UNIVERSITY OF GHANA

CORPORATE GOVERNANCE AND SHARE HOLDERS VALUE

BY

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DECLARATION

I, Mark Narh Akpaloo, a Finance (MPHIL) student of the Business School, University of Ghana hereby declare that this project is the outcome of the research I personally undertook under supervision. I further declare that the references made in this research have been appropriately recognized and that this work, whether in whole or in part, has never been submitted for a degree in this University or anywhere else.

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CERTIFICATION

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

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DEDICATION

This thesis is dedicated to my lovely wife, Sherry, who has been my inspiration throughout this program, and to my parents, Emma Maku Buertey and Simon Togbe Akpaloo of blessed memory.

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The mercy of God saw me through; I would like to extend my foremost gratitude to the God almighty.

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Any shortcomings found in the research are mine.

ABSTRACT

The relationship between corporate governance and firms' performance is not a new phenomenon. Many researches were previously carried out with divergent findings. The performance measures used in those researches were the traditional accounting based performance measures which have been heavily criticized due to the fact that they fail to account for the cost of equity and debt which determines a firm's true value. This study adopted the value based performance measures, Economic Value Added (EVA) and Market Value Added (MVA), to proxy firm performance for the period of the study, using data from 27 listed firms on the Ghana Stock Exchange (GSE) covering the period 2007 – 2014. The study examined the effect of corporate governance variables on shareholders' value using the GLS model and employing the Hausman test to determine the appropriate models to use (random or fixed). The study found that CEO duality had a negative relationship with MVA and was significant but had a positive effect on EVA. CEO tenure had an inverse relation with both MVA and EVA, while board size had a positive nexus with EVA. The study concludes that characteristics of corporate governance that influence firm level performance are CEO tenure, Board Size and Overhead costs whiles CEO duality, CEO tenure and Board size affect market level performance. The implication is that a CEO doubling as chairperson is good for the additional value creation at the market level whiles providing incentives to CEOs (Overhead cost) has greater impact on improving firm level performance. Moreover, for enhanced output of corporate organizations, the duration of CEO tenure of office must be reduced and a considerable board size with adequate skills and expertise be maintained.

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CHAPTER ONE

INTRODUCTION

1.1 **Background to the Study**

The primary objective of shareholders investing their wealth in a company's shares is to see their investment appreciate in value. However, due to information asymmetry and lack of intellectual capacity to manage the daily affairs of the company to achieve their objective, the shareholders typically employ the services of a manager (or a management team) to help them achieve their goal. The process leads to an agency contract. When this association is well figured out, the organisation performs well. Unfortunately sometimes the parties have different interests which may mar the relationship; this gives rise to what is termed an agency problem. The agency problem mostly occurs where the owners of the company are different from the managers (Jensen & Meckling, 1976).

The agency problem is the root cause of most financial turmoil. Some of the companies which experienced this menace were Enron and Worldcom.

According to Mayer (1997), corporate governance refers to "ways of bringing the interests of investors and managers into line and ensuring that firms are run for the benefit of investors." This is not quite that simple. For instance, Deakin and Hughes (1997) have recognised corporate governance to be focused on the link between governance mechanisms which are unique to a firm and the accountability conceived by the outside world. Corporate governance is also concerned with the procedures that lead to an exemplary running of an institution (Keasey et al., 1997). Corporate governance must therefore lead to a successful processing and chronology in administration, and it must demonstrate legitimacy and accountability to all. The

deployment of a proper arrangement in the systems of corporate management will achieve immense success (CACG Guidelines, 1999).

Many interpretations of a firm's performance have been given over time**.** Increased profitability, higher efficiency, and increased output were commonly associated with improvement in a firm's performance (Bevan et al., 1999). The selection of a specific measure lies solely with the investor and is subject to the accessibility of the right data. Selecting various performance measures instead of a single one may be advantageous. Performance measures are usually grouped into traditional accounting measures and value based measures.

Many studies and discussions have been carried out on the effect of shareholders' value by the usefulness of the accounting measures. These measures include the Earnings per share, return on assets and return on equity. Meanwhile, Economic Value added which measures performance based on value has been argued to be more appropriate has not been widely used. Prominent among those who made the argument in favour of the value based performance measures is Stern Stewart (1991).

EVA was first introduced by General Motors during the 1920s, but faded out later. It was then reintroduced in the 1980s (Stern Stewart Company). The objective for using the EVA was to increase shareholder's value.

In 1996 Milunovich and Tsuei also undertook a study to examine the correlation between often used financial measures among companies in the IT sector (in the US) from 1990 to 1995. The result from their study again has EVA to be the mostly correlated (42%) performance measure with the firms' market value added.

Economic Value Added is the most appropriate performance metric which best assesses the value created on shareholders wealth over time. It focuses on how much economic value has been added to the shareholders by the trustees of their wealth.

One most important attribute of the EVA is that it clearly identifies that when managers employ capital they must pay for it just as salaries of staff are paid.

It is important to note that most firms appear profitable under the traditional accounting measures, when in reality they are not. Until a business generates a profit that is in excess of its capital cost, it is not being profitable.

1.2 Problem Statement

Performance measurement systems were mainly developed as systems by which the monitoring and control of an organisation can be evaluated, to ensure that the organization's goals and objectives are achieved. Performance measurements systems tools (the various performance measures) are critical success factors in every organisation as they are considered as indicators that help management to predict or forecast a firm's performance (economic), which could necessitate variations in processes (Nanni, Dixon and Vollmann 1990; Otley, 1999: Simons, 1999).

However, some of the performance measures are often criticised since they do not factor in the cost of capital and again are influenced by accrual based accounting conventions.

Previous studies on corporate governance, mostly adopted the accounting based performance measures as their proxies for measuring firms performance. These measures include Return on Asset (ROA), Return on Equity and Earnings per Share (EPS).

Although these measures were widely accepted as good metrics, they could not ascertain the value maximised by the shareholder which is the main objective of the firm, and they fail to explain the change in the corporation's market value.

In spite of the numerous advocates for the value based measures, coupled with the obvious limitation of the conventional accounting based performance measures, little has been done in respect of using the value creation measures. Therefore this study will use superior performance measures: Economic Value Added (EVA) and Market Value Added (MVA).

1.3 Research Purpose

To assess whether any change in corporate governance (for better or for worse) will increase or decrease shareholder values (metric of measuring performance), using EVA and MVA as proxy for shareholder valuation, based on data from listed companies in Ghana.

1.4 Research Objectives

The specific objective of this research:

1. To examine the relationship between corporate governance and value based performance measures.

1.5 Research Questions

1. Is there a relationship between corporate governance and measures of a firm's value?

1.6 Significance of the Research

Findings and results from this research would significantly improve corporate governance and firm performance and widen the literature on the subject. It would also provide necessary knowledge to practitioners; which are finance managers,

investment managers, administrators and so forth. The findings would also inform policy modifications and arrangements for corporate governance.

1.7 Chapter Organisation

The introductory section (section one) of the research gives an introduction to the study. The chapter includes the background, problem statement, objectives, research question, significance, scope, limitation and outline of the. The second chapter delves into the related literature on corporate governance and performance measurement metrics. The third chapter presents a detailed explanation of the research methodology that will be used in the study. It consists of research design and data collection procedures, data preparation and analysis. Chapter four highlights the findings and results of the study. Chapter five present conclusions drawn from the findings and recommendations made to various stake holders such as investors and governments.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This second chapter delves into the related literature on corporate governance and performance measurement metrics.

2.2 Corporate Governance

A proper approach to governing a company/an institution will definitely yield positive shareholder value.

