CORPORATE GOVERNANCE AND EQUITY VALUE MULTIPLE: EVIDENCE FROM NIGERIAN LISTED FIRMS

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DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
July 2016

CORPORATE GOVERNANCE AND EQUITY VALUE MULTIPLE: EVIDENCE FROM NIGERIAN LISTED FIRMS

By

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Thesis Submitted to
Tunku Puteri Intan Safinaz School of Accountancy,
Universiti Utara Malaysia,
in Fulfillment of the Requirement for the Degree of Doctor of Philosophy

TUNKU PUTERI INTAN SAFINAZ
SCHOOL OF ACCOUNTANCY
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(Title of the Thesis / Dissertation) : **CORPORATE GOVERNANCE AND EQUITY VALUE MULTIPLE: EVIDENCE FROM NIGERIAN LISTED FIRMS**

Program Pengajian
(Programme of Study) : **Doctor of Philosophy**

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ABSTRACT

The failure of corporate entities has continued to draw the attention of various stakeholders across the globe. As a result of this problem, different countries have issued Corporate Governance (CG) guidelines. Part of the objective of these guidelines is to improve firm values. In Nigeria, similar guidelines (known as the Codes of Corporate Governance) were issued for corporate organizations to align the country with the global best practice. However, researchers, investment analysts, and other stakeholders continue to argue whether those governance mechanisms increase the value of stockholders. Others recommend that firm governance practices should be considered before making investment decisions while others argue that governance practices are not important in Nigeria. In order to address the problem, this research empirically examined the effects of eight corporate governance variables on the equity value multiple (EVM) of Nigerian firms. The study used data of 100 firms listed on the Nigerian Stock Exchange (NSE) for the period of 2009-2013. The study used the Generalized Method of Moment (GMM) to estimate the regression due to the endogeneity problem among the variables. The study applied the Principal Component Analysis (PCA) method to generate equity value multiple from the four equity valuation multiples. The results reveal a significant positive relationship between board size, board independence, board gender diversity, audit committee independence, managerial shareholding, and disclosure of corporate governance information at 1% level of significance. This study contributes to the understanding of the governance-equity value relationship by examining some corporate governance variables. The results further provide an insight for practitioners and policy makers on the importance of corporate governance codes consideration towards investment decision in Nigeria. Therefore, the study recommends consideration of the above CG variables in making investment decision.

Keywords: corporate governance, equity value multiple, principal component analysis, Nigerian Stock Exchange

ABSTRAK

Kegagalan entiti korporat terus menarik perhatian pelbagai pihak berkepentingan di seluruh dunia. Akibat daripada masalah ini, banyak negara telah mengeluarkan garis panduan Tadbir Urus Korporat (CG). Sebahagian daripada objektif garis panduan ini adalah untuk meningkatkan nilai firma. Di Nigeria, garis panduan yang sama, yang dikenali sebagai kod CG, telah diisukan untuk organisasi korporat bagi memastikan amalan negara selari dengan amalan terbaik global. Namun, para penyelidik, penganalisa pelaburan, dan pihak berkepentingan yang lain terus mempertikai sama ada mekanisme tadbir urus meningkatkan nilai pemegang saham. Di satu pihak, terdapat syor bahawa amalan tadbir urus firma perlu dipertimbangkan sebelum membuat keputusan pelaburan, sementara pihak lain mengatakan bahawa amalan tadbir urus tidak penting di Nigeria. Bagi menangani masalah ini, kajian ini secara empirikal mengkaji kesan lapan pemboleh ubah tadbir urus korporat ke atas nilai ekuiti pelbagai (EVM) firma Nigeria. Kajian ini menggunakan data daripada 100 syarikat yang disenaraikan di Bursa Saham Nigeria (NSE) bagi tempoh 2009-2013. Kajian ini menggunakan *Generalized Method of Moment* (GMM) untuk menganggarkan regresi kerana masalah endogeniti antara pemboleh ubah. Kajian ini juga menggunakan kaedah Analisis Komponen Utama (PCA) untuk menjana EVM firma daripada empat pengganda penilaian ekuiti. Keputusan kajian mendedahkan hubungan positif yang signifikan antara saiz lembaga, kebebasan lembaga, kepelbagaian jantina lembaga, kebebasan jawatankuasa audit, pegangan saham pengurusan, dan pendedahan maklumat tadbir urus korporat pada aras keertian 1%. Kajian ini menyumbang kepada pemahaman tentang hubungan tadbir-ekuiti dengan memeriksa beberapa pembolehubah tadbir urus korporat. Seterusnya, keputusan kajian ini memberi maklum balas untuk pengamal dan pembuat dasar tentang kepentingan tadbir urus korporat terhadap keputusan pelaburan di Nigeria. Oleh itu, kajian ini mencadangkan bahawa pembolehubah CG dipertimbangkan dalam membuat keputusan pelaburan

Kata kunci: tadbir urus korporat, nilai ekuiti pelbagai, analisis komponen utama, Bursa Saham Nigeria.

ACKNOWLEDGEMENT

All praise and thanks are due to Allah, the Most Gracious, and the Most Merciful. The successful completion of this research would have not been possible without the help of Almighty Allah for blessing me with good health, opportunity, endurance, perseverance, wisdom, knowledge and courage. I owe all my efforts and success on to him. I will like to express gratitude to my supervisors, Professor Dr. Ayoib Che Ahmad (first supervisor) and Associate Professor Dr. Zuani Ishak (second supervisor) for their constructive criticisms, helpful advice, patience and thorough supervision and guidance, which is glaringly evident in every page of this thesis may Almighty Allah reward them with paradise ameen.

Similarly, I thank my head of department, Dr. Ahmad Bello Dogarawa and the management of Ahmadu Bello University for awarding me study fellowship to study Doctor of Philosophy (Accounting). I sincerely thank the University. I also extend my sincere gratitude to my Father Alh. Shittu Usman, my late mother Hauwa'u Abdullah and my uncle Adam Haruna for their prayers and advice my brothers, Abdullah, Muhammad, Jibril, Lawal and my sister Aisha. Also, thanks to my wife Rabiatu Muhammad and my kids Hauwa'u and Adnan gave a total support throughout the program, she deserved commendation for her ability to bear with me despite the difficulty and time consuming of PhD program. I also appreciate the contribution of my brother Yahuza Salisu, my friends, Usman Shehu Lawal, Nasiru Yususa, Muhammad Mustapha Bagudo and all those who contributed directly or indirectly to the success of this programme.

TABLE OF CONTENTS

TITLE PAGE	**i**
CERTIFICATION OF THESIS WORK	**ii**
PERMISSION TO USE	**iv**
ABSRACT	**v**
ABSTRAK	**vi**
ACKNOWLEDGEMENT	**vii**
TABLE OF CONTENTS	**viii**
LIST OF TABLES	**xiv**
LIST OF FIGURES	**xv**
LIST OF APPENDICES	**xvi**
LIST OF ABBREVIATIONS	**xvii**
CHAPTER ONE INTRODUCTION	
1.1 Background of the Study	1
1.2 Problem Statement	8
1.3 Research Motivation	14
1.4 Research Questions	16
1.5 Research Objectives	17
1.6 Contribution of the Study	19
1.6.1 Contribution to Shareholders	19
1.6.2 Contribution to Firms	20
1.6.3 Contribution to Regulatory Authorities	20
1.6.4 Contribution to Literature	21
1.6.5 Contribution to Methodology	22
1.7 Scope of the Study	23
1.8 Organization of the Study	24
CHAPTER TWO LITERATURE REVIEW	
2.1 Introduction	25
2.2 Background Information of Nigerian Business Environment and CG	26
2.2.1 Securities and Exchange Commission of Nigeria (SEC)	28
2.2.2 The Central Bank of Nigeria (CBN)	29
2.2.3 National Insurance Commission (NAICOM)	30
2.2.4 The Nigerian Stock Exchange (NSE)	32
2.2.5 Development of CG codes in Nigeria	33
2.3 Equity, Shareholders and Equity Value Multiple	36
2.3.1 Enterprise Value Multiples	38
2.3.2 Equity Value Multiples	38
2.4 Corporate Governance	40

2.5 Empirical Studies on CG Mechanisms and Firm Performance 45
2.5.1 Board Size 46
2.5.2 Board Independence 53
2.5.3 Board Gender Diversity 58
2.5.4 Audit Committee Independence 63
2.5.5 Managerial Shareholding 67
2.5.6 Chief Executive Power Concentration 73
2.5.7 Directors Compensation 78
2.5.8 Corporate governance Disclosure and Transparency 83
2.6 Control Variables 89
2.6.1 Firm Size 89
2.6.2 Firm Age 91
2.6.3 Firm Leverage 92
2.7 limitation of the Previous Studies 93
2.8 Established Theories of CG and Equity Values 95
2.8.1 Agency Theory 95
2.8.2 Stewardship Theory 98
2.9 Summary of the Chapter 100

CHAPTER THREE THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT
3.1 Introduction 102
3.2 Theoretical Model of the Study 102
3.3 Hypotheses Development 104
3.3.1 The Relationship between Board Size and Firm Performance 105
3.3.2 The Relationship between Board Independence and Firm Performance 108
3.3.3 The Relationship between Board Gender Diversity and Firm Performance 111
3.3.4 The Relationship between Audit Committee Independence and Firm Performance 114
3.3.5 The Relationship between Managerial Shareholding and Firm Performance 117
3.3.6 The Relationship between Chief Executive Officer Power and Firm Performance 119
3.3.7 The Relationship between Abnormal Directors Compensation and Firm Performance 121
3.3.8 The Relationship between CG Disclosure and Firm Performance 124
3.4 Summary of the Chapter 126

CHAPTER FOUR RESEARCH METHODOLOGY
4.1 Introduction 128

4.2 Research Design 129
4.3 Types of Data for the Study 129
4.4 Sources and Method of Data Collection 130
4.5 Population of the Study 132
4.6 Data Sampling Procedure 133
4.7 Variables Definition and Measurement 134
4.7.1 Equity Value Multiple (Dependent Variable) 134
4.7.2 Equity Value Multiple for the Regression Model 137
4.7.3 Application of PCA to Proxy Equity Value Multiple 140
4.7.4 Procedure of PCA Technique on Panel Data 141
4.7.5 Corporate Governance (Independent Variables) 143
4.8 Control Variables 148
4.8.1 Firm Size 148
4.8.2 Firm Age 149
4.8.3 Firm Leverage 150
4.9 Technique of Data Analysis 150
4.10 Model Specification 152
4.11 Summary of the Chapter 156

CHAPTER FIVE PRESENTATION, ANALYSIS AND DISCUSSIONS OF RESULTS
5.1 Introduction 158
5.2 Sector Classification of the Sample 158
5.3 Principal Component Analysis (PCA) Results 159
5.4 Summary of Descriptive Statistics 164
5.4.1 Dependent Variable 165
5.4.2 Independent Variables 166
5.4.3 Control Variables 169
5.5 Regression Results (GMM) 173
5.5.1 Hypothesis One (Board Size and Equity Value Multiple) 177
5.5.2 Hypothesis Two (Board Independence and Equity Value Multiple) 179
5.5.3 Hypothesis Three (Board Gender and Equity Value Multiple) 181
5.5.4 Hypothesis Four (Audit Committee Independence and Equity Value Multiple) 183
5.5.5 Hypothesis Five (Managerial Share and Equity Value Multiple) 185
5.5.6 Hypothesis Six (CEO Power and Equity Value Multiple) 188
5.5.7 Hypothesis Seven (Abnormal Directors Compensation and Equity Value Multiple) 188
5.5.8 Hypothesis Eight (CG Disclosure and Equity Value Multiple) 188
5.6 Additional Analysis on Corporate Governance Variables and Individual Equity Valuation Multiples 191
5.6.1 Corporate Governance Variables and Price-to-Earnings Multiple 192

5.6.2 Corporate Governance Variables and Price-to-Book Value Multiple 193
5.6.3 Corporate Governance Variables and Price-to-Cash Flow Multiple 194
5.6.4 Corporate Governance Variables and Price-to-Sales Multiple 196
5.7 Summary of the Chapter 199

CHAPTER SIX SUMMARY, CONCLUSION AND RECOMMENDATION
6.1 Introduction 200
6.2 Summary of the Results 200
6.3 Conclusion 201
6.4 Implications of the Study Findings 204
6.5 Limitations of the Study 205
6.6 Suggestions for Future Research 205
6.7 Concluding Remark 206

REFERENCES **207**

LIST OF TABLES

Table	Page
Table 4.1 Operationalization of equity value multiples construct	135
Table 4. 2 Operationalization of CG constructs	144
Table 5.1 Sector classification	159
Table 5.2 Principal Component Analysis Correlations	160
Table 5.3 Principal Component Analysis Eigenvectors	162
Table 5.4 Keiser-Meyer-Olkin Measure of Sampling Adequacy	163
Table 5.5 Descriptive Statistics Summary	165
Table 5.6 Correlation Matrix Results	171
Table 5.7 GMM Regression Results	176
Table 5.8 GMM Panel Regression Results for Equity Value Multiples	191
Table 6.1 Summary of the Results	201

LIST OF FIGURES

Figure	Page
Figure 3.1 Theoretical Model of the Study	103

LIST OF APPENDICES

Appendix A Principal Component Analysis Results 246
Appendix B Summary of Descriptive Statistics 248
Appendix C GMM Regression Results 249

LIST OF ABBREVIATIONS

AC	Audit Committee
ACI	Audit Committee Independence
ADC	Abnormal Directors Compensation
BS	Board Size
BGD	Board Gender Diversity
BI	Board Independence
CBN	Central Bank of Nigeria
CG	Corporate Governance
CGC	Corporate Governance Code
CGD	Corporate Governance Disclosure
CEO	Chief Executive Officer
CEOP	Chief Executive Officer Power
CGI	Corporate Governance Index
DS	Directors Shareholding
EVM	Equity Value Multiple
GMM	Generalize Method of Moments
ID	Independent Director
IASB	International Accounting Standard Board
NAICOM	National Insurance Commission
NSE	Nigerian Stock Exchange
NLF	Nigerian Listed Firms
NED	Non-executive Directors

MS	Managerial shareholding
NTWG	National Technical Working Group
NYSE	New York Stock Exchange
USA	United States of America
P/E	Price to Earnings Multiple
P/B	Price to Book Value Multiple
P/C	Price to Cash Flow Multiple
P/S	Price to Sales Multiple
PCA	Principal Components Analysis
PM	Profit Margin
ROA	Return on Assets
ROE	Return on Equity
SEC	Securities and Exchange Commission
2SLS	Two Stage Least Square
TQ	Tobin‘s Q

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Equity and debt are the two sources of business financing across the globe. Equity refers to the excess residual interest of an enterprise asset after liabilities are deducted (Pope & Puxty, 1991). Equity financing through the issuance of shares to investors appears to be the most preferred source when either starting or expanding a business. This is explained by the fact that companies can easily raise the required amount of capital and avoid costs such as high interest rates of business financing through debt. Srinivasan and Phansalkar (2003) documented that financing company through equity is more attractive and preferred compared to financing through debts, because the claim of providers of equity is only on the residual value.

The most common methods of valuing equity are the valuation multiples (Milicevic, 2009). Valuation multiples simply refer to the expression of firm equity market values in relationship to important indicators such as the price-to-book value that are assumed to have a relationship with those values (Suozzo, Copper, Sutherland, & Deng, 2001). Valuation multiples are widely used in research reports and stock recommendations for both the buying and selling of equity shares by investment analysts. Valuation multiples are also used by investors to assesses firms seeking an initial public offering (Schreiner, 2007). Valuation multiples are used to supplement

comprehensive valuations of equity to obtain their terminal values and are designed to summarize the value for the stream of an estimated pay off (Souzzo et al., 2001).

Valuation multiples or value multiples are usually determined by the use of accounting numbers. In fact, the relationship between accounting numbers and market values forms the basis of the multiples valuation method (Schreiner, 2007).

According to Wilcox and Philips (2005), four different interest groups use value multiples: 1) corporate managers who want to comprehend how best to improve their firm‘s value; 2) fundamental analysts who want to appraise corporate managements and forecast the results of their efforts; 3) buyers and sellers who want to set values for risky assets not already well-valued by liquid markets; and 4), finally, active investors who try to forecast abnormal returns on the basis of mismatches between the current price and indicated equilibrium prices supported by a firm's fundamentals and current macroeconomic conditions. Thus, value multiples serve as an important metric for making business investment decisions by different interest groups (corporate executives, fund managers, institutional investors and private equity investors amongst others).

According to Damodaran (2006), one objective of the valuation multiples method is to determine the equity value of firms based on the market prices of comparable transactions or sometimes comparable firms. That is, stock analysts try to examine the value of the firm by looking at the market values of its peer group. Moreover,

multiples are used for complete valuations of equities because they efficiently communicate those valuations that are used to obtain the terminal values of an investment (Liu, Nissim, & Thomas, 2002). According to Penman (2006), current firm performance as summarized in its financial reports represents an important input to the market‘s assessment of a firm‘s future value.

Two models exist in relationship to equity value: 1) fundamental and 2) relative/market-based valuation models. Fundamental equity valuation is the method of analyzing information in present and past financial statements, in combination with other firm-specific features, industry, and macroeconomic information to forecast future payoffs and finally arrive at an intrinsic value of a firm (Liu et al., 2002). Fundamental equity valuation models include: 1) the Dividend Discount Model (DDM), 2) The Discounted Cash Flow Model (DCF), 3) the Residual Income Valuation Model (RIV), and 4) the Abnormal Earnings Growth Model (AEG).

The second valuation model is the relative or market valuation model, which has also been classified into enterprise and equity value multiples (Suozzo et al., 2001). Enterprise value multiples are used in expressing the entire value of the enterprise in relationship to values that include sales and earnings before interest and tax. Enterprise value multiples includes Enterprise Value to Invested Capital (EV/IC); Enterprise Value to Total Assets (EV/TA); Enterprise Value to Research and Development (EV/R&D); Enterprise Value to Earnings before Interest, Tax,

Depreciation and Amortization (EV/EBITDA) and Enterprise Value to Sales (EV/S) (Suozzo et al., 2001).

Equity value multiple, as the name implies, refers to the expression of the market value of common stockholders‘ interest in a firm, relative to an important indicator relating to that value (Suozzo et al., 2001). Owners (shareholders) are subordinate to all other claimants of the assets and cash flow of a business; any value used in an equity multiple valuation must be one that represents cash flow, residual profit, assets or another residual measures (Souzzo et al., 2001). Equity value multiples can also be referred to as expression of an owner‘s residual value on the assets of a firm. In addition, equity value multiples indicate the future growth in earnings and book value that is positively related to expected future returns on equity (Penman, 1996). Equity value multiples include price-to-earnings (P/E); price-to-book value (P/B); price-to-cash flow (P/C) and price-to-sales (P/S) (Schreiner, 2007). According to Schreiner (2007), equity value multiples serve as important tools in predicting the value of equity reasonably. In relationship to performance, equity value multiples perform better in terms of valuation accuracy compared to enterprise value multiples.

Equity value multiples seem to have more advantages than other measures of performance especially in valuing equity (Schreiner, 2007). For example, Tobin‘s Q is used to measure a firm‘s value; however, it includes the value of both debts and equity to the replacement costs of the assets. But, many investors are more concerned with the value of their investment in the form of share appreciation than

the entire value of the firm. Similarly, other performance measures like return on assets (ROA) and return on equity (ROE) measure net revenue to total assets and equity respectively. In contrast, equity value multiples consider book value, sales, and earnings relative to their market values. Therefore, this study focuses on equity value multiples because of the desire by investors to know the worth of their investment at any point in time. The question here is whether company corporate governance practices impact the value of equity.

Corporate Governance (CG) is regarded as a global issue that has attracted debates among researchers, investment analysts and other players in corporate organizations. Financial scandals, in recent years, mostly attributed to failure of those corporations in their CG practices, have shaken the confidence of the investing public (Strier, 2005). Good CG has been acknowledged by global financial institutions as an important component in the promotion of a more stable financial system and the reduction of systemic risks related to financial crises (Copp, 2006). CG is an essential component of equity risk; therefore, investors must consider its measurements (Grandmont, Grant, & Silva, 2004). The issue of CG is of huge practical significance, even in developed markets (Shleifer & Vishny, 1997).

Corporate governance can be viewed from the perspective of internal and external mechanisms. Internal corporate mechanisms are those actions that affect how an organization is governed internally. They include boards and their various committees, governance structure, management and ownership. External governance

mechanisms involve external factors influencing CG such as regulatory bodies, standard setting organizations, and labour rules (Weir, Laing, & Mcknight, 2002). Nigerian Securities and Exchange Commission's (SEC) Code of Corporate Governance stresses the importance of internal governance mechanisms in Nigeria listed firms. According to the code, it is the internal mechanisms that are responsible for the implementation of the external governance mechanisms. CG can also be viewed from the perspective of CG structures and process (Kula, 2005). Structured corporate governance mechanisms include board attributes. Board attributes, on the other hand, include board characteristics, board composition, board processes, and board structure (Ishak & Abdul Manaf, 2013).

The internally structured corporate governance mechanisms are the focus of this study. Internal CG mechanisms are required for the external mechanisms to function effectively, and this, therefore, leads to the harmonization of the relationship among these CG mechanisms (Nair & Cremers, 2005). Monitoring and control dimensions have received considerable importance in CG. Lack of monitoring and control may hamper business activities, raise doubts about business prosperity and add to a narrow perspective on CG (Filatotchev, Toms, & Wright, 2006). Moreover, information about internal CG mechanisms comprises the information available for Nigeria listed firms, which is the focus of the study.

Several arguments have been developed on whether company corporate governance practices influence its value. In response to the debate, many empirical studies have

been conducted on CG and a firm‘s value in developed and developing countries. Studies conducted have used various mechanisms of CG. Some studies conducted in developed economies include Bhagat and Bolton (2008), Black and Love (2005), Black, de Carvalho, and Gorga, (2012), Demsetz and Lehn (1985), Gompers, Ishii, and Metrick (2003), Gherghina, 2015, Goncharov, Werner, and Zimmermann (2006), Hermalin and Weisbach (1998), Jensen and Murphy (1990), Kenneth, Parrino, and Trapani (1996), Kuo and Tswei (2011), Lehn, Patro, and Zhao (2005), and Walters, Kroll, and Wright (2007). The studies mentioned above used different CG mechanisms and CG index in relationship to performance measures. Some of the CG mechanisms used in the above studies included board structure, ownership, and committees amongst others.

However, the studies have produced mixed results. Some found a significant positive relationship between different CG mechanisms and firm performance (Demsetz & Lehn, 1985; Gompers et al., 2003; Hermalin & Weisbach, 1998; Walters, Kroll, & Wright, 2007), while others could not establish that good CG enhances corporate values (Bhagat & Bolton, 2008; Jensen & Murphy, 1990). Similar studies on CG and firm performance have also been conducted in emerging markets. They include Alimehmeti & Paletta, 2014, Black, Jang, and Kim (2006), Black and Khanna (2007), Carter, Simkins, and Simpson (2003), Eisenberg, Sundgren, and Wells (1998), Klapper and Love (2004), Sanda, Mikailu, and Garba (2005), Ujunwa (2012). Yet, these studies too produced mixed results. In addition, previous studies focused more on the relationship between different CG mechanisms and

performance measures such as return on asset (ROA), return on equity (ROE) and Tobin‘s Q (TQ) of firms. At this time, little theoretical knowledge exists with respect to the complex nature of CG and the equity value multiples of firms, particularly in an emerging economy like Nigeria. This, therefore, serves as one basis for carrying out the study.

1.2 Problem Statement

Understandings of the structure of corporate governance have been developed through the analysis of firms from an agency perspective (Pope & Puxty, 1991). The firms that are publicly traded on a stock exchange are characterized by the separation of shareholding and management. Managers are saddled with the responsibility for operational and strategic decision making of the firm, while shareholders only provide the money and act as risk takers for their individual investments (Kohl, 2009). In this relationship, managers are expected to run the company on behalf of shareholders with the objective of maximizing the value of owners on both a short- and long-term basis. However, in certain circumstances managers pursue their own interests by extracting private benefits at the cost of common stockholders.

The collapse of companies such as Enron, Cadbury and WorldCom amongst others reveals how managers can pursue personal interests to the detriment of shareholders and other interest groups. As a result, shareholders across the globe and Nigeria in particular began to show more concern on how appointed managers manage their

investments. In Nigeria, equity investors show more concern on corporate governance after the 2007/08 global financial crises.

Global financial crises have greatly affected Nigerian investors in terms of a loss of a huge sum of money by both local and foreign investors (Sanusi, 2010). The capitalization of the Nigerian Stock Market has increase to 318.3% from 9.05 billion United State dollars in December 2005 to 38 billion United State dollars in March 2008. However, due to the terrible effects of the global financial crises on Nigeria, the market capitalization was worth only 13 billion United State dollars in March 2009 (Sanusi, 2011). The collapse of the capital market that resulted in the loss of investments was largely attributed to poor CG practices such as insider-related loan abuses, poor management of risk, weak internal control systems (ICS) and insufficient information disclosures by public companies (NTWG, 2009). The outcome of the National Technical Working Group NTWG posed a serious challenge to the regulators; as such they devise means to address the problem holistically.

To address the drastic effects of the global financial crises on Nigerian equity investments, regulatory authorities responded through a review of governance regulations. For example, the Nigerian Securities and Exchange Commission constituted a committee in September 2008 to review the 2003 Code of Corporate Governance for listed firms. According to the commission, the objective was to identify areas of lapses in the previous code and to adopt measures to avoid such a

precipitous decline in the future firm and equity values. Thus, the code was amended in 2011 to meet increasing challenges. For its part, the National Insurance Commission (NAICOM) in 2009 issued a CG code for the country‘s insurance companies. This, according to the commission, was necessary considering the complex nature of insurance companies with respect to the national economy. Similarly, the Central Bank of Nigeria (CBN) in 2006 issued a code of corporate governance for banks after banking consolidation.

