from the constituencies of a company). Jensen's (2001) argument suggests that a company's performance is not and should not be measured only by the profits of its stakeholders. Other key issues, such as stream of information from lower ranked executives, interpersonal relationships, work environment, etc. These are important issues to consider. Some of these other issues have provided a platform for other topics, as discussed below. An extension of the theory called the theory of illustrated actors has been proposed. However, problems with the empirical evidence of extension have limited its relevance (Sanda et al., 2005).

2.3.5 Managerial Hegemony Theory

Managerial hegemony theory describes the powerlessness of the board of directors as a mechanism to control managerial opportunism (Galbraith, 1967; Kosnik, 1987). This is because of three reasons: First, biases in the nomination and selection process of outside board of directors (Patton & Baker, 1987). Second, constraints on the monitoring and controlling ability of outside directors (Wolfson, 1984). Third, weak incentives for outside directors to monitor management (Patton & Baker, 1987).

Firstly, the hegemony of CEOs makes the board of directors ineffective because CEOs play a substantial role in the nomination and selection of outside directors despite the presence of a nomination committee according to Mace (1979), Lorsch and MacIver (1989) as cited in (Shivdasani & Yermack, 1999); Monks & Minow, 1991). The tenure of the outside directors depends on the CEO and the board positions as stress by Monks and Minow (1991) and promotions and salaries of inside directors depend on the CEO (Jensen, 1993).

Secondly, a number of constraints limit the monitoring and controlling ability of outside directors such as limited participation in setting the agenda of board meetings (Jensen, 1993), limited access to insight information of the firms by Bacon & Brown (1975) and Nowak & McCabe (2003), a lack of adequate expertise and time to properly analyses business proposals by the management by Estes (1980) and, Patton and Baker (1987) and 'polite' boardroom culture by Lorsch and MacIver (1989) as cited in (Clarke, 1998).

Finally, meeting fees and the stock compensations of outside directors are not adequate (Patton & Baker, 1987). Shivdasani and Yearmack (1999) provide detailed archival evidence that CEO's involvement proxied by the presence of the CEO on nomination committee or the absence of nomination committee reduces the appointment of independent directors and the consequent controlling and monitoring role of the board. Furthermore, a number of

researchers who find no significant association between board independence and their outcome variable state that their results are consistent with managerial hegemony theory (Mallette & Fowler, 1992; Kalyta, 2009).

2.3.6 Market Myopic Theory

Market myopia theory posits that the share price is not a reliable measure of long-term shareholder wealth because the stock market, being short-term oriented, undervalues long-term investments (Keasey et al., 1997). Consequently, market myopia theorists emphasize the maximization of long-term shareholder wealth instead of the maximization of share price (Keasey et al., 1997; Charkham, 1994; Sykes, 1994). They perceive that CG practices in Anglo-American countries (e.g., UK and USA) suffer from four main weaknesses: First, shareholders are reluctant and unable to exercise ownership roles.

Second, institutional investors and managers are highly concerned about short-term return on investment and corporate performance, respectively. Third, high remuneration of management relative to corporate performance. Fourth, excessive threats of takeover (Sykes, 1994); (Charkham, 1994). In order to overcome the weaknesses of the Anglo-American model, the proponents of market myopia theory suggest that institutional investors commit 'relationship investing' over the long-term, play a strong monitoring role either by sitting on the board or by appointing independent directors if institutional investors cannot sit on the board due to legal reasons (Sykes, 1994). Further suggestions include a reduction in takeover threats, restrictions on the voting rights of short-term shareholders, and the empowerment of long-term stakeholders such as employees and suppliers (Keasey et al., 1997).

2.3.7 Neo-Institutional Theory

Neo-institutional economists by North (1991) and Aoki (1994), and neo-institutional sociologists (Berger & Luckmann 1967; DiMaggio & Powell 1983; Dobbin 1994; Giddens 1984; Granovetter 1985; Whitley 1992) have developed Neo-institutional theory. According to neo-institutional theorists, national institutions dictate human and organizational interactions in a society (North, 1991) and act as constraints as well as expediters of organizational change (Hall & Thelen, 2009). Institutions are defined as a set of 'cognitive, normative and regulative structures and activities that provide stability and meaning to social Behaviour. Various carriers such as cultures, structures, transport institutions and routines and they operate at multiple levels of jurisdiction (Scott, 1995).

Neo-institutional theory differs from 'old' institutional theory in terms of its relative focus on sources of organizational resistance to change (DiMaggio 7 Powell, 1991). Neo-institutional theory views that external environmental factors are more important sources of organizational inertia than the internalized values, norms and commitments of old institutional theory (Hirsch & Lounsbury, 1997). Neo-institutional theory is extensively used in studying persistence and changes in accounting (Lounsbury, 2008) and Corporate Governance practices (Okhmatovskiy & David, 2012; Henrekson & Jakobsson, 2012).

2.3.8 Institutional Path Dependence

A group of institutional theorists view organizational arrangements as relatively stable and use institutional theory to explain organizational inertia rather than change (Tolbert, 1985; Tolbert & Zucker, 1983). The notion is that organizational change is a 'path dependent' process (Libecap, 1989). According to this group of institutional theorists, path dependence occurs because: First, initial organisational arrangements, often happen by chance, and offers self-reinforcing positive feedback and this positive feedback may 'lock-in' organizational

agents into a particular trajectory (Burns & Scapens, 2000; Greener, 2005; Kay, 2005). Second, this initial organisational arrangement creates vested interest groups who constrain organisational change in order to safeguard their interests as by Partial et al. (2012), unless the beneficiaries of organisational change commit to compensating the loss that the vested interest groups suffer (Ostrom, 2005). Third, emerging alternative trajectories are not compatible with existing institutions and structures and thus, changing to an alternative trajectory may result in inefficiency (Ranti, 2011).

Bebchuk and Roe (1999), pioneer institutional path dependence in Corporate Governance by proposing the theory of path dependence of corporate governance. While proposing this theory, they refer to the persistence of corporate ownership structures and Corporate Governance practices in USA, Western Europe, and Japan. They argue that in spite of enormous pressures exerted by global products and capital markets, divergence in corporate ownership structures and Corporate Governance practices among these countries persists because of path dependence.

They argue that resistance to new Corporate Governance practices is legitimate on the grounds of the lower 'relative efficiency' of new Corporate Governance practices compared to existing Corporate Governance practices and is opportunistic on the grounds of 'rent-protection' on the part of existing controllers of companies (Hodgson et al. 2011). On 'relative efficiency' grounds, Bebchuk and Roe (1999) argue that new Corporate Governance practices may not be efficient relative to long-established Corporate Governance practices due to 'sunk adaptive costs, network externalities, complementarities, endowment effects and multiple optima'. Sunk adaptive costs suggest that the implementation of new Corporate Governance practices may be less efficient because firms might have adapted to existing Corporate Governance practices by developing related mechanisms such as authority

relations or incentive compensation schemes (Gedajlovic et al., 2004; Khanna et al., 2006; Yoshikawa & Rasheed, 2009). Network externalities suggest that the Corporate Governance structure of a particular firm in a country depends on the Corporate Governance structures of peer firms and thus, a firm cannot switch to a different structure of Corporate Governance due to high switching costs (Khanna et al., 2006; Rasheed, 2009). Central to the idea of efficiency-based path dependence is complementarities (Schmidt & Spindler, 2002; Bratton & McCahery, 1999; Aoki, 1994).

Complementarities imply that a Corporate Governance framework is embedded in the institutions, legal rules and practices of a country and thus, imposing new Corporate Governance practices may hamper the efficiency of the overall system (Khanna et al., 2006; Schmidt & Spindler, 2004). Endowment effects mean that individuals having control under the existing Corporate Governance structure affect the total value of the alternative Corporate Governance structure due to their existing control (Bebchuk & Roe, 1999). Finally, multiple optima imply that every system of Corporate Governance has pros and cons (Aguilera et al., 2008) and a country may choose different bundles of practices that yield equivalent long-run performance (Bebchuk & Roe, 1999; Khanna et al., 2006).

The majority of regulatory authorities around the world as by Coombes and Wong (2004) acknowledges the concept of 'relative efficiency' of the Anglo-American model of Corporate Governance and thus, they recommend 'comply or explain' basis codes (Wymeersch, 2006). On the grounds of 'rent protection', Bebchuk and Roe (1999) argue that the initial Corporate Governance structure provides 'private benefits of control' to certain controllers. They argue that these controllers may resist the implementation of new Corporate Governance practices to protect their 'private benefits of control' despite the fact that new Corporate Governance practices are more efficient than initial Corporate Governance practices. This theory has

subsequently been used as a theoretical framework by a number of comparative studies that investigate the non-convergence of Corporate Governance practices around the world (Gilson, 2001; Coffee, 2002; Khanna et al., 2006). The theory is also used in a number of country-specific studies that evidence the persistence of national Corporate Governance systems (Lubinski, 2011; Henrekson & Jakobsson, 2012). The theory of path dependence of corporate governance (Bebchuk and Roe, 1999) explains the persistence of initial Corporate Governance practices. However, it sheds limited light on first, why other interest groups such as financial market participants and banks do not negatively react to this persistence especially when the initial Corporate Governance practices are inefficient and thus, influence change toward new Corporate Governance practices.

Second, how companies subject to new Corporate Governance practices tackle significant institutional pressure for compliance with new Corporate Governance practices. A probable reason for limited or no negative reaction to the persistence of initial Corporate Governance practices by financial market participants and banks could be that path dependence occurs on the part of incumbent financiers (Rajan & Zingales, 2003; Black & Coffee, 1994). Rajan and Zingales (2003) argue that incumbent financiers hinder development in financial systems because they also protect their rent and do not want to let their existing skills become redundant. This is consistent with Black and Coffee (1994) who argue that institutional investors play a passive role in changing Corporate Governance practices because they want to protect their corporate business and being specialized organisations, cannot easily change their behaviour.

2.4 Empirical Review

Various studies have explored the effects of board diversity on both stock valuation and profitability. Overall pattern of findings across the several dozen studies that have been

published to date tends to support the view that gender diversity inhibits performance. For instance, Judge (2003) highlighted by Ryan et al. (2005) concludes that 'So much for smashing the glass ceiling and using their unique skills to enhance the performance of Britain's biggest companies. The triumphant march of women into the country's boardrooms has instead wreaked havoc on companies' performance and share prices. After using three different econometric methods; the pooled OLS, GLS and 2SLS on a sample of all 229 non-financial firms listed on the Oslo Stock Exchange (OSE) over the period 1989–2002 yielding an unbalanced panel of 1290, Bøhren and Strøm (2010) find a highly negative significant relationship between gender diversity and performance (measured by Tobin's Q, return on assets and market return on stock (ROS). They find a plausible reason that heterogeneous boards are less effective decision makers.

Earley and Mosakowski (2000) suggest that members of homogeneous groups tend to communicate more frequently as they are more likely to share the same opinions. Similarly, Tajfel and Turner (1986) and Williams and O'Reilly (1998) suggest that homogeneous groups are more cooperative and experience fewer emotional conflicts. However, if greater gender diversity among board members generates more opinions and critical questions, and thus more conflicts, decision-making will be more time consuming and less effective (Lau & Murnighan, 1998). Jianakoplos and Bernasek (1998) observed that women are more risk-averse than men are, while Cox and Blake (1991) suggest that women increase the costs of the firm because of higher turnover and absenteeism. There are also arguments that greater gender diversity may serve to increase firm performance. The studies that show positive effects use cross-sectional data or observations across very short time periods, and thus are prone to problems of endogeneity. That is, studies cannot rule out the possibility that successful firms appoint women directors. Perhaps the best-publicized study linking board diversity to profitability is Catalyst's comparison of over 500 leading U.S. firms between

2001 and 2004. Catalyst concludes that firms with the greatest proportion of women board members showed significantly higher return on investment (ROI), return on equity (ROE), and return on invested capital than those with the smallest proportion of women. Similarly, in 2003, Erhardt, Werbel, and Shrader looked at 112 leading firms over 5 years and found a positive relationship between board diversity (gender, race, ethnicity) and both ROI and ROA, but suggested that performance may be inducing diversity rather than vice versa. Carter et al. (2003) looked at the gender and racial composition of Fortune 500 board committees between 1998 and 2002, finding select positive effects of diversity on Tobin's Q.

There however exist studies that tackle the problem of reverse causation. Studies that attempt to rule out reverse causation tend to find no effect of board diversity on profits or stock price, or negative effects. In a survey conducted by Singh et al. (2001) on women directors on top UK boards, they find that even though female representation has increased over the years, the proportion of firms that had at least one female director has dropped by July 2000 from 64% in 1999 to 58%. They confirm that this development had also occurred in the US.