In response to the numerous corporate institution failures and economic systems crises, there has been an evolution of corporate governance mechanism over time. This evolution began in the 1700s, with the practice in England being revolutionised as a result of the well-known governance failure of the South Sea bubble (The South Sea Corporation). Borgia (2005) was of the belief that the 1929 stock market crash caused the United States to enact most of their security laws. However, in the late 1900s many corporations collapsed. These cases included those of Parmalat and Enron, the root cause of which was linked to poor corporate governance practices. In many developed countries corporate governance received a lot of attention after those businesses collapsed. This attention was deepened when in the mid 1997s the Asian crisis and the global financial crisis (started in the US housing market) occurred, causing global economic contagion (Ghana SEC, 2002).

Within the last decade this development caught up with most developing economies (Oman, 2001: Goswami, 2001: Lin, 2001: Malherbe and Segal, 2001). Because the world has become a global village, corporate governance has taken an international

dimension, especially because economies and financial markets have been globalised. Many multilateral agencies have joined in the crusade by encouraging the various stakeholders (Regulators, companies etc.) to take a close look at the subject so as to ensure the introduction and implementation of good corporate governance practice. The Commonwealth Association for Corporate Governance and the Organization for Economic Co-operation and Development are the organisations that issued widely acclaimed codes and principles on the subject.

Okike (2007) posited that due to factors such as difference in countries corporate governance systems as a result of socio-economic, legal, political and cultural differences many definitions are being used to address the subject. A few of these definitions will be considered.

The Ghana SEC in 2002 defined corporate governance as "the manner in which corporate bodies are managed and operated".

Corporate governance is said to take place when the individuals in a corporation are governed by a set of relationships (OECD, 1999).

Abor (2007) concluded that corporate governance goes beyond the relationships that govern the members of a corporation to include various sets of processes, laws and traditions that are used to administer and control firms. From the above definitions the underlining objective of corporate governance is to ensure that managers run the affairs of corporations to the benefit of investors.

2.2.1 Legal and Regulatory Framework of Corporate Governance in Ghana

The significance of corporate governance activities must be held in high esteem, it has a strong legal backing even in Ghana. The Companies Code 1963 (Act 179), Securities Industry Amendment Act 2000 (Act 590), L.I. 1990 of the Ghana Stock

Exchange, among others contain the regulatory framework of the practice of corporate in Ghana.

The regulatory frame work covered in the context of this study is grouped as follows:

1. **The mission, responsibilities and accountability of the board:**

The appreciation of the shareholders' value and other obligations of the firm are the main responsibilities of the managers, but the question is, who "watches the watchman"? It is the board of directors. These and many more responsibilities of ensuring that the organizations are managed well are spelt out in this section of the framework. The other duties include:

- ✓ Supervision of the management of the organization
- ✓ Appointment, training and remuneration of senior members of staff
- ✓ Internal control supervision

The section as well indicates what the size of the board should be, by recommending a size from 8 to 16, with the primary focus of having an effective board. The section also addresses the leadership structure and by principle, indicates that the role of the CEO and Board Chairperson should be separate. The board composition, which should be made up of a good balance between executive and non-executive directors, with the later comprising at least one third of the board, is also stated in this section. The section states, among other things, that the non-executive directors should ordinarily be appointed by the board, based on merit.

2. **Committees of the Board**

This section of the regulatory frame work proposes that boards should form various committees that will help them perform their supervisory role effectively. The committees should include the audit and remuneration committees. The audit

committee must have at least three directors of which at least two of them should be non-executive directors. The roles of the audit committee include:

- ✓ They advise on the selection of the organization's external auditors.
- ✓ They ensure that audit quality and risk assessment is upheld.
- ✓ They conduct review of compliance, system controls, laws and code of ethics of the organization.
- ✓ They report to the board on significant transactions on finance.

3. Relationship to shareholders and stakeholders

This section ensures that structures established by the board should not have their focus on the stakeholder's benefits at the detriment of shareholders. The section among other regulations lays emphasis on the right of the shareholder, equitable treatment of all shareholders.

4. Financial affairs and auditing

This part of the regulations emphasizes on financial issues, including the governance of finance, financial reporting, audited report, sensitivity of price, the external auditor's duties, and deviations from standards.

The financial governance responsibility of the board stipulated in this section includes;

- ✓ Keeping adequate records to safeguard the organisations assets.
- ✓ Meeting statutory financial obligation deadlines.
- ✓ Ensuring regular auditing of financial statement as prescribed by law or the organization's internal policies.

5. Disclosure and annual report

The presentation of the annual audited financial statement to shareholders is mandatory. This provides the shareholders with information such as operations outcomes, majority shareholders and voting rights, issues concerning other stakeholders and employees, the identity of the board members and their remuneration.

6. Code of ethics

On code of conduct, the section mandates every corporate organization to have its own code of ethics and business practice statements as part of measures to ensure good corporate governance. The section indicates that the formulation and implementation of such documents and adherence to them, are the sole responsibility of the board of directors. The content of the codes of conduct is applicable to all; board of directors as well as employees.

2.3 Review of Theories

2.3.1 Agency theory

It is widely accepted that economic theory gave birth to agency theory (Alchian & Demsetz, 1972), but there has been some advancements in this theory (Jensen & Meckling, 1976). "The relationship between the principals, such as shareholders, and agents, such as the company executives and managers," is the basic definition of agency theory. According to Clarke (2004), the theory holds that owners/shareholders/principals/proprietors, via hiring, get some others to undertake certain duties. Those hired become agents entrusted with certain performances and

tasks are delegated to them. The ball lies in the agents' court to choose the shareholders interest.

Meanwhile, the agents must take initiatives that are bound to serve the interest of the shareholders. As asserted by Padilla (2000) and Ross (1973), this does not always happen.

2.3.2 Stewardship Theory

Psychology and sociology are the two main origins of this theory. "A steward protects and maximises shareholders wealth through firm performance, because by so doing, the steward's utility functions are maximised" (Davis, Schoorman & Donaldson, 1997). The stewardship theory holds that all managers, when given the freedom to take their own initiative to rule over the business, are most likely to do it excellently. The stewardship theory gives an option aside from the agency theory. It usually specifies certain mechanisms which reduces agency problems.

Under the stewardship theory, managers do their duty to yield results for the good of all (i.e., benefit all stakeholders of the organisation) (Daily et al, 2003).

2.3.3 Stakeholder theory

A stakeholder is "any group or individual who can affect or is affected by the achievement of the organization's objectives" (Freeman 1984, p.299). Unlike the Agency theory where the manager is supposed to pursue only the shareholders interest, the manager under the stakeholder theory must seek the interest of all the stakeholders including the shareholder. These stakeholders include the employees, suppliers and customers.

Donaldson & Preston (1995) argued that the critical success factor for the business is to address the motivation of all the interest groups.

2.3.4 Resource Dependency Theory

Companies depend on various resources in their operations to be able to achieve their objectives. These resources include labour, capital and raw material. Unfortunately most organizations may not be able to internally generate most of these resources which are critical for their functioning. In this respect, one benefit of non-executive directors serving on boards is to put into contact the firm and its outside world, so they can tap into the resources that are not internally available.

"When an organization appoints an individual to a board, it expects the individual will come to support the organization, will concern himself with its problems, will variably present it to others, and will try to aid it" (Pfeffer & Salancik, 1978, p.173).

2.4 Empirical Evidence

The right composition of the board of directors is a plus to every organization, especially if it includes directors from outside the business as stipulated by the regulatory framework mentioned above. They come in with expertise and skills that would give the enterprise a competitive edge over other organisations.