The measure areas affected by the reforms are board size, board independence, board gender diversity, audit committee independence, managerial shareholding, chief executive officer (CEO) tenure, director‘s compensation and CG disclosure in the annual reports. The SEC Code of 2003 recommends a minimum board size of 5 and maximum of 15, while the revised SEC code of 2011 allowed firms to have a board size relative to the scale and complexity of their operations. On it part, the CBN recommends a maximum board size of 20.

On the issue of board independence, the 2003 code of CG termed the non-executive director as an independent director. However, the SEC later realized that non-executive directors might not be necessary be independent particularly after the 2007/08 financial crises. Therefore, SEC 2011 revised code make a clear distinction between non-executive directors and independent directors and listed firms are required by the revised code to have at least 40% of their members to be independent. Similarly, a revision was also made to audit committee independence;

in the 2003 code, the emphasis was on non-executive directors while the new code placed more stress on independent directors serving on the audit committee to make that committee truly independent.

Similarly, the 2003 SEC code did not make any provision for gender in the composition of corporate boards. But, the 2011 revised code of SEC recommends that listed firms consider gender diversity in the composition of their respective boards. The disclosure of managerial shareholding is not compulsory in the 2003 SEC code while the revised 2011 code required detailed disclosures of managerial share ownership. In fact, in the case of CBN code, an approval is required for 10% and more for managerial ownership. On the issue of chief executive officer power (CEOP), the 2003 code allowed one person to hold the position of CEO and chairman at the time. The tenure of the CEO has no limit in the 2003 code. However, the 2011 revised code separated the position of chair and that of the CEO and the tenure of the CEO was fixed for 4-year periods, which can be renewed based on performance after the first 4 years.

The SEC revised code of 2011 further states that a company‘s compensation policy should be designed to provide appropriate compensation to directors and the compensation paid to them must be published in the company‘s annual report. Adequate guidelines for compensation were not addressed in the 2003 SEC code. Finally, listed firms are required by the revised codes particularly, the SEC and the CBN codes to provide information on CG compliance in the annual report and

provide reasons for instances of non-compliance. This study empirically examined the effect of CG governance reforms on the value of firms to stockholders as the parties that suffered more in the event of corporate failure. The expectation is that the new regulation would enhance firm value and equity value of the firm‘s stockholders.

On the other hand, equity value multiples (EVM) are regarded as the most important measures of the value of equity share ownership (Schreiner, 2007). According to Wilcox and Philips (2005), four different interest groups use equity value multiples: 1) corporate managers who want to comprehend how best to improve their firm‘s value; 2) fundamental analysts who want to appraise corporate managements and forecast the results of their efforts; 3) buyers and sellers who want to set values for risky assets not already well-valued by liquid markets; and 4), finally, active investors who try to forecast abnormal returns on the basis of mismatches between the current price and indicated equilibrium prices supported by a firm's fundamentals and current macroeconomic conditions.

The Nigerian equity investors used equity value multiples to forecast stock returns relative to the value of equity shareholders. This is because, EVMs are used for comprehensive valuations of equity to obtain their terminal values and are also used to summarize the value for the stream of an estimated pay off of the equity investment. Thus, value multiples serve as an important metric for making business

investment decisions by different interest groups (corporate executives, fund managers and private equity investors amongst others).

As a result of widespread use of the equity value multiples globally and in Nigeria, assessment of firm governance of those equity value multiples becomes paramount. This is because equity shareholders suffered more from governance failures in Nigeria compared to other interest groups of corporate organizations.

Similarly, researchers have made theoretical efforts to study the relationship between CG mechanisms and the value of firms in the global perspective (Alimehmeti & Paletta, 2014; Gompers et al., 2003; Goh, 2011; Goncharov et al., 2006; Kuo & Tswei, 2011). Unfortunately, the results of the studies have been conflicting. For example, Alimehmeti and Paletta, (2014), Gompers et al. (2003), Black and Love (2005), Black et al. (2006) found a significant and positive relationship between CG mechanisms and the value of equity. Conversely, studies of Bhagat and Bolton (2008), Gherghina, (2015), Jensen and Murphy (1990), and Lehn et al. (2005) reported a negative relationship between CG and the equity value of the companies. In Nigeria, the only known study on price-to-earnings (P/E) multiple is that of Sanda et al. (2005), which established that only selected CG mechanisms influence the P/E multiple. Therefore, the findings combined are mixed and inconclusive suggesting the need for further investigation.

Hence, the problem of the current study is whether the regulatory reforms on board size, board and audit committee independence, board gender diversity, managerial shareholding, CEO tenure, director‘s compensation, and disclosure of CG information in a firm‘s annual report have a corresponding impact on the equity value multiple of firms listed on the Nigerian Stock Exchange.

1.3 Research Motivation

This study is motivated by the arguments of Nigerian investors about whether the reviewed code of Corporate Governance by regulatory authorities with respect to board size, board and audit committee independence, managerial shareholding, CEO power, director‘s compensation and disclosure of CG information have significant effects on the equity value multiples of Nigerian listed firms.

Other reasons that motivate this study include the following:

First, previous studies that addressed the influence of CG and equity values have focused on either one or a few of the CG mechanisms (Eisenberg et al., 1998; Miller & Triana, 2009; Rosentein & Wyatt, 1997; Yermack, 1996). In contrast to the above studies, this study extends the literature by expanding the knowledge through the incorporation of eight CG variables and their effects in predicting the value of equity. The eight CG variables are board size, board and audit committee independence, board gender diversity, managerial shareholding, CEO power, director‘s compensation, and disclosure of CG information in firm‘s annual report.

The selection of the above mentioned CG variables is based on the regulatory reforms carried out to address lapses in the 2003 SEC code of CG.

Second, previous research measured compensation of directors by the amount of pay (Mehran, 1995; Brick, Palmon, & Wald, 2006; Ryan & Wiggins, 2004). In this current study, the compensation of directors is measured as abnormal director‘s compensation (ADC). Abnormal director‘s compensation refers to the pay that directors receive above their peer group sector average. This is because good pay encourages directors to enforce sound CG in the company. Abnormal director‘s compensation has been studied in the United States with respect to takeover target companies (Agrawal & Walkling, 1992). However, to this researcher‘s knowledge, this current study is a pioneering attempt to test abnormal director‘s compensation on equity value multiples.

Third, with respect to the Nigerian business environment, investments analysts have used value multiples in the valuation of equity for both growth and value investors. Growth investors are those investors who like to buy stock with high prices, while value investors invest in firms with low stock prices. CG is seen as a global issue in corporate management and the protection of stakeholder‘s interests. Yet, no study so far has examined the combined effects of a firm‘s CG in predicting the equity value of firms listed on the Nigerian Stock Exchange (NSE). According to Okike (2007), Nigeria, with its emerging economy, is the most populous country in Africa. Therefore, adherence to global CG standards and codes of best practices must reflect

its peculiar socio-political and economic settings. Also, providing sound CG that gives correct assurance to prospective and existing shareholders (domestic and foreign investors) is critical to the country‘s development.

Fourth, a general argument exists amongst investment analysts on whether a firm‘s governance practices should determine investment decisions. For example, some studies have established a strong positive and significant relationship between a firm‘s CG practices and a firm‘s value (Alimehmeti & Paletta, 2014; Black et al., 2006; Black & Love, 2005; Gompers et al., 2003). However, other studies have reported a negative and significant relationship between the governance practices of firms and their value (Bhagat & Bolton, 2008; Gherghina, 2015; Yeh et al., 2008).

Based on the research problem and motivation of the study discussed above, this study seeks answers to the following research questions.

1.4 Research Questions

In line with the problem and research motivation stated above, the study seeks to answer the following research questions:

1. Does board size have a relationship with the equity value multiple of Nigerian listed firms?

2. Does board independence have a relationship with the equity value multiple of Nigerian listed firms?

3. Does board gender diversity have a relationship with the equity value multiple of Nigerian listed firms?

4. Does audit committee independence have a relationship with the equity value multiple of Nigerian listed firms?

5. Does managerial shareholding have a relationship with the equity value multiple of Nigerian listed firms?

6. Does chief executive officer power concentration have a relationship with the equity value multiple of Nigerian listed firms?

7. Does abnormal directors compensation have a relationship with the equity value multiple of Nigerian listed firms?

8. Does corporate governance information disclosure have a relationship with the equity value multiple of Nigerian listed firms?

1.5 Research Objectives

Based on the research problem, motivation and research questions stated above, the major objective of this study is to examine the impact of corporate governance on the equity value multiple of Nigerian listed firms. To achieve the above objective, the following are the sub-objective:

1. To examine the relationship between board size and the equity value multiple of Nigerian listed firms.

2. To examine the relationship between board independence and the equity value multiple of Nigerian listed firms.

3. To examine the relationship between board gender diversity and the equity value multiple of Nigerian listed firms.

4. To examine the relationship between audit committee independence and the equity value multiple of Nigerian listed firms.

5. To examine the relationship between managerial shareholding and the equity value multiple of Nigerian listed firms.

6. To examine the relationship between chief executive officer power concentration and the equity value multiple of Nigerian listed firms.

7. To examine the relationship between abnormal directors compensation and the equity value multiple of Nigerian listed firms.

8. To examine the relationship between corporate governance information disclosure and the equity value multiple of Nigerian listed firms.

1.6 Contribution of the Study

A number of studies have been conducted on CG and a firm‘s value at different times and in different parts of the world. However, most studies documented in accounting and finance literature have focused on CG and other performance measures that include return on assets, return on equity, return on investment, sales growth, profitability and Tobin‘s Q amongst others. Thus, by studying CG and equity value multiples, the study has great significance and contributes to stakeholders including shareholders, firms, regulatory authorities, the empirical body of literature and methodology.

1.6.1 Contribution to Shareholders

The findings of the research have great significance with respect to the perceptions of shareholders about the role CG mechanisms play in improving the reliability of corporate financial reporting procedures and the information of accounting-based multiples. Measuring CG in relationship to equity value helps shareholders assess the capability of managers in managing their investments. This is because managers sometimes alter accounting information for their respective interests. Thus, the study contributes to shareholders by evaluating information and the reliability of accounting -based multiples in relationship to CG. The findings of this study open new opportunities for shareholders to improve their investment decisions.

1.6.2 Contribution to Firms

A firm CG is an issue that is related to the way and manner in which companies are structured and administered, for example, management, owners, boards and committees. Companies need to satisfy owners and attract more investors by adopting appropriate CG practices. The result of this research has highlighted the significance of CG practices in predicting the value of equity. Measuring the impact of CG mechanisms on EVMs also enables companies to assess the effectiveness and efficiency of corporate governance in improving the financial stake of the shareholders. Once investors are able to obtain reliable information about corporation performance, their response to financial and market performance measures can increase.

1.6.3 Contribution to Regulatory Authorities

Issues of CG practices rules and regulations in any part of the world require evidence that CG systems are effective in protecting stakeholder‘s interests. This study has provided empirical evidence about the roles of CG in increasing the value of equity holders. New CG regulations and amendments of existing CG best practices should be founded on empirical evidence rather than on politically driven debates. The outcome of the research has provided an understanding to regulatory authorities of companies in Nigeria about the role of CG in predicting the value of equity.

1.6.4 Contribution to the Literature

The findings of the study have contributed to the body of empirical literature in the following ways:

1. To the best knowledge of the researcher, no prior study empirically and theoretically investigated the relationship between various CG mechanisms and all the four equity value multiples. Thus, the study contributes by providing theoretical evidence on the relationship between corporate governance variables and equity value multiple of Nigerian listed firms.
2. The results have given an additional understanding on the reasons behind the inconclusive findings concerning the CG and performance relationship.
3. Previous studies have measured directors‘ compensation by aggregating the amount of pay to the directors including salaries and other incentives accruing to the directors (Mehran, 1995; Ryan & Wiggins, 2004; Brick, Palmon, & Wald, 2006). However, in this study, abnormal director‘s compensation was determined by computing director‘s compensation above the peer group sector average. The expectation is that additional incentives to directors will enable them to create more value for the company. This is also a unique contribution.
4. The results of the research have also provided further support for the external validity of previous studies through analysis of different economic settings, the Nigerian experience, and assessing the strength of the theories used.

5. Prior studies measured CEO power in two ways: 1) the situation in which the CEO is also the chairman of the company and 2) the number of years spent as the company‘s CEO. However, the current study measured CEO power as dummy of 1 for CEO serving above 4 years while 4 years and below 0. The expectation is that, CEO assumes more power as the tenure increases.

1.6.5 Contribution to Methodology

Prior studies on CG and equity values have focused on one or two of the equity value multiples: price-to-earnings, price-to-book value, price-to-cash flow, or price-to-sales multiples. However, this research study used all dimensions of the EVMs by using principal components analysis (PCA). For example, Lys, Naughton, and Wang (2015) applied PCA to condense 10 corporate social responsibilities CSR to 3. But, to the best of this researcher‘s knowledge, no prior study used PCA to generate one EVM.

Similarly, one common concern with research on CG and value is the possible presence of endogeneity. Specially, where positive causality is established from performance to good CG, the estimated coefficient on CG might become biased, hence rendering the prior results unreliable. This study used the generalized method of moment‘s estimation (GMM) in solving the problem

1.7 Scope of the Study

The study covers all the EVMs because they capture essential aspects of company financial statements. The EVMs also provide a more accurate valuation of equity compared to enterprise value multiples (Schreiner, 2007). The selection of firms is based on the availability of information in annual reports for the equity value multiples. The study also concentrated on mechanisms of CG in the literature including board size, board independence, board gender diversity, audit committee independence, managerial shareholding, chief executive officer (CEO) power concentration; abnormal directors‘ compensation and CG disclosure.

The selection of above CG mechanisms is based on availability of information in the environment of the study. The information on the variables of the study is available in the annual reports of firms listed on the Nigerian Stock Exchange. In addition, the choice of the above-mentioned CG variables is based on issues observed in CBN, SEC, and NAICOM codes formulated for implementation by firms. For example, the codes have recommended different board sizes, an independent board, and ownership by management, independent of an audit committee, power of the CEO in relationship to tenure, the compensation structure for directors and the provision of CG information in annual reports.

The choice of audit committee independence is based on regulatory recommendations of the SEC, CBN, and the NAICOM that all functions of an audit committee are related to its independence including, other technical statutory

functions. Furthermore, global financial crises have greatly affected Nigerian investors. The crises have resulted in the loss of huge sums of money for both local and foreign investors (Brambila-Macias & Massa, 2010; Sanusi, 2010). Thus, the study covered the post-global financial crises period (2009-2013), as this was the period in which investors began paying more attention to CG practices as a result of corporate failures. The period of 2009 onward is regarded as the post-global financial crises period, therefore, making it very important for this study. The study covered all firms listed on the NSE as of 31st December 2013.

1.8 Organization of the Study

The study is organized into six chapters. Chapter One contains the introduction to the study; the chapter clearly explained the study‘s focus. Chapter Two explains the concepts and reviews the relevant literature and underpinning theories. Chapter Three presents the hypotheses and model. Chapter Four explains the methodology of the research. Chapter Five presents the results and discussions and Chapter Six summary, conclusion and recommendation of the research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The previous chapter discusses the direction and focused of the research, research problem, research questions, research scope, significance and objective the study seek to achieve. This chapter extensively conceptualizes Equity Value Multiple (EVM) and Corporate Governance (CG mechanisms). Equity value multiples explained in the chapter includes; price-to-earnings, price-to-book value, price-to-cash flow and price-to-sales.

The CG mechanisms explained in the chapter, includes, board size, board independence, board gender diversity, audit committee independence, managerial shareholding, chief executive officer power, abnormal directors compensation and CG disclosure information and transparency. The purpose is to ensure that, the review is more comprehending. The CG literatures that are important to the problem under study were thoroughly reviewed. The studies conducted on the relationship between CG and performances were critically reviewed. The review focuses more attention on problems, methodologies and findings/results of preceding studies to justify the need for our study. Finally, the chapter presented established theories of the study.

2.2 Background Information of Nigerian Business Environment and CG

The Nigerian business setting is dominated by private. The private sector capital is held by institutions, groups, and private individuals. The private sector capital is managed by managements and the company board of directors on behalf of shareholders (owners) who are usually spread across the country and abroad. Nigeria is the most populous country in Africa with an estimated population of about one hundred and seventy eight (178) million people based on 2014 world population review reports. According to NSE 2010 annual reports on the country capital market, Nigerian capital market is rank second in Africa after South Africa and largest in the sub-Sahara region. Nigeria is blessed with a lot of natural resources including oil which makes the country one of the oil exporting countries OPEC. Therefore, strong corporate governance in Nigeria is important considering its vast population and resources in order to better the life of its people.

Corporate governance is an international issue that continues to attract debate amongst practitioners, researchers and the public in virtually every country of the world. Investors and other stakeholders (management, creditors employees suppliers, creditor society, government agencies) increase more concern on the way and manner their corporations are administered. The concern of interest groups in recent time upsurge as a result several corporate scandals that lead to the collapse of the affected corporations. In Nigeria, similar scandals were also recorded in corporate

organization especially financial institutions that include banks and insurance companies.

The National Technical Working Committee NTWC of Nigeria in 2009 attributed failure of corporate organizations to poor CG practices and insider- related abuses. In order to meet up the global challenge in governance best practices and protect the interest of investors (local and foreign). Government regulatory institutions issued guides for corporate best practices. The guides are known as the corporate governance codes. The codes includes CG code for Nigerian listed firms issued by the SEC in 2003 and amended 2011, code of CG for banks after consolidation issued by the CBN in 2006 and code of CG for insurance companies issued by the NAICOM 2009 to carter for the country‘s insurance companies.

However, it is important to note that the codes are not rule based rather they are principle based like those of the United Kingdom. Compliance with various provisions of the codes is not a compulsory, but companies are mandated to disclose the level of compliances with the codes and state reasons for instances of non-compliance. In the case of banks, the Central Bank of Nigeria CBN can enforce sanctions for erring banks in regards to the CG compliance. The following sub-section explains various reasons specified by the regulatory authorities in issuing the codes in their respective sectors.

2.2.1 The Securities and Exchange Commission of Nigeria (SEC)

The SEC of Nigeria is regarded as the apex regulatory authority in the capital market operations. The body was established in 1962. Its obligation was to examine requests from companies looking for capital in the capital market. The SEC started as an advisory body of Central Bank of Nigeria CBN before attaining the full status of regulatory authority of the country capital market in 1973. The Commission issued a code of CG for all listed firms in Nigeria effective in 2003. However, as a result of increased challenges and weaknesses of the 2003 code, the commission establishes a committee to review the area of lapses of the 2003 code. The Committee was particularly saddled with the responsibility of identifying constraints and weaknesses of the 2003 code, recommending ways of ensuring good CG in the country listed firms and means of ensuring greater compliance with the code in order to align the code with global best practices.

According to the SEC, the objective of the review is to ensure the highest level of transparency among listed companies in Nigeria. The Committee after concluded its assignment comes up with the revised code known as SEC Code of CG for Nigerian listed firms 2011. According to the commission, the provisions of the code apply to the following categories of companies:

i. All public listed companies in the country capital market, which is the Nigerian Stock Exchange (NSE)

ii. All companies seeking to raise money in the capital market through securities issuance.

iii. Other public listed companies seeking to be listed on the stock market.

It is also important to note that compliance with the SEC code is principle based and not rule based. However, companies are required to include the level of their compliance with the code in their respective annual reports and state reasons for violating any section of the code.

2.2.2 The Central Bank of Nigeria (CBN)

The CBN is the apex regulatory body in the country's banking industry. CBN was established the 1958 Act of Parliament. Its function includes, ensuring monetary stability, issuing of the currency, maintaining of external reserve and promoting sound financial system among others. The CBN in 2006 issued code of CG for banks after consolidation that increases the capital base of the banks from 2 billion to 25 billion Nigerian Naira. The following reasons were highlighted by the CBN for having separate code of CG specifically for banks looking at their importance in the economy.

i. Financial scandals that leads to the collapse of corporate organization internationally and locally (including Nigerian banks).

ii. Retention of public trust in the banking industry because of its role in funds mobilization, credit allocation to the needy economic sectors, settlement of payment and monetary policy implementation.

iii. Survey by the SEC of Nigeria in 2003 that only 40% of listed companies including banks have CG structures in place. According to the same SEC survey, virtually all the corporate collapses are attributed to poor governance.

iv. Consolidation of the banks necessitated the need for strong CG because increase in their size has a corresponding increase in complexity of their management.

2.2.3 National Insurance Commission of Nigeria (NAICOM)

The NAICOM is the regulatory authority in the Nigerian insurance industry. The commission derived its regulatory power from the NAICOM Act of 1997 and the Insurance Act of 2003. The major objective of NAICOM is to ensure the effective management, supervision and regulation of insurance business in Nigeria (NAICOM, 2009). The insurance industry plays vigorous roles in the economy of a nation because of risk and uncertainty in the corporate world. CG is inevitable in the Nigerian insurance industry considering the critical role of the sector to financial market stability, security and economic development (NAICOM, 2009). The CG code was adopted in 2009 to guide the operation of Nigerian insurance companies in line with international best practices in the insurance business. NAICOM (2009) states that CG contains those arrangements, practices and procedures introduced by

the board of directors and individuals duly appointed by the shareholders to manage the business of the company. CG must ensure accountability, transparency and increase in the value of shareholders.

The frameworks of CG introduce by the NAICOM aims to promote transparency and efficiency of insurance business in Nigeria. The code also provides clear division of responsibilities between different stakeholders that includes shareholders, management, creditors and other players in the industry. The code specifically addresses the following issues:

i. Compliance to the relevant regulations and guiding principles of insurance business in Nigeria.
ii. Differences that exist between the board of directors and management of insurance business in Nigeria.
iii. Ineffective oversight and functions of board directors of insurance companies in Nigeria.
iv. Fraudulent practices among board members, managements and staffs of insurance companies in Nigeria.
v. Domineering influence of chairmen or chief executive officer/managing director CEO/MD, especially in insurance companies dominated by family members.
vi. Weak systems of internal control.
vii. Inactive shareholders.

viii. Influence of block shareholders over minority shareholders.

ix. Ineffectiveness of company's management information and communication system.

x. Increasing public awareness on the importance of the insurance sector in Nigeria.

xi. Conflict of interest among different interest groups.

2.2.4 The Nigerian Stock Exchange (NSE)

The NSE was founded in 1960 and today serves as the second biggest financial centre in Africa. The NSE is a company registered limited by guarantee, is approved under the Investments and Securities Act (ISA) under the regulatory supervision of the Nigerian SEC. The NSE has affiliations with African Securities Exchanges Association (ASEA), International Organization of Securities Commissions (IOSCO) and the World Federation of Exchanges (WFE). The NSE is empowered by the SEC to carry out the following functions- listing of securities of public companies; trading services; dissemination of market data/information; provision of market indices and other functions approves by the SEC.

On its part, the NSE continues to develop ways to meet the desires of its esteemed customers, and to attain the maximum level of competitiveness. In about 208 listed securities as at December 2012, the Exchange operates fair, orderly and transparent markets that bring together the best of African enterprises, local and global investing

communities. The NSE is composed to lead the acceleration of Africa's economic growth and development and serve as a gateway into the African Markets (N.S.E, 2012). It is important to note that, listed securities in Nigeria are traded on the NSE trading floor through the Central Security Clearing System CSCS.

2.2.5 Development of CG codes in Nigeria

The Securities and Exchange Commission (SEC) in partnership with the Corporate Affairs Commission established a 17-member Committee on June 15, 2000. The Committee, headed by Atedo Peterside (OON), was mandated to identify weaknesses in corporate governance practices in Nigeria and fashion the necessary changes to improve the country‘s corporate governance. Membership of the committee was carefully selected to cut across all sectors of the economy and included members of professional organizations, organized private sector and regulatory agencies. The outcome of the committee work was adopted by the board of SEC and named as the Code of Corporate Governance for listed firms in Nigeria and became effective in 2003. However, despite the 2003 CG code, Nigerian investors, particularly equity investors, suffered severe losses due to the 2007/08 global financial crises.

The 2007/2008 global financial crises prompted the Nigerian Securities and Exchange Commission to constitute a committee to review the 2003 Code of Corporate Governance for listed firms. According to the commission, the objective

was to identify areas of lapses in the previous code and to adopt measures to avoid such a precipitous decline in the future value of equity. Thus, the code was modified in 2011 to meet increasing challenges. On its part, the National Insurance Commission (NAICOM) issued a CG code for country‘s insurance companies in 2009. This, according to the commission, was necessary considering the complex nature of insurance companies with respect to the national economy. Similarly, the Central Bank of Nigeria (CBN) issued a code of corporate governance for banks in 2006 after banking consolidation.

The key areas affected by the revised code were the following: board size, board independence, board gender diversity, audit committee independence, managerial shareholding, chief executive officer (CEO) tenure concentration, director‘s compensation and CG disclosure in the annual reports. The revised SEC Code of 2011 allowed firms to have a board size relative to the scale and complexity of their operations unlike the previous code that limited board size to maximum of 15. The issue of board independence was also revisited to conform to contemporary challenges. The SEC 2011 revised code make a clear distinction between non-executive directors and independent directors and listed firms are required by the revised code to have at least 40% of their members to be independent.