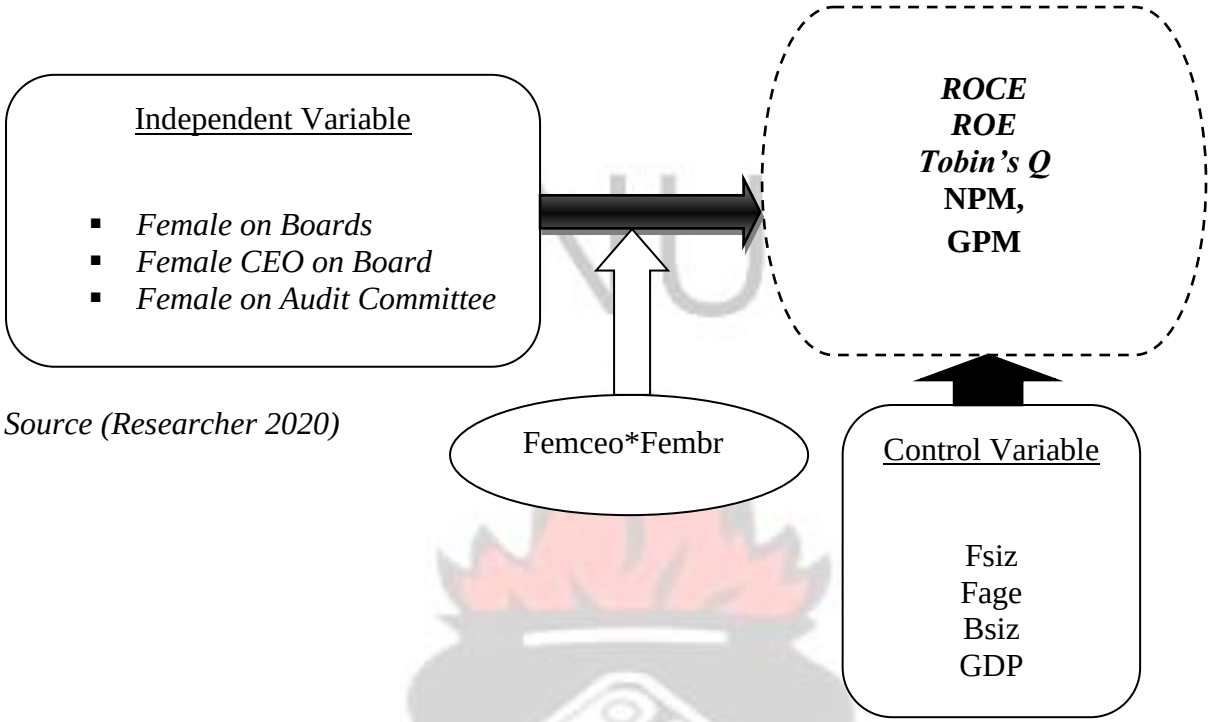
They thus find that female directors are more likely in large firms, with many employees and with the highest profits. While Judge (2003) highlighted by Ryan et al. (2005) note emphatically that the triumphant march of women into the country's (US) boardrooms has instead wreaked havoc on companies' performance and share prices.', Haslam and McGarty (2003) findings oppose that rather than the appointment of women leaders precipitating a drop in company performance, it is equally plausible that a company's poor performance could be a trigger for the appointment of women to the board. There however exist studies, which give mixed results. Zahra and Pearce (1989) find no effect generally, and some evidence of a negative effect, among large American firms in the 1980s. In another instance of studies, Smith, Smith, and Verner (2006) used panel data on 2500 Danish firms to explore

several performance measures. They find that female outside directors showed negative effects, though female inside directors showed positive effects. In their 2009 study, Adams and Ferreira used panel data between 1996 and 2003 on 1939 large American firms. Theirs is possibly the most sophisticated, and transparent, analysis published to date. While they found that boards with more women do better at monitoring firms, they also found negative effects of women board members on both Tobin's q and ROA.

In particular, they found positive gender diversity effects in OLS models, but two different techniques for handling endogeneity (fixed effects, and fixed effects with instrumental variables) produce negative and significant effects (for profits and stock value) and a third (one-step Arellano and Bond models with lagged dependent variables) produces negative but non-significant effects for both outcomes. Campbell and Minguez-Vera in 2008 finds that having women on board does not significantly affect firm value, but the fraction of women on board positively affect firm value. The causality test result shows that there is no reversed causality (Campbell et. al., 2008).

Notwithstanding, some studies find no significant relationship between gender diversity and firm performance. Rose (2017) provides Danish evidence showing that gender in relation to board composition does not influence firm performance. Despite the fact that Denmark has gone very far in the liberalization of women, Danish boardrooms are still to a large extent dominated by men. Contrary to a number of other studies, this article does not find any significant link between firm performance as measured by Tobin's Q and female board representation.

2.5 Conceptual Framework and Hypothesis Development



Source (Researcher 2020)

2.5.1 Female on Board and Firm Performance

Resource dependence theory does not specifically predict a link between board diversity and the financial performance of the firm but it is highly suggestive of a positive relationship. Agency theory offers the likelihood that diverse boards may be better monitors of management. While agency theory suggests a link between board diversity and firm performance, the nature of the link is not clear. More and tougher monitors may be either positive or negative as suggested by (Adams & Ferreira, 2009). The two theories aforementioned provide a solid indication that a link between board diversity and firm financial performance is a realistic possibility. However, the relationship may be either positive or negative based on the theory. Furthermore, the limited amount of empirical evidence on the relationship does not provide clear support for the direction of the link being either positive or negative. Presence of female directors on a board (gender diversity) is

therefore critical to the effective performance of the board and the overall performance of the firm (Hillman, Cannella & Harris, 2002; Hillman & Dalziel, 2003). Several key regulatory and governance reforms including the Sarbanes-Oxley (2002) in the United States of America and the Cadbury's 1992 report and the Higgs Report in the United Kingdom also require significant adjustments to corporate board diversity with peculiar emphasis on gender (Arfken, Bellar & Helms, 2004). It is a corporate fact that an effective board has a direct effect on firm performance. The author wishes to find out whether the presence of female directors in the boardroom affects board performance and the overall firm performance of Ghanaian listed firms. Based on the above arguments the study proposes that:

***H_1**: The presence of women on board has effect on firm performance.*

2.5.2 Female on Audit Committee and Firm Performance

Bilimoria and Piderit (2014) explain that board committees provide a means and structure for effective governance by facilitating special tasks and addressing important corporate concerns. Jiraporn, Singh and Lee (2009) argue board effectiveness is accomplished through board committees. Kesner (1988) argues the most important decisions of the board are initiated at the committee level. If the above arguments are correct, the possibility exists that diverse directors may have more influence through board committees than board membership. Hypothesis 3 is therefore, based on the proposition that a well-functioning audit committee improves on the soundness of the financial systems of the entity. Sound financial records enhance firm credibility and bolster investor and public confidence in the firm. Interestingly, women are in a peculiar position to discharge fiduciary duties entrusted in their care. This is so because of the motherly care they generally portray. Adams (2003) in particular finds that board committees of diversified companies devote more effort to

monitoring and board committees of growing firms devote more effort to strategic issues. As a result, the researcher deems it fit the inclusion of females on the audit committee can improve the performance of the audit committee and the overall firm performance.

H_2: *The presence of women on audit committee has effect on firm performance.*

2.5.3 Female CEO and Firm Performance

The classical case of Salomon versus Salomon established a critical point in corporate management: thusly, ownership is divorced from management. The agency theory builds on this platform and submits that a management team is entrusted with fiduciary care over the resources of shareholders. The executive directors are responsible for the corporate management of an entity. All board policies are communicated down the communication chain through the executive directors. How well a firm performs has a bearing from how effective the executive directors exercise their supervisory powers. Females are naturally more sensitive to several social issues. As a result, their inclusion on the executive directorship can improve the performance of the executive directors and the overall firm performance. The last hypothesis says that:

H_3: *The presence of female CEO has effect on firm performance.*

2.6 Chapter Summary

The chapter gives accounts on concepts, theories, empirical review and conceptual framework with hypothesis development. Cadbury Committee first defined corporate governance as a set of rules by which companies are directed and controlled (Cadbury, 1992). Corporate governance is concerned with solving the agency problem (Berle & Means 1932; Jensen & Meckling 2016). ILO (2009) asserts that female participation in labour markets

worldwide grew substantially during 1970 and 1980s, even though this was not always correspondent to improvements in job quality. Meanwhile, ownership structure and control, and board independency are some specific issues of corporate governance that have been focused so far in Ghana at the expense of gender related issues. Empirical findings in this area in Ghana have argued that internal governance mechanisms such as board size, outside directors, CEO duality, managerial ownership and ownership concentration have a positive effect on firm performance. Other researchers oppose such claims by arguing that these mechanisms have a negative effect on firm performance. By utilizing the reource dependency theory, agency theory and the stewardship theory, this current study asks that: What is the effect of female presence on boards on firm financial performance? To what extent does female presence on audit committee affect firm financial performance? What effect does gender diversity of executive members of the board have on firm performance? Is there any moderating effect of female CEO on female board membership financial sustainability?

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter covers the research tools and methodology used for the study. The methodology elaborates on the data collection and the estimation technique employed in the study. The reliability of the findings and conclusions extensively depends on the quality of the research design, population; sample size and sampling techniques, data type, sources and analysis. To obtain the necessary data for the study the researcher employs quantitative approach. The model estimation and specification are used by ordinary least squares (OLS). This include pooled regression model, fixed effect model and random effect model. The section also covers profile of the Ghana stock exchange.

3.1 Research Design

Generally, panel data set is a data set constructed from repeated cross-section over time. Panel data could both balanced and unbalanced data set. A balanced panel has the same unit appears on each time whereas an unbalance panel, some units do not appear in each time (Wooldridge 2006). This means that unbalance panel data set is used for the study since the data for this study consist of longitudinal dimension coupled with cross-sectional observations where some data do not appear for some of the time. The use of panel data method makes it possible to obtain more data points. There are various methods of estimating panel data. However, this study uses ordinary least squares that employs pooled OLS regression, fixed effect model and random effect model. The pooled OLS regression deals with the pooling of all the entities together and running the regression model by not taken

into consideration the cross-section and time series in nature. The fixed effect model on the other hand allows for heterogeneity among the entities by allowing them to have their intercept value. For random effect model, the discrepancy across entities is assumed random and uncorrelated with the explanatory variables. The random effect model also allows for heterogeneity among the entities but the entities have a common mean value of the intercept. To investigate the effect of gender diversity on firm financial performance, firstly the pooled OLS regression is used. Nevertheless, for robustness check, Hausman test is performed to determine whether to use fixed effect or random effect models. The p-values for the Hausman test are not significant hence, the random test is adopted.

3.2 Population

The study is based on listed firms on the Ghana Stock Exchange (GSE). The GSE is chosen primarily because it is the only stock market in the Ghanaian economy facilitating trading activities in securities of these companies. This means that the study combines both financial and non-financial firms.

3.3 Sample Size and Sampling Technique

This study uses an unbalanced panel data sample of annual financial reports from 2008 to 2019. The study employs convenient sampling technique in selecting the firms. Thus, firms who do not have their annual financial reports within this specified period of the observation chosen for the study are excluded in the analysis. Hence, out of the current total of 40 listed firms, the researcher samples 31 firms with 12-year period of observation. This number of firms are sampled due to their availability of the annual financial statement at the time the researcher was conducting the study.

3.4 Data Sources and Collection Method

The data for the study is obtained from the annual financial statement of thirty-one (31) listed firms for the period 2008 to 2019 published by the Ghana stock exchange. The other variable which is gross domestic product (GDP) is sourced from world development indicator (wwd).

3.5 Description of Variables

Table 1: Description of Variables and Expected Signs

Category	Description	Expected Sign
Dependent Variables	Return on Capital Employed (ROCE) Return on Equity (ROE) Tobin's Q Net Profit Margin (NPM) Gross Profit Margin (GPM)	
Independent Variables	Female Presence on Board (FemBrd) Female CEO Presence on Board (FemCeo) Female Presence on Audit Committee (FemAudt) Female COE*Female Board Member	(±) (±) (±) (±)
Control Variables	Fsiz Fage Bsiz GDP	(±) (±) (±) (±)

Researcher's own construction (2020)

3.6 Dependent and Independent Variables

The empirical evaluation of the relationship between gender diversity and firm financial performance necessitates the selection of appropriate firm performance measures for the analysis. However according to prior studies, there has been no consensus on which firm performance measures are appropriate, (Dalton et al., 1998; Cochran & Wood, 1984). Notwithstanding, previous studies evaluating the relationship between gender diversity and firm performance have usually used various firm performance measures covering Tobin's Q

(Yermack, 1996; Carter et al., 2007; Bøhren & Strøm, 2010; Dobbin & Jung, 2011; Black & Kim, 2012), ROA (Daily & Dalton, 1993; Shrader et al., 2017; Adams & Ferreira, 2009), ROE (Shrader et al., 2017; Catalyst, 2004:) and Earning per share (Zahra & Pearce, 1989). It is clear from above that measurement of firm value in gender diversity studies varies considerably, but these studies can generally be divided into two groups: those that use mainly accounting measures and those that use stock performance measures: Tobin's Q predominantly (Campbell et. al., 2008). For the dependent variables, this study uses Tobin's Q, return on equity (ROE) and return on capital employed (ROCE). Tobin's Q is the ratio of the market value of a firm divided by the replacement cost of its assets. It is often singularly used to measure firm financial performance; particularly in corporate governance research. This is because it believed to reflect the market expectations of future earnings and is thus a good proxy for a firm's competitive advantage (Montgomery & Wernerfelt 2018). Tobin's Q ratio greater than 1.0 are expected by investors to be able to create more value by using available resources effectively, while those with a Tobin's Q ratio of less than 1.0 are associated with poor utilization of available resources.

Return on equity (ROE) is profit available to ordinary shareholders divided by equity and reserves. This is an accounting measure of firm performance and it widely used by investors. Return on capital employed (ROCE) is net profit before interest and tax divided by capital employed. For the independent variables, the key explanatory variables in this study are variables that measure gender diversity. Proportion of females on board refers to the percentage of females on board. The study uses additional measures of diversity based on female membership on a major board committee and the audit committee. The researcher therefore measures diversity by calculating the percentages of females on the audit committee. The last measure of diversity is percentage of Female executive members.

3.7 Control Variables

In order to identify the specific effect of female presence on the board, audit committee and executive committee on firm financial performance, it is necessary to include control variables in order to limit potential omitted variable bias. These control variables are not restricted by corporate governance mechanisms in affecting firm performance. To mitigate for the omitted variable bias, the study employs appropriate control variables that are potential determinants of firm financial performance. The basis for each of these control variables included in the regression models and their measurement is described. Board size is total number of directors on a board and indicates the experience and knowledge of its members. Board size is logged (lnBSiz) in order to normalize the data. Board size is controlled because it has been suggested to affect board effectiveness by prior studies. Yermack (1996) suggests that bigger boards are associated with lower firm value because of the problems of poor communication and decision-making.

However, Coles, Daniel and Naven (2008) suggest that for larger and more complex firms' bigger boards do a better monitoring job. Firm size is represented by natural logarithm of assets (lnassets) of the firm. The value of total assets is logged in order to normalize the data in order to minimize the standard deviation (Baltagi, 2001). Firm size is usually used as a control variable in analysis of financial performance and is shown to be related to market returns by Fama and French (1992), among others. Many studies show that firm size is related to Tobin's Q (Carter et al., 2007).