A lot of research has been carried out by various authors on the effect of non-executive directors on performance but with mixed results. For instance Brickley et al. (1994) and Weisbach (1988) found a positive impact of non-executive directors on performance, contrary to the work carried out by Wen et al. (2002) who found out that none- executive directors and performance had an inverse relationship. Meanwhile

using Tobin's Q as a proxy for performance, Bhagat and Black (2002) found no relationship.

However, there was a positive correlation found between board size and leverage (Wen et al., 2002). Abor (2007) also had a view that was consistent with that of Wen et al (2002). Both studies claimed that boards with larger members and superior monitoring ability prefer leveraging to boost the organisation's value.

Debt financing has been seen over time to be one of the secure measures that boards of directors and other stakeholders use to achieve appreciation in the value of the business.

2.4.1 Boards

Among the countless duties of a board of directors is supervising and rewarding (penalizing) managers. Boards also provide strategic input in decision making as advisors to the firm's management team. Our focus is monitoring. Typically boards are measured using two main factors: their size (number of board members) and formation (the number of board members who are outsiders or non-executive members). There is a trade-off between more information and effectiveness. Bigger boards, due to their large size, bring on board more information, whereas collective decision making becomes difficult. Again, on the issue of effectiveness, larger boards turn to have less candid opinion during board room meetings and they bring about free-rider issues resulting in less effective monitoring (Jensen, 1993: Adams and Mehran, 2003).

Yermack (1996) surveyed large US firms from 1984 to 1991 and concluded that there is a strong adverse effect of board size on performance (Tobin's Q). Moreover, maintaining large board sizes is very costly. For a firm with a board of eight members

(the average is about twelve), the firms value reduces by $100 million anytime there is an additional board member; for a firm with a board size of fifteen, an increase by one member reduces the firm's value by $50 million. That was an interesting finding.

Hermalin and Weisbach (1991) examined the association between the number of non-executive and performance (Tobin's Q) for firms over five different years (most years were in the 1970s). They estimated a piecewise linear model using instrumental variables to account for endogeneity. Their findings revealed no relation between board composition and firm performance.

Taking advantage of natural experiments which were provided by the application of the Sarbanes-Oxley Act (SOX) rules requiring a minimum number of outside directors, Duchin et al. (2010) first projected variation in the number of outside (independent) directors over 2000 – 2005 (SOX passed in 2002). They then regressed changes in organizations performance on board composition over the same period.

If the number of board members was optimal and SOX-induced variations are suboptimal, then firm performance should decline. Hence, the more the induced changes in the board composition the lower the firm's performance should fall. For firms where insiders are a crucial source of information, this is indeed the case. But for firms where insiders are not a vital source of information, the induced increase in the number of outsider's increases firm performance. This suggests that for this set of firms, board composition was not chosen optimally.

2.4.2 CEO Duality

Many researchers have found that there is very high concentration making and taking decisions around the chief executive due to his dual role, i.e. also as board chair, and

this dilutes the board's independence. This makes the work of the board of directors less easy and accountability difficult. Gul and Leung (2004) and Fama and Jensen (1983) proclaimed that the basis for these arguments is the agency theory principle. The dual role of the CEO creates an excessively powerful person making it difficult in most cases, for the board as a whole to be effective in their supervisory and monitoring responsibilities. It is not that convincing the argument position is that CEO duality helps to better provides a focused leadership and make it possible to take swift decisions for her/his companies (Gul and Leung, 2004).

2.5 Performance Measures

2.5.1 Economic Value Added

Peter Druker (1995) once observed that, "Until a business returns a profit greater than the cost of capital, it operates at a loss, until the firm is able to return a profit greater than. Never mind it pays taxes, as if it had a genuine profit. The enterprise will still return less to the economy than it devours in resources until then it does not create wealth; it destroys it."

All organisations exist to bring out results and provide returns on investment/ value creation. Therefore for a performance measure to be said to be effective it depends on how well the measure evaluates an organization's performance in relation to its objectives.

Profit based measures are often used by many organizations to evaluate their financial performance. These measures, usually termed traditional accounting based measures are faced with two major problems:

- The traditional accounting measures ignore the expenses involved in debt financing. The profit gain in business must be higher than

the cost or expenditure in securing capital investments. Unfortunately the profit stated in the financial reports of firms is questionable. It merely deploys the expenditure on debt financing at the expense of equity financing.

- Profit computed using accounting standards are usually subject to manipulation by the accountant and do not really reflect the wealth that has been created.

EVA was developed by Stern Stewrts & Co, and many companies are Siemens, Coca Cola and Herman Miller. The EVA is considered to be ideal to help presentation of financial reports that would have both the cost of equity and the cost of debt.

2.5.1.1 Computation of EVA

Measured as the surplus left after taking care of the appropriate charge on the capital employed in the business.

The most significant component of EVA is the cost of capital (WACC) which addresses the limitation of the traditional accounting measures.

2.5.2 Market value added (MVA)

MVA represents the change in the value of a company's investors' (both shareholders and bondholders) capital from its inception to date.

It is measured as the difference between the market value of a firm and the capital employed by the investors. One can get a positive or a negative result. A positive MVA indicates that value has been added (created) to the firm, while a negative indicates that the company has destroyed (reduced) it value.

MVA is an effective performance measure because it also reflects on a company's main objective of maximising shareholders wealth which is the EVA 'value now'.

2.6 Value Based versus Accounting Based Measures

2.6.1 Value based performance measures

According to Stewart (1991), financial analysts Stern Stewart & Co. monitored the best 1000 industrial and services companies in the USA in 1989, at a point he was disappointed with the companies standing of the magazine, *Business Week*. Stern Stewart and co. later ranked the companies based on MVA, and as they expected their rankings were different. Market capitalization was the basis on which the previous standings were compiled. They started with 1000 companies and dropped some during their research due to certain factors like incomplete information. Stern Stewart & Co. then continued their research on the EVA and MVA of 613 companies in the USA. Two years were used (1987 and 1988). There was a very high level of correlation (as indicated by r^2) between the level of EVA and the level of MVA for companies with a positive EVA, both for the changes in values and the average values used. The averages (per group of 25 companies) of the 1987 and 1988 EVA values indicated an r^2 of 97%, compared to the 1988 MVA values. The relationship for the variations in values was even better than that for the average values.

The correlation between the EVA and MVA levels was not as good for the groups of companies with a negative EVA as it was for those with positive EVA. The explanation given by Stewart's (1991) for this was the fact that market value of shares always reflects at least the value of net assets, although the firm may have low or negative returns.

2.6.2 Further studies by Finegan on the application of EVA and MVA

Finegan's (1991) further study on the previous investigation deliberated on other methods. They focused on 467 companies out of the original 613 by Stern Stewart & Co. where the MVAs were 'compactly grouped' and compared based on EVA's power and other traditional methods like earnings per share and ROC.

Various methods (EVA and the other orthodox methods) were regressed on MVA, and the result shows that EVA was the most significantly correlated (with an r of 61%) as compared to the other methods.

Then the changes in MVA were used in the analysis, and again the result was consistent with the earlier findings: EVA was found to be superior to the other measures. The changes in EVA resulted in an r2 of 44%, as against an r2 of 35% for changes in return on capital.

2.6.3 EVA Compared to Accounting Measures by Stern

According to Stern (1993), the key popular accounting measures such as earnings, earnings growth, dividends, dividend growth, ROE, or even cash flow are not the key operating measures of corporate performance, but instead EVA. The changes in the MVA of a selected group of companies have been revealed to have a comparatively low correlation with the accounting measures already mentioned.