Similarly, revisions were also made to audit committee independence. The new code stressed that independent directors should serve on the audit committee rather than just non-executive directors to make the committee truly independent. On the issue

of a gender diversity board, the 2003 SEC code did not make any provision for gender in the composition of corporate boards. But, the 2011 revised code of SEC recommends said that listed firms should consider gender diversity in the composition of their respective boards. The revised 2011 SEC code required detailed disclosures of managerial share ownership. In fact, in the case of CBN code approval is required for managerial ownership of 10% or more. In the 2003 code of SEC, no separation of the chairman and the CEO was mandated and the CEO did not have a specific fixed tenure.

However, the 2011 revised code separated the position of chair and that of the CEO and the tenure of the CEO was fixed for 4-year periods, which could be renewed based on performance after the first 4 years. The SEC revised code of 2011 further states that a company‘s compensation policy should be designed to provide appropriate compensation to directors and the compensation paid to them must be published in the company‘s annual report. Finally, listed firms are required by the revised codes particularly, the SEC and the CBN codes, to provide information on their board size, board and audit committee independence, board gender diversity, managerial shareholding, chief executive tenure, directors compensation in their annual reports and provide reasons for instances of non-compliance.

2.3 Equity, Shareholders and Equity Value Multiple

According to Pope and Puxty (1991), equity is the residual attained by ordinary shareholders after liabilities are subtracted from resources and the associated. They stated that, income definition shows the role and significance of equity in the accounting process in practice. The introduction of company laws in different countries has accorded an exceptional position to ordinary shareholders. The ordinary shareholders are also known as equity holders, stockholders or owners of the company. The statute law is founded in the idea that, the aim of a company is to assist the members (shareholders) to develop means of maximizing their investments (profits). They added that, UK Companies Act of 1985 provides that when a company completes all process of incorporation, the company is thus structured in terms of the ordinary shareholders rights. The ordinary shareholders are the company owners. The other stakeholders (management, employees and others) constitute only avenues through which shareholders run the activities of the company.

In normal condition, all residual power in a company‘s strategic decisions is retained by the shareholders. They are only the ones to vote in the company general meeting, appoint directors or terminate their appointment, approve company‘s auditor‘s appointment and grant approval for payment of dividends proposed by the management. As long as the company remains as a going concern business, apart from precise powers conferred by agreements in debt contracts or the company articles of association, the powers of creditors and other contributors to the company

are non-existent. However, they have right to withdraw the funds contributed. The debenture holders and suppliers also have the right to withdraw their supplies (Pope & Puxty, 1991).

According to Pope and Puxty, those who provide capital other than equity shareholders have to depend on constraints agreed at the period the capital is provided. While equity shareholders in norm have the opportunity of influencing management policy through their ownership right as conferred to them by law. The Nigerian company law on the other hand is a replica of British company law in regards to ownership rights of shareholders therefore the same applies. According to Souzzo et al. (2001), multiple refers to the expression of the market value compare to a key measurement that is presumed to relate to that value (example earnings, sales and book value). The above authors also mentioned that, for a measurement to be valuable, it most has a rational relationship with the observed market value.

Souzzo et al. (2001) and Schreiner (2007) divided multiples into two basic types- enterprise value multiple and equity value multiple. Enterprise multiples are used to express the value of the entire enterprise value and all entitlements of the business, proportional to a value driver that relays to the whole enterprise, sales for example. Equity value multiple on the other hand, is used to express the value of equity holders claims on the cash flow and assets of the business. Thus, equity value multiple expresses the value of this due compare to an indicator that applies to

shareholders only, such as earnings (the residual after minority shareholders, creditors, and other non-equity claimants are paid).

2.3.1 Enterprise Value Multiples

According to Sehgal and Pandey (2010), multiples are popularly used by investment/portfolio analysts in buying and selling of shares. They used multiples to the appraise value of a firm‘s price per share, that is, the firm‘s equity value per share. However, some corporate managers and analysts are more interested in evaluating the total value of the company, reflecting both debt and equity. In this circumstance the best multiple for the evaluation is enterprise value multiple. The enterprise value multiples are used by corporate managers and investment analysts especially when valuing mergers and acquisitions. The most popular enterprise value multiple known in the literature includes, enterprise value to earnings before interest, tax, depreciation and amortization (EV/EBITDA) multiple and enterprise value to sales (EV/S) multiple. The EV/EBITDA multiple indicates what the acquirer will pay and know whether is over or under-valued. Many investment analysts usually consider EV/EBITDA multiple in their investment and portfolio analysis.

2.3.2 Equity Value Multiples

Equity values multiples on the other hand are also referred to as price multiples or market multiples. They are defined as, the proportion of a market price adjustable to a specific value driver (for example earnings, cash flow, book value and sales) of a

company. Thus, EVM represent the summary methods, which inform about the market‘s opinion of a firm‘s market valuation compared to its competitors (Penman, 2006). The use of price or market value as the numerator is what differentiate between equity value multiples and financial accounting ratios (growth ratio, profitability ratio, liquidity ratio).

The terms such as P/E ratio, P/BV ratio, P/S ratios, P/CF are very common in some literatures, for example in the studies of (Aras & Yilmaz, 2008; Gupta & Modise, 2012). However, this study used a more precise term that is used in the literature and to differentiate the multiples from the normal accounting ratios. The terms used in the literature are P/E multiple, P/BV multiple, P/S multiple, and P/CF multiple to avoid misinterpretations. They are used by Sehgal and Pandey (2010); Pandey, (2013); Liu et al. (2002) and Suozzo et al. (2001).

Equity value multiples provide information on a firm‘s financial and operating performance at any particular point in time. The equity value multiples are usually based on either the market value/price variable or the type of value driver used to compute the multiples. Also, equity value multiples are different from Tobin‘s Q, as the latter is used to determine market value of debts and equity to replacement value of the same assets. That is why, during the period of inflation, Q is usually lower than the price to book value ratio. Hence, book value would not reflect the cost that will replace assets, as inflated prices of the firm‘s assets would not reflect the firm‘s

balance sheet. Therefore, the focus of this study is the EVM because of the desire by several investors in knowing the value of their equity instead of the entire firm value.

2.4 Corporate Governance

The term corporate governance is an issue that continues to attract debates among academicians, researchers; market practitioner‘s institutions and the general public. The concept is understood and defined by different researchers; corporate organizations and institutions based on the way they perceived it. The concept of CG has no one single definition that is accepted to all interest group. However, parties involve agreed that governance has to do with the management of corporations as a result of separation between the owners and appointed managers who served as agents of the owners. Some of CG definitions include the following.

CG has conventionally been related to the principal-agent known as an agency problem. The principal-agent relationship arises in a situation where the person that owns a company is not the person who controls or manages its affairs. For example, shareholders or capital providers (principals) employ managers (agents) to administer the company on their behalf. Shareholders need managers that are specialized in human capital in order to generate investment returns, and managers require shareholders‘ funds as shareholders require their services (Maher & Andersson, 1999).

Coşkun and Sayilir (2012) defined CG as the relationship that exists between the organization and its various stakeholders. A number of processes are utilized in managing their relationship and they include laws, regulations and voluntary practices. The increasing acceptance and spread of CG practices mostly stem from benefits expected as a result adopting the measures mentioned at both micro and macro level. The term CG is all about building operational mechanisms and methods, in order to satisfy current social expectations or the satisfaction of anticipations of shareholders (Letza, Sun & Kirkbride, 2004).

Gompers et al. (2003) defined corporations as republics; the last power rests with the electorates (shareholders). The electorates elect their representatives (company directors) and delegate most of the decisions to administrators (company managers). Like in state, the real power-sharing association depends upon the exact guidelines of governance. One end which slopes toward democracy system, preserve lesser power for the managers and authorities shareholders to quickly and simply replace directors where necessary. While the other ends, that slopes toward autocracy, reserved broad power for managements and places tough limitations on capability of stockholders‘ to change directors. Actually, stockholders accept restrictions of their hopes towards wealth maximization, but not many are known about the best balance of power. Similarly, CG comprises of the contractual, legal and understood frameworks that explain the exercise of control within a corporation, that impact decision making, that permit the stakeholders to accept their responsibilities to the

corporation, and that guarantee their rights and respect for their privileges (Jean-Paul, 2005).

Sanda et al. (2005) sees corporate governance as means through which all interest groups concerned in the company management (stakeholders) attempt to make sure that, managers and insiders take necessary measures or implement machinery that safeguards the interests of all stakeholders of the company. That type of procedure is required due to management and ownership separation.

Daines (2001) observes that ownership separation from control generate possible conflicts of interest among the parties. The reason is because both stockholders and managers want wealth maximization in their favour. Hence, Daines define CG as set of mechanisms through which decision makers make company decisions that protect the interest of capital suppliers. The boards of directors of the company who perform their duty in accordance with shareholders interest who entrusted them with the power to employ, reward, monitor and sack any company staff were required for maximization of stockholders value.

La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000) defined CG as established machinery through which outside investors (stockholders) protect themselves against insiders (managements) expropriation. For example, management might steal firm‘s profits; sell the assets of the company to themselves or to another firm less than the

market values; divert chances of the businesses; assigning family members to key posts though are unqualified to hold those positions.

Zingales (2000) describes CG as a difficult set of controls which outline the ex-post trading over the quasi-rents created by a firm. Note that, capitals allocation; the board of directors; managerial compensation packages; pressure from labour market competition; institutional investors, product market competition, company structure, among others, could all be anticipated as institutions which affect the procedure of quasi-rents distribution.

Shleifer and Vishny (1997) view CG on the perspective of issues that treat the ways in which providers of finance to companies (shareholders) guarantee themselves of getting returns on their investments. In addition, Garvey and Swan (1994) explained that, CG decides how the company‘s top decision makers (executive and non-executive directors) actually manage the contract that is entered between them and stockholders (owners). They added that CG matters only when such contractual associations are incomplete, and the consequence is that executive directors no longer look like the Marshallian entrepreneurs.

The concept of corporate governance can be viewed from the perspective of internal and external mechanisms. Internal corporate mechanisms are those actions that affect how an organization is governed internally; they include managerial efficiency; CG structures; ownership structure; boards and committees. While the external corporate

governance mechanisms involve external influence that affects how the company is governed. External CG mechanisms include, the legal system of the environment where the company operates, regulatory authorities, standard setting organizations, labour rules, creditors and media (Weir et al., 2002).

The internal CG mechanisms are required for the external mechanisms to function, leading to complementary association between these CG mechanisms (Nair & Cremers, 2005). The concept of CG can also be viewed from the perspective of CG structures and CG procedures. The structured CG includes board size, board composition, board independence, committee structures, director‘s executive and non-executive‘s experiences, compensation and tenure amongst others. On the other hand, CG process includes norms and cohesiveness.

Deducting from the explanation above, CG involves internal and external mechanisms, structure and process whether the principle or rule that guide how a corporation is governed for maximum shareholders returns. In the context of this study, internal structured CG mechanism will be the focus. This is because external CG mechanisms depend on the internal mechanisms to function well as documented by Nair and Cremers (2005). In addition, information on the internal CG mechanisms is the information available on the companies that form the focus of the study (Nigerian listed firms). The information on labour rules, standard setting organizations, legal system and service providers (external CG mechanisms) and

relationship with companies cannot easily be found in published annual reports of companies.

Furthermore, information on the issue of board structure is available in the annual reports of the listed firms in Nigeria. For example information on the study variables board size, board independence, board gender, audit committee independence, managerial shareholding, directors compensation, chief executive officer power and disclosure of CG information are available in the firm‘s annual reports. The issues discussed serve as reasons for the researcher to focus on the structured corporate internal mechanisms.

2.5 Empirical Studies on CG mechanisms and Firm Performance

The previous studies on the CG mechanisms, board size, board independence, board gender, audit committee independence, managerial shareholding, chief executive officer power concentration, director‘s compensation and CG disclosure were extensively reviewed. The objective of the review is to provide insights on previous literature efforts and establish gab in the body of knowledge that justifies the need for this study. The issues in respect of aforementioned mechanisms of CG codes of CBN, SEC, and BAICOM are additionally highlighted. The objective also, is to create links between the variables of the study and Nigerian economic setting.

2.5.1 Board Size

The board of a public corporation is the most important CG monitoring mechanism (SEC, 2009). The board is responsible for the establishment of strategic goals and a set of corporate values with clear lines of responsibility for the attainment of banks objective (CBN, 2006). The framework of CG shall be safeguarded on an active and responsible board of directors that are nominated and appointed to ensure strategic direction and effective administration of the company (NAICOM, 2009). A board is responsible for the overall performance and affairs of a company. It is the duty of the board to ensure that firms, human and financial resources are efficiently and effectively managed towards attaining company goals (SEC, 2009).

The SEC Code of best practices issued in 2003 and amended in 2011 states that, board members of listed firms in Nigeria shall not be less than five (5). The code did not specify the maximum number of board members of listed firms. In the case of banks, the code of CG for banks issued by the CBN in 2006 provides that, banks operating in Nigeria must have a maximum board size of 20. The code did not provide the minimum number of board members. In addition to the SEC and CBN codes, the NAICOM also issued a code of CG for insurance companies operating in Nigeria. The code provides that the minimum number of board members of the insurance company should be seven (7) and a maximum of fifteen (15).

The SEC code covers all listed firms irrespective of sectors while CBN and NAICOM codes are industry-specific. As a result of various guidelines issued on board size, public companies have different board size. Companies need to abide by the SEC code on one hand and their industry specific codes. The issue of board size has become an important factor in Nigerian company administration looking at roles conferred to the board by all the issued codes. In an attempt to increase the value of shareholders and other stakeholders of public corporations, several researchers, corporate analysts, investors and interest groups argued on best board size. Studies and arguments produce mixed results on the exact number of company board members. This study reviewed the following studies on board size and performance:

As highlighted earlier, numerous studies have been conducted on board size as a mechanism for corporate monitoring and firm performance. However, studies produce conflicting results on what number represent an effective and efficient board. For example, Jensen (1993) suggests larger board size as a better monitoring mechanism for corporate value. The researcher argues that larger board has a range of expertise to support the company makes better investment decisions, and is hard for the chief executive officer of control. To support Jensen, Smith et al. (1994) study UK firms board structure and found that higher board size have the potential of providing a better group of knowledge and proficiency to the board, the reason is of because of their large number; some of them may possibly have wider variety of credentials that may symbolize more specified knowledge and skills, thus are better

prepared compared to smaller board size to process vast volume of information for the firm overall benefit.

A large board is significantly related to the performance of sampled United State (US) commercial banks before the global financial crises of 2008-2009 (Switzer & Wang, 2013). Board size is established to be positively related to firm value of 257 selected US firms for the period from 1994 to 2000. In addition, large boards are reported to be positively related to yearly stock returns measured by market to book value (Larmou & Vafeas, 2010). Larger board size increases company performance and value of shareholders for a sample of 103 firms in four African countries namely, South Africa, Nigeria, Ghana and Kenya for the period from 1997 to 2001 (Anthony, 2007). Also, Mat Rahim, Mahat, Md Nassir, and Yahya (2015) examine board size and the performance of 200 selected Islamic banks across 21 countries during the 2014 cross-sectional analysis, the result revealed a significant relationship between board size and Islamic banks performance.

Similarly, Linck, Netter and Yang (2008) reported that average increase in the number of board size is positively and significantly related to firm value amongst 7,000 sample firms in the US during the period of 1990-2004 pre- and the post-SOX. Other studies in favour of a larger board size are Black et al (2006) who reported a significant positive relationship between Korean CG Index (board size) and a price to sales of firms listed on the Korean stock exchange during 2001. Adams and Mehran (2003) also report that larger boards increase monitoring efficiency of the

management and provide for improved board expertise. They argue that a larger board size may increase the level of managerial monitoring. Board size is significantly and positively associated with bank‘s financial performance of Turkish firms (Isik & Ince, 2016).

According to Morey, Gottesman, Baker and Godridge (2009) in a study of 200 firms from 21 emerging markets, report a significant positive relationship between board size and higher market value measured by price to book value of the sampled firms. Board size has a positive and significant association with the firm value (Alimehmeti & Paletta, 2014).

In contrast to the above findings, other studies suggest small board size, for example, Eisenberg et al. (1998) studied the relationship of board size and declining company value. The study discloses that larger boards have the possibility of being slowly towards decision making, and thus could lead to changing problem. A small board size inclines to be less active because it is simple for the influential CEO of control. Hence, optimum board size is required, a board that is not too small and not large. Small board size has positive demonstrating effects on the privatized company‘s performance in Jordan (Al-Smadi, Mond-Saleh, & Ibrahim, 2013). Also, Lipton and Lorsch (1992) in a study of some listed firms in the United State, discovers that large company‘s boards are less effective and easier to be controlled by a powerful CEO. When a company‘s board grow excessively large, it becomes difficult to co-ordinate its actions and thus posing more problem.

To support Lipton and Lorsch, Yermack (1996) establish that for large United State industrial corporations for the period of 1984-1991, the market values of firms with small board size are higher compared to firms with large boards. Similarly, Mak and Kusnadi (2005) concured with the above findings in their study of firms listed in Malaysia and Singapore. They found that firm valuation is higher when board size is small. For example, if a firm has five directors, the number is considered fairly small in their markets. The study of Eisenberg et al. (1998) also reported a negative relationship between firm board size and profitability while using the sample of midsized and small Finnish firms in the US. This suggests that effects of board size can exist even in a situation where there is a lesser separation of ownership from management in the smaller firms. In addition, they argue on whether large firm boards, perform better than small boards. They conclude that performance of large and small board depends on the situation such as a firm operational setting, size of the firm, and development of technology.

Hermalin and Weisbach (2001) documented that, board size and other boards features are determined by some endogenously factors, for example, performance of the firm, ownership structure and CEO power. The works of Yermack (1996) states that small boards are more efficient in taking good company decisions and easier to take emergency decisions where the need arises unlike larger boards where formation of a quorum is difficult, even if such decision requires an urgent attention.

Vafeas (2000), suggested a minimum board size of five (5) performs better in terms of market valuation of 307 sampled Forbes firms and important corporate decisions can be taken since members can easily meet within the shortest possible period due to their limited number. Small board size has a significant impact on the market to book value of 250 publicly traded listed firms in the UK during the 1993-1994 (Vafeas & Theodorou, 1998). Goosstein, Gautam and Boeker (1994) used selected hospital in the US and reported that large company boards may find it difficult to establish individual relationships which may provide promote cohesiveness. Strong individual interaction among large board‘s members is challenging. This means, the board might develop divisions and coalitions that could increase group rattle and therefore constrain cooperation among the directors.

The studies of Eisenberg et al. (1998) and Hackenbrack et al. (2000) found when the structure of board upsurges, the board might be endangered with traditional dynamic difficulties associated with large groups. In summary, large company board of director‘s become problematic to the management and the board may face difficulties in communication amongst its members. The larger boards might be quiet to have fruitful discussions. Also, having large member of individuals around a table could impede board ability to ascertain, extract and utilize its member‘s potential contributions during the meeting. Bearing in mind the inadequate period available in board meetings, there are possibly too many members of the board to hear from.

Board size has a significant negative impact on the Tobin‘s Q and share return of 2746 sample firms in the UK for the period of 1981 to 2002 (Guest, 2009). Board size is inversely related to earnings before interest tax, depreciation and amortization of 459 sample firms after initial public offering (IPO) from 1996-2011 (Madalina, 2013). Board size as CG monitoring mechanism usually increases in proportion with firm growth over the period of time, board size ensures balance between costs and benefits of monitoring. Therefore, size of firm board depends on the size of the firm (Boone, Casares, Karpoff & Raheja, 2007).

The optimum number of company board directors is a problem for companies. The efficiency is reduced where the number of board of directors of the company is too large. This is because there will be increased difficulty in reaching agreement concerning important decisions. Furthermore, decision-making accuracy is reduced where the number of directors is too small as they may be inadequate discussion of important issues (Chiang, 2005).

Correspondingly, on the relationship between board size and firm value, Amran and Che Ahmad (2009) study the relationship between board dynamics, family business and firm value in Malaysia. Evidence from the study reveals that, leadership structure and board size affect company value. Similarly, board size gives a positive contribution towards improved performance of non-family corporations. The size of the company board is positively associated with performance (Switzer & Wang, 2013).

However, the following studies find no relationship between size of the board small or large and firm value. Dimitropoulos and Asteriou (2010), using of 2000-2004 of Greek capital market data found that board size has no significant impact on the value of shares listed on the Greek Stock Exchange market. Board size has insignificant relationship on the performance of 82 sampled Islamic Financial Institutions IFSs in Golf Countries (Hashim, Mahadi, & Amran, 2015).

Board size has little evidence in predicting impact of firm‘s market valuation, except for small and medium entities and in some particular industry sectors (Di, Christos, Raonic, & Riccaboni, 2008). Board size has no significant association with firm value measured by earnings per share (EPS) (Gherghina, 2015). Therefore, the focus of this study is monitoring role of the board not the size. Thus, board sizes of selected companies would be regressed against the equity value multiple.

2.5.2 Board Independence

The firm board independence is another source of monitoring firm governance practices. The firm board is the most important monitoring mechanism of CG as observed by the SEC. Therefore it independence is critical to the survival and success of corporations. It is the decision of the directors that influence the performance or otherwise of the company. To ensure the independence of the board of directors, NAICOM 2009 recommends the total number of executive directors of

firms should not exceed 40% while the remaining directors should be non-executive to ensure their voting influence overwhelmed that of executive directors.

While code of CG issued by the SEC 2009 suggests that majority of the director‘s should be non-executive directors and among the NED some must be independent. According to the code, an independent director is a director that has no stake in the company and does not represent any interest group. In addition, CBN code of CG 2006 directed that number of NED should be more than the executive directors and at least two must be independent who have no any interest in the bank and appointed by the bank boards.

As a result of different regulatory recommendation (CBN, SEC, and NAICOM) listed firms in Nigeria have different ways to implement the independence of their respective boards. Researchers conducted studies on board independence and performance. However, most of the studies reported a significant relationship between the dependent variable (equity value) and the independent variable (board independence) while others found no relationship between the variables, therefore, making the issue inconclusive. The studies that report positive relationship include the following:

The study of Kenneth et al. (1996) finds a positive and significant relationship between the percentages of outside directors to inside directors and firm performance especially where an outsider is appointed as firm chief executive officer CEO. This

is consistent with the significant role of monitoring the management by outside directors. On their part, Rosentein and Wyatt (1997) reported an abnormal increase in firm value after outside directors (independent directors) are appointed. Similarly, Brickley, Coles and Terry (1994) document a positive and significant stock price reaction once firm‘s boards are dominated by outside independent directors, and negative stock returns where insiders dominated the firm board. Also, Byrd and Hickman (1992) report that the firms market stock price reaction of bidding firms offers is more positive when firm‘s boards comprise outside independent directors. Independent boards lead to more active CEO discipline and monitoring thereby increasing firm value (Guo & Masulis, 2015).

The independence of the board is one of the important CG monitoring. Ratio of outside independent directors produces positive abnormal returns of US industrial firms of 1989-1995 (Fich & Shivdasani, 2006). Consistent with the significance of independent directors on board as monitors, Weisbach (1988) documented that, chief executive officers (CEO) of poorly performing companies are likely to be changed if the company has a majority of independent directors.

The work of Cotter, Shhdasanib and Zennef (1997) analyzes target firms role on the independent of outside directors of the sample firms during takeover challenges. They discover that, boards with a majority of independent directors are more likely to use resistance approaches that enhance shareholder value. Also, fields and Keys (2003), conducted an extensive examination of empirical literatures on the director‘s

independent directors using 70 sample companies in the London Stock Exchange for the period of 1997-2003 and found overwhelming backing from the researchers.

Similarly, Weisbach (1988) and Byrd and Hickman (1992) buttressed the favourable advisory roles and monitoring roles to firm stockholders by independent company directors. Though, there seems no evidence that insider/outsider percentage is associated with company performance (Hermalin & Weisbach, 2001) and that companies with additional independent directors attained improved company profitability (Bhagat & Black, 2002).

On their part, Bhagat and Black (2002) using 934 large US firms from 1985-1995 found a significant positive relationship between board independence and market to book value multiple. Also, Bruno and Claessens (2010) in a study of 2,350 firms from 23 countries from Europe and America reports a significant positive association between firm board independence and market to book value multiple. The independence of firm board is positively related to earnings before interest tax, depreciation and amortization of 459 sample firms after initial public offering (IPO) from 1996-2011 (Madalina, 2013). Board independence has a significant positive association with earnings before interest, tax, depreciation and amortization of 100 samples Danish firms listed on the Danish Stock Exchange in 2004 for cross sectional analysis (Holm & Schøler, 2010).

Moreover, Morey et al (2009), in a study of 200 firms from 21 emerging countries, report a significant positive relationship between board independence and higher market valuation measured by price to book value multiple of the sampled firms for the period of November 2001 to September 2006. The company‘s board independence has a substantial positive influence on the share prices value of 30 sampled firms listed on the Karachi Stock Exchange for 2009-2010 periods (Malik, 2012). Board independence, board size, audit independence have a positive and significant association with the firm value (Alimehmeti & Paletta, 2014).

On the contrary to the above studies that established a positive link between board independence and performance, other studies report little or no relationship between the variables. They include the following: the study of Bhagat and Black (1998) established no evidence that the proportion of independent directors on board affects future company value.