Firm age is used to represent the number of years a firm has been in existence. Firm age is another significant control variable that needs to be considered in the study. Black and Kim (2012) observe that corporate governance practices of older firms may differ from their younger counterparts. Additionally, age according to the product life cycle is connected with

firm performance, as its profitability is expected to be minimal at its early stages, rise as the firm grows (age) and then fall at the maturity. Firm age is logged (lnAge) in order to normalize the data. Ownership (downer) represents the dummy variable regarding the ownership of a firm. Dummy variable is one (1) for a local firm and zero (0) for a multinational. Industrial dummy represents the dummy variables with regards to the various industries of firms listed on Ghana Stock Exchange.

3.8 Panel Data Analysis

Panel data framework is used for this study because of its numerous advantages. Thus, panel data, where the same firms (**n**) are observed over number of years (**t**) has the possibility to give a more reliable picture than cross-section analyses that are based on only one year of observation (Smith et al., 2006). Since the increased number of observations based on (**n x t)** as already defined above help to improve the efficiency of the estimators because the larger the sample size the lower the bias found in the estimations.

As well, the use of panel data helps to minimize the problem of multicollinearity faced by time series studies. Again, panel provides data that are more informative, more variability, less collinearity among the variables, more degrees of freedom and efficiency (Klevmarken, 1989; Hsiao, 2003). Moulton (1987) notes that the time series and cross section studies does not control for individual heterogeneity and run the risk of obtaining biased results. In this respect, panel data analytical framework makes a distinction between a residual heterogeneity related to changes over time (period effects) and across firms (group effects). This permits for a better identification of the issues leading to changes in corporate governance and firm performance.

The basic panel data model is of the form

$$Y_{it} = \alpha + X_{it}\beta + \varepsilon_{it}$$
…….(1)

Where α is constant, *i* represents the firm and *t* is the time dimension.

X_{it} Represents explanatory variable and ε_{it} is the error term.

$\varepsilon_{it} = u_{it} + v_{it}$ Where μ_i is the firm's specific effect and v_{it} is a random term. The basic model of panel data could be estimated by several methods depending on the behaviour of the error term. It also depends on whether; there is serial correlation and heteroscedasticity in the estimated model in question. As already indicated, the study focuses on ordinary least squares that include pooled OLS, fixed effects and random effects.

3.8.1 Pooled OLS

Pool regression model deals with the pooling of all the observation together and running the regression model by neglecting cross-section and time series in nature where X is not correlated with the error component. The main problem with the pooled regression is that it does not differentiate between the various entities. This is the most restrictive model that specifies constant coefficients, which is the common assumption about cross-section analysis is of the form:

$$Y_{it} = \alpha + \beta X_{it} + \varepsilon_{it}$$ …… (2)

Where;

Y=Dependent Variable,

X=Explanatory Variable

i =Cross section unit

t =The time period

ε =Error term it is assume that the X's are nonstochastic and that the error term follows the classical assumptions, namely E (μ_{it})~N(0, σ^2)

3.8.2 Fixed Effect

Fixed effect model allows the individual-specific effects β_{1i} to be correlated with the explanatory variables X. The fixed effect model is as shown below:

$$Y_{it}=\beta_{1i} + \beta_2 X_{2it} + \beta_3 X_{3it} + \mu_{it} \quad (3)$$

Where;

Y =Dependent Variable

X=Explanatory Variable

i =Cross section unit

t =The time period.

Although, in Fixed Effect Model, intercept may differ across individual firms, each individual intercept does not vary over time. That is, it is time invariant. Fixed Effect Model assume that the slope coefficients of the regressions do not vary across individuals or over time.

3.8.3 Random Effects

The rationale behind random effect model is that unlike the fixed effect model, the random effect assumes that the entity's error term is not correlated with the explanatory variables. The fixed effect model is of the form:

$$Y_{it}=\beta_{1i} + \beta_2 X_{2it} + \beta_3 X_{3it} + \mu_{it} \quad (4)$$

Where;

Y =Dependent Variable, X=Explanatory Variable, i = Cross section unit and t =The time period. Instead of treating β_{1i} as fixed, we assume it is a random variable with a mean value of β_1 (no subscript *i*). That is, the individual error components are not correlated with each other and are not correlated across with cross-section and time series unit. ε_i is not directly observable, it is known as an unobservable, or latent variable. If it is assumed that ε_i and the X's are correlated, fixed effect model may be appropriate where as if ε_i and the X's are not correlated, REM may be appropriate. The very reason why for chosen this model is that since all the variables are stationary at levels with the exception of two control variables; board size and assets and all variables become stationery at first difference, the OLS estimator will yield unbiased and consistent estimate hence the use of OLS regression model. OLS method of estimation is used because of its possibility to capture not only the variation of what emerges through time or space, but also the variation of those two dimensions simultaneously. This is because instead of testing a cross-section model for all firms under study at one point in time or testing a time series model for one firm using time series data, a pooled model is tested for all firm years through time (Podestà 2002).

3.9 Model Specification

$$\boldsymbol{P_{it}} = \beta_0 + \beta_1 FemBrd_{it} + \beta_2 FemCeo_{it} + \beta_3 FemAudt_{it} + \beta_4 FemCeo * FemBrd_{it} + \beta_5 lnFsiz_{it} + \beta_6 Fage_{it} + \beta_7 Bsiz_{it} + \beta_{10} GDP_{it} \varepsilon_{it} \ldots\ldots \quad (5)$$

Where:

P= (ROCE, ROE & Tobin's Q,)
i= firms, t= time dimension
FemBrd=Proportion of females on board
FemCeo=Percentage of female executive board members
FemAudt=Percentage of female on audit committee
*FemCeo*FemBrd=Presence of female CEO and female board member firm financial performance nexus.*
Fsiz=Natural logarithm of assets,
Fage=Natural logarithm of firm age
Bsiz=Natural logarithm of board size

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter focuses on the presentation of data and discussion of findings. Generally, the study seeks to examine the relationship between gender issues in corporate governance and financial sustainability of listed firms in Ghana. Specifically, the study determines the effect of female presence on boards on firm performance, investigates the effect of female presence on audit committee on firm performance, evaluates the effect of female executive members of the board on firm performance and lastly, explores the moderating effect of female CEO on female board membership financial performance.

4.1 Panel Unit Root Test

Table 2: Levin, Lin and Chu Panel Unit Root Test (At Level)

Variable	Level @ Indv. Intecp.	Level@Indv. Intecp & Trend	Level @ None
GPM	0.0000	0.0000	0.0735
NPM	0.0001	0.0000	0.7680
ROCE	0.0000	0.0398	0.0003
ROE	0.7670	1.0000	0.3860
Tobin's Q	0.2324	0.0094	0.2140
FemBrd	0.0000	0.0000	0.6125
FemAudt	0.0000	0.2404	0.0000
FemCeo	0.3091	0.0000	0.0542
Fsiz	0.9655	1.0000	1.0000
Fage	0.6353	1.0000	0.4972
Bsiz	0.0000	0.0000	0.1036
GDP	0.0000	0.0000	0.0010

Result from Levin, Lin and Chu (EViews 2010 Version).

Validity and reliability make sure that the data set is free from inaccuracy. In panel data set, testing the stationarity of data is to run the unit root test by Levin, Lin and Chu. Table 2 above illustrates the evidence of the variables where some are at stationary whilst others are

not stationary in respect to testing stationarity at level. Meanwhile, all variables must be stationary before any subsequent testing is achieved. Therefore, the Table 3 below illustrates the stationarity at first difference.

Table 3: Levin, Lin and Chu Panel Unit Root Test (At First Difference)

Variable	Level @ Indv. Intecp.	Level@Indv. Intecp & Trend	Level @ None
GPM	0.0000	0.0000	0.0000
NPM	0.0000	0.0000	0.0000
ROCE	0.0376	0.0000	0.0000
ROE	0.0106	0.0000	0.0000
Tobin's Q	0.0000	0.0000	0.0000
FemBrd	0.0000	0.0000	0.0000
FemAudt	0.0331	0.0000	0.0000
FemCeo	0.0000	0.0000	0.0000
Fsiz	0.0241	0.0000	0.0000
Fage	0.0000	0.0000	0.0203
Bsiz	0.0000	0.0000	0.0000
GDP	0.0000	0.0000	0.0000

Result from Levin, Lin and Chu (EViews 2010 Version).

Making a reference from the Table 2, it can be deduced that most of the variables are not stationary at level. This makes the researcher takes the first difference of each of the variable. From the above Table 3, it shows an evidence of stationarity of the variables after first difference. Meaning, all variables are stationary at first difference. That is, at level and individual intercept, individual intercept and trend and at None. This indicates that the probability values for all variables are at ≤ 5% significant level.

4.2 Descriptive Statistics

This section presents the descriptive statistics of the variables. That is gross profit margin (GPM), net profit margin (NPM), return on capital employed (ROCE), return on equity (ROE), Tobin's Q, female board representation (Fembrd), female representation on audit committee (FemAudt), female chief executive offer (FemCeo), firm size (Fsiz), firm age (Fage), board size (Bsiz), ownership, industrial and gross domestic product (GDP). From the

Table 3 below, the size of the boards of corporates in the sample is highly isolated with a minimum of 3 and a maximum of 17 board members. A standard deviation of 2.05 supports this observation and is consistent with the provision in the corporate governance code in Ghana. The firms for the study have been operating for the past 90 years with a mean age of 37 years. The size of the firms under study is measured by their assets size. With a minimum asset size of 1 billion Ghana Cedis and a maximum of 23.26 billion Ghana Cedis, the average asset size is however 18 billion Ghana Cedis.

The average board in the sample of 288 firm years is comprised of a minimum of 0percent and a maximum of 60percent female with a mean of 13percent. The minimum value of 0percent means that there are firms in which all the board members are men. In contrast, the maximum value of 60percent means that there are firms whose women representative on the board is greater than men, but the average of 13percent indicates a general underrepresentation of women on boards in Ghana which is consistent with the findings of prior studies. The audit committee of the average board is 13percent female. The female representation on this important board depicts underrepresentation of females and this is not drastically different from the overall female representation on the board at 13percent. This also presupposes that female participation on boards is minimal.

GPM is an accounting-based profitability measure which compares profit before tax to sales of a firm; the higher the GPM the better. The results indicate an average of 41percent GPM with a maximum of more than 100percent and a minimum of -57percent. This is consistent with the ROE result in a way. This result again confirms the existence of tremendous spread in performance of listed firms. The same can be said of ROCE with a minimum of -1215percent and a maximum of more than 100percent and a mean of -41.78percent. NPM is another accounting-based profitability measure which compares profit after tax to sales of a

firm; the higher the NPM the better. The results indicate an average of 15percent NPM with a maximum of more than 100percent and a minimum of -92percent. This is consistent with the ROE result in a way. The ROE reflects the profitability of firms based on accounting numbers taken from the financial reports. The ROE is a ratio of net income after tax and equity (ordinary share capital plus reserves) of the firm. On average, from 2005 to 2017, the value of ROE is 974percent. The maximum value is 281percent and the minimum is -27percent. The result shows that there is a large gap in terms of accounting profitability among the firms during those years.

This may be due to extraordinary large losses experienced by firms in a particular year. Tobin's Q is a market-based financial performance measure. A firm is assumed to have a promising future with a Tobin's Q value higher than 1. The minimum and the maximum values are 2.81 and 3.03 respectively indicating low spread in performance. The mean value of Tobin's Q in the study is 0.387 which means that on average, from 2005 to 2017 the value of Ghanaian listed firms reflected relatively negative signs of developing in the future.

Table 4: Descriptive Statistics of The Variables

Variable	*GPM*	*NPM*	*ROCE*	*ROE*	*Tob. Q*	*Fembrd*	*FemAudt*	*FemCeo*	*Fsiz*	*Fage*	*Bsiz*	*GDP*
Mean	0.413	0.150	-41.782	974.3	0.387	0.133	0.119	0.177	18.075	38.649	8.399	7.211
Median	0.391	0.122	0.299	0.170	0.386	0.125	0.000	0.000	18.223	37.000	8.0000	7.312
Maximum	1.478	1.161	2.972	28061	3.027	0.600	1.000	1.000	23.264	90.000	17.00	14.046
Minimum	-0.570	-0.916	-12157	-27.66	2.814	0.000	0.000	0.000	1.000	1.000	3.000	3.917
Std Dev.	0.306	0.249	716.38	16535	0.997	0.115	0.187	0.382	2.798	19.656	2.057	3.043
Observation	**288**	**288**	**288**	**288**	**288**	**288**	**288**	**288**	**288**	**288**	**288**	**288**

Descriptive Statistics Result from (EViews 2010 Version). That is, descriptive statistics of Gross Profit Margin, Net Profit Margin, Return on Capital Employed, Return on Equity, Tobin's Q, Female Board Membership, Female Audit Committee Membership, Female CEO, Firm Size, Firm Age, Board Size, Ownership, Industrial and Gross Domestic Product

4.3 Multicollinearity Tests

This section presents the probable degree of multicollinearity among the variables. The correlation among the variables may affect the efficacy of the estimated coefficients. Table 5 shows the results of correlation among variables using Pearson's correlation matrix. The Table 5 depicts that the age of the firm and FemCeo are positively correlated with Tobin's Q though the correlation is weak. Similarly, Fembrd, FemAudt, Fsiz and Bsiz have weak and negative correlation with Tobin's Q. The results also show that Fembrd and Fage have weak and positive relationship with ROE. FemCeo, FemAudt, Fsiz and Bsiz on the other hand have negative and weak correlation with ROE. There is positive relationship among FemCeo, FemAudt, Fage, Fsiz, Bsiz with ROCE, even though the correlation is weak.

The study reveals weak and negative association between Fembrd and ROCE. The explanatory variables Fembrd, FemCeo, FemAudt, Fsiz and Bsiz are positively related with GPM and NPM though the correlation is weak. There is however, weak and negative relationship between age and GPM and NPM. All the results show that the independent variables are not suffering from the problem of multicollinearity. The relationship among the variables reported in Table 5 shows that all the independent variables are less than 0.5 which clearly indicates that multicollinearity is not a problem.

Again, Kennedy (2008) recommends a threshold of 0.8 to be a high correlation between two variables and must treated as such. From the results, even though some variables seem to have something closer to Kennedy's threshold, the correlation between them cannot have any significant effect on the dependent variable. This means that except the correlation between the size of loan committee and board size being closer to Kennedy's threshold, the

correlations among the variables below show a weak correlation. Hence, there is no any potential multicollinearity problem that can have effect on the result.