The study revealed that the correlation between MVA and the various independent variables ranges from 9% for turnover growth to 25% for ROE, while EVA had the highest association with MVA, with an r2 of 50%.

2.6.4 Study on CEO Turnover, Share Price Performance, MVA and EVA

Lehn Makhija (1996) investigated among other things, how well EVA and MVA correlate to share price performance. In that study, four years were used (1987, 1988, 1992 & 1993) for 241 corporate institutions in the United States of America.

ROA, ROE and return on sales (ROS), share returns (dividends and changes in share price), EVA and MVA were the performance measures used for each company for the four year period. There were positive correlations between all the measures used and the share return, with EVA having the highest correlation.

EVA and MVA were found to be very formidable metrics to measure performance (Lehn & Makhija, 1996).

2.6.5 Study in the US computer industry using MVA and EVA

The study of Milunovich and Tsuei (1996) examined the association between frequently used financial measures of companies in the US computer technology industry over the years, from 1990 to 1995.

Once again, economic value added has proven to be the well correlated performance measure with MVA and it would just be fair to infer from the above results that a company that can consistently improve its EVA should be able to boost its MVA and therefore its shareholder value.

The weak association between the market value added and free cash flow is because the latter as a measure is deceptive. The study showed that positive EVA and investment prospects for new and rapidly growing of firms (technology firms), on the

one hand and companies that are incurring some loss and at the point of being bankrupt, on the other, may have negative cash flow which is similar.

Milunovich and Tsuei determined based on their study, that to create wealth or value the firm's returns must be greater than the cost of capital. For appreciation in earning is not sufficient to create value.

2.7 Criticisms of EVA and MVA

2.7.1 Studies not in favour of EVA – Kramer and Pushner

For the period of 1982 to 1992, Kramer and Pushner (1997) investigated the magnitude of the correlation that existed between MVA and EVA. For consistency they used the 1000 firms used initially by Stern Stewart. They concluded that the mean of EVA was negative, yet they observed that NOPAT and MVA were positive. They believed that their results demonstrated the substantial effect of the weighted average cost of capital and the high anticipations for EVA.

The results revealed that the correlation between MVA and EVA had an r^2 of 10%, which means that 90% of the variation of MVA is unexplained. They then went further by lagging the NOPAT and EVA levels and regressing them on MVA for the duration of their study.

Again their result confirmed that in all instances the variation in MVA was better explained by NOPAT than by EVA.

With an expansion in the regression model (to include changes in NOPAT, MVA and EVA) they found an inverse relationship between variations in MVA and those in EVA. Meanwhile, the variation in NOPAT and in MVA was positive. The researchers surmised that the findings were a result of the possibility that the market may respond positively to profit rather than an outcome of the economic value in the short run. No

proof was given to back the claim that the economic value added is the most preferred method of creating wealth for the shareholder.

2.7.2 Investigation of EVA Explanatory Power

In 1996, Dodd and Chen, in an effort to be consistent with the data used by Stewart (1991), also adopted the 1992 database of Stern and Stewart (1000 companies) as the initial basis and subsequently introduced other information covering a ten year period (1983 to 1992). Dodd and Chen collected information on 566 firms (US companies) and critically investigated the assertion that the preferred shareholder value performance measure is economic value added indicator.

Their research revealed that EVA could only explain 20% of the variation in share return, while the ROA could explain 25% of the variation in share return. These results imply that 80% and 75% of the changes in share appreciation were not explained by both EVA and ROA.

The results for the two measures were almost the same when more comprehensive multiple regression models were employed.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The third chapter presents a detailed explanation of the research methodology that will be used in the study. It consists of research design and data collection procedures and analysis.

3.1 Methodology

The methodology section of the study is used to discuss the description of the data sample used, the proxies for performance (dependent variables) and other variables (predictors and controls) used. The section goes on to specify the model and estimation techniques employed.

The study used annual data to estimate the responsiveness of the various firms' performance to patterns of corporate governance variables for the period, 2007-2013.

3.1.1 Description of data and Sample

The population for the study was restricted to listed companies on the Ghana Stock Exchange, which has 37 companies.

A panel data study was conducted using the annual reports/data of the companies (24 companies). The study used annual data to estimate the responsiveness of the various firm's performance to corporate governance variables patterns for the period, 2007-2013.

3.2 Model Specification

The model used in the study was adopted from Brooks (2008), the common arrangement is:

$$Y_{it} = \alpha + \beta X_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (7)$$

Where: subscript i denotes the cross sectional dimension (firm) i = 1……..N and t denotes the time series dimension (time) t = t……T;

Y_{it} is the dependent variable.

α is the intercept term for all periods (t) and specific to a firm specific effect (i),

β is a k x 1 vector of parameters to be estimated on the independent variables.

X_{it} is a 1 x k a vector of observations on the independent variables in the model which include the control variables.

ε_{it} is the error term.

To investigate whether there is a relationship between corporate governance and firm value, the study used a GLS panel regression model, estimated using the random effect model. The model was adopted from Meslier et al (2014), which was used to examine the interaction between components of corporate governance and firm value. Moreover, the estimation was employed because firms included in the sample were randomly selected to represent the true population. The specific models below were developed:

$$MVA_{it} = \alpha_1 CEOD_{it} + \alpha_2 CEOT_{it} + \alpha_3 BODSIZE_{it} + \alpha_4 SQ\_BODSIZE_{it} + \alpha_5 FSIZE_{it} + \alpha_6 FAGE_{it} + \alpha_7 OH\_COST_{it} + \varepsilon_{it} \text{ ----------(8)}$$

$$EVA_{it} = \beta_1 CEOD_{it} + \beta_2 CEOT_{it} + \beta_3 BODSIZE_{it} + \beta_4 SQ\_BODSIZE_{it} + B_5 FSIZE_{it} + \beta_6 FAGE_{it} + \beta_7 OH\_COST_{it} + \varepsilon_{it} \quad \text{----------(9)}$$

$$ROA_{it} = \varphi_1 CEOD_{it} + \varphi_2 CEOT_{it} + \varphi_3 BODSIZE_{it} + \varphi_4 SQ\_BODSIZE_{it} + \Phi_5 FSIZE_{it} + \varphi_6 FAGE_{it} + \varphi_7 OH\_COST_{it} + \varepsilon_{it} \quad \text{----------(10)}$$

$$ROE_{it} = \gamma_1 CEOD_{it} + \gamma_2 CEOT_{it} + \gamma_3 BODSIZE_{it} + \gamma_4 SQ\_BODSIZE_{it} + \gamma_5 FSIZE_{it} + \gamma_6 FAGE_{it} + \gamma_7 OH\_COST_{it} + \varepsilon_{it} \quad \text{----------(11)}$$

Where the subscripts i,t are for firm *i* at time *t* and ε_{it} is the error term.

$\varepsilon_{it} = \lambda_t + \mu_i$

λ_t is a proxy for control for time specific effect,

μ_i is a proxy for cross sectional heterogeneity.

$\alpha_0, \beta_0, \varphi_0, \gamma_0,$ are the constant terms and

$\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6 and\ \alpha_7$ represent coefficient estimators in model (8)

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ and β_7 represent coefficient estimators in model (9)

$\varphi_1, \varphi_2, \varphi_3, \varphi_4, \varphi_5, \varphi_6$ and φ_7 represent coefficient estimators in model (10)

$\gamma_1, \gamma_2, \gamma_3, \gamma_4, \gamma_5, \gamma_6$ and γ_7 represent coefficient estimators in model (11)

3.2.1 Proxies for performance

Many interpretations of a firm's performance have been given over time**.** Increased profitability, higher efficiency, and increased output were commonly associated with improvement in a firm's performance (Bevan et al., 1999). The selection of a specific

measure lies solely with the researcher and is subject to the accessibility of the right data. Selecting various performance measures instead of a single one may be advantageous. Labour productivity, Tobin's Q and profitability were the variables used by Kuznetsov and Muravyev (2001) in their research.