Thus, results of the study did not support the predictable wisdom that higher board independence increases firm performance. Cadbury (1992) recommends the existence of more independent directors in the boards of firms as the report found that, increase in outside directors on board of a company is consistent to an increase in the company board monitoring activity. However, could not produce evidence on whether such an increase in the independent directors has resultant improvement in the value of those companies. Agrawal and Knoeber (1996) observed that company boards that are expanded for political motives which often result in too many outside

directors on the board, do not help in increasing performance of a company. Also, Chen, Cheung, Stouraitis and Wong (2005) in a study of 412 listed public companies in Hong Kong Stock Exchange from 1995 to 1998 found little impact between board independence and firm‘s performance measured by price to book value, particularly firms with small market capitalization. Proportion of independent directors on company board has a negative outcome on shareholders wealth and the economic value addition (Imanzadeh, 2014).

Board independent has little influence upon firm value because of the strong attention of the media and regulators, all corporations moved hurriedly to upsurge the independence of their respective boards and other committees mitigating a cross-sectional effect on firm value (Brick & Chidambaran, 2010). Bathala and Rao (1995) used 800 sample firms by Forbes magazine from 1984 to 1986 to study the influence of independent directors. The study established an inverse association between the percentage of independent directors and several other agency conflicts and equity value of the firm. Thus, present study would empirically investigate the impact board independence as a monitoring mechanisms and equity value multiples of Nigerian listed firms.

2.5.3 Board Gender Diversity

In recent times, there has been increasing demand on the corporations in both the United State of America and the United Kingdom to increase the mixture of their

corporate board memberships. For instance, in the UK, Higgs report (2003) suggested that companies should look at other ways to find and employ non-executive directors (NED) in order to widen the group of talent available, with the confidence that board diversity will provide a more effective company board. According to the report gender issue is one of the most important board diversity. Gender issue continues to attract the interest of researchers, practitioners and the investing public. In Nigeria, SEC Code of CG set guideline for directors‘ selection to include experience and skills, ranges in age and gender composition.

In addition, there is increasing argument of gender representation in company‘s board as both genders have similar rights in the Nigerian constitution. For example, Ejumudo (2013) observed that, gender equality is a critical factor for the development of the country. Equality is needed in both government institutions and public companies. In addition, Farrell and Hersch (2005) document that, number of women serving on corporate boards increased considerably during the 1990s.

Nevertheless, studies conducted on the relationship between board gender diversity and performance of firms produced contradicting results. For example, the study of Farrell and Hersch (2005) report that women tend to serve on better performing firms and significant abnormal returns is recorded when an announcement is made on additional women joining a company board. Similarly, Carter et al. (2003) in a study of African American and Asian American percentage of women on board of American firms, report a significant positive relationship between the percentage of

women or minorities on the board and firm value. Additionally, they found that, the percentage of women and minorities on board‘s increases with firm size and board size, but, decreases as the number of insider‘s increases.

The study of Miller (2009) for Fortune 500 firms, reports a positive relationship between board ethnic diversity on firm repute and innovation. Also, reputation and innovation partly mediate the relationship between board ethnic diversity and company performance. Lastly, the study establishes a positive relationship between board gender diversity, innovation and company value. Firms with a greater number of female directors are implementing restrained towards earnings management practices in the UK (Arun, Almahrog, & Ali, 2015).

The percentage of women and minorities on boards of directors for 127 large US companies during 1993-1998 are positively associated with two financial performance indicators (return on investments and return on assets) (Erhardt, Werbel & Shrader, 2003). The companies with more female directors have more performance in relation to return on equity and Tobin‘s Q (Masulis, Couto, & Francisco, 2015). The proportion of women on company boards and top management has positive impact performance of the firm. This is, after adjusting for numerous features of the firm and causation effects. However, the positive influence of women on directorship and top management intensely depends on their credentials (Smith, Smith & Verner, 2006). Ethnicity has very little effect on firm performance, but gender diversity in large UK sample firms was found to be

significant (Brammer, Millington & Pavelin, 2007). Gul, Srinidhi and Ng (2011) documented that, gender diversity of board members increases stock price through the device of public information disclosure in larger firms and by boosting confidential evidence gathering in smaller firms.

Dezso (2012), used 15 year pool data on the company board and top management teams Standard and Poor (S&P)1,500 firms, found that, female representation in the company top management improves performance. In this regard, the informational and social benefits of gender diversity and the characters associated with women sitting on top management are likely to improve managerial task performance. On their part, Adams and Ferreira (2009) found that, female directors have a significant impact on board inputs and firm performance in selected US firms. Furthermore, female directors on firm boards record more attendance in meetings than their male counterparts. Finally, the study establishes that, women directors on the board are more willing to join monitoring committees of the firm. Shareholders in Spain support firms that increase the number of female directors in their company board‘s membership and the greater diversity in gender is more likely to generate for economic benefits (Campbell & Minguez Vera, 2010).

In a similar study, Ku Ismail and Abdul Manaf (2016) examined market reactions to 127 Malaysian firms towards women appointment in the corporate boards and women‘s attributes including their role towards discharging and monitoring responsibilities to firm‘s value. The result established that investors welcomed the

appointment of women on the corporate board and a positive abnormal return was also observed due to such appointment.

Morey et al. (2009) studied 200 firms from 21 emerging market countries and report a significant positive relationship between board gender and higher market valuation measured by price to book value of the sampled firms. Julizaerma and Sori (2012) examined the benefit of board gender diversity on companies listed on the Bursa Malaysia for the period of 2008-2009; the study suggests that female directorship in the company board may influence company performance.

On the contrary, other studies could not establish any relationship between board gender diversity and firm‘s value. For example, Fenwick and Neal (2001) could not find any significant correlation between group gender structure and market value of equities. To support their findings, Fenwick and Neal, Rose (2007) study sample of listed Danish firms during the period of 1998–2001, evidence from the study show that, Danish boards rooms are to a significant extent dominated by men directors. Yet, the study could not establish any significant linkage between firm value and representation of female on board. Moreover, Marinova, Plantenga and Remery (2010) used 186 listed companies in Dutch and 84 listed companies in Danish to find the relationship between number of women and performance. The evidence obtained from the study reveals that, number of women serving on firm's board have no any significant influence on their performance. Despite, 40% of the companies have at least one woman on board and the average percentage of women is 5.4%. The

finding may be as a result of an insignificant number of women on the board of those companies. They are limited in number, therefore, cannot influence any decision during board meeting.

The discussions above highlighted the findings of previous studies on gender representation in the company‘s board of directors. Most of the studies report a significant positive relationship between performance and women representation, though few other ones could not find a significant relationship between the independent variable (board gender) and the dependent variable (performance). This study tests the relationship between the number of women on board and equity of Nigerian listed firms.

2.5.4 Audit Committee Independence

Audit committee independence is also one of the internal governance monitoring mechanisms that ensure corporations operate in accordance with appropriate laws and regulations upon which they are established. An audit committee monitors the financial accounting practice through interaction with the company board of directors, managements and the external auditors. They also conduct an investigation into certain management estimates and accounting matters to prevent tendencies of fraud. Audit committee mediates between management and the external auditors to ensure all relevant information required by the external auditors are supplied to ease their audit assignment.

To achieve the independence of an audit committee (AC) of listed firms in the NSE, the SEC code recommends the following: at least one member of audit committee should be well-educated; at least one member of the AC should be able to read financial statement and at least one member of the committee should have accounting and financial management knowledge. Similarly, NAICOM 2011 codes recommend that, audit and compliance committee should be headed by an independent director. The code defines independent director as an individual who has no personal interest in the company and represent neither shareholder no management.

In the same way, CBN code 2006 recommends all members of the audit committee should be non-executive director (NED) and ordinary shareholders nominated and appointed at the company general meeting of the bank. According to the CBN code, some members of the audit committee must have knowledge of internal control procedures one of the shareholders appointed should serve as committee chairman.

On the other hand, studies on the relationship between audit committee independence and firm‘s performance on the other produced mixed results. For example, Klein (2002a) in study of firms listed in NYSE during 1990s found board or audit committee independence resulted in increases in abnormal accruals of the sample firms; however, Klein (2002b) found a negative relationship between audit committee independence and abnormal returns. Similarly, Klein (2002b) found no relationship between audit committee independence and creditors demand for

accounting information. Chan and Li (2008) used a sample of Fortune 200 companies find that, the presence of expert independent directors in the audit committee of those companies increases company‘s value.

Analyses by Zhang, Zhou and Zhou (2007) indicated that a relationship exists between audit committee independence and value of firms. The board and audit committee members with corporate or financial expertise are related with firms that have smaller discretionary accruals, furthermore, board and audit committee frequent meeting reduces levels of discretionary accruals in the firms (Xie, Davidson & DaDalt, 2003).

Yang and Krishnan (2005), in a study of 896 samples 1996–2000 reports that earnings management is lower in firms where audit committee members have greater governance knowledge. In addition, the study report that there is positive association between the proportion of independent directors on board and its monitoring committees, and a greater percentage of independent directors on both audit and compensation committees than the full board. Thus, audit committee independence is envisaged to have a positive association between board and monitoring committee independence and firm performance (Cotter & Silvester, 2003). Firms with more effective board and independent audit committee structures, managements are more likely to apprise company earnings estimate, and their estimate is less likely to be precise, it is more accurate, and it elicits a more encouraging market response (Karamanou & Vafeas, 2005). The regulatory guidelines of New Zealand show that

only in firms where majority of the directors serving in the audit committee are independent that are related with the possibility for aggressive earnings management (Sharma & Kuang, 2014).

Moreover, Bruno and Claessens (2010) studied 2,350 firms from 23 countries. The study reports a significant positive relationship between audit committee independence and market to book value multiple for the period of 2003-2005, especially, in countries with good legal requirement for CG practices. Audit committee independence has a significant positive impact on the value of share prices of 30 sampled companies listed on the Karachi Stock Exchange for the 2009-2010 periods (Malik, 2012). Audit committee formation surrounding corporate governance reform in Australia is significantly related to improved earnings for both large and small companies (Christensen, Kent, Routledge, & Stewart, 2015).

In addition, Morey et al. (2009) reported a significant positive relationship between audit committee independence and higher market valuation measured by price to book value multiple of the sampled firms. To support, Black and Khanna (2007) report significant positive relationship between CG measured by audit committee and 4% increase in stock prices of listed Indian firms. There is positive relationship between independence of audit committee and quality of performance(Al-Haddad, Alzurqan, & Al-Sufy, 2011). Audit independence have positive and significant association with firm value (Alimehmeti & Paletta, 2014).

On the contrary, Sunday (2008) found no significant relationship between audit committee independence and the two performance measures profit margin (PM) and ROE of 20 non-financial institutions listed on the NSE during the period of 2000 to 2006. The findings may be a result of inadequate data used in the regression model. Similarly, Chen et al. (2005) in a study of 412 listed public companies in Stock Exchange of Hong Kong from 1995 to 1998 found little impact between audit committee independence and firm performance measured by price to book value multiple. The evidence is more glaring particularly in firms with small market capitalization. Similarly, Lin, Li, and Yang (2006) study features of an audit committee and found them to have no significant impact on the quality of firms reported earnings. Evidence from the study reveals a negative association between the size of audit committees and the firm‘s value.

From the discussion above, most of the literatures reported a positive relationship between the independence of firm‘s firms audit committee and performance. This is in line with agency theory assumption of corporate monitoring as a means of enhancing firm performance. Audit Committee in the context of this study is measured as the proportion of independent directors on the audit committee.

2.5.5 Managerial Shareholding

The ownership of shares owned by management is often suggested as one of CG monitoring mechanism. The stake of management in the company shares encourages

them to ensure success of the company. Management will take appropriate steps to avoid unethical issues which may have a potential consequence on the company value. The NAICOM 2011 code of CG directed that information on each director who owns (5%) five percentages of insurance company shares directly or indirectly must be provided, in addition, to information on shareholders who control the company. In the same way, 2006 CBN codes of CG states that, shareholding above 10% is subject to approval from the CBN. However, the SEC code was silent on the amount of ownership of management.

Researchers argue on the role played by managements towards ensuring rigorous monitoring of company activities. The findings of studies on the relationship between management share ownership and performance produce mixed result. Most the findings reveal a positive relationship. For example, Shleifer and Vishny (1997) observe the association concerning pay and performance as a problem issue; they contend that, the greatest approach to decrease agency cost is through increasing shares of executive director‘s and managers in the corporation. That may align management interest with that of shareholders.

Jensen and Meckling (1976) opined that, as management shareholding increases, company managers bear a large proportion of the costs of elusion and other deed that will rescind the value of the company. In addition, large shareholding by management reduces the differences between the interest of shareholders and management. However, constraint of managerial ownership as a mechanism for

reducing agency costs is that management may not be concerned in increasing their ownership stake in the company as a result of certain reasons, for example their individual wealth. Peasnell Pope and Young (2005) using UK firms, study the relationship between managerial ownership and the percentage of outsiders (independent directors) on the board of directors. They found entrenchment level is around 40%; however, applicable only to larger firms. Managerial shareholding is significantly related to monitoring characteristics which in turn influence financial reporting quality for listed manufacturing companies in Nigeria (Hassan, 2013).

Demsetz and Lehn (1985) argue that, managerial owners can be considered potential managers of equity agency problems; therefore, an increase in their shareholdings gives them a stronger incentive to monitor performance of the firm. Increase in market of return of equity of selected US firms is dominated by shareholding of managers and directors of the firms (Baker, 1988). Managerial ownership is positively related to performance evaluation roles and management oversight roles (Kamardi & Haron, 2011).

Similarly, Short and Keasey (1999) in a study of the relationship between insider ownership (directors and management) and company performance (measured by shareholders return on equity) in accordance to entrenchment of 225 sample companies listed on the London Stock Exchange. The study reports a negative relationship at lower levels of directors and management shareholding and a positive and significant relationship at higher levels of directors and managerial

shareholdings. This is in consistent with the alignment of managers and shareholder‘s interests being dominant at the highest and lowest levels of insider shareholding.

Hermalin and Weisbach (1991) constructed board composition and insider ownership relationship model and performance, permitting for the endogenous purpose of insider ownership and board composition and found a significant relationship with firm value. Their results are in agreement with the study of (Morck, Shleifer, & Vishny, 1988). On their part, McConnell and Servaes (1990) reported significant results after regressing market value against different methods of ownership that explain the ownership structure in the company own by insiders (management and executive directors); individual shareholders; large shareholders and institutional shareholders, using a quadratic measurement for insider ownership. Managerial ownership is positively related with crisis-period performance of Chinese State-Owned Enterprises (SOEs) (C. Liu, Uchida, & Yang, 2012).

Furthermore, Stulz (1988) presents a model specifying that high share ownership by company management and the associated voting power warrant managers to be more likely embedded in their individual positions within the company. In line with a management entrenchment perception, Morck et al. (1988) regress the association between insider share ownership and market to book value and found that market to book rises at the start (0-5%) and falls when insider share ownership increases to 25%. However, increases at higher share ownership stakes. The authors described

the findings as consistent with the alignment of interests when insider shares ownership increases. Shleifer and Vishny (1989) also advanced the model whereby management is able to establish them by making investments that improve the value of company owners.

Corporate organizations where insiders (directors and managers) held above 30% of the shares have not ever been acquired during the period hostile takeovers (Weston, 1979). The firms with managerial share ownership are probably had to experience distress (Donker, Santen, & Zahir, 2009). Moreover, Jensen and Meckling (1976) document that, with minor or no shareholdings in the firm, management may use company assets to achieve personal gain, such as ducking, unnecessary consumption and the search of unprofitable investments. Therefore, increase in stake of executive directors and management may reduce agency cost as managers bear a larger portion of the costs. They concluded that, as the directors and management ownership percentage increases, the management pays larger part of agency costs and thus, considered unlikely to waste corporate wealth.

Morey et al (2009) study the relationship between managerial shareholding and performance of 200 firms from 21 emerging countries. The study reports a significant positive relationship between managerial shareholding and higher market valuation measured by price to book value of the sampled firms. Managerial shareholding has a significant positive impact on the collective stock return of 800 sample firms of 8 East Asian countries during the financial crises (Lemmon & Lins,

2003). Ownership by directors and outside shareholders has an influence on the abnormal returns of firms listed on the London Stock Exchange (Fidrmuc, Goergen & Renneboog, 2006).

There is inverse relationship between managerial ownership in several segments and total monitoring costs as projected in agency theory (Mustapha & Che Ahmad, 2011). Firms with insider director‘s shareholding have better operational performance and market to book ratios, particularly when an observation is more problematic. These companies make better purchasing decisions; have better cash holdings, and less overstatement of earnings (Masulis & Mobbs, 2011).

The directors and management ownership are significantly related to firm value measured by price to book value multiple of 60 listed firms during their initial public offering in Finland (Keloharju & Kulp, 1996). Denis, Denis, and Sarin (1997) propose a model of ownership of firm and upper management income to be as a function, in line with management entrenchment. The researchers found that top management turnover is expressively higher in firms that report poor shareholder‘s returns with low management and directors ownership than in corporations that are performing badly with higher managerial and directors ownership. Furthermore, larger equity stake by company managers and directors has a significant impact in internal monitoring of the selected US firms.

Despite, results from the studies reviewed reported a positive relation between the explained and the explanatory variables; others could not establish any link between the proportion of shares own by managements and performance. For instance, Sanda et al. (2005) study the CG mechanisms and performance of 93 listed companies in the NSE for the period of 1996 to 1999. The study reports no significant relationship between director‘s ownership concentration and price to earnings ratio of the sample firms. Also, Dadidson, Rosenstein, and Sundaram (2002), reported a significant negative relationship between stock of executive (inside directors) and abnormal equity returns of 94 sample firms in the US from 1985-1991.

In addition, Mura (2007) in a study of 1100 non-financial firms in the London Stock Exchange for 1991-2001 found that the proportion of directors and non-executive director‘s ownership is not positively and significantly related to market value of the sampled firms. To conclude, this study would empirically test the relationship between percentage of executive directors share ownership and equity value multiple of firms listed on the NSE.

2.5.6 Chief Executive Officer Power Concentration

Reduction in the power concentration of CEO is suggested as internal governance monitoring (Flath & Knoeber, 1985; Shleifer & Vishny, 1997). This is to ensure that the CEO does not use his concentrated power to the detriment of other company stakeholders. To ensure balance of power of the CEO, issued codes in Nigeria (SEC.

CBN and NAICOM) recommend the separation of chairman from the CEO and CEO shall not serve on the audit committee to make the committee truly independent of the management. In addition to the chair/CEO separation, the NAICOM code of CG for insurance companies recommends that the appointment of the CEO must be approved by the commission. This is to ensure that, the appointed CEO is qualified and competent to manage the affairs of the company in terms of requisite knowledge and experience. Similarly, the CBN code of CG for banks recommends the tenure of the CEO to a maximum of two terms of 4 years each (8 years) and his/her reappointment for the second term must be on performance and value addition to the bank.

Researchers argue on whether too much power for CEO enhances the value added to the company. The power of the CEO can be considered in two perspectives. First, where the CEO serves as chairman of the company board and, secondly, where the CEO is not the chairman but stay at the company CEO for a long period of time. Studies have been conducted on the relationship between CEO power and the value of companies. However, the studies produce mixed results. For example, Daily and Dalton (1992) using some selected entrepreneurial firms in the US from 1986-1992 found no association between the duality of CEOs and the performance of those entrepreneurial firms.

Other studies on the CEO board chairman separation show that for an efficient, effective and unselfish board should be constituted, board chairman and CEO

positions should be separated (Jensen, 1993). In agreement to this results therefore, it can be deduced that, if the firm CEO is also the board chairman, the board major responsibility for supervising the appointment, sacking, evaluating and rewarding of the CEO could be jeopardized. This is because the CEO may not implement this function in contradiction of his/her individual interests. Chen et al. (2005), in a study of 412 listed public companies in Hong Kong Stock Exchange from 1995 to 1998 found a negative relationship between CEO duality and firms performance measured by price to book value multiple of the sampled firms.

Also, Rechner and Dalton (1990) studied 250 sample firms for 6 years in the US. Evidence from the study indicates that companies with independent leadership perform better than companies that rely on CEO duality in terms of stronger market performance. CEO power measured by separation of chair from CEO has a significant positive impact on the value of share prices of 30 sample companies listed on the Karachi Stock Exchange for 2009-2010 periods (Malik, 2012). The pay for to directors is tied to long-term firm performance thereby adding value to shareholders (Cheng, Hong, & Scheinkman, 2015).

However, other studies suggest combination of Chair and CEO to one person, for example, Goyal and Park (2002) established that the CEO sensitivity to turnover and firm performance is lesser for corporations without CEO duality, which means CEO occupying the position of chairmanship bring more value to the company compare to the separation. In addition, Brickley, Coles, and Jarrell (1997) show that CEO duality

is not associated with inferior performance; evidence from the study show that combining CEO and chair is associated with agency cost and is not associated with low performance. Furthermore, Chan and Li. (2008) report a significant negative relationship between chief executive officer/chairman separation and price to sales multiple.

The other aspect of chief executive power is tenure. Scholars argued that whenever CEO stay for a long period of time is likely to have too much power that may influence many company decisions. Long-serving CEO may influence the appointment of executive directors that may be loyal to him. The CEO can also use his position to penetrate some board member‘s to support his opinion during board meetings to the detriment of other company stakeholders. To ensure the control of tendencies of excessive CEO power, code of CG issued by the SEC, CBN and the NAICOM provides a guideline on the maximum number of years an individual can occupy as the CEO of his/her company.

Research was also carried out on the average term of the CEO as a solution for the inhibition of organization fraud (Hermalin & Weisbach, 1988). The tenure of the CEO as the member of the board of directors could therefore be an essential indicator of the influence of the individual. As a long-serving CEO takes relatively more influence compares to a new CEO. Therefore, if CEO tenure increases, his/her power concentration in the firm could as well increase, that could reduce the monitoring powers of the directors and hence paving the way for likely management

fraud. Berger, Ofek, and Yermack (1997) report that leverage resolutions are correlated to the extent of entrenchment by executives, and generally entrenched executives strive to evade debts. In addition, leverage is likely to be lesser when the CEO has longer tenure to serve in the company.

On their part, Walters, Kroll and Wright (2007) in a study of 100 public traded firms in the US from 1997 to 2001 found that, CEO tenure is significantly related to value addition for shareholders where board of directors take adequate measures to enhance vigilance. Furthermore, tenure of the CEO is positively related to shareholders value at low level tenure, and negatively related with shareholders value where the tenure of the CEO rises to significant level. They conclude that shareholders value can advance through board vigilance even where the tenure of CEO is high.

Moreover, Bhagat and Black (2002), using 934 large US firms from 1985-1995 found a significant positive relationship between CEO power concentration and market to book value multiple. Morey et al (2009), in similar study of 200 firms from 21 emerging countries, report a significant positive relationship between chief executive officer power concentration and higher market valuation measured by price to book value multiple of the sampled firms.

Bathala and Rao (1995), using 800 sample firms by Forbes magazine from 1984 to 1986, evidence from the study reveals a negative coefficient for chief executive

officer tenure and significant at 1% level. This means chief executive officers who control the firms for relatively long periods of time seem to be successful towards restricting outside directors representation on boards of their firms'. This agrees with the entrenchment proposition found in the literature that longer serving CEO gets excess power that makes it easy to control other board members.

Studies on the influence of the CEO on firms‘ performance produce mixed results. However, reducing too much power to CEO will contribute to the achievement of monitoring role of the board. It is important to note that, CEO power on the perspective of separation of chairman from CEO has been taken care off by the issued codes in Nigeria. Presently, no listed company in Nigeria having one person that occupies the position of chairmen and CEO at the same time. The other perspective is the power of the CEO in terms of number of years of he/she is serving as CEO. Therefore, the study will empirically examine whether tenure of CEOs influences equity value of firms listed on the Nigerian Stock Exchange.

2.5.7 Directors Compensation

Director‘s compensation is often-suggested as internal CG monitoring mechanism to ensure the optimum performance of directors. A solution to the problem of ineffective or self-serving directors is to improve compensation policies that tie compensation of management directly to company performance, for example through share bonuses (Morey et al, 2009). To achieve fair and equitable

compensation plan, the SEC Code of CG recommends that, only board of directors shall approve the compensation of executive directors on the recommendation of the company remuneration committee.

The SEC code further emphasized that, compensation of executive director should be on individual bases considering director skills and relevant experience and only non-executive directors should be associated with the procedure. In addition to cash option, where stock option is granted as part of director compensation, an approval is required from the SEC. Similarly, compensation for non-executive directors should be established by the board of directors and approved by the shareholders at the annual general meeting. The objective of SEC guidelines is to ensure that directors are properly and adequately compensated, but, without detriment to the shareholders. Compensation of directors differs across industries and even within an industry across firms. The code of CG for insurance companies issued by the NAICOM code and the code of CG for banks issued by the CBN also, makes a similar recommendation. They clearly state that, directors cannot sit and decide their compensation. Instead, the compensation committee decides their compensation and the decision must be approved by the board of directors for executive and in the case of non-executive by the shareholders.

The pay-performance strategy generally helps to decrease the problem of CG in a firm (Phan, 2001). Mehran (1995), in examining executive compensation structure for 153 selected manufacturing firms at random from 1979 to 1980, established

evidence supporting supporters of incentive compensation for directors. The study found that stock-based compensation is extensively used in firms that have more outside directors on board. The firms were a higher proportion of stocks are held by inside directors or outside block holders use less stock-based compensation plan.

The results from data of U.S. non-financial companies from 1993-2005 indicate that, the impact of CEO equity-based pay on company performance is positive but in companies with higher incomes quantile levels, while the impact is negative in companies in the lower incomes levels (Li, Yang, & Yu, 2015).