Table 5: Correlation Matrix for the Variables

Variable		1	2	3	4	5	6	7	8	9	10	11	12
1	*GPM*	1											
2	*NPM*	0.637	1										
3	*ROCE*	0.091	0.075	1									
4	*ROE*	0.113	0.017	0.003	1								
5	*Tobin's Q*	-0.156	-0.096	0.072	-0.053	1							
6	*Fembrd*	0.127	0.039	-0.017	0.004	-0.113	1						
7	*FemAudt*	0.112	0.106	0.037	-0.037	-0.055	0.562	1					
8	*FemCeo*	0.067	0.090	0.027	-0.027	-0.000	0.507	0.401	1				
9	*Fage*	0.133	0.022	0.017	0.151	0.148	0.014	-0.061	0.081	1			
10	*Fsiz*	0.086	0.140	0.005	0.024	-0.262	-0.176	0.105	0.040	-0.120	1		
11	*Bsiz*	0.024	0.139	0.069	-0.040	-0.035	-0.152	0.140	-0.037	-0.079	0.531	1	
12	*GDP*	0.053	0.005	0.064	-0.062	-0.008	0.028	-0.025	0.091	-0.009	0.017	0.000	1

Multicollinearity of Result from (EViews 2010 Version). That is, descriptive statistics of Gross Profit Margin, Net Profit Margin, Return on Capital Employed, Return on Equity, Tobin's Q, Female Board Membership, Female Audit Committee Membership, Female CEO, Firm Size, Firm Age, Board Size, Ownership, Industrial and Gross Domestic Product

4.4 Empirical Results

This section presents the empirical results of the study. Generally, the section covers four (4) main results. The first result presents the Pooled ordinary least squares regression model (Pooled OLS). The second and the third are Fixed effect regression model and Random effect regression model respectively. The last result, which is the Hausman test. This test presents the appropriateness or the best fit model for the three models. Under Hausman, the null hypothesis states that ″The Random Effect Model is Appropriate when the probability value is more than or greater than 0.05″ and the alternative hypothesis states that ″The Fixed Effect Regression Model is Appropriate when the probability value is less or equal to 0.05″. Table 6, 7 and 8 present the various empirical results under this section.

4.4.1 Pooled OLS Model

This section presents the empirical results from the pooled OLS regression model. Here, variables considered are gross profit margin (GPM), net profit margin (NPM), return on capital employed (ROCE), return on equity (ROE), Tobin's Q, female board representation (Fembrd), female representation on audit committee (FemAudt), female chief executive offer (FemCeo), firm size (Fsiz), firm age (Fage), board size (Bsiz) and gross domestic product (GDP). Table 7 on the next page illustrates this result. Specifically, the analysis is based on the determination of the effect of female presence on boards on firm performance, investigates the effect of female presence on audit committee on firm performance, evaluates the effect of female CEO on firm performance and finally, explores the moderating effect of female CEO on female board membership financial performance.

Table 7: Regression Results Using Pooled OLS

Variable	GPM			NPM			ROCE			ROE			lnTobin's Q		
	Coe.	Std. Er	**P-values**	Coe.	Std. Er.	**P-values**	Coe.	Std. Er	**P-values**	Coe.	Std. Er	**P-values**	Coe.	Std. Er	**P-values**
Constant	-0.021	0.144	0.879	-0.124	0.119	0.297	-140	344.92	0.683	-8160	7872	0.300	1.499	0.451	0.001
FemBrd	0.373	0.213	0.008**	0.006	0.175	0.971	-423	508	0.405	9505	11609	0.413	-2.265	0.664	0.000**
FemAudt	0.090	0.121	0.458	0.077	0.099	0.437	223	289	0.440	-3837	6598	0.561	0.394	0.379	0.299
FemCeo	-0.036	0.055	0.506	0.039	0.045	0.393	67.94	132.50	0.608	-2390	3024	0.430	0.293	0.173	0.009**
lnFsiz	0.015	0.007	0.043**	0.008	0.006	0.201	-14.75	18.32	0.421	576.40	418.34	0.169	-0.133	0.023	0.000**
Fage	0.002	0.009	0.009**	0.000	0.000	0.506	0.695	2.186	0.750	132.81	49.89	0.008**	0.005	0.002	0.046**
Bsiz	-0.003	0.010	0.710	0.010	0.008	0.203	29.24	24.79	0.239	-526	565	0.352	0.061	0.032	0.050**
GDP	0.005	0.005	0.3372	1.70E	0.004	0.997	15.34	14.00	0.274	-327	319	0.306	-0.000	0.018	0.960
Add.info	R^2=0.33 Adjust. R^2= 0.23 f-statistic = 2.440 Prob(f-stat) =0.0192			R^2= 0.37 Adjust. R^2= 0.24 f-statistic = 1.584 Prob(f-stat) = 0.138			R^2= 0.41 Adjust. R^2 = 0.21 f-statistic = 0.588 Prob(f-stat) = 0.765			R^2= 0.39 Adjust. R^2= 0.22 f-statistic = 2.515 Prob(f-stat) = 0.162			R^2= 036 Adjust. R^2= 0.25 f-statistic = 6.371 Prob(f-stat) = 0.0000		

Notes: (**) Denote significance at 5% level.

Table 7 above presents the various relationships that exit among the dependent and independent variables. That is, the various relationships that exist among GPM, NPM, ROCE, ROE and Tobin's Q and that of female board membership, female audit committee member, female CEO, firm size, firm age, board size and GDP. In respect to the gross profit margin (GPM), the result shows that there is a positive and significant relationship between female board member and GPM at 5% significant level.

That is, there is a positive effect on firm performance when we have a female member serving on the boards of listed firms in Ghana. This means that the higher the number of female memberships on the boards of listed firms, the higher the GPM. Again, there is a positive and insignificant relationship between female audit committee member and GPM at 5% significant level. That is, there is a positive relationship when we have a female member serving on the audit committee of listed firms on the GPM of such firms. However, such relationship does not have any significant effect on GPM.

Again, there is a positive and insignificant relationship between female audit committee member and GPM at 5% significant level. On the contrary, there is a negative and insignificant relationship between female CEO of listed firms and GPM. That is, there is a negative relationship between female CEO and financial sustainability of listed firms in Ghana. However, such relationship does not have any significant effect on GPM. The only control variables that seem to have effect on GPM are firm size and firm age. That is, the study shows that there is a positive and significant relationship between the size of a firm and GPM. Meaning, the higher the size of the firm, the higher the GPM. This same effect goes to firm age. The longer the firm age or higher age of a firm significantly translates into higher GPM. Meanwhile, both board size and GDP do not show any significant effect on the GPM of listed firms in Ghana. In respect to the net profit margin (NPM) under same model, the

result shows that there is a positive and insignificant relationship between female board member and NPM, female audit committee member and NPM, female CEO and NPM at 5% significant level. That is, there is a positive insignificant effect on firm performance when we have a female board member, female audit committee member serving on the boards of listed firms or female as a CEO of listed firms in Ghana. This means that the higher the number of female memberships on the boards of listed firms, higher the number of female memberships on the audit committee of listed firms, it has no significant effect on NPM of such firms. This also happens when we have a female as a CEO of listed firms as well. Further, none of the control variable seems to have effect on NPM. This means that unlike NPM where it shows that there is a positive and significant relationship between the size of a firm and NPM and the higher the size of the firm, the higher the NPM, it does not happen under NPM. This same goes to firm age. The longer the firm age or higher age of a firm does not translate into higher NPM. Same as well goes to both board size and GDP.

In respect to the return on capital employed (ROCE) under same model, the result shows that there is a negative and insignificant relationship between female board member and ROCE, positive and insignificant relationship between female audit committee member and ROCE and as well as positive insignificant effect of female CEO and ROCE at 5% significant level. That is, there is a negative insignificant effect on firm performance when we have a female board member and positive insignificant effect when we have female audit committee member serving on the boards of listed firms or female as a CEO of listed firms in Ghana. This means that the higher the number of female memberships on the boards of listed firms, higher the number of female memberships on the audit committee of listed firms, it has no significant effect on ROCE of such firms. This also happens when we have a female as a CEO of listed firms as well. Further, none of the control variable seems to have effect on ROCE. However, all the control variables seem to have a positive relationship except that of

firm size. In respect to the return on equity (ROE) under same model, the result shows that there is a positive and insignificant relationship between female board member and ROE. However, unlike ROE which shows a positive and insignificant relationship between female audit committee member and ROE and as well as positive insignificant effect of female CEO and ROE at 5% significant level, the results under ROE shows a negative relationship. That is, there is a negative insignificant effect on firm performance when we have a female audit committee member and a negative insignificant effect when we have female CEO of listed firms or female as a CEO of listed firms in Ghana. Meanwhile, the result shows that firm age have a positive significant effect on the performance of listed firms in Ghana. This means that the longer period of the firm or higher age of the firm translates into higher ROE.

In respect to the last variable, which is Tobin's Q, apart from female audit committee member and GDP, the result shows series of significant relationships among the variables and Tobin's at 5% significant level. For instance, the result shows that there is a negative and significant relationship between female board member and Tobin's Q. That is, there is a negative effect on firm performance when we have a female member serving on the board of listed firms in Ghana. This means that the higher the number of female memberships on the boards of listed firms, the lower the Tobin's Q. Again, there is a positive and insignificant relationship between female audit committee member and Tobin's Q at 5% significant level. That is, there is a positive relationship when we have a female member serving on the audit committee of listed firms on the Tobin's of such firms. However, such relationship does not have any significant effect on Tobin's. Again, there is a positive and insignificant relationship between female audit committee member and GPM at 5% significant level. On the contrary, there is a positive and significant relationship between female CEO of listed firms and Tobin's. That is, there is a positive relationship between female CEO and financial sustainability of listed firms in Ghana. That is, higher female CEOs of listed firms translates

into higher value. The only control variables that seem to have effect on Tobin's Q are firm age and board size. That is, the study shows that there is a positive and significant relationship between the age of a firm and Tobin's Q. Meaning, the higher the longer the firm age or higher age of a firm significantly translates into higher value of the firm. From the results, board size shows a positive significant effect on Tobin's Q of listed firms in Ghana. This implies that large board size improves or translate into higher value.

4.4.2 Fixed Effect Model

This section presents the empirical results from the fixed effect regression model. Here, variables considered are gross profit margin (GPM), net profit margin (NPM), return on capital employed (ROCE), return on equity (ROE), Tobin's Q, female board representation (Fembrd), female representation on audit committee (FemAudt), female chief executive offer (FemCeo), firm size (Fsiz), firm age (Fage), board size (Bsiz) and gross domestic product (GDP). Table 7 on the next page illustrates this result. Specifically, the analysis is based on the determination of the effect of female presence on boards on firm performance, investigates the effect of female presence on audit committee on firm performance, evaluates the effect of female CEO on firm performance and finally, explores the moderating effect of female CEO on female board membership financial performance.

Table 8: Regression Results Using Fixed Effect Model

Variable	GPM			NPM			ROCE			ROE			lnTobin's Q		
	Coe.	Std. Er	**P-values**	Coe.	Std. Er.	**P-values**	Coe.	Std. Er	**P-values**	Coe.	Std. Er	**P-values**	Coe.	Std. Er	**P-values**
Constant	0.752	0.171	0.000**	0.565	0.184	0.002**	-555	769	0.471	-22755	17827	0.203	4.0083	0.642	0.000**
FemBrd	-0.003	0.169	0.981	-0.127	0.182	0.486	-1426	760	0.001**	9064	17609	0.607	-0.425	0.634	0.502
FemAudt	-0.037	0.079	0.638	0.030	0.085	0.719	213.60	355	0.548	-1480	8229	0.053**	0.073	0.296	0.805
FemCeo	-0.00	0.038	0.938	-0.008	0.041	0.841	109.86	172	0.523	-821	3983	0.836	0.102	0.143	0.476
LnFsiz	-0.038	0.008	0.000**	-0.04	0.009	0.000**	11.105	37.88	0.763	882.44	877	0.315	-0.203	0.031	0.000**
Fage	0.005	0.003	0.006**	0.008	0.003	0.014**	-2.692	14.31	0.851	221	331	0.504	-0.009	0.011	0.427
Bsiz	0.013	0.008	0.107	0.015	0.008	0.058**	48.32	36.47	0.186	262.21	844.64	0.756	-0.02	0.030	0.374
GDP	0.006	0.003	0.036**	0.002	0.003	0.388	21.80	14.33	0.129	-309	331	0.352	-0.013	0.011	0.245
Additional information	**R^2=0.76 Adjust. R^2= 0.72 f-statistic = 21.67 Prob(f-stat) =0.000**			**R^2= 0.58 Adjust. R^2= 0.52 f-statistic = 9.40 Prob(f-stat) = 0.000**			**R^2= 0.115 Adjust. R^2 = 0.014 f-statistic = 0.886 Prob(f-stat) = 0.667**			**R^2= 0.11 Adjust. R^2= 0.02 f-statistic = 0.84 Prob(f-stat) = 0.7395**			**R^2= 0.63 Adjust. R^2= 0.61 f-statistic = 14.745 Prob(f-stat) = 0.0000**		

Notes: (**) Denote significance at 5% level.