These researchers believed that all financial performance indicators, whether value based or accounting based, all have different interpretations hence their responsiveness to the various corporate governance measures will be different. As a result, the following listed variables were adopted to proxy performance in the research: Market Value Added (MVA), Economic Value Added (EVA), Return on Assets (ROA) and Return on Equity (ROE).

The following formulae demonstrate how they were calculated.

3.2.1.1 Market Value Added (MVA)

It can be calculated as:

MVA= MVE – BVE …………………………………….. (1)

Where:

MVA = Market Value Added

MV = Market value of the firm, including the value of the firm's equity and debt.

3.2.1.2 Economic Value Added (EVA)

EVA=NOPAT – (TCE * WACC) ------------------------------- (2)

TCE = (TA – CL) --- (3)

WACC = [(R_E× E/V)] + [(R_D× D/V)(1-T_C)] -------------------------- (4)

$V = E + D$ ---------- (5)

$R_E = R_F \times \beta (R_M - R_F)$ ---------- (6)

Where:

NOPAT = Net operating profit after tax to total asset

TCE = Total capital employed

TA = Total assets

CL = Current liability

WACC = Weighted average cost of capital

R_E = Cost of equity, measured on the basis of capital asset pricing method (CAPM)

R_F = Risk free returns

β = Risk coefficient of particular investment

R_M = Expected market rate of returns

R_D= Cost of debt, taken as after tax cost

T_C = Corporate tax

E = Equity capital

D = Debt capital

V = Firm's value

Sources of data for the variables in the computation of EVA

Since the banks borrow from the Bank of Ghana (BoG), the cost of debt is obtained using BoG's policy rate from 2007 to 2013. Other firms borrow from the banks so the Treasury bill rate for the same period represents the cost of debt for those firms.

The risk-free rate is the one year treasury bill rate, obtained from the bank of Ghana website.

The expected market rate of returns is the Ghana Stock Exchange annual returns from 2007 to 2013, obtained from the annual Ghana website.

Beta is computed using a Data Regression method. Annual percentage changes of the GSE composite index are computed for the period of study. Annual percentage changes of the firms' stock returns are also calculated.

The percentage change changes of the stocks are then regressed on the percentage changes of the Ghana stock exchange composite index.

The betas obtained are substituted into the CAPM equation to derive the cost of equity for each firm for the entire research period.

3.2.1.3 Return on assets (ROA)

ROA= (Net Income)/(Total Assets) ---------- (7)

It reflects a firm's efficiency in utilizing its total assets.

3.2.1.4 Return on Equity (ROE)

It is computed as:

ROE = (Net profit)/(Total equity) ---------- (8)

3.2.2 Corporate governance variables

The corporate governance variables used in the study are: board size, Board independence, CEO duality and CEO tenure.

3.2.2.1 Board size (BODSIZE)

$BODSIZE_{it}$ is the proxy for board size, which specifies in the model the count of all directors on an organization's board. It is measured as the log of the total number of board members i at time t (Abor, 2007). Most studies on the effect of board size on

performance have found that there is a positive relationship between the two variables. One such study is Adams and Mehran (2010). From the above discussion it is expected that the board size will be positively related to performance.

3.2.2.2 CEO duality (CEOD)

$CEOD_{it}$ is the proxy for CEO duality; in the model it specifies that the role of the CEO and the Board Chairperson be separate. It was obtained from the annual report of the firms submitted to the Ghana Stock Exchange. It is stipulated that whenever an individual is responsible for the decisions of management and control there is a conflict of interest and a higher agency cost which hinders the board to effectively monitor top management. Nonetheless other schools of thought argue that when the CEO doubles up us the board chairperson, decisions are carried out without influence of bureaucratic structures, hence they believe that CEO duality and performance should be positively related. CEO duality is measured as a dummy variable, equal to 1 if the CEO is also the chairperson /vice chairperson of the board, otherwise 0. A negative relationship between CEO duality and performance is expected.

3.2.2.3 CEO Tenure (CEOT)

$CEOT_{it}$ is the proxy for CEO tenure; it specifies the length of period (number of years in this case) a chief executive officer stays at the helm of affairs. This variable was obtained from the annual reports of the individual firms submitted to the Ghana stock Exchange. During the early stage of their employment, Chief Executive officers tend to learn faster on the job and are risk lovers, thus positively impacting on performance (Wu et al., 2005). After some years they tend to be complacent with their past glory

and become risk averse. The expected outcome is either a positive or negative impact on performance (Kyereboah-Coleman, 2007).

3.2.3 Control Variables

The study made use of certain variables, which were not of interest to the research, but were relevant to the dependent variable. The purpose of including them is to remove their effects from the equation. The control variables specified are the size of the organisation, the firm's age and Overhead cost.

3.2.3.1 Square of Board size (SQ_BODSIZE)

The study control for large board size, measured as the square of the number of directors on the board. This is because, we expect to find evidence of a non-linearity in the relationship between firm value and board size. An increasing larger board size may trigger diversity in terms of ideas and decision making and may also prolong decision making among board of directors. Thus, the study expects either positive or negative relationship between larger board size and firm value.

3.2.3.2 Firm Size (FSIZE)

$FSIZE_{it}$ is the proxy for firm size. It represents the total assets owned by the business. This variable is obtained from the annual company report filed with GSE. It is measured as the log of total assets (He & Sommer, 2006; Abor, 2007). Some studies found a positive relationship between firms' size and profitability, the reason being that the larger the firm, the larger the profit rate (Punnore, 2012). Hence the expectation is that firm size will have a positive impact on performance.

3.2.3.3 Firm's age (FAGE)

$FAGE_{it}$ is the proxy for firm's age. It represents the number of years a firm has been in existence, its incorporation. It is measured as observation year less year of incorporation. Its outcome is expected to be either positive or negative. New firms tend to deal in products that are at their introduction stage, while older firms' products are usually in their maturity stage. On the other hand, older firms tend to acquire experience over time and might be specialists and also benefit from economies of scale by having a wider market share, resulting in a positive impact on performance (profit).

3.2.3.3 Overhead Cost (OH_COST)

OH_COST_{it} is the proxy for overhead cost. It represents a firm's indirect or fixed expenses of operating a business. It is measured as the ratio of overhead cost to total asset. There is an inverse relationship between cost and performance (profit), unless the firm is able to transfer the cost to its customers. The expectation of the impact of overhead cost on a firm's performance can be either positive or negative.

3.3 Estimation techniques

Due to the fact that the data for the study was made up of cross-sectional and time series features of twenty-seven (27) companies over 7 years, we employed the General Least Square (GLS) panel data regression analysis for the study. This comprises of the fixed effect and the random effect model estimation. These are the two (2) broad classes of GLS panel estimator approaches that can be employed to capture the time specific effects and firm specific effects in the model. To select the approach to be used, a Hausman specification test was conducted for all the regression. However, after employing the hausman test, we fail to reject the null

hypothesis in favour of the random effect model. The error term of the model was tested for their assumptions of normality, autocorrelation and homoscedasticity. The stationarity of the variables was tested using Dickey-Fuller unit-root test, a prerequisite for the use of such a regression (panel data model). The robust standard error under the random effect model was used to correct for heteroskedasticity and serial correlation.