Perry and Zenner (2001) conducted a study on pay and performance. Evidence from the study suggests that, incentive -based compensation for directors influence the level of monitoring by the board and through such compensation, firms can align the interest of directors and shareholders. Equally, Shivdasani (1993) provides additional evidence that ownership by unconnected outside directors remains negatively related to the possibility that a company will be subject to aggressive takeover attempt.

Furthermore, when choosing the form of compensation, firms need to be considerate to their individual firm features, because some directors and managers may use the advantage to compensate themselves at the expense of other company stakeholders. Lambert and Larcker (1988) in a study of 800 sample firms in the US from 1970 to 1984 reported that bigger stock-based compensation is applied when accounting procedures are noisy. Yermack (1997) in a similar study of 620 sample share option

rewards to chief executive officers of Fortune 500 corporations in the US from 1992 to 1994. Evidence from the study reveals that, method of awards agrees with favourable movements in corporation stock prices and quarterly announcement of incomes are in agreement with the interpretation that CEOs obtain share option rewards just before good company news.

Hermalin and Weisbach (1998), in a related research also suggested that incentive pay for directors and management can enhance the monitoring efforts executed by the board of directors. Additionally, Morey et al. (2009), report a significant positive relationship between directors compensation and higher market valuation measured by price to book value multiple of the sampled firms.

In contrast, Core et al. (1999) investigated 205 US firms from 1982 to 1984 and found that firms with weak boards (weak outside directors) and ownership (no block holder) structures allow CEOs to obtain excessive compensation, which results in worse subsequent firm value. Also, Yeo, et al (1999) in a study of 56 sample listed firms in Singapore from 1983 to 1993 established no significant evidence for the motivation effect of executive directors share option compensation plans (ESOP) on stock price increase and operating performance of Singapore listed firms during the period. The study concludes that, lack of significant effects for incentive and stock price of the sample firms reveals mainly the distinctive regulatory setting in Singapore. Campbell and Wasley (1999), found that executives can sometimes structure compensation plans at the cost of shareholders

Other studies that examined the relationship between management and director‘s compensation and firm performance includes, a study by Jensen and Murphy (1990) which found a weak relationship between compensation and performance. Similarly, Jensen and Murphy (1990) report drops in both level of CEO pay per annum and the pay-performance relationship since the 1930s. This position is compounded by the evidence that managerial capital is more complex to asset size compared to market value. This position contradicts Rosen (1982) postulation that the firm size-pay association is due to bigger firms hiring more capable executives.

Agrawal and Knoeber (1998) report that, threat of takeover has two contrasting effects on compensation: they are risk and competition effects. The compensation effects between directors result in less ability for directors to extract greater wages. However, risk effect that leads to different improved compensation as greater takeover threat is possible to result in an improved probability of corporation-specific human investment loss or implicitly delayed compensation. This difference in risk makes management demand higher remuneration to counterbalance the bigger risk. Finally, Healy (1985), reports evidence which suggests that, executives choose revenue increasing in order to maximize present value of the bonus element of their compensation in the firm.

Studies conducted on directors‘ compensation and performances continue to produce mixed findings. The studies reviewed used cash payment and share bonuses. In the context of this work abnormal compensation will be used to predict equity value.

Abnormal directors compensation will be measured by directors pay above their peer sector average.

2.5.8 Corporate Governance Disclosure and Transparency

The disclosure of corporate governance information in the annual report is also suggested as one of the internal monitoring mechanisms. This is because investors that are sensitive on governance issues in their investment decision can use such disclosed CG information and make their decisions. According to the code of CG issued by the SEC, all listed firms in the NSE must disclose the level of their compliance with the code. Information on shares owned by directors and all remunerations must be published in the annual reports. The CBN code of CG also, concurred with SEC code; it requires banks to include CG compliance status in their audited financial statements. But, the NAICOM Code of CG 2009 did not make it compulsory for the insurance companies to disclose their level of compliance to the code but require them to disclose their accounting system in line with guidelines issued by the commission. The disclosure of financial reporting and governance information is important potential means by which management communicate performance of the company to outside investors (Healy & Palepu, 2001).

Research was also conducted on whether disclosing CG information has an impact on the value of firms yet, the studies produced mixed findings. Some established positive relationship between a dependent variable (value) and independent variable

(CG information disclosure), while others find no relationship between disclosure and performance. The following studies established a positive relationship between disclosure of CG practices and performance of firms. Holm and Schøler (2010) in a study 100 Danish companies listed on the Copenhagen Stock Exchange, the data derive mainly from information in the 2004 annual reports. Evidence from the study reveals that, disclosure has a significant positive relationship to earnings before interest tax, depreciation and amortization of the samples firms during the 2004 cross sectional analysis. CG disclosure indexes of 49 listed firms in Zimbabwe show a significant positive effect on compulsory disclosure and reporting practices of the sample firms (Owusu-ansah, 1998).

Ayorinde, Toyin, and Leye (2012) examined the level of corporate governance disclosure for the sampled deposit money banks in Nigeria, the result revealed a positive and significant relationship between corporate governance disclosure index and bank performance. Gompers et al. (2003) report a significant positive association between corporate governance indexes (CGI) built from 24 provisions and stock returns. The study establishes that potential investors buy stocks in firms with the highest levels in CGI and their stock in such firms earned considerable abnormal returns of 8.5% per annum. The authors also document that, firms with stronger investor rights experience higher firm value; greater profits and lower investment expenditures. Whereas corporations with weak corporate governance index experience lower accounting based performance measures.

Firm‘s voluntary CG disclosure has a significant positive relationship with a price to earnings multiple of 156 sample firms listed on the Singapore Stock Exchange for the period of 1991-1995 (Eng & Mak, 2003). Also, Bauer, Frijns, Otten and Tourani-Rad (2008) using Governance Index Metrics (GIM) constructed and rating of 225 companies in 2003 June 2004 January and 356 companies for the month of August 2004 in Japan, found significant positive relationship between disclosure, internal control and market to book value during the period. Similarly, Mitton (2002) in a study 398 firms in five Asian countries, report that, firms with higher quality disclosure, greater transparency and CG experiences have better share price performance during the East Asian financial crisis.

In addition, Bruno and Claessens (2010) studies 2350 firms from 23 countries. The study reports a significant positive relationship between governance transparency and market to book value for the period of 2003-2005 in countries with low investor protection. Equally, Morey et al (2009) in a study of 200 firms from 21 emerging market countries, reports a significant positive relationship between CG disclosure and higher market valuation measured by price to book value multiple.

Correspondingly, Meek, Roberts and Gray (1995) observed that, company directors may disclose voluntarily information if that information will be to their own personal interest. When directors own company shares and their interest coincide with the interest of shareholders, directors will pay more attention to the company share price, which wholly reflects the prospects and performance of the company. In addition,

director‘s shareholdings may have a significant impact on the disclosure of CG information. Governance and social responsibility disclosure is significantly related to performance of companies (Lys et al., 2015). The disclosure effects are associated with the likelihood that the market expects future involvement and responds to the pronouncement of funds ownership performance (Croci & Petrella, 2013).

In contrast, other studies could not establish that GC information disclosure affects performance. For example, Che Haat, Abdul Rahman and Mahenthiran (2008) examine the effect of good CG practices on company transparency performance of listed firms in Malaysia. The results suggest that, timeliness and disclosure are not significant contributing factors in the association between CG and market performance of the sample firms. Nevertheless, foreign ownership and debts monitoring have predicting power on the performance of the company. Also, Poshakwalea and Courtisb (2005) using 135 banks across America, Europe, and Australia, report significant negative relationship between disclosure and price to earnings multiple of the sample banks across the countries.

Apart from the previous studies that relate information disclosure and corporate performance, other researchers look at motivations why firms disclose or failed to disclose information. Akhtaruddin, Hossain and Yao (2009) examined empirically the level of CG and voluntary disclosure of Malaysian listed firms. The results suggest a positive relationship between board size and disclosures and between ratio of board independence and voluntary information. But, the level of voluntary

disclosure is adversely associated with family control, while proportion of audit committee members to whose members are on the company‘s board is not associated with voluntary disclosures. Proportion of independent directors on firm board; an audit committee appointment; amount shares held by directors and stock option plans, have a definite relationship to voluntary disclosure of CG information (Babı & Muin, 2005).

Ownership structure, shareholders dispersion and market capitalization have significant effect on companies‘ CG information disclosure and level of CG disclosure is sluggish in Ghana (Tsamenyi, Enninful-adu & Onumah, 2007). Firm capability to voluntary discloses CG information is positively associated with the need to increase equity share capital, though, not with the need for raising debt investment in Australian firm‘s (Collett & Hrasky, 2005). The CEO duality is related to lower stages of voluntary CG information disclosures amongst 385 companies in Hong Kong (Gul & Leung, 2004). In addition, Chairman who is non-executive director and board controlled by family members has a significant association with the level of voluntary disclosure of non-compulsory financial accounting information (Haniffa & Cooke, 2002). Family control firm‘s characteristics affect their corporate disclosure practices. They disclose only small information on their CG practices (Ali, Chen & Radhakrishnan, 2007).

Eng and Mak (2003) in a study of 158 firms listed on the Singapore Stock Exchange. Evidence from the study reports the following results, board composition and

structure of ownership influence firm‘s information disclosure; significant government stake and lower managerial interest are associated with increased information disclosure. Also, large ownership is not related to information disclosure while increase in the independent directors reduces corporate information disclosure. Finally, firms with few debts and big firms have the highest level of information disclosure.

Financial accounting information reporting and disclosure are important avenues for management to communicate firm performance and CG practices to outside investor (Healy & Palepu, 2001). The existence of an audit committee on firm‘s board is positively and significantly correlated to the extent of voluntary information disclosure (Ho & Wong, 2001). Similarly, Verrecchia (2001) reports that if company directors have motivations, such as valuable shareholdings, they might tend to prejudice information disclosure in order to make it less or more or favourable compared to actual expectation. Dedman (2004) contends that if directors‘ remuneration contains company shares, they might tend to issue update when their corporations are wrongly valued by the market for them to increase their individual wealth.

Literatures reviewed for CG information disclosure and performance has shown that most of the studies established a relationship between the variables, though some of the studies could not establish that CG information disclosure in the company financial reports enhances performance. This study looked at CG disclosure as a

monitoring mechanism for reducing agency problem and whether information disclosure on CG practices has an effect on the equity value multiple of listed firms in the NSE.

2.6 Control Variables

According to Becker (2005), control variables in organizational research are important like the independent and dependent variables. They assist in ruling out other explanations of study findings, reduction in error terms and enhance statistical power. The objective of control variables is to ensure the reliability of results and avoid the possibility of spurious regression. Following consideration of the objective of our study, that is, investigating the relationship between mechanisms of CG and equity value multiple of listed firms in Nigeria. Practically, investors in Nigeria consider company reputation in terms of size and age, leverage, risk, industry in making investment decisions. Thus, the study control for firm size, firm age, industry type, leverage, and risk to reduce the error term and increase the statistical power of explanatory variables, as in (Pagano & Schivardi, 2003; Loderer & Waelchli, 2009).

2.6.1 Firm Size

Firm size is a vital variable that controls the volatility in stock prices fluctuations (Lam, 2002). Prior studies established a positive relationship between size and performance. For instance, Pagano and Schivardi (2003) found empirical evidence of the sectorial classification of firm size from some European countries (UK,

Germany, Italy, Finland, Sweden, Denmark and France). The study discloses substantial differences, positive association between output growth, industry level and structure of size Also, Beck, Demirguc-Kunt and Maksimovic (2005) Using more 4000 survey and database consisting 54 countries from 1996 to 1999 to examine the influence of financial, corruption problems, legal and on corporations' value rates whether the mention factors growth constrains depends on size of firm. Evidence from the study reveals that, small firms are most constrained.

In addition, Kiani, Chen and Madjd-Sadjadi (2012) using cross-sectional data obtained from 120 good-performing companies issued through Common Wealth Magazine during the years 1997-2003 and 25 companies that are performing poorly and published in Taiwan Stock Exchange for the same period. Evidence from the study reveals that, large firms grew faster compared to smaller ones. One of the yardsticks that display the size of the firm is the logarithm of the total assets of the firm. Large firms are usually considered to have attained maturity which shows that a firm is relatively established and better capability to produce more profits compared small firms (Nur'ainny, Nurcahyo, Kurniasih & Sugiharti, 2013). Firm size has a significant positive relationship with the book to market value and earnings to price value of listed companies listed in the Hong Kong and United State stock exchange for the July 1984 to 1997 cross-sectional studies (Lam, 2002).

Furthermore, Bassey, et al (2014) study financial reports of twenty eight (28) agro allied companies listed on the NSE during the period 2005 to 2010. Evidence from

the study reveals a significant positive relationship between long term debt proportion and firm size, the results conform prior expectation that large size firms with large tangible assets are well-known to access loans easier compared to small firms with smaller tangible assets.

2.6.2 Firm Age

The age of a firm features in several researches of finance and accounting literature. For example, it is a control variable in studies on CG and performance of firms (Loderer & Waelchli, 2009). Part of the reason is, if a company‘s shares are traded for quite period of time, investors can have the opportunity to monitor company share prices fluctuations. The ability of investor‘s to assess share prices volatility enhances their investment decision in those companies. As stated above, the importance of age for company dynamics has attracted attention in accounting and finance literatures. Many prior studies believe that company‘s age influence performance. At least, firms learn some abilities on how to do their activities better as they become older.

Similarly, the existing empirical evidence shows that life expectation increases with age. For example, Bassey, et al (2014) study the financial reports of twenty eight (28) agro allied companies listed on the NSE during the period 2005 to 2010. Evidence from the study reveals a significant positive relationship between long term debt proportion and firm age, the results conform prior expectation that older listed

companies are well-known to access loans easier compared to newly listed companies.

Moreover, Bellone, Musso, Nesta and Quere (2008) in a study of selected French manufacturing firms in the 1990s argue that the determining factor for the concrete survival of a firm depends on its age. Considering the importance of age in the performance of firms, age is used as control variable for more accuracy and reliability of results.

2.6.3 Firm Leverage

A number of empirical studies have used leverage as control variable (Chiu & Ho, 2015; Lys, Naughton, & Wang, 2015; Mitton, 2002). Leverage was reported to have to have positive relationship with the financial performance of selected insurance companies listed at the Nairobi Stock Exchange (Wanyonyi & Tobias, 2013). The size of firms and leverage generally explained more than 53% of the variation in reported goodwill impairment of selected firms in the 2002 to 2004 reporting periods (Godfrey & Koh, 2009). The relationship between leverage and firm value is positive especially where leverage is not unreasonably high (Pech, Noguera, & White, 2015).

The leverage coefficient (total debt/total assets) was indistinguishable from the value of zero; this could be as a result of fact that the variable does not have significant change over the time series analysis (Linck et al., 2009). The empirical study of this nature needs to take consideration of leverage because of the way firms under the

sample are financed. The control for leverage prevents the likelihood of spurious correlations between the variables of the study. Therefore, this study controls for leverage to ensure the reliability of the regression results.

2.7 Limitation of the Previous Studies

In summary, previous studies on CG used one or few of CG mechanisms on the value of firms excluding other mechanisms. For, example, some studied only board size (Guest, 2009; Eisenberg et al., 1998). Some study only used board independence in relation to performance (Bhagat & Black, 2002; Klein, 2002). Others study compensation and performance (Mehran, 1995; Brick et al., 2006) and some used gender (Abdullah et al., 2016). However, this study incorporates eight mechanisms of CG (board size, board independence, board gender diversity, audit committee independence, managerial shareholding, chief executive officer power, abnormal directors compensation and disclosure of corporate governance information in the annual reports) to see their individual and collective impact in predicting the value of equity.

On the equity value multiples, previous studies concentrate on one or two of the multiples. For instance, price to earnings (Karamanou & Vafeas, 2005; Salomons, 2008), some considered only price to book value (Barniv, 2009; DeAngelo, 2014). But, this study incorporate all the four equity value multiples (P/E, P/V, P/C, P/S) through the use of PCA methods. The use of principal component analysis to

condense the equity value multiple serve as one of the major deviation of this study compared to the prior literatures. This is because prior literatures have established a strong correlation between the equity values multiples themselves due to their relationship with price. In addition, several studies on board size tend to argue on size, some argue in favour of small board size (Yermack, 1996) others argue favour of large board size (Black et al. 2006). This study is considered the board in relation to its responsibility of corporate monitoring (Cotter & Silvester, 2003). Studies on CEO power mostly concentrated on the chair/CEO power separation, only rare look at the power of the CEO in relation to his tenure as the company CEO.

Similarly, research on directors compensation focused on total pay to directors including, stock rewards and other tangible incentives. This study measures compensation as payment of directors above their peer sector average making the study the first to relate abnormal compensation on the value of owners. This is because good compensation can also influence good corporate governance practice. It can be observed from review of previous works on stock value where some of the studies only look at stock prices without relating it to any value driver like earnings and book value. Moreover, most of the studies are in developed economies, therefore, similar study in emerging economies particularly Nigeria would add value to the empirical body of the literature due to the role of the country in Africa.

2.8 Established theories of CG and Equity Values

Theories related to corporate governance and performance are discussed. The objective is to enable the study establish ground for developing hypotheses that are tested to answer the research questions

2.8.1 Agency Theory

Agency theory seems to be most used theory in CG monitoring mechanism because the agency problem arises out of separation of ownership from management. As observed by Pope and Puxty (1991) that, understandings into the structure of CG have been mostly developed through the analysis of firms in an agency viewpoint. According to Eisenhardt (1989), agency theory is utilized in numerous subjects with different implications. For example, researchers in accounting, finance, management sciences, political sciences, economics, marketing, sociology and organizational behavior amongst others have used agency theory with different inference. Although agency theory may have different meaning in usage, it generally, discusses those relationships where one party call (the principal) employs work to another party call (the agent). In the context of this research, agency theory refers to those types of relationships that exist between directors (managements) and shareholders (owners).

Jensen & Meckling (1976) added that, the problem of agency arises as a result of two reasons; first, because the collaborating players may have different objectives towards risk and secondly, the principal may find it too expensive to monitor the

activities of the agent (manager). The cost of agency comprises of costs of monitoring, structuring, and binding set of contracts relationship between agents and conflicting interests groups. On the other hand, Hart (1995) stated that, what constitutes a good return is its gross profit and gross profit depends on manager‘s determination.

The effort of the agent towards increasing the value of the firm is likely observed by only the agent himself. Thus, Hart (1995) proposes a model that provides balance (trade off) between risk sharing and incentive to decrease the principal-agent problem. The model suggested agent-performance pay that includes stock options compensation and the remuneration. The empirical literature divided agency theory into two perspectives the positivist and the principal-agent. The positivist focused on all CG mechanism that is used to decrease ―the behavior of self-serving agent", while the principal-agent examined every agency relationship with mathematical evidence (Eisenhardt, 1989).

As already stated above, literature on CG conventionally identifies agency problem on the perspective of conflicts between directors (managements) and shareholders (owners), so the positivist perspective is closer to our research objective. This perspective produced numerous articles on CG model to evade managerial opportunism and reduction in information asymmetry. Jensen and Meckling (1976) emphasized how a partaking in company ownership affects managers‘ interest. The study also provided evidence on how to utilize management contribution to company

ownership in order to align their objectives with that of shareholders. A study by Fama (1980) maintained that efficient capital market and labour represent an instrument for controlling the behaviour of self-serving (manager) agent.

The large part agency theory literatures concentrate in determining the optimum balance between risk bearing and efficiency. The efficiency result argues that agent opportunism decreases by information systems, permitting the principal (owner) to verify what does the agent is actually doing. Every shareholder may encounter principal-agent problems, though it is more obvious for bigger firms. Those firms, where share ownership is spread amongst several investors, monitoring costs are not insignificant.

The study of Muth and Donaldson (1998) presented some of the assumptions of the agency theory, and they include the following. First, separation of chairperson and chief executive officer leads to higher company performance. Second, increase in board size increases company value. Third, higher percentage of non-executive directors on boards leads to higher company value. Fourth, boards with lower average tenure including CEO lead to higher company value. Lastly, stake of management in the company ownership leads to performance.

Agency theory further argues that, the company board of directors is responsible for taking adequate measures in terms of incentive mechanisms to make management more like (owners) shareholders. Since the boards of directors are proxy

representatives of shareholders incentive alignment is important to them as it is important for management (Muth & Donaldson, 1998). To conclude, Hjelmstad, Marshall and Walmsley (2006) documented that, positive market reaction related to open market equity repurchases in the UK is better explained by agency theory.

Finally, Phan (2001) submitted whether agency theory assumptions can be generic to emerging markets, despite their economic, sociological and developmental differences remain an essential research problem. In the Nigerian business environment, agency theory has been a serious problem most especially in public companies where shareholders are dispersed across the country and abroad. The joint report of Central Bank of Nigeria CBN and Nigerian Deposit Insurance Corporation NDIC 2009 indicted many CEO of public companies for using their positions to defraud their respective organizations. Shareholders in the affected corporations have suffered seriously due to the problem self-serving (managers) agents. Therefore, this study investigated the influence of corporate governance mechanisms in predicting the value equities from an agency theory perspective.

2.8.2 Stewardship Theory

The stewardship theory is also recommended as a substitute for agency theory; the theory assumes that managements are good company‘s stewards. They are dependable and working diligently towards attaining high company profit and returns to the shareholders‘ (Donaldson & Davis, 1991). Stewardship theory refers to

situations where managements are not motivated by their individual objectives but instead stewards whose motivations are aligned with that of their principals (owners) (Davis, Schoorman & Donaldson, 1997).

The theory argues that re-allocation of company control by shareholders (owners) to professional managers may have positive development in management of modern corporation complexity. Having control to maximize company value, using the stewardship theory, executive directors are favoured because of their technical expertise, depth knowledge of the company operation, access to current information and operating environment. Prediction of stewardship theory is that shareholders (owners) can expect maximization of equity returns where the company is structured and effectively control by the management (Muth & Donaldson, 1998).

Stewardship theory is assumed to have been originated from the social relations management theories, is perceived to be an alteration of the agency theory. According to stewardship school of thought, managements are not opportunistic; also, play a significant role towards empowering directors instead of controlling and monitoring them (Ong & Lee, 1996). The stewardship reveals a continuing sense of responsibility or duty of interest groups based on the intent to maintain the covenanted link. Therefore, stewardship refers to the level whereby individual freely suppresses his/her individual interests and acts in guard of others‘ individuals‘ long-term benefit (Hernandez, 2012).

The stewardship theory reflects involvement of board‘s in both management and control decision through a board of directors on strategic roles (Bordean, Lucian & Cristiana, 2000). To conclude, Kulkarni and Ramamoorthy (2011) extend the relationship between principal and agent to include further hierarchy of staff, where subordinates (other hierarchy employees) might be considered as stewards of the top managers.

In Nigeria, many shareholders depend on the integrity and reputations of the management team appointed to manage their respective organizations. In some instances, managers are found to engage in activities that increase the value of owners. However, in most cases managers betrayed this trust and act in their interest instead of owners interest. This is more glaring in the banking sector where the CBN has to inject money to some banks to save depositors and remove the banks managements due to recklessness. Thus, the present study examined the impact of firm‘s governance on the value of owners‘ equity amongst Nigerian listed companies in relation to the stewardship theory.

2.9 Summary of the Chapter

The chapter extensively operationalizes dependent variables (EVM) and independent variable (CG mechanisms). The equity value multiple explained in the chapter are: price to earnings, price to book value, price to cash flow and price to sales multiples. CG mechanisms explained in the chapter comprises; board size, board independence,

board gender, audit committee independence, director‘s shareholding, chief executive officer power, abnormal director‘s compensation and CG disclosure and transparency in addition to extensive definition of CG in general and in the context of this research.

The review of related literature was based on the CG variables in order to make it more comprehending. Studies conducted on the relationship between CG and performances were critically reviewed. The review focuses more attention on problems, methodologies and findings/results of previous studies with the aim of justifying the need for this study. The chapter presented control variables and limitations observed in previous studies that warrant this study. Finally, relevant theories of CG are reviewed with the aim of aligning our study with established theories. The subsequent chapter presents hypotheses of the study and a theoretical model in order to achieve the objective of the study

CHAPTER THREE

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

3.1 Introduction

This chapter continues from the previous review of relevant literature by focusing on literature that relates to the problem under investigation. The theories that are relevant to the study were also reviewed in the preceding chapter. This current chapter presented a theoretical model for the study. The chapter also presents hypotheses that are tested in order to achieve the objective of the study. As mentioned earlier, the main objective of this study, is to, empirically examine whether the combinations of different CG mechanisms have significant influence in predicting equity value multiple of firms listed on the NSE. Also, in developing the hypotheses emphasis is placed on existing theories that explain CG and performance not on the conflicts of results from prior literatures.

3.2 Theoretical Model of the study

The figure 3.1 below presents the theoretical model of the study. The objective is to provide a picture of the relationship that is proposed to exist between the independent variables and the dependent variable. The figure also included control variables to take care of likely spurious correlations between the dependent and the independent variables.