Table 8 above presents the various relationships that exit among the dependent and independent variables. That is, the various relationships that exist among GPM, NPM, ROCE, ROE and Tobin's Q and that of female board membership, female audit committee member, female CEO, firm size, firm age, board size and GDP. In respect to the gross profit margin (GPM) under fixed regression model, the result shows that there is a negative and insignificant relationship between female board member and GPM at 5% significant level. That is, there is a negative insignificant effect on firm performance when we have a female member serving on the boards of listed firms in Ghana. This means that the higher or lower the number of female memberships on the boards of listed firms, it has no effect on GPM. Again, there is a negative and insignificant relationship between female audit committee member and GPM at 5% significant level. That is, there is a negative insignificant effect when we have a female member serving on the audit committee of listed firms on the GPM of such firms. Again, there is a negative and insignificant relationship between female CEO and GPM at 5% significant level. On the contrary, there is a negative and significant relationship between female CEO of listed firms and GPM. The control variables that seem to have effect on GPM are firm size, firm age and GDP whilst board size have no significant effect on GPM. That is, the study shows that there is a negative and significant relationship between the size of a firm and GPM. Meaning, the higher the size of the firm, the lower the GPM. Positive relationship between firm age and GPM means that the longer the firm age or higher age of a firm significantly translates into higher GPM. Meanwhile, board size does not show any significant effect on the GPM of listed firms in Ghana whilst GDP shows a significant relationship with GPM. In respect to the net profit margin (NPM) under same model, the result shows that there is a negative and insignificant relationship between female board member and NPM, positive insignificant relationship between female audit committee member and GPM, and finally, a negative insignificant relationship between female CEO and

GPM at 5% significant level. That is, there is a negative, positive and a negative insignificant effect on firm performance when we have a female board member, female audit committee member serving on the boards of listed firms or female as a CEO of listed firms in Ghana respectively. This means that the higher the number of female memberships on the boards of listed firms, higher the number of female memberships on the audit committee of listed firms and well as female CEO has no significant effect on NPM of such firms. Further, except GDP which has a positive insignificant effect on NPM, the other control variables have effect on NPM. For instance, firm size shows a negative and significant effect on NPM whilst firm age, board size has a positive effect on NPM. This means that the higher firm size, the lower NPM. However, the longer the firm age or higher age of a firm, the higher GPM. Same as well goes to board size.

In respect to the return on capital employed (ROCE) under same model, the result shows that there is a negative and significant relationship between female board member and ROCE which is contrary to what pooled OLS indicates, positive and insignificant relationship between female audit committee member and ROCE and as well as positive insignificant effect of female CEO and ROCE at 5% significant level. That is, there is a negative significant effect on firm performance when we have a female board member and positive insignificant effect when we have female audit committee member serving on the boards of listed firms or female as a CEO of listed firms in Ghana. This means that the higher the number of female memberships on the boards of listed firms, lower ROCE and the number of female memberships on the audit committee of listed firms, it has no significant effect on ROCE of such firms. This also happens when we have a female as a CEO of listed firms as well. Further, none of the control variable seems to have effect on ROCE. However, all the control variables seem to have a positive relationship except that of firm age. In respect to the return on equity (ROE) under same model, the result shows that there is a positive and

insignificant relationship between female board member and ROE which is contrary to that of ROCE. However, unlike ROCE which shows a positive and insignificant relationship between female audit committee member, the results under ROE shows a negative significant relationship. That is, there is a negative significant effect on firm performance when we have a female audit committee member. This means that the higher presence of female auditors of listed firms lower the financial sustainability of such firms. The results also show negative insignificant effect when we have female CEO of listed firms or female as a CEO of listed firms in Ghana. Meanwhile, none of the control variables seems to have effect on the ROE. This means that the longer period of firm, the size of the firm, board size and GDP do not translate into firm value.

In respect to the last variable, which is Tobin's Q, as seen under pooled OLS which indicates series of significant relationships among the variables and Tobin's at 5% significant level apart from GDP and female audit member, fixed effect regression model presents different results. For instance, the result shows that there is a negative and insignificant relationship between female board member and Tobin's Q. That is, there is no effect on firm performance when we have a female member serving on the board of listed firms in Ghana. This means that the higher the number of female memberships on the boards of listed firms translates into no firm value. Again, there is a positive and insignificant relationship between female audit committee member and Tobin's Q at 5% significant level. That is, there is a positive relationship when we have a female member serving on the audit committee of listed firms on the Tobin's of such firms. However, such relationship does not have any significant effect on Tobin's. the result as well shows that there is a positive and insignificant relationship between female CEO of listed firms and Tobin's. That is, there is no effect of female CEO on financial sustainability of listed firms in Ghana. Meaning, higher female CEOs of listed firms does not translate into higher value. The only control variable that seems to have effect on

Tobin's Q is firm size. That is, the study shows that there is a negative and significant relationship between the size of a firm and Tobin's Q. Meaning, the huge size of the firm significantly translates into higher value of the firm. From the results, firm age, board size and GDP show negative insignificant effect on Tobin's Q of listed firms in Ghana.

4.4.3 Random Effect Model

This section presents the empirical results from the random effect regression model. Here, variables considered are gross profit margin (GPM), net profit margin (NPM), return on capital employed (ROCE), return on equity (ROE), Tobin's Q, female board representation (Fembrd), female representation on audit committee (FemAudt), female chief executive offer (FemCeo), firm size (Fsiz), firm age (Fage), board size (Bsiz) and gross domestic product (GDP). Table 7 on the next page illustrates this result. Specifically, the analysis is based on the determination of the effect of female presence on boards on firm performance, investigates the effect of female presence on audit committee on firm performance, evaluates the effect of female CEO on firm performance and finally, explores the moderating effect of female CEO on female board membership financial performance.

Table 9: Regression Results Using Random Effect Model

Variable	GPM			NPM			ROCE			ROE			lnTobin's Q		
	Coe.	Std. Er	P-values	Coe.	Std. Er.	P-values	Coe.	Std. Er	P-values	Coe.	Std. Er	P-values	Coe.	Std. Er	P-values
Constant	0.627	0.154	0.000**	0.339	0.142	0.017**	-140	345	0.684	-8160	8006	0.309	3.112	0.546	0.000**
FemBrd	-0.009	0.162	0.952	-0.162	0.166	0.329	-423	509	0.406	9505	1180	0.421	-0.963	0.598	0.109
FemAudt	-0.039	0.078	0.613	0.017	0.082	0.829	223	289	0.441	-383	671	0.567	0.101	0.290	0.726
FemCeo	-0.001	0.037	0.967	0.006	0.039	0.861	67.948	132	0.609	-239	307	0.437	0.123	0.140	0.378
LnFsiz	-0.027	0.007	0.000**	-0.023	0.006	0.000**	-14.75	18.37	0.422	576	425.45	0.176	-0.175	0.025	0.000**
Fage	0.002	0.001	0.128	0.001	0.001	0.323	0.695	2.191	0.751	132	50.74	0.009**	-0.002	0.006	0.693
Bsiz	0.014	0.007	0.055**	0.019	0.008	0.017**	29.24	24.84	0.240	-526	575	0.361	-0.002	0.028	0.927
GDP	0.006	0.003	0.035**	0.002	0.003	0.458	15.343	14.041	0.275	-327	325	0.314	-0.012	0.011	0.299
Additional information	**R^2=0.075 Adjust. R^2= 0.052 f-statistic = 3.309 Prob(f-stat) =0.0021**			**R^2= 0.55 Adjust. R^2= 0.0315 f-statistic = 92.341 Prob(f-stat) = 0.024**			**R^2= 0.014 Adjust. R^2 = 0.010 f-statistic = 0.588 Prob(f-stat) = 0.765**			**R^2= 0.036 Adjust. R^2= 0.012 f-statistic = 1.515 Prob(f-stat) = 0.1616**			**R^2= 0.171 Adjust. R^2= 0.149 f-statistic = 8.253 Prob(f-stat) = 0.0000**		

Table 9 above presents the various relationships that exit among the dependent and independent variables. That is, the various relationships that exist among GPM, NPM, ROCE, ROE and Tobin's Q and that of female board membership, female audit committee member, female CEO, firm size, firm age, board size and GDP. In respect to the gross profit margin (GPM) under random effect model, the result shows that there is a negative and insignificant relationship between female board member and GPM at 5% significant level.

That is, there is no effect on firm performance when we have a female member serving on the boards of listed firms in Ghana. This means that the higher or lower the number of female memberships on the boards of listed firms has no value for the firms. There is a negative and insignificant relationship between female audit committee member and GPM at 5% significant level. That is, there is no effect when we have a female member serving on the audit committee of listed firms on the GPM of such firms.

Again, there is a negative and insignificant relationship between female CEO and GPM at 5% significant level. On the contrary, there is a negative and significant relationship between the size of listed firms in Ghana and GPM. That is, there is a negative relationship between firm size and financial sustainability of listed firms in Ghana. This mean that the huge size of the firm lower firm value. The other control variables that seem to have effect on GPM are board size and GDP. That is, the study shows that there is a positive and significant relationship between the size of the board of listed firms in Ghana and GPM. Meaning, the higher the size of the board, the higher the GPM. This same effect goes to GDP. Meanwhile, firm age has no significant effect on GPM of listed firms in Ghana. In respect to the net profit margin (NPM) under same model, the result shows that there is a negative and insignificant relationship between female board member and NPM, positive and insignificant relationship between female audit committee member and NPM and finally a positive insignificant effect between

female CEO and NPM at 5% significant level. That is, there is a negative insignificant effect on firm performance when we have a female board member and the higher the number of female directors on the boards of listed firms, the lower NPM. There is also a positive insignificant effect of female audit committee member serving on the boards of listed firms and whether to increase the number or not does not translate into firm value. This scenario goes to that of the relationship that exists between female as a CEO of listed firms in Ghana and NPM. Further, the control variables seem to have effect on NPM are firm size and board size. That is, there is a negative and significant relationship between the size of a firm and NPM and the higher the size of the firm, the lower the NPM.

And the positive relationship of that of board size and NPM means that higher number of board members translate into higher NPM. In respect to the return on capital employed (ROCE) under same model, the result shows that there is a negative and insignificant relationship between female board member and ROCE, positive and insignificant relationship between female audit committee member and ROCE and as well as positive insignificant effect of female CEO and ROCE at 5% significant level. That is, there is a negative insignificant effect on firm performance when we have a female board member and positive insignificant effect when we have female audit committee member serving on the boards of listed firms or female as a CEO of listed firms in Ghana.

This means that the higher the number of female memberships on the boards of listed firms, higher the number of female memberships on the audit committee of listed firms, it has no significant effect on ROCE of such firms. This also happens when we have a female as a CEO of listed firms as well. Further, none of the control variable seems to have effect on ROCE. However, all the control variables seem to have a positive relationship except that of firm size. In respect to the return on equity (ROE) under same model, the result shows that

there is a positive and insignificant relationship between female board member and ROE. However, unlike ROE which shows a positive and insignificant relationship between female audit committee member and ROE and as well as positive insignificant effect of female CEO and ROE at 5% significant level, the results under ROE shows a negative relationship. That is, there is a negative insignificant effect on firm performance when we have a female audit committee member and a negative insignificant effect when we have female CEO of listed firms or female as a CEO of listed firms in Ghana. Meanwhile, the result shows that firm age have a positive significant effect on the performance of listed firms in Ghana. This means that the longer period of the firm or higher age of the firm translates into higher ROE.

In respect to the last variable, which is Tobin's Q, apart from firm size which shows a negative and significant relationship with Tobin's Q, none of the variables has an effect on Tobin's at 5% significant level. For instance, the result shows that there is a negative and insignificant relationship between female board member and Tobin's Q. That is, there is no effect on firm performance when we have a female member serving on the board of listed firms in Ghana. Again, there is a positive and insignificant relationship between female audit committee member and Tobin's Q at 5% significant level.

That is, there is a positive relationship when we have a female member serving on the audit committee of listed firms on the Tobin's of such firms. However, such relationship does not have any significant effect on Tobin's. Again, there is a positive and insignificant relationship between female CEO and Tobin's at 5% significant level. The only control variable that seems to have effect on Tobin's Q is firm size. That is, the study shows that there is a negative and significant relationship between firm size and Tobin's Q. Meaning, the huge size of the firm significantly lowers firm value.

4.4.4 Moderating Effect of Female CEO on Female Board Membership

This section illustrates the moderating effect of female CEO on female board membership financial sustainability or performance nexus. That is, does female directorship significantly moderates female CEO financial performance of listed firms? The values in column (1) represents previous coefficients and p-values and values in column (2) represents the new coefficients and p-values under the moderating effect. The values at the top represents the coefficients values and those at the bottom represents the p-values respectively. The previous values are values from the models Hausman deems as appropriate for each of the dependent variable. For instance, Hausman suggest fixed effect model for gross profit margin (GPM), net profit margin (NPM) and Tobin's Q whilst random effect model for both return on capital employed (ROCE) and return on equity (ROE). Table 10 below presents these results.

Table 10: Moderating Effect of Female CEO on Female Board Membership Financial Sustainability Nexus

Variable	GPM		NPM		ROCE		ROE		lnTobin's Q	
	Value (1)	Value (2)	Value (1)	Value (2)	Value (1)	Value (2)	Value (1)	Value (2)	Value (1)	Value (2)
Constant	0.752	0.769	0.565	0.570	-140	-489	-8160	-210	4.0083	3.933
	(0.000)***	(0.000)**	(0.002)**	(0.002)**	(0.684)	(0.531)	(0.309)	(0.245)	(0.000)***	(0.000)***
FemBrd	-0.003	-0.047	-0.127	-0.140	-423	-1594	9505	466	-0.425	-0.249
	(0.981)	(0.797)	(0.486)	(0.477)	(0.406)	(0.053)**	(0.421)	(0.806)	(0.502)	(0.716)
FemAudt	-0.037	-0.049	0.030	0.026	223	165	-383	-160	0.073	0.123
	(0.638)	(0.544)	(0.719)	(0.760)	(0.441)	(0.653)	(0.567)	(0.059)**	(0.805)	(0.685)
FemCeo	-0.00	-0.038	-0.008	-0.019	67.948	-29.78	-239	-446	0.102	0.248
	(0.938)	(0.577)	(0.841)	(0.794)	(0.609)	(0.923)	(0.437)	(0.535)	(0.476)	(0.338)
LnFsiz	-0.038	-0.039	-0.04	-0.048	-14.75	8.123	576	804	-0.203	-0.199
	(0.000)***	(0.000)**	(0.000)**	(0.000)**	(0.422)	(0.832)	(0.176)	(0.365)	(0.000)***	(0.000)***
Fage	0.005	0.005	0.008	0.008	0.695	-2.154	132	235	-0.009	-0.010
	(0.006)***	(0.007)**	(0.014)**	(0.014)**	(0.751)	(0.881)	(0.009)**	(0.479)	(0.427)	(0.401)
Bsiz	0.013	0.012	0.015	0.015	29.24	47.59	-526	243	-0.02	-0.026
	(0.107)	(0.113)	(0.058)**	(0.037)**	(0.240)	(0.194)	(0.361)	(0.774)	(0.374)	(0.388)
GDP	0.006	0.006	0.002	0.002	15.343	20.86	-327	-333	-0.013	-0.012
	(0.036)***	(0.045)**	(0.388)	(0.404)	(2.275)	(0.150)	(0.314)	(0.319)	(0.245)	(0.285)
*FemCeo*FemBrd*		0.180		0.056		706		184		-0.740
		(0.537)		(0.857)		(0.590)		(0.544)		(0.498)
Additional Information	R^2=0.76 Adjust. R^2= 0.72 f-statistic = 21.06 Prob(f-stat) =0.000		R^2= 0.58 Adjust. R^2= 0.51 f-statistic = 9.12 Prob(f-stat) = 0.000		R^2= 0.11 Adjust. R^2 = -0.01 f-statistic = 0.868 Prob(f-stat) = 0.692		R^2= 0.11 Adjust. R^2= -0.02 f-statistic = 0.821 Prob(f-stat) = 0.763		R^2= 0.68 Adjust. R^2= 0.63 f-statistic = 14.338 Prob(f-stat) = 0.0000	

Table 10 above illustrates the moderating effect of female CEO and female board membership financial sustainability relationship. That is, does female CEO significantly moderate female directorship financial performance? As already mentioned, the values in column (1) represents previous coefficients and p-values and values in column (2) represents the new coefficients and p-values under the moderating effect. The values at the top represents the coefficients values and those at the bottom represents the p-values respectively. The previous values are values from the models Hausman deems as appropriate for each of the dependent variable. For instance, Hausman suggest fixed effect model for gross profit margin (GPM), net profit margin (NPM) and Tobin's Q whilst random effect model for both return on capital employed (ROCE) and return on equity (ROE).