The state of strong inter-associations between the independent variables in a multiple regression is termed multi-collinearity. These associations can cause several problems that include a modification in the magnitude and signs of the coefficient in different samples with partial regression, making it tiresome to examine the importance of the independent variables in explaining the variation caused in the variable being predicted. To check for multi-collinearity, a Pearson correlation coefficient analysis was conducted. Thus, the coefficient variables were tested to ensure the presence of no multicollinearity among the explanatory variables.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Introduction

Chapter four will highlight the findings based on the analysis done in the study.

4.1 Summary of Descriptive Statistics

Descriptive statistics provides a statistical description of all the variables used for the analysis, as shown in table 1 below.

Table 4.1: Summary of Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	174	0.0805	0.1656	-0.7066	0.6581
ROE	176	0.1561	0.2519	-0.9839	0.6159
EVA	141	0.21167	0.221580	-0.70389	0.9232
MVA	136	17.95459	2.048422	12.1115	22.6281
BODSIZE	176	8.0455	2.203421	3	13
CEOD	176	0.0682	0.2528	0	1
CEOT	176	2.943182	1.712862	1	7
OVERHEAD COST	171	0.16182	0.3161	-0.1728	3.5774
FSIZE	174	18.1669	2.2745	12.5436	22.2546
FAGE	176	36.0284	21.7999	5	104

Note: ROA and ROE represent Return on Asset and Return on Equity respectively. EVA= Net Operating Profit after Tax (NOPAT) less the product of the cost of capital and the economic capital; MVA= the difference between the market value of equity (MVE) and the book value of equity (BVE); ***CEOD*** is measured as a dummy variable, equal to 1 if the CEO is also the chairperson /vice chairperson of the board, otherwise 0; ***CEOT*** is a measure of the number of years a CEO has been in office; ***BODSIZE*** is measured as total number of board members; ***FAGE*** *is* the number of years since a firm's incorporation, calculated as observation year less incorporation year; and FSize stands for the natural logarithm of total assets. Overhead cost equal to ratio of overhead expenses to total assets

Source: Data Analysis, 2017

4 .1.1 Performance Indicators

The two performance variables used as proxies for the Value based approach are Market Value Added (MVA) and Economic Value Added (EVA), while Return on Assets (ROA) and Return on Equity (ROE) were used as proxies for the Accounting based performance. The mean (standard deviation) of ROA is 0.0805 (0.1656) with minimum and maximum of -0.7066 and 0.6581 respectively whiles the mean (standard deviation) of ROE is 0.1561 (0.2519) with minimum and maximum of -0.9839 and 0.6159 respectively. The standard deviations of ROA and ROE suggest that there is a high variability of ROA and ROE across the sample . In terms of the Value based approach (see table 4.1), the mean (standard deviation) of Economic Value Added (EVA) is 0.2117 (0.2216), with minimum and maximum values of -0.704 and 0.9232 respectively. Given the minimum and maximum values of EVA, we show that performance (EVA) is relatively high for banks in Ghana. The mean (standard deviation) of the Market Value Added (MVA) is 17.95459 (2.048422) with a minimum and maximum value of 12.1115 and 22.6281 respectively. Given the values of their minimum and maximum values, we show that MVA is relatively high.

4.1.2 Corporate Governance

There were five variables used as proxies for corporate governance. These are: board independence (dummy; 0 or 1), board size, CEO Duality (dummy; 0 or 1), and CEO tenure. From table 4.1, board size recorded an average of 8, a minimum of 3 and a maximum of 13. This means that on the average there are 8 members that represent the board of listed companies in Ghana. CEO duality recorded an average of 0.06818, which shows that most of the listed firms do not have CEOs also serving as the chairperson or vice chairperson of the board. CEO tenure recorded an average of 2.94,

indicating that the average number of years a CEO of listed firms has been in office is 3 years.

4.1.3 Firm specific variables

From table 4.1, overhead cost recorded a mean (standard deviation) of 0.1618 (0.3161), with minimum and maximum values of -0.1728 and 3.5774 respectively, which shows that overhead expense to total asset is relatively low. Firm size (log of total assets) recorded an average (standard deviation) value of 18.1669 (2.274458) with minimum and maximum values of 12.5436 and 22.2546 respectively. Firm age, on average, was 36 years for the firms listed, which was high.

4.2 Correlation Matrix

The study used the Pearson's correlation coefficient to analyse the relationship between the explanatory variables (corporate governance and control variables). A high correlation coefficient of more than 0.6 indicates multicollinearity. It can be observed in table 4.2 that the variables were not highly correlated and therefore have no potential for causing multicollinearity problem.

Table 4.2: Correlation matrix for Explanatory Variables

	BODSIZE	FSIZE	OH_COST	FAGE	CEOD	CEOT
BODSIZE	1					
FSIZE	0.5123	1				
OH_COST	0.0696	-0.3559	1			
FAGE	-0.0807	-0.177	0.0421	1		
CEOD	-0.1874	-0.467	0.2419	0.2324	1	
CEOT	-0.0826	0.1473	-0.1238	0.0836	0.0877	1

Note: ***CEOD*** is measured as a dummy variable, equal to 1 if the CEO is also the chairperson /vice chairperson of the board, otherwise 0; ***CEOT*** is a measure of the number of years a CEO has been in office; ***BODSIZE*** is measured as total number of board members; ***FAGE*** *is* the number of years since a firm's incorporation, calculated as observation year less incorporation year; and ***FSIZE*** stands for the natural logarithm of total assets. ***OH_COST*** is the Overhead cost equal to ratio of overhead expenses to total assets

Source: Data Analysis, 2017

4.3 Regression Results

The study used the GLS Random-Fixed Effect regression model to analyse the data. All assumptions were tested and the regression models (fixed and random effect) were corrected with the robust standard error regression, where, heteroskedastic panels corrected standard errors. There was a normal distribution, using the multivariate normality test, shown below.

Test that all means are the same
Hotelling T2 = 20500.42
Hotelling F(8,86) = 2369.67
Prob > F = 0.0000

The robust standard error was used to correct for heteroskedasticity and autocorrelation. The robust option for estimating the standard errors under the fixed effect and random effect regression models were used to regress dependent variables on the explanatory variables.

4.3.1 Corporate Governance and Accounting Based Performance

This section presents results on the regression between corporate governance and accounting based performance (ROA & ROE). The study used the GLS model, comprising the fixed-effect and random-effect estimation techniques.

This study therefore report on both the fixed-effect and random-effect estimation model. This was done to check for consistencies in relation to the significance impact of the explanatory variables on the performance indicators since the performance variables vary from one model estimation to the other. Moreover, a better and more robust discussion was observed, and therefore requires that both the fixed-effect model and random-effect model be presented as shown in table 4.3 and discussed below the table.

Table 4.3: Regression results on ROA and ROE

	ROA		ROE	
	RE(1) (Robust SE)	**FE(2)**	**RE (3) (robust SE)**	**FE (4)**
CEO_D	-0.1154325	-0.0458	-0.121915	0.085156
	(-1.45)	(-0.70)	(-1.53)	(0.81)
CEO_T	0.006671*	-0.000812	0.0079395*	-0.00974
	(2.06)	(-0.07)	(1.91)	(-0.47)
BOD_SIZE	-0.026164***	0.1259**	0.01164	0.22189**
	(-4.07)	(2.34)	(1.23)	(2.38)
SQ_BODSIZE	-0.0072**	-0.007**	-0.01224**	-0.012369**
	(-2.44)	(-2.29)	(-2.36)	(-2.33)
Overhead Costs	0.08851*	0.09132*	0.01823	0.0183239
	(1.92)	(1.91)	(0.24)	(0.24)
FIRM_AGE	-0.0007248	0.001092	-0.00373	0.0008485
	(0.58)	(1.59)	(0.16)	(0.77)
FIRM_SIZE	7.0243*	0.004069	0.001213***	0.050384***
	(1.68)	(0.42)	(3.16)	(3.08)
_cons	0.67145 (13.77)	-0.58034	0.65181	-1.725387
		(-2.48)	(10.13)	(-4.34)
Observations	121	121	121	121
R Square	0.0390	0.0982	0.024	0.1782
Chi^2	71.68		2.45	
F-stats		2.06		4.37
Sign	0.0000	0.0518	0.7845	0.002

Note: RE=Random effect model; FE=Fixed Effect model; Numbers in parentheses are z-and t-statistics; ***, ** and * indicate significance at the level of 1%, 5% and 10% respectively.