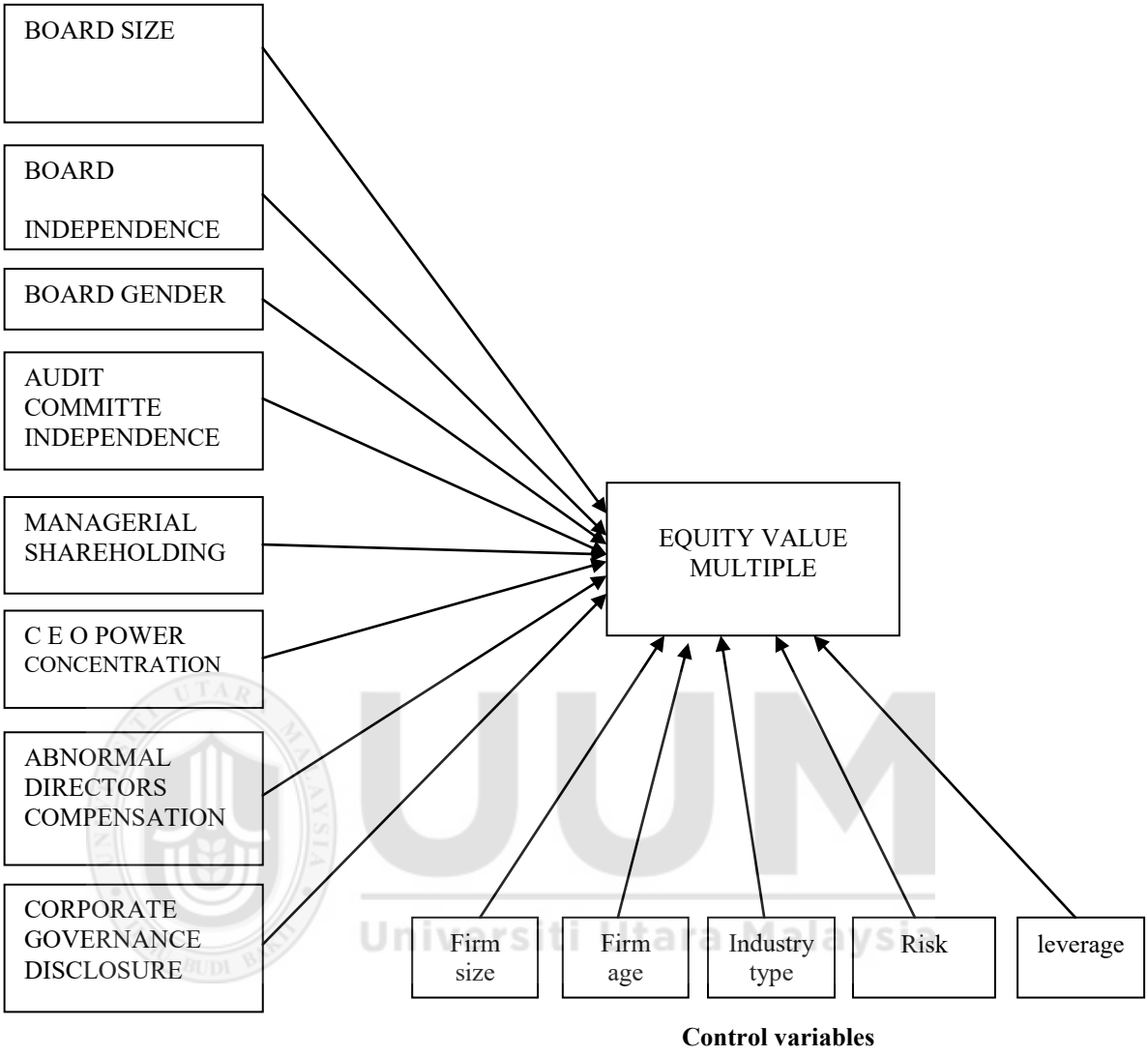

Figure 3.1
Theoretical Model of the Study

Equity value multiple can be explained by board size, board independence, board gender diversity, audit committee independence, managerial shareholding, CEO power concentration, abnormal directors compensation and CG disclosure. However, they are not the only variables that explain equity value multiple. There are other variables that influence the equity value multiple but they will not be included in the model. Nevertheless, control variables are introduced to take care of them. According to Becker (2005), control variables in organizational research are

important like the independent and dependent variables. They help in ruling out other explanations of study findings, reduction in error terms and enhance statistical power of the regression model.

3.3 Hypotheses Development

It can be understood from the theoretical exploration in the previous chapter that, different scholars have produced different theories on CG in relation to firm performance. For example, board size, board independence, board gender and audit committee independence can be explained by agency theory on the perspective internal governance monitoring. Share ownership by management can also be explained by both agency and stewardship theories. The stewardship theory assumes that managements are good firm‘s stewards. They are dependable and working diligently towards attaining high company profit and returns to the shareholders‘ (Donaldson & Davis, 1991).

The CEO power concentration on the other can be explained by stewardship and agency theory. The stewardship theory sees CEO as steward of the firm, therefore, exercise his/her responsibility with all sincerity in order to increase the value of owners. The director‘s compensation is explained by the same agency and stakeholders‘ theory.

Accordingly, in developing the hypotheses of the study, researcher reviews conflicts of results from previous studies. However, emphasis is placed on existing theories that explained various CG mechanisms and performance of corporate organizations.

3.3.1 The Relationship between Board Size and Firm Performance

From an agency perception, there is argument that a larger board size is more probable to be watchful for agency problems. This is because; a larger number of people on the company board will find it easier to review actions of the management (Kiel & Nicholson, 2003). The empirical study of Adams and Mehran (2003) reported that an increase in the company board size increases board‘s capacity of corporate monitoring thereby increasing firm value. Similarly, Linck et al. (2008) provided another support for this argument by establishing that larger board sizes are strongly related to lower earnings management. Board size has a significant positive relationship with the performance of Islamic banks (Mat Rahim et al., 2015).

In addition, works of Smith et al. (1994) found that, large board size has the perspective to provide a better group of experience and expertise to the board. This is because of their number, some of the board members may have a broader mixture of credentials and that may represent more specific knowledge, skills and training. Thus, are more equipped as compared to smaller board size to process huge volume of information for the overall benefit of the firm. Board size is significantly and

positively associated with bank‘s financial performance of Turkish firms (Isik & Ince, 2016).

Furthermore, large board is significantly related to the performance of sampled United State commercial banks before the global financial crises of 2008 (Switzer & Wang, 2013). Equally, larger board sizes increase company performance and value of shareholder for the sample of 103 firms in four African countries for the period from 1997 to 2001 (Anthony, 2007). Additionally, Linck et al. (2008) reported that the average increase in the number of board size is positively and significantly related to firm value. The empirical evidence on the role played by board size on company performance is inconclusive (Dalton et al., 1999; Eisenberg et al., 1998; Yermack, 1996)). Apart from size these research also, focused on board‘s role in improving performance and increasing the reliability, credibility and the integrity of company‘s financial reporting procedure. Given that the main important role of the company board is monitoring of management.

Some researchers are of the view that by the time board sizes comprise of many members, taking important company decisions may be difficult. This is because, even during meetings there are many members to here from and that could have negative effects on urgent vital company decisions. To prove this, Jensen (1993) and Lipton and Lorsch (1992) argue on the problem of coordinating a large group of directors for urgent company decision. Therefore, large board could negatively affect ability of the board to serve the company long strategic planning. Similarly, evidence

from the work of Eisenberg et al. (1998) reveals that a large board has a likelyhood to be slow in decision making, and thus can be problematic to change.

Small board size tends to be less active because it is easier for the powerful CEO to control. Hence, an optimum board size is required, a board that is not too small and not large. Mak and Kusnadi (2005) opined the above findings by reporting that firm valuation is higher when board size is small, example if a firm has five directors, the number considered fairly small. In addition, Yermack (1996) established that the market values of firms with small board size are higher compare to firms with large board. Small board size has positive demonstrating effects on the privatized company‘s performance in Jordan (Al-Smadi et al., 2013). While, Hermalin and Weisbach (2001) documented that board size and other boards‘ features, is determined by some endogenously factors, for example, performance of the firm; ownership structure and CEO power. Also, Board size has insignificant relationship to the performance of 82 sampled Islamic Financial Institutions IFSs in Golf Countries (Hashim et al., 2015).

Empirical findings on the relationship between board size and performance are mixed. Some of the studies established a positive relationship between board size and company value others found a negative relationship. The current study is looking at board size in relation to its monitoring role (Beasley, 1996). This is because even prior studies that argue in favour small or large board size have accepted that, the most important role of the board is monitoring of the management. In the Nigerian

context, board is responsible for the establishment of strategic goals and a setting of corporate values with clear lines of responsibility for the attainment of firm‘s objective. Size of firm board is expected to influence its performance. Therefore, based on the above discussion and in line with agency theory the study makes the following proposition.

H1. Board size has a positive relationship with equity value multiple of firms listed on the NSE.

3.3.2 The Relationship between Board Independence and Firm Performance

The independence of company board of directors is one of the major lines of defence for shareholders‘ against opportunistic behaviour of management (Sundaramurthy, 2000; Weisbach, 1988). According to Kenton (1995), there are three important responsibilities of company board of directors. First, it is the responsibilities of the boards to ensure company strategic direction (Kesner & Johnson, 1990). Second, it is their responsibility to provide advices and avenue for networking between the company and relevant stakeholders (Westphal, 1999). Third, it is the responsibility of the board to exercise their monitoring over the management for the benefit of shareholders (Bainbridge, 1993; Fama, 1980). For the third responsibility of the board to be effective and efficient, an independent board is required. In a situation where a majority of the board members are executive directors, its monitoring

function is likely to be compromised. Corporate organizations that have limited monitoring, the interest of the shareholders may be affected.

The boards monitor management by ensuring that, executive directors and managers exercise their obligations in a way that protects the interests of shareholders of a corporate entity (Fama & Jensen, 1983). However, according to Sundaramurthy (2000), not all corporate boards effectively monitor their management. To support the independence of board members, Fama (1980) asserts that boards dominated by insiders (executive directors) encounter the problem of self-monitoring, hence, resulting in ineffective monitoring of the executives. Majority of prior studies provide empirical evidence on the role played by board independence in the performance of corporate organization. For example, the study of Rosentein and Wyatt (1997), reported an abnormal increase in the value of companies after additional outside directors are appointed on board. Board independence has a positive effect on the company value and overall operating performance (Knyazeva, et al., 2013).

In addition, Byrd and Hickman (1992) establishes that, the firms market stock price reaction offers is more positive when firm‘s boards comprise of independent directors. Independent boards lead to more active CEO discipline and monitoring thereby increasing firm value (Guo & Masulis, 2015). Also, Brickley et al. (1997) found that the average equity market response to pronouncements of poison pills are positive where the board has a majority of independent directors and negative when

it does not. The independence of board members has significant positive relationship with bank performance during the period of financial crises (Aebi, et al. 2011).

On the contrary, the study of Bhagat and Black (1998) established no evidence that the proportion of independent directors on board affects future company value. Result of the study did not support the predictable wisdom that higher board independence increases firm performance. Board independence has insignificant relationship to the performance of 82 sampled Islamic Financial Institutions IFSs in Golf Countries (Hashim, et al. 2015). Similarly, Cadbury (1992) report, recommends the existence of more independent directors (outsiders) for an increase company monitoring activity. Proportion of independent directors on company board has a negative outcome on shareholders wealth and the economic value addition (Imanzadeh, 2014).

Bathala and Rao (1995) established an inverse association between the percentage of independent director‘s members and several other agency conflicts mechanisms and insider ownership of equity of the firm. Greater board independence is significantly and inversely associated with the degree of share price returns, regularized share trade sizes and the market value of stock traded (Elbadry, et al., 2015). While, Agrawal and Knoeber (1996) observed that, company board that are expanded on political motives often result to too many outside directors on the board, does not help in increasing performance of the company. To conclude, board independence is

recognized on the basic assumptions that outside independent directors on the board are more vigilant compared to inside directors because of the following reasons:

Firstly, emphasis of outside directors is more on financial performance of their respective companies, which is a significant part of firm monitoring (Fama & Jensen, 1983). Secondly, independent directors are more expected to dismiss CEOs after poor performance than inside directors (Weisbach, 1988). Thirdly, independent directors have a reason to defend their personal reputes as truly independent directors through attentive monitoring of management (Fama & Jensen, 1983).

In Nigeria, all the codes of CG issued by the regulatory agencies emphasized the need for board of public companies to be independence. The code recommends that 40% of the board member should be independent directors. The independence is determined by the proportion of directors on independent cadre to total number of directors sitting on the board. Against the background in the discussion above, that independence of firm‘s board increases its monitoring capacity and in line with agency theory prediction. This study therefore, suggests the following hypothesis:

H2. Board independence has positive relationship with the equity value multiple of firms listed on the NSE.

3.3.3 The Relationship between Board Gender Diversity and Firm Performance

In recent times, there has been increasing pressures to the world corporations to increase the mixture of their corporate board memberships. Example, in the UK,

Higgs report (2003) suggested that companies should look at other ways to find and employ non-executive directors in order to widen the group of talent available, with the confidence that board diversity will provide a more effective company board. The gender mixture of company board is among the important measures of diversity available in the CG literature. Nevertheless, studies into the influence of gender diversity on company performance have produced mixed findings. For instance, Carter et al. (2003) established that the proportion of females on the company board is positively and significantly related with firm value. In addition, Adams and Ferreira (2004) documented that firms that experience higher variability in their share returns have less women serving on their boards, this indicates that, when the level of uncertainty increase, group homogeneity is desired.

The percentage of women and minorities on boards of directors is positively associated with performance indicators (Erhardt, 2003). Similarly, Gul et al. (2011) documented that gender diversity increases stock price through machinery of public information disclosure in larger firms and by boosting confidential evidence gathering in smaller firms. Also, Dezs (2012) found that, female representation in top management and board improves performance. Investors welcomed the appointment of women on the corporate board and a positive abnormal return was also associated with the appointment of women on board (Ku Ismail & Abdul Manaf, 2016).

Adams and Ferreira (2009) found that, female directors have a significant impact on board inputs and firm performance in selected US firms; similarly, female directors on boards record more attendance in meetings than their male counterparts and are more willing in joining monitoring committees of the firm. Greater diversity in gender of company boards is more likely to generate economic benefits (Campbell & Mínguez-Vera, 2007). Female directors generate value for some Malaysian firms however decrease the value in others (Abdullah, et al., 2016). The more female directors have more performance of Tobin‘s Q and return on equity (Terjesen et al., 2015).

However, other studies could not establish a significant relationship between board gender and firm performance. For instance, Fenwick and Neal (2001) reported no significant correlation between group structure and the market value of equities. The firm with higher presence of female in the boards does not result in substantial differences both in service quality and financial return (Ellwood & Garcia-Lacalle, 2015). Representation of female on boards negatively affects the performance of small firms (Adams, 2015)

In addition, Rose (2007) could not also establish any significant linkage between firm performance measured by firm value and representation of female on boards. The number of women serving on boards could be seen as one of the monitoring mechanism; however, only in countries that their laws and customs allowed women to observe those functions. In Nigeria, women are allowed to occupy any position

like their male counterpart and public companies are encouraged by the regulatory authorities to consider gender diversity in composition of their boards. Therefore, from the issues highlighted above and in line with agency theory prediction the study hypothesizes:

H3. Board gender diversity has positive relationship with the equity value multiple of firms listed on the NSE.

3.3.4 The Relationship between Audit Committee Independence and Firm Performance

Firms audit committees are suggested to be part of internal monitoring mechanisms of corporate organizations. As a result of additional responsibilities to corporate boards, certain responsibilities are allocated to sub-committees for example, audit committees, risk management committees and compliance committees (Kesner, 1988). Kesner (1988) uphold that a majority of essential corporate board decisions start at the committee‘s level including audit committee.

The objective of an audit committee is to increase the reliability and the integrity of the financial examination process (Klein, 2002). Klein added that audit committees in the company boards can add to internal monitoring through an increase in the level of financial auditing process integrity. Dechow, et al (1996) report that, companies that have no audit committee on their boards are more likely to commit financial fraud. According to Jensen and Meckling (1976) and Watts and

Zimmerman (1990), auditing is an essential form of monitoring mechanisms used by corporations to minimize agency cost.

However, the presence of an audit committee alone does not provide assurance for the efficiency of the management monitoring process and credibility of the company financial reporting process (Cotter & Silvester, 2003). Other issues should be taken into consideration when analyzing audit committee measure in monitoring management‘s conduct and performance. An audit committee of every company should be truly independent from management to enable them to conduct effective monitoring for potential prevention of management opportunistic tendencies, improvement in the credibility and quality of the financial reporting process. Empirical evidence reveals that audit committee independence improves firm performance.

Chan and Li (2008) reported that the presence of expert independent directors on company boards and in the audit committee increases their value. Equally, Klein (2002) found that the board or audit committee independence led to an increase in abnormal accruals of firms. The management of companies with more effective boards and independent audit committee structures is more likely to provide more accurate estimates (Karamanou & Vafeas, 2005). In the same line, Bruno and Claessens (2010) reported a significant positive relationship between audit committee independence and market to book value multiple, especially, in countries with good legal requirement for CG practices. The regulatory guidelines of New

Zealand show that only in firms where the majority of the directors serving on the audit committee are independent that are related with the possibility of aggressive earnings management (Sharma & Kuang, 2014).

However, some studies could not establish that audit committee independence increases firm performance. For example, Chen et al. (2005) established little relationship between audit committee independence and performance. Similarly, Sunday (2008) found no relationship between performance and independence of the audit committee. Despite findings from some studies that independence of an audit committee does not lead to increasing firm value, most of the studies established a significant positive relationship between independence of company audit committee and value.

In Nigeria, regulatory authorities emphasise the need for audit committees of public companies to be independent from management influence. According to SEC, and NAICOM codes, the best way to have an independent audit committee is to ensure that the non-executive directors more than those on executive cadre and independent directors among them shall head the audit committee. In summary, looking at audit committee independence as monitoring mechanisms of reducing agency cost, this study proposes:

H4. Audit committee independence has a positive relationship with equity value multiple of firms listed on the NSE.

3.3.5 The Relationship between Managerial Shareholding and Firm Performance

Ownership of shares by executive directors and managers is expected to increase their monitoring ability. Researchers argued on the role played by shareholding of executive directors and managers towards ensuring sound administration of the firm. The findings of the studies on the relationship between executive directors and management share ownership and performance produced a mixed result, although most the findings reveal a positive relationship. For example, Shleifer and Vishny (1997) observe the overall evidence on the association concerning pay and performance as a problem issue. They contend that the greatest way to decrease agency cost is through increasing shares of director‘s and managers in the corporation in order to align management interest with that of shareholder.

On their part, Jensen and Meckling (1976) opined that, as management shareholding increases, company managers bear a large proportion of the costs of elusion and other deed that will rescind the value of the company. Demsetz and Lehn (1985) argue that, managerial owners can be considered potential managers of equity agency problems. Therefore, an increase in their shareholdings gives them a stronger incentive to monitor performance of the firm. Managerial ownership is positively related with crisis-period performance of Chinese State-Owned Enterprises (SOEs) (Liu et al., 2012).

Moreover, Short and Keasey (1999) reported a negative relationship at lower levels of directors and management shareholding and a positive and significant relationship

at higher levels of directors and managerial shareholdings. Hermalin and Weisbach (1991) constructed board composition and insider ownership relationship model and performance, permitting for the endogenous purpose of insider ownership and board composition and found a significant relationship management ownership and firm value consistent with (Morck et al., 1988). Stulz (1988) presents a model specifying that high share ownership by company management and the associated voting power warrant managers to be more likely embedded in their individual positions within the company. Shleifer and Vishny (1989) also advance the model whereby management is able to establish itself by making managers specific investments that improve the value of company owners.

To conclude, Jensen and Meckling (1976) added that, where managers hold small stocks and owners are too spread to take action against non-value maximization of their stocks then agency problem upsurge. With minor or no shareholdings in the firm, management may use company assets to achieve personal gain.

Notwithstanding, other studies could not establish any link between the proportion of shares own by directors and performance. For instance, Sanda et al. (2005) reports no significant relationship between director‘s ownership concentration and price to earnings ratio of the sample firms. In addition, Dadidson et al. (2002) reported a significant negative relationship between stock of executives (inside directors) and abnormal equity returns. Finally, Mura (2007) found that the proportion of directors

and management ownership is not positively and significantly related to the market value of firms.

From the perspective of agency cost monitoring, share ownership by directors and management enhances their monitoring capacity. Ownership by management makes them to be vigilant in managing the company. Accordingly, in line with agency theory, it is reasonable to state that:

H5. Managerial shareholding has positive relationship with equity value multiple of firms listed on the NSE.

3.3.6 The Relationship between Chief Executive Officer Power and Firm Performance

The Nigerian SEC Code of CG state that reducing too much power from chief executive officer that seems to be part of a mechanism to reduce the agency cost. Power of the CEO can be viewed in two perspectives. Firstly, separation of chairman and CEO from one person (Rechner & Dalton, 1990); Second, tenure of the CEO i.e. number of years serving in the company as CEO (Walters et al., 2007). The separation of chairman from CEO as a mechanism to checkmate the activities of CEOs who seem to be above their boards and in some cases influence board decisions. The CEO and chairman duality has been taken care of by the regulatory authorities in Nigeria. For example, CG codes issued by the SEC, CBN and NAICOM make it categorically clear that no CEO should be chairman of the board of his company. But, the present challenge is placed on the tenure of the CEO.

The CBN code of CG for banks recommends the tenure of a CEO to a maximum of 4-years terms (8 years) and his or her reappointment for the second term must base on performance and value addition to the bank. Practically, it can be argued that whenever a CEO stay for a long period of time it is likely for him/her to accumulate too much power that may influence many company decisions. Long-serving CEOs can influence the appointment of executive directors that may be loyal to him. Long-serving CEOs can also use his/her position to penetrate some board member‘s to support his/her opinion during board meetings at the detriment of other company stakeholders. Research was also carried out in both developed and developing markets on the average term of the CEO as a solution for the inhibition of organization fraud (Hermalin & Weisbach, 1988).

Walters et al (2007) found that CEO tenure is positively related to shareholders value at low level tenure and negatively related with shareholders value where the tenure of the CEO rises to a significant level. Berger et at. (1997) reports that leverage resolutions are correlated to the extent of entrenchment by executives, and generally entrenched executives strive to evade debt. They establish that leverage is likely to be lesser when the CEO has longer tenure to serve in the company. Similarly, Bhagat and Black (2002) found a significant positive relationship between CEO power concentration and market to book value. Lastly, Morey et al. (2009) report a significant positive relationship between CEO power concentration and higher market valuation measured by price to book value. In situation where the

board of directors takes adequate measures for vigilance, the tenure of the CEO could value to shareholders (Walters, Kroll & Wright, 2007).

However, the study of Bathala and Rao (1995) reveals a negative coefficient for CEO tenure at a 1% level. This means CEOs who control the firms for relatively long periods of time seem to be successful towards restricting outside directors representation on boards of their firms'. This agrees with the entrenchment proposition found in the literature that longer serving CEO gets excess power that makes it easier for him/her to control other members of the board of directors. Similarly, consistent with the perspective problem, overstatement of earnings is higher in the final year of CEOs (Ali & Zhang, 2014). The CEO tenure in Nigeria is 4 years in the first instance, however, renewable after satisfactory performance. Therefore, based on the issues discussed above and in line with the agency theory, it is reasonable to propose that:

H6. Chief executive power concentration has positive relationship with equity value multiple of firms listed on the NSE.

3.3.7 The Relationship between Abnormal Directors Compensation and Firm Performance

Director‘s compensation is often-suggested as an internal CG monitoring mechanism to ensure the optimum performance of directors. The pay-performance strategy generally helps to decrease the problem of CG in the firm (Phan, 2001). When a company has good compensation plans for its management, the temptation to

commit fraud in the companies is reduced. Prior studies found a link between director‘s compensation and their ability to carry out their monitoring function which in turn increases the performance of firms. For example, Mehran (1995) established proof supporting groups that believe in increased incentive compensation for directors, and also recommends that the method that motivates executives to increase the value of the firm to include stock base compensation plan. Perry (1999 finds evidence that incentive -based compensation for directors influences the level of monitoring by the board and through such compensation, firms can align the interest of directors and shareholders.

In a similar study, Hermalin and Weisbach (1998) also suggested that incentive pay for directors and management can enhance the monitoring efforts executed by the board of directors. Shivdasani (1993) provides additional evidence that ownership by unconnected outside directors remains negatively related to the possibility that a company will be subject to aggressive takeover attempt. Also, when choosing the form of compensation, firms need to be thoughtful to their individual firm characteristics, because some directors and managers may use the advantage to compensate themselves at the expense of other stakeholders.

Other researches also reveal a stronger association between corporate performance and compensation of the executive (Hall & Liebman, 2000). Some researchers however, suggest trade-off between pay-performance to be optimum, though, could not provide what optimum pay to performance should be. Some found that

executives can sometimes structure compensation plans at the cost of shareholders (Campbell & Wasley, 1999). The pay for to directors is tied to long-term firm performance thereby increasing the value of shareholders (Cheng et al 2015).

Nevertheless, some studies could not establish any relationship between director‘s compensation and increased performance (Core et al., 1999; Yeo, et al., 1999). There is no significant evidence for the motivation effect of executive directors share option compensation plans (ESOP) on stock price increase and operating performance of firms (Yeo, et al., 1999).

In the context of this work, directors‘ compensation would be determined by average pay to directors above their peer group sector average as an additional benefit. It can be argued that, if abnormal compensation to directors increases firm performance, performance of directors can also increase their compensation. Executive directors compensation plan actually depend on complex performance including accounting measures (Bushman & Smith, 2001). In Nigeria, companies are encouraged to have a compensation committee that will structure compensation plan that will be fair to all the stakeholders. Based on the discussions above, it is expected that directors pay motivate them to perform better. Therefore, based on the issues discussed and in line with agency theory, the study makes the following proposition:

H7. Abnormal director‘s compensation has positive relationship with equity value multiple of firms listed on the NSE.