The interaction term representing the coefficients obtained from regressing female directorship variable on female CEO is positive and statistically insignificant on GPM. Also, this same interaction term is positive and statistically insignificant on NPM, ROCE and ROE. However, it shows negative and statistically insignificant with that of Tobin's Q. even though there is no significant effect in respect to the interaction, the moderation has some implication or effect on some variables. For instance, Table 10 indicates that the presence of female board of directors have no effect on ROCE. However, after moderation, the result shows a negative significant relationship between female directorship and ROCE even though this effect lowers the performance of firms. This scenario also happens under ROE.

4.4.5 Hausman Test

Table 11: Redundant Fixed Effects Tests (Hausman Test For GPM)

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section Chi-square	397.941843	30	0.0000

Table 12: Redundant Fixed Effects Tests (Hausman Test For NPM)

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section Chi-square	240.166179	30	0.0000

Table 13: Redundant Fixed Effects Tests (Hausman Test For ROCE)

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section Chi-square	31.262978	30	0.4026

Table 14: Redundant Fixed Effects Tests (Hausman Test For ROE)

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section Chi-square	22.846349	30	0.8215

Table 15: Redundant Fixed Effects Tests (Hausman Test For Tobin's Q)

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section Chi-square	291.186594	30	0.0000

Null Hypothsis: Random Effect is Appropraite (P-value ≥0.05)
Alternative Hypothesis: Fixed Effect is Appropraite (P-value ≥0.05)
Notes: (***), (**) and (*) Denote significance at the 1%, 5% and 10% levels respectively

Ordinary Least Squares Regression Model (OSL) comes with three main regression models. The Pooled OSL model, Fixed Effect Model and Random Effect Model. To decide which

model is appropriate, Hausman Test is run to determine the appropriateness of the model. Under Hausman Test, Null Hypothesis says that Random Effect is appropriate whilst the Alternate Effect says that the Fixed Effect is appropriate. P-value of more than 0.05 rejects the Null Hypothesis. This means that we accept the Alternate Hypothesis. The opposite of this is true. Making references from Table 11-15, the p-values on the Table 11, 12 and 15 indicate that the fixed effect is appropriate since the p-values is less or equal to 5% significant level. Hence, we failed to accept the Null Hypothsis and accept Alternative Hypothesis. On the other hand, the p-values under Table 13 and 14 indicate that random effect is appropriate since the p-values are more than 5% significant level. Hence, we fail to accept the alternative hypothesis but accept the null hypothesis. Therefore, the final results for this study is based on the fixed effect results for GPM, NPM and Tobin's Q whilst random effect for ROEC and ROE.

4.5 Discussion of Results

The focus of this study is to examine gender issues in corporate governance and financial performance of listed firms in Ghana. Specifically, this section covers the findings of the study which seek to answer questions such as: What is the effect of female presence on boards on firm financial performance? To what extent does female presence on audit committee affect firm financial performance? What effect does gender diversity of executive members of the board have on firm performance? And lastly, is there any moderating effect of female CEO on female board membership financial sustainability?

4.5.1 Relationship Between Female Board Directors and Firm Performance

The investigations into many prior studies have concluded that women are less represented on the corporate boards across the globe. Specifically, Singh et al. (2008) suggest that men are somewhat more likely to board membership role than women. Moreover, Hillman et al.

(2002), cautions that as the number of women on corporate board position is limited, companies will select women as directors who have specialized skills that complement the executive experience of business experts. And therefore, corporate women are advised to seek specialized skills. There exists a positive effect of female directorship (FemBrd) on gross profit margin (GPM), a negative effect of female directorship (FemBrd) on Tobin's Q, a positive insignificant effect on net profit margin (NPM) and a negative insignificant effect on return on equity (ROE) using pooled OLS regression model. Under the random effect regression model, there exists a negative insignificant effect of female directorship on GPM, NPM, ROCE and Tobin's Q whilst it shows a positive insignificant effect on that of ROE. This same result is seen under the moderation. That is, a negative insignificant effect of female directorship on GPM, NPM, ROCE and Tobin's Q whilst it shows a positive insignificant effect on that of ROE. Meanwhile, going by the fixed effect regression model as an appropriate model suggested by Hausman Test, the results shows that there exists a negative insignificant effect of female directorship (FemBrd) on gross profit margin (GPM), a negative insignificant effect of female directorship (FemBrd) on net profit margin (NPM) and a negative insignificant effect on Tobin's Q whilst it shows a positive insignificant effect of female directorship on return equity.

Meanwhile, there is a negative significant effect of female board directorship on capital employed (ROCE). These findings do not agree with arguments made by Carter et. al. (2013) and Stiles (2001) that a more diverse board can benefit a firm in so many ways including access to resources critical to the firm, getting a greater understanding of its customers and other stakeholders among others. Furthermore, research and government commissioned reports such as the Higgs (2013), Cadbury (1992) reports in the UK, Sarbanes–Oxley Act of 2002 in the US, and Erhardt, Werbel and Shrader (2013) have explicitly argued out on the importance of board diversity among other factors to the firm.

Some argued out that to enhance board effectiveness, corporate firms must continually solicit for expertise of gender diverse professional groups where women are better represented. Compbell and Minguez-Vera (2018) note that the presence and participation of women on corporate boards in one way or the other may promote and enhance shareholder value due to their ability to bring additional viewpoints to the board.

4.5.2 Relationship Between Female Audit Committee Members and Firm Performance

With regards to female presence on audit committee and firm financial performance, it is evident that using the pooled OLS method of estimation, there exist no significant relationship between percentage of female on audit committee and firm performance measured by GPM, NPM, ROCE, ROE. This result also seen under random effect estimation method. There is however a reflection of a negative significant relationship between that of female audit committee member and ROE under the moderation estimation and fixed effect estimation method. This result is consistence with the findings of Law Chapple, Kent, & Routledge, (2012) who admit that the existence of an audit committee ensures transparency in a companies' reporting, however, they do not find the relation strengthened by the existence of a female audit committee member.

However, the agency theory argues out that diversity may lead to an improvement in monitoring management (especially through the audit committee), as a result of greater boardroom independence and a more complex and complete decision-making progress which

eventually affect financial performance positively, but the result of the present study seems inconsistent with this argument of the agency theory which predicts a positive relationship. On the contrary, Carter et al. (2007) finds a significant positive relationship between percentage of female on the audit committee and firm performance measured by Tobin's Q.

4.5.3 Relationship Between Female CEO and Firm Performance

Abor and Biekpe (2007) in a research conducted on companies in Ghana find a positive relationship between CEO and profitability but Ehikioya (2009) find that CEO adversely affect firm performance in a research conducted on Nigerian companies. Jackling and Johl (2009) and Mashayekhi and Bazaz (2008) find that leadership structure and firm performance have no relationship meaning that the separation or merging of the two positions has no influence on performance. Managerial ownership has also been assessed in the literature to see whether it has influence on performance or otherwise. This study also finds that apart from a positive effect of female CEO on Tobin's Q using pooled OLS estimation method, none of the results show a significant relationship between female CEO and financial performance of firms. Meanwhile, the appropriate model for Tobin's Q is fixed effect estimation. However, the fixed effect estimation method does not show any significant effect between tat of female CEO and Tobin's Q. Whilst this finding does not agree with the findings of that of Abor and Biekpe (2007), it is however, agrees with that of Jackling and Johl (2009), Mashayekhi and Bazaz (2008) which state that firm performance have no relationship meaning that the separation or merging of the two positions has no influence on performance.

4.5.4 Moderating Effect of Female CEO on Female Directorship-Financial Sustainability

The interaction term representing the coefficients obtained from regressing female directorship variable on female CEO is positive and statistically insignificant on GPM. Also, this same interaction term is positive and statistically insignificant on NPM, ROCE and ROE. However, it shows negative and statistically insignificant with that of Tobin's Q. Even though there is no significant effect in respect to the interaction, the moderation has some implication or effect on some variables. For instance, the study indicates that the presence of female board of directors have no effect on ROCE. However, after moderation, the result shows a negative significant relationship between female directorship and ROCE even though this effect lowers the performance of firms. This scenario also happens under ROE.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents summary of findings, draws conclusion and makes some recommendations. The chapter is divided into summary of findings, concluding part, recommendations for policy makers and for academic scholars.

5.1 Summary of Findings

The focus of this study is to examine gender issues in corporate governance and financial performance of listed firms in Ghana. Specifically, the study determines the effect of female presence on boards on firm performance, investigates the effect of female presence on audit committee on firm performance, evaluates the effect of female CEO on firm performance and finally, explores the moderating effect of female CEO on female board membership financial performance.

5.1.1 Relationship Between Female Boards of Directors and Firm Performance

Generally, the results show that there exists a negative insignificant effect of female directorship (FemBrd) on gross profit margin (GPM), a negative insignificant effect of female directorship (FemBrd) on net profit margin (NPM) and a negative insignificant effect on Tobin's Q whilst it shows a positive insignificant effect of female directorship on return equity. Meanwhile, there is a negative significant effect of female board directorship on capital employed (ROCE).

5.1.2 Effect of Female Presence on Audit Committee on Firm Performance

With regards to female presence on audit committee and firm financial performance, it is evident that using the pooled OLS method of estimation, there exist no significant relationship between percentage of female on audit committee and firm performance measured by GPM, NPM, ROCE, ROE. This result also seen under random effect estimation method. There is however a reflection of a negative significant relationship between that of female audit committee member and ROE under the moderation estimation and fixed effect estimation method.

5.1.3 Relationship Between Female CEO and Firm Performance

The study finds that apart from a positive effect of female CEO on Tobin's Q using pooled OLS estimation method, none of the results show a significant relationship between female CEO and financial performance of firms. Meanwhile, the appropriate model for Tobin's Q is fixed effect estimation. However, the fixed effect estimation method does not show any significant effect between tat of female CEO and Tobin's Q.

5.1.4 Moderating Effect of Female CEO on Female Directorship-Financial Sustainability

Even though there is no significant effect in respect to the interaction, the moderation has some implication or effect on some variables. For instance, the study indicates that the

presence of female board of directors have no effect on ROCE. However, after moderation, the result shows a negative significant relationship between female directorship and ROCE even though this effect lowers the performance of firms.

5.2 Conclusion

Generally, the study establishes the relationship between gender issues in corporate governance and financial performance of listed firms in Ghana. Although many performance measures have been used to measure the performance of firms. Following literature, the study employs five indicators to measure performance of these listed firms which include gross profit margin (GPM), return on equity (ROE), net profit margin (NPM), return on capital employed (ROCE) and Tobin's Q which are widely been used by many authors such as Smith et al (2006), Yermack (1996), Carter et al. (2007), Bøhren, & Strøm (2010), Dobbin & Jung (2011) and finally, (Black & Kim 2012).

Specifically, the study determines the effect of female presence on boards on firm performance, investigates the effect of female presence on audit committee on firm performance, evaluates the effect of female CEO on firm performance and finally, explores the moderating effect of female CEO on female board membership financial performance. The study first and foremost employs an explanatory research design through the application of quantitative analysis in its presentation of results. The study samples 31 listed companies from the Ghana Stoch Exchange. The period under studying is between the year 2008-2019.

By the application of unbalanced panel data estimation and ordinary least regression method, the study concludes that while there is a negative insignificant effect of female directorship on stock market performance which is being represented by Tobin's Q as a proxy, there is a negative significant effect of female board directorship on financial sustainability which is

that of return on capital employed. Secondly, there is a reflection of a negative significant relationship between that of female audit committee member and financial performance of listed firms in Ghana. None of the estimation methods show any significant effect between that of female CEO and firm performance. Lastly, moderation estimation shows a negative significant relationship between female directorship and financial sustainability.

5.3 Recommendation

Based on the finding from the study, the study recommends that:

Ghanaian firms or firms in general of similar status must be circumspect about selection of women on corporate boards as evidence shows that women presence on board less affects the profitability of firm. That is, regardless of positive effect of female directorship on other profitability measures of selected firms, it indicates a negative effect on stock performance (Tobin's Q). Aside the women on board positions must undergo relevant seminars and training, government must institute a policy which ensures female participation in leadership positions in Ghana.

Since the executive division of the board are more likely to have experience in CEO and MD roles, the study notes that as the number of women on the board as a whole is insignificant, women who have specialized skills that complement the executive experience of business experts are more likely to be appointed in the executive seats. Corporate women are therefore advised to seek specialized skills to make them versatile for appointment in the executive role in order for their impacts to be felt as such. GSE should make it a requirement for all listed firms to disclose corporate governance issues (including; important board committees such as

audit, nomination and compensation, its constituents especially the gender composition of such committees: meeting attendance of the board members and number of times the board met in the year among others) in their annual report.