From the models in table 4.3, whiles CEO tenure in office was positively and statistically significant with ROA and ROE under the random effect model, CEO tenure in office had no significant impact on ROA and ROE under the fixed effect. The result suggests that number of years a CEO has been in office does not vary with time (time specific effect) but varies across firms in the sample. Moreover, board size was negatively and significantly linked to ROA in model 1 (random effect model), but positively and significantly linked to ROA and ROE in model 2 (fixed effect model). Thus, increasing the number of directors on the board improves the return on asset and return on equity under the fixed effect which confirms the work by Jackling, and Johl (2009) in developed countries whiles decreasing the number of directors on the board improves return on asset of the firm under the random effect model, which confirms earlier work by Kyereboah-Coleman et al 2006. However, squaring the size of the board provides a consistent relationship between board size and profitability (ROA and ROE). Thus, under the random effect model; CEO tenure, board size, board size squared, overhead cost and firm size are important factors in explaining ROA whiles CEO tenure, board size squared and firm size are important elements of corporate governance in explaining ROE. Under the fixed effect, board size, square of board size and overhead cost are important element in explaining ROA whiles board size, board size squared and firm size are important elements in explaining ROE.

From table 4.3, CEO duality and Firm age were insignificant to ROA and ROE. However, CEO tenure was positive and significant (10%) to profitability (ROA and ROE). This suggests that as CEOs spend more years in the organization, the profitability of the firm increases. Thus, CEO tenure tends to serve the interest of shareholders. BOD size was negatively and significantly linked to ROA, indicating that larger BOD size decreases the profitability of firms. This does not support the argument that larger BOD size increases firm performance due to significant

contributions and voting rights of members who come from diverse backgrounds and bring their expertise to take optimal decisions. However, there was no relationship between board size and return on equity under the random effect but was positively linked to ROE under the fixed effect, as discussed earlier. In our findings, we observe that smaller BOD size rather influences firm level performance. The square of BOD size negatively and significantly (5%) influenced ROA and ROE of the firm. Thus, as more and more BOD members are being added to the firm, there is a greater possibility that firm performance will decrease. This may be due to conflict of interest among members in arriving at conclusive decisions for the firm – thus, affecting firm performance.

Overhead cost was positively and significantly (10%) associated with firm performance ROA but had no significant impact on ROE. This indicates that spending more on management provides a form of incentive and motivation for them to work in order to improve performance. Firm size was positively and significantly associated with ROA and ROE. This shows that large firm size increases firm performance. From the findings, CEO tenure, BOD size, overhead cost and firm size are important in explaining firm level performance. However, we find evidence to support inconsistencies between the use of fixed effect and random effect; thus, the study proceeds to employ the hausman test for appropriate selection of the models.

The Hausman test was conducted to determine the differences between the coefficient of the fixed effect and random effect models as shown in table 4.3 below.

Hausman Test

Test: Ho: difference in coefficients not systematic

Table 4.3.1 Results on Hausman test

	ROA	***ROE***
Variables	*Differences in coefficient [b(fe)-B(re)]*	*Differences in coefficient [b(fe)-B(re)]*
CEO_D	0.04586	0.18705
CEO_T	0.0100081	0.00443
BOD_SIZE	0.0114138	0.0120854
FIRM_AGE	0.000629	0.0004101
FIRM_SIZE	-0.0041973	0.0491125
Chibar^2 (5)	0.76	1.53
Prob > chibar^2	0.9796 (not positive definite)	0.9092

Source: Data Analysis, 2017

H_0: There is no correlation between regressors and individual effects

H_1: Fixed effect is appropriate

As shown in table 4.3, the probability for the chi^2 between ROA and explanatory variables was 0.9796 which was insignificant at 5% level. This implies that differences in coefficient are not equal to zero. Obviously, the alternative hypothesis is not accepted.

On the other hand, the probability for the chi^2 in the second model between ROE and the explanatory variables was 0.9092, which was insignificant at 5%, implying that the differences in coefficient is not equal to zero. There is no reason to reject the H0. This study concludes that the random effect is appropriate for this model.However, the findings showed an inconsistent result when MVA and EVA were employed as dependent variables. The study proceeded to use the GLS model to conduct a regression on the dependent variable (MVA and EVA) and explanatory variables. This is reported in the next section.

4.3.2 Corporate Governance and Value Based Performance

Table 4.4 reports the results on corporate governance and value based performance.

Table 4.4: Regression results on MVA and EVA

	MVA		**EVA**	
	FE(1)	**RE(2) (robust SE)**	**FE (3)**	**RE (4) (robust SE)**
CEO_D	-2.9696***	-2.8575***	2.2256**	1.37016**
	(-3.82)	(-2.62)	(2.07)	(2.13)
CEO_T	-0.9472***	-0.2406*	-0.4059**	0.2113
	(-2.08)	(-1.89)	(-2.03)	(0.78)
BOD_SIZE	-0.9135	1.5954**	0.5766	2.2255***
	(1.33)	(2.38)	(0.61)	(4.06)
SQ_BODSIZE	-0.0884**	-0.0963**	-0.0205	-0.005033
	(-2.22)	(-2.52)	(-0.38)	(-0.09)
Overhead Costs	0.7095	0.6038	-0.0629	-0.10354
	(1.24)	(1.07)	(-0.09)	(-0.15)
FIRM_AGE	-0.8465***	-0.0154	-0.0198*	-0.3632***
	(-3.07)	(-1.47)	(-1.91)	(-2.83)
FIRM_SIZE	12.990**	0.21593	0.1059	1.4804
	(2.55)	(1.58)	(0.67)	(0.25)
_cons	3.174648	9.2462	0.0915	-2.2020
	(0.57)	(3.14)	(0.02)	(-0.31)
R Square	0.0332	0.2489	0.0756	0.1136
Chi^2		34.46***		9.33*
F-stats	4.60***		2.29***	

Numbers in parentheses are t-statistics; ***, ** and * indicate significance at the level of 1%, 5% and 10% respectively.

MVA measures how much value has been added to the firm listed on the market. EVA also measures how much value is added to the firm in terms of economic value. These (MVA and EVA) are influenced by CEO duality, CEO tenure, Board size, firm age and firm size.