3.3.8 The Relationship between CG Disclosure and Firm Performance

The concept of CG is associated with the level of information asymmetry and contracting inadequacies that firms encounter (Klapper & Love, 2004). Financial accounting information reporting and disclosure are important avenues for management to communicate firm performance and CG practices to outside investors (Healy and Palepu, 2001). CG information disclosure in the company‘s annual report is also suggested as one of the internal monitoring mechanisms. Quality of financial experts‘ relative to future earnings growth is related to the value of CG (Byard et al., 2006).

Firm capability to voluntarily disclose CG information is positively associated with the need to increase equity share capital, though, not with a need of raising debt investment by Australian firms (Collett & Hrasky, 2005). Also, Black (2001) found that, change in CG scores (CGS) including disclosure of CG information from the lowest to the highest significantly increases firm market value. Firm‘s voluntary CG disclosure has a significant positive relationship with the price to earnings (Eng & Mak, 2003).

In a similar study, Bruno and Claessens (2010) report a significant positive relationship between better governance transparency and market to book value in countries with low investor protection. In addition, Mitton (2002) reports that, firms with higher quality disclosure, greater transparency and CG focus experience better share price performance during the East Asian financial crisis.

Moreover, Morey et al. (2009) report a significant positive relationship between CG disclosure and higher market valuation measured by price to book value of firms. To support Morey et al, Holm and Schøler (2010) reveals that, disclosure has a significant positive relationship with earnings before interest, tax, and depreciation. While Gray et al. (1995) observed that company directors may disclose voluntarily information if that information will benefit their own personal interest. When directors own company shares and their interest coincides with the interest of shareholders, in that situation the director will pay more attention to the company share price, which reflects the prospects and performance of the company. Governance and social responsibility disclosure is significantly related to performance of companies (Lys et al., 2015). The disclosure effects are associated with the likelihood that the market expects future involvement and responds to the pronouncement of funds ownership performance (Croci & Petrella, 2013).

However, the study of Poshakwalea and Courtisb (2005) report significant negative relationship between disclosure and price to earnings of the sampled banks across the six selected European countries. Also, results from Che Haat et al (2008) indicate that timeliness and disclosure are not significant contributing factors in the association between CG and market performance of the sampled firms. However, foreign ownership and debts monitoring have predicting power on the performance of the company. Against the background that CG information included in the financial reports of companies send a signal of company‘s transparency to its various stakeholders.

In Nigerian, listed firms are by the SEC and CBN codes required to include the following corporate governance information in their annual reports. The CG information to be disclose includes, board size, board and audit committee independence, board gender diversity, managerial shareholding, chief executive power concentration and directors compensation. The objective is to provide details information on governance issues to stakeholder‘s .Therefore, based on the assumption of agency theory, the study suggests that:

H8. Corporate governance information disclosure has a positive relationship with equity value multiple of firms listed on the NSE.

3.4 Summary of the Chapter

The chapter presented the theoretical model of the study to provide an insight of the proposed relationship that exists between the variables. The chapter also presented hypotheses of the study in line with the study objective. That is, to empirically examine whether the combinations of different CG mechanisms have significant influence in predicting equity value multiples of firms listed in the NSE. Hypotheses were developed through review of previous findings; however, emphasis was placed on the theoretical argument. In agreement with previous research, theories of CG are served as guides for the development of all the eight hypotheses that are tested to answer the research questions of the study. The subsequent chapter presents the methodology of the research. The chapter explains the research design, sources of

the data, population and sample of the study. The chapter finally explains the variables of the study (dependent and independent) and technique of data analysis.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

The previous chapter discusses the hypotheses to achieve the study objective. The main objective of the study is to empirically examine how internal CG mechanisms affect the EVMs of firms listed in the NSE. To achieve the objective, this study used four proxies as measures of equity value multiple namely price to earnings, price to book value, price to cash flow and price to sales multiple through the use of principal components analysis PCA method.

CG variables on the other hand are represented by board size, board independence, board gender diversity, audit committee independence, chief executive officer power concentration, abnormal directors‘ compensation and corporate governance disclosure and information. This chapter explains the research design, the population of the study, the data collection procedure, the source and methods of data collection. In addition, the chapter defines variables of the study (dependent and independents). Finally, the chapter presented a model specification for the regression analysis and technique used in the analysis of data.

4.2 Research Design

Research design is those strategies and actions for gathering information and examining them with the objective of combining the significance of research through economy in procedure (Barney, 1986). Different research designs have been suggested depending on research objectives and they include: experimental research design, survey research design, exploratory research design, causal research design, case study research design, cross-sectional research design, historical research design and descriptive research design, longitudinal research design, and observational research design among others. However, this study chose to use descriptive research design to examine the impact of the independent variable (CG mechanisms) on the dependent variable (EVM). Documentary information from annual accounts and reports of the sampled listed companies in the NSE is utilized in answering the research questions. The use of secondary information from financial statements and other relevant publications justifies the selection of the research design.

4.3 Type of Data for the Study

According to Hsiao (2003), panel data is a set of data that trails a specified section of individuals or entities over a period of time. Similarly, panel data provides numerous observations on every individual or entity in the sample. Panel data are widely used to conduct research both in developing and developed countries of the world. Panel data are also referred to as longitudinal. Panel data groups for economic study have

several key advantages over time-series data or conventional cross-sectional (Hsiao, 1985).

Panel data provided the researcher with large number of observations, increased the degree of freedom and decreased the collinearity between independent variables – therefore improved the effectiveness of econometric estimations (Hsiao, 2003). Additionally, panel data permit a researcher to investigate a number of vital research problems which cannot be solved using time-series data or cross-sectional data (Hsiao, 2003). Panel data possess the characteristics of both cross-sectional and time series, thus, making it provide more tentative prediction. The use of panel data regression techniques has become progressively popular as the accessibility of longitudinal sets of data has grown. Panel data comprise recurring time series observations (T) of a huge number (N) of cross-sectional components (firms, individuals, or households) (Ahn & Schmidt, 1998). A significant benefit of using panel data is that it‘s allowed the control of unobservable heterogeneity by the researcher, that is, organized differences through cross-sectional elements (Ahn & Schmidt, 1998). Based on the issues highlighted above, the data of this study are the combination of cross-sectional and time series.

4.4 Sources and Method of Data Collection

The study used secondary sources of data; the data are gathered from the published financial statements of the sampled listed firms in the NSE for period of five (5)

years (2009, 2010, 2011, 2012 and 2013). The period is chosen for the following reasons. Firstly, this is the period of post global financial crises that have affected virtually most countries of the world, Nigeria inclusive. The period of global financial crisis leads to total failure of many corporate organizations. The period is characterized by a loss of huge amount of money from investors. These make some investors to lose confidence on how their investments are managed by company‘s management. Secondly, is the period when corporations started to pay more attention to CG practices in order to safeguard the interest of all stakeholders (shareholders, management, creditors, regulatory authorities, employees, associations and other interest groups).

Thirdly, during the period, Nigerian regulatory authorities have carried out a lot of reforms in 2011 and 2012 to avoid a repetition of the past. Therefore it is important in order to assess the influence of these regulatory reforms on the value of shareholders. Firms are mandated to disclose certain information in their annual reports which CG practices are part of it. Information on the dependent variable (EVM) is extracted and calculated by the researcher on individual company bases for all the period of the study. CG information on the other hand, is extracted base on the published information. Other secondary information includes publication from SEC, the NSE and CBN statistical bulletin.

It is important to note that, this study is restricted to Nigeria because of the following reasons. First, according to the African Securities and Exchange Association, Nigeria capital market is the most vibrant in the Africa Sub-Sahara region and the second most important market after South Africa. Therefore making Nigerian capital markets an important player in equity investment in Africa and world at large. Second, Ujunwa (2012) observed that, corporate governance in Nigeria is an important issue that requires frequent investigation particularly in relation to the value of shareholders.

4.5 Population of the Study

The population of this study comprises of all public companies listed on the NSE i.e. period of the study. The study includes listed companies from all sectors according to NSE classification. The NSE categorized listed firms based on the following sectors; (i) Agriculture; (ii) Conglomerates; (iii) Construction/Real Estate; (iv); Consumer Goods; (v) Financial Services; (vi) Healthcare; (vii) ICT; (viii) Industrial Goods; (ix) Natural Resources; (x) Oil and Gas; (xi) Services; and (xii) Utilities. The ability of a public company to meet the listing requirement of NSE indicates the company is a public company and its shares could be traded in the stock exchange market. The population is selected because of the objective of the study, that is to examine the impact of CG mechanisms on equity value multiple of Nigerian listed companies.

Thus, the selection of the population concentrates only on listed companies. Secondly, all the listed companies are required by the SEC to prepare annual financial reports including disclosure of CG information. The population of the study comprises of 203 listed firms as at 31st December 2013. It is important to note that contrary to the widespread view that different industries have different ―best" multiples. Liu et al (2001) investigated the performance of a comprehensive list of multiples and a variety of associated issues like variation in their performance across industries over the period. Evidence from the findings established that the overall rankings of equity valuation multiples are observed consistently for almost all industries over the period.

4.6 Data Sampling Procedure

The determination of an appropriate sample is a common task for various organizational researchers. Inadequate, inappropriate, or excessive sample continue to impact on the accuracy and quality of research (Bartlett, Kotrlik & Higgins, 2001). Therefore, the researcher is guided by the following procedures in determining the data of the study. Firstly, the study selects companies that are listed on the Nigerian Stock Exchange prior to 2009. Secondly, only companies that are on NSE listing up 2013 are considered. Thirdly, the choice of a company depends on the availability of information for both equity value multiple and corporate governance variables. It is important to note that, the sampled selection excludes firms that are sanctioned by the regulatory authorities as a result of non-availability of governance information.

The exclusion of the affected firms was also motivated by inability of non-selected firms to disclose data on the equity value multiples consistently in their annual reports. Thus, the selection of the sample excludes firms affected by regulatory reforms during the period of the study.

4.7 Variable Definition and Measurement

This sub-section defined equity value multiples (price to earnings, price to book value, price to cash flow and price to sales multiples) and how they are evaluated in the context of this research. Governance mechanisms (board size, board independence, board gender, audit committee independence, managerial shareholding, chief executive power concentration, abnormal director's compensation and CG disclosure and their measurements are discussed in the sub-section below. It is important to emphasize that the selection of the above mention CG variables is based on the availability of data and issues observed in respect of the variables from the codes.

4.7.1 Equity Value Multiple (Dependent Variable)

As highlighted earlier, equity value multiples are the most important way to value shares of a company. Value multiples can be determined by two approaches. First, through the use of prior information, for example historical financial data of a company, these types of value multiples are referred to as trailing multiples (Damodaran, 2006). Second, through financial information forecasted by investors

and analysts, these types of value multiples are referred to as the forwarding-looking multiples (Barniv, 2009; Liu et al., 2002; Schreiner, 2007). This study used the trailing approach to determine value multiples of the study. This is because; the information is available in the firm‘s financial reports. In determining multiple of the regression model, two stages are involved, first, the researcher calculate individual value multiple of the firms within the sample and, second, application of the principal components analysis technique (PCA) to determine one EVM that is used in the regression model. Various EVMs are presented in table 4.1 below:

Table 4.1
Operationalization of equity value multiples construct

EVM Variables	**Measurements**
Price to earnings (P/E)	Price per share divided by earnings per share
Price to book value (P/B)	Price per share divided by book value per share
Price to cash flow (P/C)	Price per share divided by cash flow from operation per share
Price to sales (P/S)	Price per share divided by gross revenue/sales per share

The explanation of constructs and their operationalization are as follows:

1. Price to Earnings Multiple

One of the ways to reflect the worth of any company asset is to look at a multiple of earnings generated by that asset. While in buying shares, it is normal to consider the amount paid as a multiple of earnings per share that the company generates (Damodaran, 2006; Mosley & Singer, 2008). This price to earnings multiple is determined by stock price per share divided by earnings per share of the selected companies

2. Price to Book Value Multiple

Investors regularly consider the relationship between the price of a stock and the book value of the company‘s equity (net worth) as a means of measuring of how under-or overvalued a stock is. The price to book value multiple that emerges may vary across industries, dependent upon the growth potential of the company and the investments quality in each (Damodaran, 2006). In valuing businesses, some analysts estimate this multiple using the value of the company and the book value of total assets or capital (not just the equity) (Damodaran, 2006). In the context of this research price to book value multiple was determined by stock price per share divided by book value of equity per share.

3. Price to Cash Flow Multiple

Operating cash flow is one of the relative performance measures of earnings forecasts that have been revealed to provide remarkably accurate valuations for

companies in U.S. and cash is regarded as a king in equity valuation (Liu et al., 2007). Some studies used net cash flows from investing activities, cash flow from financing activities, total cash flow or net cash flow. However, this study used cash flow from operating activities, because it provides more accurate value as observed by Liu et al. (2007). Thus, price to cash flow was determined by stock price per share divided by cash flow from operations per share.

4. Price to Sales

Both book value and earnings are accounting measures of performance and are determined through accounting principles and rules. Another approach that has not much affected by accounting choices is using the proportion of business value to its generated revenues (Damodaran, 2006). For equity share investors, this proportion is the price to sales multiple where the market value or price of equity is divided by income generated by the company. Thus, price to earnings was determined by stock price per share divided by gross revenue per share.

4.7.2 Equity Value Multiple for the Regression Model

Factor models are used as dimensionality reduction methods in circumstances where a researcher has a large number of variables that are closely related and want to allow the most essential influences on the total variables at equal time. Factor models are also used to decompose the construction of a group of sequences to common factors in all sequence and a ratio that is specific to each sequence known as

idiosyncratic variation (Brooks, 2008). According to Brooks (2008), factor models are divided into two; first, macroeconomic model, and second, mathematical model. For, the macroeconomic model, the factors are observable, while, in the mathematical model the factors are unobservable and principal components analysis (PCA) is the common mathematical factor model. The PCA technique is useful where variables are closely related.

The PCA is a factorial technique where new variables are created, as mixtures of the initial displays, variables named primary having no relationship between them and a maximum variance. In the PCA, the total variance of the variables is explained (Opris, Demeter, & Palade, 2014). PCA is a multivariate arithmetical technique that is used in order to reduce the variables number from a data set to a smaller number of ‗measurements'. Mathematically, PCA generates uncorrelated components or indices, where every component is a linearly weighted mixture of the original variables (Vyas & Kumaranayake, 2006).

PCA transforms variables that are initially correlated to new uncorrelated variables with maximum representation of all the initial variables, and is useful in identifying and preserving data information structure (Kim, 1986). A statistical instrument designed to summarize inter-relationships between related variables is principal component analysis and one of its functions is to group variables to a small factor that maintains maximum information contained in the original variables (Chen & Shimerda, 1981).

PCA technique has been used by many researchers to reduce the number of variables that are initially correlated to new variable. For example, Ittner and Larcker (2001) used PCA to reduce 12 factors of the corporate organizational strategy and company environment that are normally used to measure strategy and environmental uncertainty to 3 factors. Also, Larcker et al. (2007) used PCA to reduce 39 measures of corporate governance to 14 to see their impact on organizational performance and accounting outputs. In addition, Libby (1975) used PCA to reduce 14 accounting ratios to 5, while predicting failure in relation to the ratios. Finally, Miller and Bromiley (1990) used PCA to reduce 9 measures of corporate risk in management research to 3.

Therefore, this study used the PCA method to reduce the 4 equity value multiples (price to earnings, price to book value, price to cash flow and price to sales) to generate one value multiple as the dependent variable. The PCA is deducted from Ashton, Cooke, Tippett and Wang (2003) aggregation theorem of market value and equity, thus;

$$EVM\ (\eta) = \beta_0 + \beta_1 x\ (t) + \beta_2 b_2\ (t) + \beta_3 c_3\ (t) + \beta_4 s_4\ (t) + \beta_5 x_5\ (t) + \varepsilon(t)$$

Where EVM is the equity value multiple, x (t) is the price to earnings multiple, b(t) is price to book value multiple, c(t) price to cash flow multiple, s(t) is price to sales

multiple, x(t) and β (s) are the coefficients of valuations related with every element of reduce valuation model, while ε is the error term in the regression equation.

In addition to the PCA value as the explained variable, the study also estimated the influence various corporate governance variables on the individual dimensions of the equity value multiples (price to earnings, price to book value, price to cash flow and price to sales multiples).

4.7.3 Application of PCA to Proxy Equity Value Multiple

Liu et al.'s (2002) study motivated the application of the Principal Component Analysis PCA to proxy Equity Value Multiples EVMs. Their study examined correlations for different sets of value drivers scaled by price and indicated that value drivers used to compute multiples were positively correlated. This suggests that they share considerable common information. Principal component analysis technique on the other hand, is applied where variables are established to have correlations with each other. In addition, Penman (1997) combined price-earnings and price-book value in valuation of equity, and the overall result indicated an improvement in calculating a combined P/E and P/B multiples compared to ones based on normal multiplier of each separately. This further suggests that equity value multiples share some common information with each other.

Similarly, Yoo (2006) examined whether the composite approach yields higher value accuracy than the individual multiple valuation approach and found that the composite approach using historical multiples reduces the valuation errors of each multiple valuation using a historical multiple. Correspondingly, the application of principal component analysis to a proxy group of variables can only be appropriate after the PCA satisfied the post- estimation test.

The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was conducted as a post-estimation test to check whether correlations exist amongst the equity value multiples of the sampled firms under study. The overall KMO value was 0.79 approximately indicating the sample quality falls in the "meritorious" range of values as Hutcheson and Sofroniou (1999) described. Therefore, based on the results of Liu et al. (2002), which suggests correlation amongst the equity valuation multiples because of their relationship with one numerator (stock price) and the PCA post-estimation test, the current study applied the PCA technique to proxy EVMs.

4.7.4 Procedure of PCA Technique on Panel Data

PCA is a factorial technique in which new variables are created, as combinations of the initial displays have no correlations amongst them with a full variance (Opris et al., 2014). Passamani et al (2015) documented that principal component analysis is a practical and common method in finance and macroeconomics with regard to standard econometric examinations of models that are used to condense the number

of variables in a data set by extracting important linear combinations from the supposed variables that might correspond to describe a particular phenomenon. The principal component analysis methodology is applied where correlations exist between the variables and the researcher desires to choose a component that represents all other variables. The objective of PCA is to find a variable that has a linear combination of the initial variables and do away with redundant variables.

In this study, PCA methodology is important because the equity valuation multiples (price-to-earnings, price-to-book, price-to-cash flow and price-to-sales multiples) have relationships with stock prices. The first principal component PC1 is given by the linear mixture of the initial variables x and accounts for the maximum possible variance. The second principal component PC2 captures most of the information that is not captured in the first PC1 and also not correlated with the first PC. Principal component analysis is performed with software like the Statistical Analysis System (SAS), the Statistical Package for Social Sciences (SPSS) and STATA.

The current study used STATA software to compute the PCA and generated a principal component with a linear representation of all the four equity valuation multiples. Thus, these steps were followed. First, the data were sorted and arranged in panel form in the Excel spreadsheet before importing the data set. Second, the equity value multiples were imported in panel form into the STATA software. Third, the data were analyzed by first going to statistic in the STATA window, then selecting multivariate, then selecting Factor and Principal component analysis, then

selecting Principal Component Analysis (PCA), then selecting variables of interest for the PCA computation and pressing enter. The STATA automatically generated Principal Component Correlation and Principal Component Eigenvectors. After the computation of PCA correlation and eigenvectors, the final stage is typing predict F1 in the STATA data entry window and pressing enter after which STATA automatically generates the first principal component.

4.7.5 Corporate governance (independent variable)

As earlier discussed, CG in the context of this research refers to those internally structured mechanisms that guides how corporations are governed for shareholders maximum returns and protection of other stakeholders interests. The CG variables of the study are board size; board independence; board gender diversity; audit committee independence; managerial shareholding; chief executive officer (CEO) power concentration; abnormal directors compensation and level of CG disclosure. The variables and their definition are presented in table 4.2:

Table 4. 2
Operationalization of CG constructs

CG mechanisms	Measurements
Board Size (BS)	Total number of board members
Board independence (BI)	Number of independent directors to total board size
Board gender diversity (BGD)	Total number of females on the firm‘s board
Audit committee independence (ACI)	Number of independent directors to total number of audit committee members
Managerial shareholding (MSH)	Total management shares ownership to the total shares
Chief executive officer power concentration (CEOP)	The tenure of the CEO of a company above 4 years is one (1) 4 years below zero (0) (the more the years the more power accumulation)
Abnormal directors compensation (ADC)	The amount of pay to director above peer group sector average
Corporate governance disclosure (CGD)	The disclosure of CG information in the annual reports dummy of one (1) otherwise zero (0)
Control Variables	
Firm size (FIRMSIZE)	Measured by natural log of total asset
Firm age (FIRMAGE)	The difference between 2013 and company year of listing in the NSE.
Industry type	Industry dummies based on financial and non-financial firms
Leverage	Firm total debts to total assets
Risk	Firm dummies for risk management committees one (1) and zero (0)

The explanation of constructs and their operationalization are as follows:

1. Board Size

Following prior researches, (Vafeas, 2000; Beasley, 1996) board size is represented by the total number of company‘s directors on the board including executive and non-executive directors. Annual reports of Nigerian listed firms disclose information concerning the board structure.

2. Board Independence

The number of independent directors to total number of board members on the firm‘s board is used to operationalize the independence of the board (Clifford & Evans, 1997). As a result of regulatory recommendation by the SEC, an independent outside director is a director that is assumed to have some level of independence compare to directors on the executive cadres. Independent directors are not subject to any influence from management or any other person. The SEC CBN and NAICOM codes defined independent director of the company board as a director that has no substantial share in the company and does not represent any shareholder. Annual reports and accounts of listed firms listed on the NSE have information on independent directors.

3. Board Gender Diversity

Previous studies on board gender look at the number of women serving on the firm‘s board (Farrell & Hersch, 2005). Other studies measure board gender for percentage of women serving on boards (Carter et al., 2003). In addition, some study used

dummy board gender diversity (Dezso, 2012). This study measures board gender as the total number of women serving on the company‘s board. Information on board member‘s gender is available in the annual reports of Nigerian listed firms.

4. Audit Committee Independence

Independence of audit committee is operationalized as the number of independent directors to total members serving on the audit committee. SEC 2011 recommends that at least one member of the audit committee must be independent director while the NAICOM 2009 recommends the chairman of the audit committee must be independent. On its part, the CBN recommends that at least two of the bank directors must be on an independent cadre (Abbott, Park, & Parker, 2000; Klein, 2002). Information and status of the audit committee members are available in the annual reports of the Nigerian listed firms.

5. Managerial Shareholding

From prior studies, managerial shareholding refers to the amount of shares own by the company management (Jensen & Meckling, 1976; Donker Santen, & Zahir, 2009). Managerial shareholding can also be measured by the percentage of shares owned by executive directors and other management to total shares of the company (Shleifer & Vishny, 1997; Flath & Knoeber, 1985). This study used managerial shareholding and is measured as the total management ownership of shares to total

shares in the company in line with the monitoring mechanism. Information on shareholding of firms is available in the annual reports of Nigerian listed firms.

6. Chief Executive Officer Power Concentration (CEOP)

Following prior research, CEO power concentration is denoted by a dummy variable. While prior researches measures CEO power concentration on whether the CEO of the firm occupies the position of the chairman (Gul & Leung, 2004). The current study uses a broader measure of CEO power concentration. A chief executive officer is considered powerful where his/her tenure continues to increase over the years. This means the CEO of a company assumes more power concentration based on the years he/she serves as the CEO. Thus, CEO power concentration is determined by tenure individual occupying the position of CEO above 4 years meaning the CEO is serving a second term.

7. Abnormal Directors' Compensation

From prior studies, director's compensation is determined by aggregating the amount of pay to directors including, salaries and other incentives accruing to the directors. (Mehran, 1995; Ryan & Wiggins, 2004; Brick, Palmon & Wald, 2006) However, in this study, director's compensation is measured as abnormal director's compensation that is directors pay above peer group as used by Agrawal and Walkling (1992) for takeover companies in US. Abnormal directors' compensation is also referred to as deviation from the model of normal. The annual reports of listed firms contained

director‘s compensation. Thus, abnormal director‘s compensation was determined by computation of the peer group sector average, then comparison between the average and individual firm compensation package for directors.

8. Corporate Governance Disclosure Information

From prior studies, CG disclosure is measured as dummy one (1) and zero (0) if the firm annual report has CG Information 1 otherwise 0 (Collett & Hrasky, 2005,). Other researchers developed disclosure index to take care of individual item disclosed and score the firms (Singhvi & Desai, 1997). This study used a dummy of one (1) and zero (0) to assess CG information disclosure information in the annual reports of companies as recommended by the regulatory authorities. The CG information disclosure in the context of this study refers to the disclosure of information on the board size, board and audit committee independence, gender diversity of the board, managerial share ownership, tenure of the chief executive officer and director‘s compensation.

4.8 Control Variables

4.8.1 Firm Size

The size of a firm determined how the firm operates. Large firms usually find it less difficult to secure external finances and do not like to rely mostly on borrowing from bank for their financing. They have lesser informational asymmetries, and larger firms are more established than smaller firms (Baek, Kang & Suh, 2004). Large firms tend to have huge asset based that can be used as collateral. All these features

suggest that large companies are less exposed to external shock (Baek et al., 2004). Large firms are perceived to have sufficient tangible assets compare to small firms that are used as collateral to access debt capital (Bassey et al., 2014). In the context of this work firm size is measured by the logarithm of total assets. Information on the firm‘s total assets reflects in the annual reports of Nigerian listed firms.