5.4 Study Limitation

The findings from this study cannot be generalized beyond Ghana due to fundamental cultural differences and economic conditions among different countries across the world. For true representation of the study in Ghana it would have been perfect to use data from all listed firms and unlisted firms but due to data unavailability few firms may be capture in this study.

5.5 Areas for Further Studies

Further research is required using data from both listed and unlisted firms in Ghana to give a true representation of Ghana. More theoretical and empirical work is needed to fully flesh out the specific means if any by which board diversity impact corporate performance. Research regarding investor behaviour in response to the existence or the appointment of female board members is suggested. This is because in the stock market, behaviour is shaped partly by psychological and sociological factors that some prominent theories disregard. Again, the effects of the presence of women board members on firm performance should be explored further because there is a possibility that shareholders behaviour may change in relation to the gender bias due to the acknowledgement that gender diversity of board members is needed to maintain the going concern of the business.

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APPENDIX

Correlation Matrix

													GDP	FEMCEO
GPM	1												0.0537554754 3171707	0.067296688 14586232
NPM	0.63785806892 43595	1											0.0058123371 90236962	0.090655009 32768589
ROCE	0.09093771588 813312	0.07554017 469839085	1										0.0640252556 1339382	0.027483125 0786641
ROE	0.11301610193 62351	0.01746509 941494588	0.0035324677 08136913	1									0.0626689254 2270821	0.027377156 57615008
TOBINS_Q01	0.15677435136 39927	0.09680400 834756225	0.0724163092 2363265	0.0537353386427 1983	1								0.0089534827 86872382	0.000286766 9804330271
FEMBRD	0.12760341463 66541	0.03959650 91505146	0.0170083071 7591778	0.00494023229412 67582	0.1132810807 67391	1							0.0281209723 2139894	0.507567090 3618822
FEMAUDT	0.11297470912 15275	0.10684461 99386514	0.0379604843 4172987	0.03776447716800 3475	0.0554984581 9859827	0.56269259 3818738	1						0.0252745266 8385721	0.401296553 8875083
FAGE	0.13375635810 64136	0.02242235 855552053	0.0170977540 8500954	0.15147970613530 896	0.1485766083 0067	0.01411716 648950118	0.0611526975 4613259	1					0.0096125361 41297732	0.081067937 94391961
LNFSIZ	0.08619756570 811355	0.14083058 66118655	0.0053812610 99672786	0.02430350225780 3106	0.2620402229 774167	0.17657845 07078305	0.1057477498 925685	0.1204407748 964651	1				0.0174149215 2687771	0.040650004 53208093
BSIZ	0.02435261588 715859	0.13988467 68020196	0.0691294369 0690468	0.04020228384470 6585	0.0356457388 3074385	0.15278491 52489069	0.1406897548 678178	0.0793158884 8060954	0.5313227585 738073	1			0.0009542554 828387248	0.037040674 25856396
OWNER	0.06939073079 548094	0.09108051 8073082	0.0474126370 0659715	0.04742636254660 3695	0.2833219814 198103	0.17096876 5413122	0.0137015019 767522	0.1296070520 827142	0.3829717579 098282	0.3388619207 693022			0.0266399165 4033138	0.074319455 91104289
INDUSTRIAL	0.16522919141 20169	0.13300460 12861875	0.1670852758 085149	0.02088927240960 66	0.0060208689 12520152	0.10153765 48272916	0.1771110217 756699	0.1716102080 058004	0.1793844344 343498	0.0364574413 8294614			0.0813761246 3125578	0.019295098 31697682
GDP	0.05375547543 171707	0.00581233 7190236962	0.0640252556 1339382	0.0626689254227 0821	0.0089534827 86872382	0.02812097 232139894	0.0252745266 8385721	0.0096125361 41297732	0.0174149215 2687771	0.0009542554 828387248	0.0266399165 4033138	0.0813761246 3125578	1	0.091286088 59141936
FEMCEO	0.06729668814 586232	0.09065500 932768589	0.0274831250 786641	0.02737715657610 5008	0.0002867669 804330271	0.50756709 03618822	0.4012965538 875083	0.0810679379 4391961	0.0406500045 3208093	0.0370406742 5856396	0.0743194559 1104289	0.0192950983 1697682	0.0912860885 9141936	1

Pooled OLS Regression Analysis

Dependent Variable: GPM
Method: Panel Least Squares
Date: 26/10/20 Time: 15:40
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 290

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.021908	0.144728	-0.151374	0.8798
FEMBRD	0.373331	0.213427	1.749220	0.0083
FEMAUDT	0.090051	0.121315	0.742289	0.4585
FEMCEO	-0.036996	0.055598	-0.665422	0.5063
LNFSIZ	0.015606	0.007691	2.029179	0.0434
FAGE	0.002382	0.000917	2.596493	0.0099
BSIZ	-0.003869	0.010402	-0.371961	0.7102
GDP	0.005651	0.005878	0.961371	0.3372

R-squared	0.337112	Mean dependent var	0.415092
Adjusted R-squared	0.233707	S.D. dependent var	0.306264
S.E. of regression	0.301058	Akaike info criterion	0.464170
Sum squared resid	25.55931	Schwarz criterion	0.565408
Log likelihood	-59.30466	Hannan-Quinn criter.	0.504731
F-statistic	2.440147	Durbin-Watson stat	0.382832
Prob(F-statistic)	0.019225		

Dependent Variable: NPM
Method: Panel Least Squares
Date: 26/10/20 Time: 15:41
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 289

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.124294	0.119058	-1.043974	0.2974
FEMBRD	0.006391	0.175370	0.036446	0.9710
FEMAUDT	0.077560	0.099743	0.777598	0.4375
FEMCEO	0.039125	0.045764	0.854922	0.3933
LNFSIZ	0.008105	0.006330	1.280386	0.2015
FAGE	0.000501	0.000754	0.664914	0.5067
BSIZ	0.010897	0.008547	1.275026	0.2034
GDP	1.70E-05	0.004830	0.003520	0.9972

R-squared	0.037968	Mean dependent var	0.150430
Adjusted R-squared	0.014003	S.D. dependent var	0.249041
S.E. of regression	0.247291	Akaike info criterion	0.070789
Sum squared resid	17.18394	Schwarz criterion	0.172282
Log likelihood	-2.228974	Hannan-Quinn criter.	0.111456
F-statistic	1.584290	Durbin-Watson stat	0.785701
Prob(F-statistic)	0.139802		

Dependent Variable: ROCE
Method: Panel Least Squares
Date: 26/10/20 Time: 15:41
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 290

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-140.5680	344.9204	-0.407537	0.6839
FEMBRD	-423.9138	508.6480	-0.833413	0.4053
FEMAUDT	223.3129	289.1223	0.772382	0.4405
FEMCEO	67.94852	132.5027	0.512809	0.6085
LNFSIZ	-14.75857	18.32924	-0.805193	0.4214
FAGE	0.695484	2.186230	0.318120	0.7506
BSIZ	29.24731	24.79101	1.179755	0.2391
GDP	15.34356	14.00863	1.095293	0.2743

R-squared	0.014400	Mean dependent var	-41.49039
Adjusted R-squared	-0.010065	S.D. dependent var	713.9093
S.E. of regression	717.4930	Akaike info criterion	16.01660
Sum squared resid	1.45E+08	Schwarz criterion	16.11784
Log likelihood	-2314.407	Hannan-Quinn criter.	16.05716
F-statistic	0.588606	Durbin-Watson stat	2.261547
Prob(F-statistic)	0.765091		

Dependent Variable: ROE
Method: Panel Least Squares
Date: 26/10/20 Time: 15:42
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 290

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8160.129	7872.500	-1.036536	0.3008
FEMBRD	9505.655	11609.44	0.818787	0.4136
FEMAUDT	-3837.805	6598.958	-0.581577	0.5613
FEMCEO	-2390.306	3024.256	-0.790378	0.4300
LNFSIZ	576.4013	418.3485	1.377802	0.1694
FAGE	132.8144	49.89875	2.661678	0.0082
BSIZ	-526.5484	565.8326	-0.930573	0.3529
GDP	-327.8668	319.7345	-1.025434	0.3060

R-squared	0.396260	Mean dependent var	967.6717
Adjusted R-squared	0.220338	S.D. dependent var	16478.10
S.E. of regression	16376.14	Akaike info criterion	22.27224
Sum squared resid	7.56E+10	Schwarz criterion	22.37347
Log likelihood	-3221.474	Hannan-Quinn criter.	22.31280
F-statistic	2.515734	Durbin-Watson stat	2.335257
Prob(F-statistic)	0.161605		

Dependent Variable: TOBINS_Q01
Method: Panel Least Squares
Date: 26/10/20 Time: 15:42
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 289

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.499473	0.451250	3.322934	0.0010
FEMBRD	-2.265794	0.664350	-3.410542	0.0007
FEMAUDT	0.394795	0.379766	1.039574	0.2994
FEMCEO	0.293955	0.173237	1.696831	0.0908
LNFSIZ	-0.133409	0.023983	-5.562640	0.0000
FAGE	0.005725	0.002856	2.004532	0.0460
BSIZ	0.061013	0.032378	1.884398	0.0505
GDP	-0.000916	0.018295	-0.050058	0.9601

R-squared	0.361972	Mean dependent var	-0.389460
Adjusted R-squared	0.251473	S.D. dependent var	0.996278
S.E. of regression	0.936993	Akaike info criterion	2.735009
Sum squared resid	246.7055	Schwarz criterion	2.836502
Log likelihood	-387.2088	Hannan-Quinn criter.	2.775677
F-statistic	6.371086	Durbin-Watson stat	0.483372
Prob(F-statistic)	0.000001		

FIXED EFFECT REGRESSION MODEL

Dependent Variable: GPM
Method: Panel Least Squares
Date: 26/10/20 Time: 15:43
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 290

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.752509	0.171654	4.383880	0.0000
FEMBRD	-0.003943	0.169554	-0.023258	0.9815
FEMAUDT	-0.037243	0.079239	-0.470004	0.6638
FEMCEO	-0.002954	0.038357	-0.077006	0.9387
LNFSIZ	-0.038875	0.008447	-4.602348	0.0000
FAGE	0.005500	0.003193	1.722556	0.0062
BSIZ	0.013142	0.008133	1.615913	0.1074
GDP	0.006713	0.003197	2.100037	0.0367

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.760935	Mean dependent var	0.415092
Adjusted R-squared	0.725834	S.D. dependent var	0.306264
S.E. of regression	0.160362	Akaike info criterion	-0.701147
Sum squared resid	6.480439	Schwarz criterion	-0.220266
Log likelihood	139.6663	Hannan-Quinn criter.	-0.508482
F-statistic	21.67858	Durbin-Watson stat	1.267073
Prob(F-statistic)	0.000000		

Dependent Variable: NPM
Method: Panel Least Squares
Date: 26/10/20 Time: 15:46
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 289

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.565168	0.184891	3.056770	0.0025
FEMBRD	-0.127174	0.182590	-0.696503	0.4068
FEMAUDT	0.030739	0.085454	0.359719	0.7194
FEMCEO	-0.008296	0.041350	-0.200638	0.8411
LNFSIZ	-0.048484	0.009098	-5.329069	0.0000
FAGE	0.008476	0.003439	2.464601	0.0144
BSIZ	0.015137	0.008758	1.728328	0.0582
GDP	0.002979	0.003444	0.864814	0.3880

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.580936	Mean dependent var	0.150430
Adjusted R-squared	0.519162	S.D. dependent var	0.249041
S.E. of regression	0.172691	Akaike info criterion	-0.552624
Sum squared resid	7.485368	Schwarz criterion	-0.070533
Log likelihood	117.8541	Hannan-Quinn criter.	-0.359452
F-statistic	9.404168	Durbin-Watson stat	1.583401
Prob(F-statistic)	0.000000		

Dependent Variable: ROCE
Method: Panel Least Squares
Date: 26/10/20 Time: 15:49
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 290

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-555.4853	769.8109	-0.721587	0.4712
FEMBRD	-1426.334	760.3943	-1.875782	0.0018
FEMAUDT	213.6010	355.3611	0.601082	0.0543
FEMCEO	109.8614	172.0193	0.638657	0.5236
LNFSIZ	11.10935	37.88137	0.293267	0.7696
FAGE	-2.692220	14.31875	-0.188021	0.8510
BSIZ	48.32119	36.47366	1.324824	0.1864
GDP	21.80675	14.33566	1.521154	0.1295

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.115125	Mean dependent var	-41.49039

Adjusted R-squared	-0.014798	S.D. dependent var	713.9093
S.E. of regression	719.1719	Akaike info criterion	16.11570
Sum squared resid	1.30E+08	Schwarz criterion	16.59658
Log likelihood	-2298.776	Hannan-Quinn criter.	16.30836
F-statistic	0.886104	Durbin-Watson stat	2.496582
Prob(F-statistic)	0.661040		

Dependent Variable: ROE
Method: Panel Least Squares
Date: 26/10/20 Time: 15:52
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 290

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-22755.86	17827.07	-1.276477	0.2030
FEMBRD	9064.152	17609.01	0.514745	0.6072
FEMAUDT	-14804.72	8229.357	-1.799013	0.0530
FEMCEO	-821.5983	3983.577	-0.206246	0.8368
LNFSIZ	882.4476	877.2465	1.005929	0.3154
FAGE	221.6450	331.5897	0.668432	0.5045
BSIZ	262.2114	844.6471	0.310439	0.7565
GDP	-309.0697	331.9814	-0.930985	0.3528

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.109271	Mean dependent var	967.6717
Adjusted R-squared	0.021511	S.D. dependent var	16478.10
S.E. of regression	16654.39	Akaike info criterion	22.40035
Sum squared resid	6.99E+10	Schwarz criterion	22.88123
Log likelihood	-3210.051	Hannan-Quinn criter.	22.59302
F-statistic	0.835519	Durbin-Watson stat	2.542541
Prob(F-statistic)	0.739597		

Dependent Variable: TOBINS_Q01
Method: Panel Least Squares
Date: 26/10/20 Time: 15:55
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 289