From table 4.4, CEO duality, CEO tenure, firm age and firm size were significant to Market Value Added under the random effect and fixed-effect estimation, while board size was not significant with MVA under fixed effect but was significant under the random effect model. However, the square of BOD size was negative and significant (5%) with MVA for both fixed effect and random effect estimation. This implies that larger board size results in low market value added. CEO duality was negatively and significantly (1%) associated with MVA; which implies that the presence of CEO duality on the board decreases the market value added of the stock. The negative nexus disagrees with the stewardship theory that managers and executives (agents) protect the interest of shareholders; it rather confirms the view of agency theory. This suggests that if CEOs play the role of both the executive director of the firm and the board chairman, there is the possibility for the CEO to seek his or her own interest and focus less on other matters. CEO tenure of office has a negative and significant (1%) relationship with MVA. This was not expected and it contradicts earlier findings that as CEOs stay in office for a longer period, they tend to improve firm performance. The result indicates that CEOs who stay longer in their position focus more on firm level performance rather than on creating value at the market level, thus decreasing the market value. This result agrees with the findings of Abor (2007). From the findings, BOD size has no effect on MVA under the fixed effect but it has a positive and significant effect on MVA under the random effect. However, the square of BODSize has a negative and significant (5%) relationship with MVA. This implies that an increase in BODsize decreases market value of the firm due to high conflict of interest from members with diverse

views. Under the fixed effect, firm age influenced the market value negatively and was significant (1%), denoting that firms that stay longer in the market are less profitable due to market competition and imperfections in the market. This contradicts most studies (Gillan and Starks, 2000).

In terms of Economic Value added, CEO duality was positively and significantly (5%) related to economic value added under the fixed effect and random effect, which supports the stewardship theory that agents do things that favour the interest of shareholders. It agrees with the findings by Kyereboah-Coleman (2007). However, this study found that CEO duality negatively affects MVA while it positively affects EVA. This implies that CEO duality improves the performance of firms when they are small because decision making is sped up, but will not improve large firm's performance over time as a result of the CEO being able to take swift decision that may be unbeneficial and hinder growth. BOD size was positively and significantly associated with EVA under the random effect, reflecting that large BOD size results in higher economic value added. Board size will comprise more people with different expertise, background and diversity and they will as a team undertake optimum investment decisions. However, an increase in BOD size measured by the square of BOD size will yield no significant effect on EVA. Shareholders and managers should focus on maintaining a favourable and considerable board size whose members will come together with their expertise to make optimum decisions that will help achieve the interest of shareholders. Firm age was negatively and significantly linked to EVA under the GLS model, whereas firm size was positive and significantly (5%) related to EVA under the fixed effect. This means that additional EVA declines marginally when the firm advances in years. This is inconsistent with the findings of Stem, Stewart and Co (2000), but the positive nexus between firm performance and firm size supports many findings in literature that as the firm

increases in size, performance increases (Abor, 2005, 2007; Adams and Mehran, 2010; Kyereboah-Coleman, 2007) and therefore additional economic and market value are added to the firm.

The study used the GLS model, comprising the fixed-effect and random-effect estimation techniques. The hausman test was conducted ascertain for the differences between the coefficient of the fixed effect and random effect models as shown in table 5 below.

Hausman Test

Test: Ho: difference in coefficients not systematic

Table 4.4.1 Results on Hausman test

	MVA	***EVA***
Variables	*Differences in coefficient [b(fe)-B(re)]*	*Differences in coefficient [b(fe)-B(re)]*
CEO_D	-0.7746	0.382140
CEO_T	-0.75170	-1.136200
BOD_SIZE	-2.000	-0.309900
FIRM_AGE	-0.032500	-0.024400
FIRM_SIZE	5.965700	-1.133900
Chibar^2 (5)	10.16	4.32
Prob > chibar^2	0.0378 (not positive definite)	0.3649

Source: Data Analysis, 2017

As shown in table 4.4.1, the probability for the chi^2 between MVA and explanatory variables was 0.0378 which was significant at 5% level. This implies that differences in coefficient are equal to zero. Therefore, the alternative hypothesis is accepted. Thus, we report on the fixed effect model

for the relationship between MVA and the explanatory variables. On the other hand, the probability for the chi^2 in the second model between EVA and the explanatory variables was 0.3649, which was insignificant, implying that difference in coefficient is not equal to zero. There is no reason to reject the H0. We therefore report on the random effect model for the relationship between EVA and the explanatory variables. This is shown in table 4.6 and discussed below the table.

4.4 Conclusion

From the findings, we observe evidence to support the use of random effect as an appropriate model for the study. We deduce that CEO tenure, BOD size, square of BOD size, overhead costs and firm size are important in explaining returns on assets while CEO tenure in office, square of BOD size and firm size are good determinants of returns on equity. In terms of value added based performance, we found that CEO duality, CEO tenure, the square of BOD size, firm age and firm size are important in explaining Market Value Added, while CEO duality, BOD size and Firm age are important determinants of Economic Value Added.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a summary of the findings and conclusions made from the study

5.1 Summary of the findings

The study examined the effect of corporate governance variables on shareholders' value using the GLS random and fixed effect model. The Hausman test was used to determine the appropriate model for the study.

The explanatory variables used were CEO duality, CEO tenure, BOD Size, Firm age, overhead cost, square of the BOD size and Firm size, while the performance indicators MVA, EVA, ROA and ROE were used as the dependent variables.

From the descriptive statistics, average performance values and value based method, shows that the overall performance of the listed firms show that EVA is relatively low while MVA is relatively high. The average performance of the listed firms, using the accounting based approach (ROA and ROE), is relatively low. On average, board size was high, CEO duality was less among the listed firms, overhead cost was relatively low and the average CEO tenure was 3. The findings show that the listed firms were relatively large and had been in existence for a considerable time. The study tested for multicollinearity using the Pearson's correlation matrix before proceeding to the regression analysis. After employing the Hausman test, the study confirmed the appropriate use of the random effect model to estimate the relationship between

the regressors and the dependent variables (ROA, ROE and EVA) while the fixed effect was used to regress MVA on the explanatory variables.

From the accounting based performance, CEO tenure, Board size, firm age and firm size were significant with accounting based performance under both the fixed and random effect estimation. However, when MVA and EVA were employed as dependent variables, the results were inconsistent. CEO duality was negative and significantly associated with MVA, but had a positive nexus with EVA. CEO tenure had a negative nexus with MVA and EVA while Board size had a positive nexus with EVA. Firm age had a negative nexus with both MVA and EVA while Firm size had a positive nexus with MVA and EVA.

The study also found that CEO duality, CEO tenure, the square of BOD size, firm age and firm size are important in explaining market value added while CEO duality, BOD size and Firm age are important determinants of Economic Value Added.

5.2 Conclusion and Implications

CEO duality speeds up decision making, hence improving economic value added, but reduced the shareholders' market value. Managers tend to focus less on improving shareholders' value, when CEO tenure increases. Board size and firm size increase shareholders' value while higher firm age leads to a decline in shareholders' value. The study finds that CEO duality, CEO tenure and board size influence performance at the stock market level more than at the firm level (where accounting based performance is used). Thus, MVA and EVA are external measures of performance that contribute to why corporate governance issues influence market value added and economic value added performance.

The study concludes that characteristics of corporate governance that influence firm level performance are CEO tenure, Board Size and Overhead costs whiles CEO duality, CEO tenure and Board size affect market level performance. The implication is that CEO duality is good for the additional value creation at the market level whiles overhead cost is good for adding value to shareholders at the firm level. CEOs doubling as chairpersons has the possibility of improving value added at the market level whiles providing incentives to managers (Overhead cost) has greater impact on improving firm level performance.

However, the study found that the results of the relationships under both performance measures are not consistent because the measures of performance vary in the different model estimations. The study also suggests that investors pay more attention to the market value added rather than the accounting based approach. Thus, managers and investors should focus on measuring shareholders' value using the Value based method rather than the accounting approach, especially when examining how corporate governance explains shareholders' value. Moreover, conferences must be organized regularly to help address most of the concerns of both shareholders and managers of the firm.

Future study should examine which performance measure (value based or accounting) is the best or superior measure in assessing the performance of the firm, using the GSE listed companies.

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