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.008387	0.642097	6.242648	0.0000
FEMBRD	-0.425886	0.634604	-0.671105	0.0028
FEMAUDT	0.073012	0.296006	0.246656	0.8054
FEMCEO	0.102408	0.143619	0.713052	0.0465
LNFSIZ	-0.203047	0.031767	-6.391797	0.0000
FAGE	-0.009530	0.011987	-0.795057	0.4273
BSIZ	-0.027061	0.030384	-0.890609	0.0340

GDP	-0.013892	0.011942	-1.163338	0.0248

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.684903	Mean dependent var	-0.389460
Adjusted R-squared	0.638454	S.D. dependent var	0.996278
S.E. of regression	0.599049	Akaike info criterion	1.935055
Sum squared resid	90.07378	Schwarz criterion	2.417146
Log likelihood	-241.6155	Hannan-Quinn criter.	2.128226
F-statistic	14.74538	Durbin-Watson stat	1.251796
Prob(F-statistic)	0.000000		

RANDOM EFFECT REGRESSION MODEL

Dependent Variable: GPM
Method: Panel EGLS (Cross-section random effects)
Date: 26/10/20 Time: 19:39
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 290
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.627246	0.154024	4.072395	0.0001
FEMBRD	-0.009676	0.162572	-0.059521	0.9526
FEMAUDT	-0.039455	0.078085	-0.505280	0.6138
FEMCEO	-0.001540	0.037771	-0.040765	0.9675
LNFSIZ	-0.027635	0.007198	-3.839106	0.0002
FAGE	0.002902	0.001902	1.525640	0.1282
BSIZ	0.014982	0.007798	1.921296	0.0557
GDP	0.006739	0.003192	2.111382	0.0356

Effects Specification

	S.D.	Rho
Cross-section random	0.250986	0.7101
Idiosyncratic random	0.160362	0.2899

Weighted Statistics

R-squared	0.075922	Mean dependent var	0.082863
Adjusted R-squared	0.052984	S.D. dependent var	0.167910
S.E. of regression	0.163623	Sum squared resid	7.549847
F-statistic	3.309881	Durbin-Watson stat	1.083533
Prob(F-statistic)	0.002114		

Unweighted Statistics

R-squared	-0.087597	Mean dependent var	0.415092
Sum squared resid	29.48200	Durbin-Watson stat	0.277475

Dependent Variable: NPM
Method: Panel EGLS (Cross-section random effects)
Date: 26/10/20 Time: 19:43
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 289
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.339926	0.142535	2.384849	0.0177
FEMBRD	-0.162796	0.166635	-0.976967	0.3294
FEMAUDT	0.017848	0.082659	0.215925	0.8292
FEMCEO	0.006940	0.039791	0.174407	0.8617
LNFSIZ	-0.023229	0.006862	-3.385125	0.0008
FAGE	0.001431	0.001446	0.989048	0.3235
BSIZ	0.019198	0.008010	2.396651	0.0172
GDP	0.002547	0.003433	0.741867	0.4588

Effects Specification	S.D.	Rho
Cross-section random	0.161355	0.4661
Idiosyncratic random	0.172691	0.5339

Weighted Statistics

R-squared	0.055111	Mean dependent var	0.046755
Adjusted R-squared	0.031573	S.D. dependent var	0.182420
S.E. of regression	0.180138	Sum squared resid	9.118402
F-statistic	2.341346	Durbin-Watson stat	1.309442
Prob(F-statistic)	0.024485		

Unweighted Statistics

R-squared	-0.094612	Mean dependent var	0.150430
Sum squared resid	19.55209	Durbin-Watson stat	0.610677

Dependent Variable: ROCE
Method: Panel EGLS (Cross-section random effects)
Date: 26/10/20 Time: 19:48
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 290
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-140.5680	345.7276	-0.406586	0.6846
FEMBRD	-423.9138	509.8383	-0.831467	0.4064
FEMAUDT	223.3129	289.7989	0.770579	0.4416
FEMCEO	67.94852	132.8128	0.511611	0.6093
LNFSIZ	-14.75857	18.37213	-0.803313	0.4225
FAGE	0.695484	2.191346	0.317378	0.7512
BSIZ	29.24731	24.84902	1.177001	0.2402
GDP	15.34356	14.04141	1.092736	0.2754

Effects Specification	S.D.	Rho

Cross-section random	0.000000	0.0000
Idiosyncratic random	719.1719	1.0000

Weighted Statistics

R-squared	0.014800	Mean dependent var	-41.49039
Adjusted R-squared	-0.010065	S.D. dependent var	713.9093
S.E. of regression	717.4930	Sum squared resid	1.45E+08
F-statistic	0.588606	Durbin-Watson stat	2.261547
Prob(F-statistic)	0.765691		

Unweighted Statistics

R-squared	0.014400	Mean dependent var	-41.49039
Sum squared resid	1.45E+08	Durbin-Watson stat	2.261547

Dependent Variable: ROE
Method: Panel EGLS (Cross-section random effects)
Date: 26/10/20 Time: 19:53
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 290
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8160.129	8006.266	-1.019218	0.3090
FEMBRD	9505.655	11806.70	0.805107	0.0214
FEMAUDT	-3837.805	6711.084	-0.571861	0.5679
FEMCEO	-2390.306	3075.643	-0.777173	0.0377
LNFSIZ	576.4013	425.4569	1.354782	0.1766
FAGE	132.8144	50.74660	2.617208	0.0093
BSIZ	-526.5484	575.4470	-0.915025	0.0610
GDP	-327.8668	325.1673	-1.008302	0.0142

Effects Specification

	S.D.	Rho
Cross-section random	0.000000	0.0000
Idiosyncratic random	16654.39	1.0000

Weighted Statistics

R-squared	0.036260	Mean dependent var	967.6717
Adjusted R-squared	0.012338	S.D. dependent var	16478.10
S.E. of regression	16376.14	Sum squared resid	7.56E+10
F-statistic	1.515734	Durbin-Watson stat	2.335257
Prob(F-statistic)	0.161605		

Unweighted Statistics

R-squared	0.036260	Mean dependent var	967.6717
Sum squared resid	7.56E+10	Durbin-Watson stat	2.335257

Dependent Variable: TOBINS_Q01
Method: Panel EGLS (Cross-section random effects)

Date: 26/10/20 Time: 19:56
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 289
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.112682	0.546767	5.692890	0.0000
FEMBRD	-0.963036	0.598991	-1.607766	0.0190
FEMAUDT	0.101497	0.290242	0.349697	0.7268
FEMCEO	0.123973	0.140496	0.882400	0.0383
LNFSIZ	-0.175210	0.025872	-6.772315	0.0000
FAGE	-0.002484	0.006306	-0.393967	0.6939
BSIZ	-0.002615	0.028718	-0.091063	0.9275
GDP	-0.012379	0.011917	-1.038812	0.2998

Effects Specification	S.D.	Rho
Cross-section random	0.776371	0.6268
Idiosyncratic random	0.599049	0.3732

Weighted Statistics

R-squared	0.170534	Mean dependent var	-0.088401
Adjusted R-squared	0.149871	S.D. dependent var	0.653086
S.E. of regression	0.602961	Sum squared resid	102.1609
F-statistic	8.253143	Durbin-Watson stat	1.109068
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.040169	Mean dependent var	-0.389460
Sum squared resid	274.3773	Durbin-Watson stat	0.412947

MODERATING EFFECT RESULTS

Dependent Variable: GPM
Method: Panel Least Squares
Date: 27/10/20 Time: 00:53
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 290

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.769479	0.174042	4.421215	0.0000
FEMBRD	-0.047034	0.183513	-0.256301	0.7979
FEMAUDT	-0.049657	0.081838	-0.606770	0.5446
FEMCEO	-0.038642	0.069331	-0.557349	0.5578
LNFSIZ	-0.039638	0.008547	-4.637804	0.0000
FAGE	0.005637	0.003204	1.759211	0.0078
BSIZ	0.012955	0.008149	1.589898	0.1131

GDP	0.006471	0.003224	2.007024	0.0458
FEMCEO*FEMBRD	0.180635	0.292165	0.618263	0.5370

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.761299	Mean dependent var	0.415092
Adjusted R-squared	0.725161	S.D. dependent var	0.306264
S.E. of regression	0.160559	Akaike info criterion	-0.695772
Sum squared resid	6.470585	Schwarz criterion	-0.202236
Log likelihood	139.8869	Hannan-Quinn criter.	-0.498037
F-statistic	21.06641	Durbin-Watson stat	1.265797
Prob(F-statistic)	0.000000		

Dependent Variable: NPM
Method: Panel Least Squares
Date: 27/10/20 Time: 01:09
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 289

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.570487	0.187599	3.040999	0.0026
FEMBRD	-0.140722	0.197872	-0.711179	0.4776
FEMAUDT	0.026908	0.088234	0.304962	0.7606
FEMCEO	-0.019485	0.074793	-0.260520	0.7947
LNFSIZ	-0.048727	0.009215	-5.287687	0.0000
FAGE	0.008520	0.003454	2.466396	0.0143
BSIZ	0.015078	0.008781	1.717115	0.0372
GDP	0.002905	0.003476	0.835726	0.4041
FEMCEO*FEMBRD	0.056781	0.316009	0.179680	0.8575

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.580990	Mean dependent var	0.150430
Adjusted R-squared	0.517301	S.D. dependent var	0.249041
S.E. of regression	0.173025	Akaike info criterion	-0.545832
Sum squared resid	7.484402	Schwarz criterion	-0.051055
Log likelihood	117.8728	Hannan-Quinn criter.	-0.347578
F-statistic	9.122237	Durbin-Watson stat	1.581755
Prob(F-statistic)	0.000000		

Dependent Variable: ROE
Method: Panel EGLS (Cross-section random effects)
Date: 27/10/20 Time: 01:37
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 290
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.

C	-8278.234	8024.310	-1.031644	0.5331
FEMBRD	8072.535	12595.82	0.640890	0.0531
FEMAUDT	-4732.317	7246.899	-0.653013	0.6533
FEMCEO	-4026.771	5842.610	-0.689208	0.9233
LNFSIZ	583.5555	426.5430	1.368105	0.8324
FAGE	134.3742	51.03016	2.633232	0.8819
BSIZ	-497.6708	582.7923	-0.853942	0.1949
GDP	-339.9127	327.6200	-1.037521	0.1504
FEMCEO*FEMBRD	7800.741	23668.01	0.329590	0.5900

Effects Specification	S.D.	Rho
Cross-section random	0.000000	0.0000
Idiosyncratic random	16675.27	1.0000

Weighted Statistics

R-squared	0.116645	Mean dependent var	967.6717
Adjusted R-squared	0.019219	S.D. dependent var	16478.10
S.E. of regression	16401.97	Sum squared resid	7.56E+10
F-statistic	0.868127	Durbin-Watson stat	2.336445
Prob(F-statistic)	0.692282		

Unweighted Statistics

R-squared	0.036645	Mean dependent var	967.6717
Sum squared resid	7.56E+10	Durbin-Watson stat	2.336445

Dependent Variable: ROCE
Method: Panel EGLS (Cross-section random effects)
Date: 27/10/20 Time: 01:38
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 290
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-143.0257	346.5607	-0.412700	0.2451
FEMBRD	-453.7368	543.9990	-0.834077	0.8069
FEMAUDT	204.6983	312.9853	0.654019	0.0596
FEMCEO	33.89394	252.3356	0.134321	0.5352
LNFSIZ	-14.60969	18.42190	-0.793061	0.3654
FAGE	0.727944	2.203934	0.330293	0.4794
BSIZ	29.84825	25.17013	1.185860	0.7747
GDP	15.09289	14.14953	1.066670	0.3190
FEMCEO*FEMBRD	162.3321	1022.194	0.158808	0.5449

Effects Specification	S.D.	Rho
Cross-section random	0.000000	0.0000
Idiosyncratic random	720.1859	1.0000

Weighted Statistics

R-squared	0.114489	Mean dependent var	-41.49039
Adjusted R-squared	-0.023568	S.D. dependent var	713.9093

S.E. of regression	718.7361	Sum squared resid	1.45E+08
F-statistic	0.821416	Durbin-Watson stat	2.260824
Prob(F-statistic)	0.763123		

Unweighted Statistics

R-squared	0.014489	Mean dependent var	-41.49039
Sum squared resid	1.45E+08	Durbin-Watson stat	2.260824

Dependent Variable: TOBINS_Q01
Method: Panel Least Squares
Date: 27/10/20 Time: 01:30
Sample (adjusted): 2008 2019
Periods included: 12
Cross-sections included: 31
Total panel (unbalanced) observations: 289

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.938334	0.651039	6.049304	0.0000
FEMBRD	-0.249774	0.686332	-0.363925	0.7162
FEMAUDT	0.123873	0.305671	0.405248	0.6856
FEMCEO	0.248717	0.259290	0.959223	0.3384
LNFSIZ	-0.199882	0.032142	-6.218726	0.0000
FAGE	-0.010106	0.012030	-0.840115	0.4016
BSIZ	-0.026291	0.030438	-0.863744	0.3386
GDP	-0.012901	0.012043	-1.071197	0.2851
FEMCEO*FEMBRD	-0.740014	1.091383	-0.678051	0.4984

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.685481	Mean dependent var	-0.389460
Adjusted R-squared	0.637674	S.D. dependent var	0.996278
S.E. of regression	0.599695	Akaike info criterion	1.940138
Sum squared resid	89.90844	Schwarz criterion	2.434916
Log likelihood	-241.3500	Hannan-Quinn criter.	2.138393
F-statistic	14.33854	Durbin-Watson stat	1.256789
Prob(F-statistic)	0.000000		

HAUSMAN TEST

Table 11: *Redundant Fixed Effects Tests (Hausman Test For GPM)*

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section Chi-square	397.941843	30	0.0000

Table 12: *Redundant Fixed Effects Tests (Hausman Test For NPM)*

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section Chi-square	240.166179	30	0.0000

Table 13: *Redundant Fixed Effects Tests (Hausman Test For ROCE)*

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section Chi-square	31.262978	30	0.4026

Table 14: *Redundant Fixed Effects Tests (Hausman Test For ROE)*

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section Chi-square	22.846349	30	0.8215

Table 15: *Redundant Fixed Effects Tests (Hausman Test For Tobin's Q)*

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section Chi-square	291.186594	30	0.0000