4.8.2 Firm Age

The age of age a firm is a significant indicator that control vulnerability of equity prices, many investors often consider age of the firm before making their investment decisions. Firm age can be determined through two perspectives. First, the year a company is incorporated to carry out its business (Loderer & Waelchli, 2009). Second, company firm age, can also be looked into on the perspective of listing period i.e. the year a company is listed to trade its shares on the approved stock exchange (Baker, Powell, & Weaver, 1999). It has been established in the literature that, age of a company increases its performance and control abnormal changes of its stock prices. Firm age has a significant relationship with growth of firms (Choi et al., 2013). Information on the year of listing of firms is available in the firms listed on the NSE. This study measured firm age as difference between 2013 and company year of listing in the Nigerian Stock Exchange.

4.8.3 Firms Leverage

A number of empirical works have used leverage as control variable (Chiu & Ho, 2015; Lys, et al., 2015; Mitton, 2002). The empirical study of this nature needs to take consideration of leverage because of the way firms under the sample are financed. The control for leverage prevents the likelihood of spurious correlations between the variables of the study. Leverage was reported to have positively relationship with the financial performance of selected insurance companies listed at the Nairobi Stock Exchange (Wanyonyi & Tobias, 2013). Size of firms and Leverage generally explained more than 53% of the variation in reported goodwill impairment of selected firms in the 2002 to 2004 reporting periods (Godfrey & Koh, 2009).

The relationship between leverage and firm value is positive especially where leverage is unreasonably high (Pech et al., 2015). The leverage coefficient (Total debt/total assets) was indistinguishable from the value of zero; this could be as a result of fact that the variable does not have significant change over the time series analysis (Linck et al., 2009). Therefore, this study also controls for leverage to increase the statistical power of the model and control for the likelihood of spurious correlation.

4.9 Technique of Data Analysis

The technique of data analysis of the study is multiple regressions and the mode of estimation is System Generalized Method of Moments (SYSGMM) to take care of

deficiencies of unreliability and biasness of Pooled Ordinary Least Square (OLS), fixed and random effects unreliable and bias. According to Delgado-garcía, Quevedo-puente and Fuente-sabaté (2010) the System Generalized Method of Moments has the following advantages; it controls the problems of possible endogenous of the independent variables. The GMM method also avoids non-observable constant heterogeneity problem resulting from each company specific features that remain over the period of time. Furthermore, the GMM system estimation method allows more instruments to be included for improving efficiency compared to other GMM estimators. The system GMM mode of estimation was found to have insignificant finite biases of sampling and smaller variances substantial compared to other estimations (Baltagi, 2005).

The common concern with research on CG and performance is the possible presence of endogenous. Specially, where positive connection is established from performance to good CG, the estimated coefficient on CG would be rising towards biased, hence rendering the prior results unreliable. The reason for the endogenous is that, good company performance might encourage the execution of the best CG framework because effecting CG structure is expensive; therefore, only profitable companies can afford.

Previous studies used GMM method to evaluate the relationship between governance variables and performance. For example, Mura (2007) used the System Generalised Method of Moment to estimate the relationship share ownership of chief executives

and non-executive directors on the value of firms. There are other studies that used the GMM in conducting research of corporate governance and value relationship (Ammann, Oesch, & Schmid, 2011; Delgado-garcía, et al., 2010; Guest, 2009). The reason of using the GMM estimator for governance and performance relationship aforementioned in the above researches is that, the static models (OLS, fixed and random) could not take care of endogenous problem between the explained and the explanatory variables.

The system GMM is used for estimation of causality effects between the dependent and the independent variables (Méon & Sekkat, 2013). Considering the CG and firm values system GMM provide solution on endogeneity problem that is established in the literature between explanatory and the explained variables.

4.10 Models Specification

In order to examine eight hypotheses formulated, variables from Ohlson (1995**)** equity valuation model that include corporate equity value, book value and earnings, this study selects 8 variables of corporate governance that are representing other non-financial information in line with **(**Feltham & Ohlson, 1995**;** Ohlson, 1995 **;** Ohlson, 2001 equity valuation model. The model suggests the inclusion of other information in valuing equity. Thus,

$$EVM = f(BS, BI, BG, ACI, DSH, CEOP, ADC, CGD) \qquad (1)$$

From equation 1 above equity value multiple is a function of board size, board independence, board gender diversity, audit committee independence, managerial shareholding, chief executive officer power concentration, abnormal directors' compensation and CG disclosure information.

The following sub-section explained the procedure involving the model used to estimate the regression equations. Before estimation of econometric analysis, showing the picture of variable distribution is very important and is usually done through the provision statistical summary of the data. Descriptive statistics are carried out to show the rudimentary properties for the data and they include the mean, maximum, minimum, standard deviation and variances that show the distribution of the data.

To conduct the empirical analysis of the study and in conformity with Doris, O'Neill, & Sweetman (2010), the Generalized Method of Moments (GMM) tool of estimation as suggested by Arellano and Bond (1991) and Blundell and Bond (1998) are used in estimating the regression. The GMM as a method of estimation takes into consideration time in-variant company characteristics, covering specific effects that are unobserved and which may have correlation with the independent variables. The GMM estimator also takes care of the endogenous problem of the regressions; it avoids bias in dynamic panel and accommodates panels that are unbalanced in addition to multiple endogenous variables. Alongside the benefits related to the use GMM estimator, the existence of lagged explained variable between the regressions

makes standard estimators of pooled ordinary least square (OLS), fixed and random effects unreliable and bias. Thus,

$$Y_{it} = \beta_0 + \beta Y_{it-1} + \beta_1 X + \lambda_i + \varepsilon_{it} \quad \text{Model (2)}$$

Where

Y Represent the dependent variable, I refer to the unit of observation; t refers to the time, β_0 is constant; β is coefficient of the lagged dependent variable; β_1 is coefficient of explanatory variables; X is a vector of explanatory variable; λ unobserved individual specific effect; ε is the remainder of the error term. Thus, from equation 1 and 2, the regression model of the study is stated as follows:

$$EVM_{it} = \beta_0 + \beta\, EVM_{it-1} + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BG_{it} + \beta_4 ACI_{it} + \beta_5 MSH_{it} + \beta_6 CEOP_{it} + \beta_7 ADC_{it} + \beta_8 CGD_{it} + \lambda_i + \varepsilon_{it} \quad \text{Model (3)}$$

From the model 3 above EVM is equity value multiple, BS is board size, BI is board independence, BG is board gender diversity, ACI is audit committee independence, MSH is managerial shareholding, CEOP is chief executive officer power concentration, ADC is abnormal directors‘ compensation and CGD disclosure information.

To generate efficient and consistent parameter, Sagan test was carried out to test for over identification restrictions, for example, instruments validity specification of the

model. Similarly, Arellano and Bond autocorrelation test was conducted including time dummy variable test for relevance of time. In estimating the regression equations of the study, system GMM two-step estimator was used because is more effective and robust in all sorts of heteroskedasticity (Arellano & Bond, 1991). The control variables (CV) are treated as exactingly exogenous and the regression equation utilized instruments that are internally while additional external instruments are not included. To validate the results, following diagnostic tests are conducted.

1. Sagan test for:

i. Overidentifying restrictions that have a null hypothesis (H_o) indicating that instruments are valid, for example not have correlation with the error term. Thus, Rejecting H_o means the instruments are inconsistent and biased.

ii. Model specification, the null hypothesis ($H_{o)}$ indicating that the model and over identifying situations are specified correctly. Failures to reject the null hypothesis H_o justifies the model and over identifying restrictions are correctly specified.

2. Arellano and Bond check for the autocorrelation. The null hypothesis ($H_{o)}$ states that there is no 1^{st} -order serial correlation. This test should reject the null hypothesis ($H_{o)}$ of no 1^{st} order serial correlation, however should not reject the null hypothesis ($H_{o)}$ suggesting the absence second order serial correlation.

3. The test is to show the importance of time in the estimate (time dummy variable).

Previous studies on CG and equity valuation have also used the Ohlson equity valuation model (Barniv, 2009; Davis-Friday, Eng & Liu, 2006; Lee, Lin & Chang, 2011; Kuo & Tswei, 2011). The model is flexible because it allows for incorporation of other information‘s that are not financial in nature, but has significant influence on the overall performance of an organization. Therefore, hypotheses test from the regression model above provide empirical results on the relationship between non-financial information (CG mechanisms) measured by board size, board independence, board gender, audit committee independence, managerial shareholding, chief executive power concentration, abnormal directors‘ compensation, CG disclosure information and value of equities in Nigeria.

4.11 Summary of the Chapter

The chapter introduced the methodology of the study. It explains the research designs, the population of the study, the data collection procedure, the source and methods of data collection. In addition, the chapter defines variables of the study i.e. dependent represented by equity value multiple and the two stages to determine the equity value multiple. First, calculating equity value multiple for all the sample firms. Second, use the principal components analysis to arrive at the equity value multiple that is used in the regression. In addition to equity value multiple, the

independent variables (CG mechanisms) were clearly defined and explanations on the mode of their measurements are also offered. Finally, the chapter presented a model specification for the regression and technique of analysis employed in the analysis of data together with the method of estimation. The methodology is presented in order to achieve the study objective, that is, examining the impact of selected corporate governance mechanisms on the equity value multiple of Nigerian listed firms.

CHAPTER FIVE

PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS

5.1 Introduction

The previous chapter discussed the methodology of the research used to achieve the study objective. The main objective of the research was to empirically examine how combinations of CG mechanisms influenced the EVMs of firms listed on the NSE. To achieve the objective, this study used four proxies as measures of equity values multiples, namely, price-to-earnings, price-to-book value, price-to-cash flow, and price-to-sales. The Principal Component Analysis (PCA) was used to generate uncorrelated values of the explained variable (equity value multiple).

5.2 Sector Classification of the Sample

The final sample of the study comprised 100 companies that had the data required for analysis over the 5-year period from 2009-2013 resulting in 500 observations. As shown in Table 5.1, the majority of the sampled companies were from the manufacturing, banking and the insurance sectors (60%), conglomerates (15%), services sector (11%), agriculture (10%), oil and gas sector (9%).

Table 5.1
Sector classification

Distribution of sample companies by sector	Number of observations by sector	Percentage
Manufacturing	150	30
Banks	75	15
Insurance	75	15
Conglomerates	75	15
Services	55	11
Agriculture	50	10
Oil and Gas	45	9
Total number of observations	500	100

5.3 Principal Component Analysis (PCA) Results

PCA is a factorial technique in which new variables are created, as combinations of the initial displays, having no correlations amongst them with a maximum variance (Opris et al., 2014). Passamani et al (2015) documented that principal component analysis is a practical and common method in finance and macroeconomics with regard to standard econometric examinations of models that are used to condense variables number in a data set by extracting important linear combinations from the supposed variables that might correspond to describe a particular phenomenon.

The principal component analysis methodology is applied where correlations exist between the variables and the researcher desires to choose a component that represents all other variables. The objective of PCA is to find a variable that has a linear combination of the initial variables and do away with redundant variables. In this study, PCA methodology is important because the equity valuation multiples

(price-to-earnings, price-to-book, price-to-cash flow and price-to-sales multiples) have relationships with stock prices. The first principal component PC1 is given by the linear mixture of the initial variables x and accounts for the maximum possible variance. Second principal component PC2 captures most of the information that is not captured in the first PC1 and also not correlated with the first PC. Principal component analysis is done with software like the Statistical Analysis System (SAS), the Statistical Package for Social Sciences (SPSS) and STATA. However, the current study used STATA software to compute the PCA and generated a foremost component with a linear representation of all the four equity valuation multiples. The results of the of principal component analysis for equity valuation multiples are presented in two separate tables, Table 5.2 presents the PCA correlation and Table 5.3 presents the eigenvectors.

Table 5.2
Principal Component Analysis Correlations

Component		**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**
Comp1		2.490830	1.9081300	0.6227	0.6227
Comp2		0.582700	0.0733121	0.1457	0.7684
Comp3		0.509390	0.0923132	0.1273	0.8957
Comp4		0.417077	0.0923130	0.1043	1.0000
Observations	500				
Components	4				
Trace	4				
Rho	1.00				

The table above presents the correlation variances of the principal components for PE, PB, PC and PS multiples variable variances. The first principal component has eigenvalues of variances of 2.49 and a proportionate representation of 0.62 (2.49/4) of the variable variance. This meant that the first principal component explained 62% of the variation of the equity valuation multiples. This suggests that, if the first principal component is applied to the all equity valuation multiples, the valuation multiples have 62% representation in the first principal component.

The second component has an eigenvalue variance of 0.58 and an equivalent variation of 15% (0.58/4) of the entire variable variance. This also suggests that 15% of the variation in equity valuation multiples is explained by the second component.

The principal components analysis values produced are uncorrelated to each other. This indicates that the first and the second components explained 77% (62+ 15) of the total variable variance. This accordingly suggests that, by utilising the first and the second principal components, 77% of the variables total variance for equity valuation multiples was explained.

The third component has an eigenvalue variance of 0.51 and fraction of 0.13 (0.51/4). This suggests that 13% of the variation in the variable was explained within the third principal component value. Following the researches of Nikolaev (2010) and Sheu and Lee (2012) that used first principal component that has 60% proportionate principal component, this current study therefore, identified the first

principal component as the main component to represent all four of the equity valuation multiples.

Had the components been interrelated, they would have partly represented by the same numbers, so the data enclosed in the combination would not have been equal to the summary of the of the components data. All the four principal components jointly explained all variance that occur in the variables. Therefore, the unexplained variances computed in the second panel all equal zero, and Rho = 1.00 as presented in the first result. More than 60% of the variance was explained within the first principal component. This suggests the existence of a strong correlation between the EVMs and, if joined together, can be satisfactory explained within the first principal factor. The next table 5.3 below presents the principal component analysis eigenvectors

Table 5.3
Principal Component Analysis Eigenvectors

Variable	Comp1	Comp2	Comp3	Comp4	Unexplained
PE	0.4795	0.7966	0.1107	0.3512	0
PB	0.5246	0.0735	-0.3497	-0.7727	0
PC	0.5025	-0.4641	-0.5056	0.5258	0
PS	0.4923	-0.3804	0.7809	-0.0554	0
Observations	500				

Table 5.3 above presents the eigenvectors. These principal components values have component distance; the column wise summary of the squares for the loadings is 1

(0.492 + -0.382 + 0.782 + -0.062 = 1), accordingly, the principal components analysis displays the principal components normed to the associated eigenvalues instead of to 1. The eigenvalues add up to summarize the variances for the variables in the investigation to show the ~~–t~~otal difference" of all the variables. The variables are dependable for having a component variance, so the total variance in the study's context is four (price-to-earnings, price-to-book value, price-to-cash flow and price-to-sales multiples). To further check our reliable assertion of the PCA result, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was computed as shown in table 5.4 below.

Table 5.4
Keiser-Meyer-Olkin Measure of Sampling Adequacy

Variable	PB	PC	PS	PE	Overall
KMO	0.8074	0.7830	0.7830	0.8091	**0.7872**

Table 5.4 above shows that the principal component analysis was established based on the equity valuation multiples. The data as used in the research presented the Kaiser-Meyer-Olkin sampling adequacy of equity valuation multiples. KMO sampling adequacy for the variables was PE 0.81, PB 0.78, PC 0.78 PS 0.81. The overall total KMO was 79 approximately for all the four equity valuation multiples suggesting a strong correlation between the multiples. A KMO of 50 and above is judged as adequate; therefore, the results reaffirmed the appropriateness of the PCA method to EVMs of Nigerian firms.

5.4 Summary of Descriptive Statistics

Table 5.5 below presents a summary of descriptive statistics for the explained and the explanatory variables equity value multiple and corporate governance variables. The table presents a clear picture of the descriptive statistics of the study variables.

Table 5.5
Descriptive Statistics Summary

Variable	Obs	Mean	Std. Dev.	Min	Max
EVM	500	4.4110	1.172601	-4.311341	15.24245
BS	500	9.568	2.958866	5	20
BI	500	0.63524	0.170742	0.17	1
BGD	500	0.906	1.019432	0	6
ACI	500	0.6437	0.1538397	0.33	0.9
MSH	500	0.56998	0.24302	0	0.78451
CEOP	500	0.648	0.4780723	0	1
ADC	500	100.0179	70.3335	3.462844	532.1043
CGD	500	0.47	0.499599	0	1
LSIZE	500	7.278	0.8806313	5.71	9.59
RISK	500	0.524	0.5039165	0	1
NSE-AGE	500	22.68	14.42407	4	68
LEVERAGE	500	0.57424	0.271438	-2.53	1.23
INDUSTRY	500	0.41	0.8943	0	1

Notes: Variable definitions: EVM = equity value multiple computed from the principal component analysis; BS = board size (number); BI = board independence (number of independent directors divide by total board members); BGD = board gender diversity (number of women in the board); ACI = audit committee independence (independent directors divide by number of AC); MSH = managerial shareholding (managerial shareholding divide by total shares); CEOP = chief executive officer tenure 4 years and above (dummy 1 & 0); ADC = abnormal directors compensation (pay to director above sector average); CGD = corporate governance disclosure (dummy 1 & 0); SIZE = natural log of total assets; RISK = risk management committee (dummy 1 & 0); NSE-AGE = difference between 2013 and company year of listing; LEVERAGE= total debt to total asset; INDUSTRY = financial and nonfinancial (dummy).

5.4.1 Dependent Variable

The mean value of the equity value multiple computed from the principal component analysis is 4.4110 Nigerian Naira suggesting that on the average sampled firms have a composite value of 4.4110 Nigerian Naira. The standard deviation of the composite value for equity value multiple is 1.172601 suggesting that the data are closely clustered around the mean signifying normality of the data. The minimum EVM composite value is -4.311341 of Nigerian Naira, meaning that some of the firms

have a negative equity value multiple while the maximum composite value of the equity value multiple is 15.24245 Nigerian Naira.

5.4.2 Independent Variables

Table 5.5 above presented the summary statistics of all the independent variables. The mean value for the board size is 9.568, suggesting that sample firms have an average board size of approximately 10. The standard deviation of board size is 2.958866 signifying that the data are clustered around the mean. The minimum value of board size is 5 and the maximum is 20. The minimum board size of 5 further suggests that sample firms have fully complied with the Securities and Exchange Commission's revised code of corporate governance. The code states that all listed firms in Nigeria must have minimum board size of 5, and the size and complexity of the firm operation determine the maximum board size.

The mean value for board independence is 0.63524 suggesting that on average the sampled firms have board independence of approximately 64%. The standard deviation of board independence is 0.170742, which is lower than the mean. Minimum board independence is 0.17 signifying that in some the of the sampled firms only 17% of their directors are independent, which is far less than the 40% minimum requirement of the SEC revised code of corporate governance. On the other hand, Trans Corporation Company (Transcorp) in the year 2013 has all of its board members as independent due to government intervention during the year.

Similarly, the mean value for board gender diversity is 0.906, suggesting that on average 0.9 females are serving on the board of directors of the sampled firms. The standard deviation is 1.019432 also signifying the closeness of the data set to mean. The minimum number of females serving on the board is 0 meaning some of the firms have no female on their board. On the other hand, some firms have 6 females serving on the firm‘s board of directors. In fact, in some instances, boards with 9 members have 5 or 6 females on them. This indicates adherence to the SEC revised code of CG that requires firms to consider gender issues in the composition of their boards.

The mean value for the audit committee independence is 0. 6437 also suggesting that, on average, 64% of the audit committee members of the sampled firms comprises independent directors. The standard deviation of audit committee independence is 0.1538397 suggesting that the data are clustered around the mean. The minimum value proportion of independent directors on the audit committee is 33%, and the maximum value is 93%.

In addition, the mean value for managerial share ownership is 0.56998, suggesting that 57% of the share ownership of the sampled firms is owned by the management. The standard deviation of managerial shareholding is 0.24302, suggesting that the data are closely clustered around the mean. The minimum value is 0 meaning that some firms within the sample have no managerial shareholding and the highest

proportional managerial ownership is approximately 78%. The mean value for chief executive officer (CEO) power is 0.648, suggesting that about 65% of the sampled firm have their CEOs serving in a second term or more. This means that 45% of the CEOs are serving in their first tenure that is 4 years and below. The standard deviation of CEO power is 0.4780723 signifying that the deviation is closely clustered around the mean suggesting the normality of the data set.

Furthermore, the mean value for abnormal director‘s compensation is 100.0179 in thousands of Nigerian Naira suggesting that an average abnormal compensation for directors of the sampled firm is about 100,000.00 Nigerian Naira. The mean value of abnormal director‘s compensation is 70.3335, suggesting that the data are closely clustered around the mean. The maximum value of abnormal compensation is 532.1043, which is about 532,000.00 Nigerian Naira. The mean value for corporate governance disclosure is 0.47, meaning that firms disclose information on their board size, board and audit committee independence, board gender, compensation for directors and tenure of their chief executive officers. This also suggests that 53% of the sampled firms have not complied with revised code for disclosing governance information in annual reports. The standard deviation SD of CG information disclosure is 0.99599 suggesting that SD is closely clustered around the mean average.

5.4.3 Control Variables

The mean value for log of total assets is 7.278, and the standard deviation is 0.8806313. The reason is because of the variation in size of the firms in the sample. The firms within the sample included financial and non-financial industries, which are quite diverse in terms of size. The minimum value is 5.71 while the maximum value is 9.59. Also, risk has a mean value of 0.524 suggesting that 52% of the sampled companies have a risk management committee to monitor firm risk exposure. CG codes, particularly those of the Central Bank of Nigeria CBN and that of the National Insurance Commission, have emphasized the importance of risk committee. Cross checks of the sampled firm show that banks and insurance companies have all complied with the risk management requirement.

Similarly, firm age has a mean value of 22.68, suggesting that an average age of the sampled firms is approximately 23 years. The minimum firm age of the Nigerian Stock Exchange is 4 years suggesting that the firm age was listed in 2009, and the maximum firm age is 68 suggesting that the firm with the highest age in the sample was listed in 1968. The mean value for the industry is 0.41 suggesting that on the average 41% of the sampled firms are financial sector while the other 59% of the sampled firms represent other sector of the listed firms. The mean value of leverage is 0.57424, meaning that the average of total debts to total asset is 57% while the standard deviation is 0.271438. The standard deviation is closely clustered around the mean, suggesting the normality of the data set. The minimum value for leverage

is -2.53 and the maximum value for the leverage of 1.23. Table 5.6 presents the correlation matrix.

Table 5.6
Correlation Matrix Results

	EVM	BS	BI	BGD	CEOP	ACI	CGD	ADC	MSH	RISK	AG	SIZ	LEV	ID
EVM	1.0000													
BS	0.6666***	1.0000												
BI	0.5034***	-0.0152	1.0000											
BGD	0.1614***	0.3859	-0.1323*	1.0000										
CEOP	0.0850	0.0226	-0.1335	0.1961	1.0000									
ACI	0.1842***	0.3397**	-0.0983	0.1803	-0.1438	1.0000								
CGD	0.1941***	0.3491**	-0.0895*	0.2514**	0.0396*	0.1465*	1.0000							
ADC	0.0673	0.0644*	-0.1608	0.1680*	0.1069*	0.1722	0.0787	1.0000						
MSH	0.0543***	0.0166	-0.1150	0.0446	0.2525*	-0.1521	0.0869*	0.0420	1.0000					
RISK	0.1938	0.3322	-0.0471	0.2073	0.0767*	0.0557*	0.5561	0.1271*	0.0359*	1.0000				
AGE	0.0227***	0.0221	0.0350*	-0.0439	-0.2430	0.2053	-0.0597	-0.0559	-0.4002	0.0930	1.0000			
SIZE	0.2956***	0.6291**	-0.1702	0.3815	-0.0449	0.3456*	0.4959*	0.1619*	-0.0454	0.4630	0.0299	1.0000		
LEV.	0.2938	0.2322*	0.0471	0.1073	0.0867*	0.04578	0.4661*	0.0971	0.0359*	0.3517	0.0271	0.0812*	1.0000	
IND	0.2938	0.3722	-0.0471	0.1073**	0.0767	0.0757	0.4561	0.1371	0.0559	0.1321	0.1123	0.1541	0.2132	1.0000

Note: *** indicates that coefficient estimates are * = significance at 10%, ** = significance at 5% and *** = significance at 1% levels respectively. EVM=equity value multiple computed from the PCA

Correlation matrix results as presented in Table 5.6 above show a positive correlation of 0.66 between the equity value multiple, which is the dependent variable, and board size, which is the independent variable. The correlation between the equity value multiple and board independence has a positive correlation of 0.50. The correlation coefficient of equity value multiple to board gender diversity was 0.16 while audit committee independence had a correlation of 0.18 to equity value multiple. Chief executive power concentration and managerial shareholding had a positive correlation of 0.08 and 0.05 to the equity value multiple respectively. Also, abnormal director‘s compensation had a positive correlation of 0.07 to EVM, while corporate governance information disclosure had a correlation of 0.19 to the equity value multiple of Nigerian firms.

The correlation coefficient of the independent variables board size, board independence, board gender diversity, audit committee independence, CEO power, abnormal director‘s compensation and CG information suggests the absence of multicolinearity among the explanatory variables. This is because of all the correlation coefficients are less than 70% indicating that no problem of multicollinearity is present in the model. However, even where multicollinearity exists, the use of GMM is likely to overcome the problem. A problem of multicollinearity between the independent variables results in incorrect signs or doubtful magnitudes in the estimations coefficients and bias in the standard errors. The subsequent subsection research presents the regression results.

5.5 Regression Results (GMM)

This section introduces the GMM regression results for the dependent variable, the independent variables and the control variables. One of the contributions of this current work is the use of the system GMM regression model for the corporate governance variables and firms value relationship. This is because the GMM method eliminates estimation bias introduced by endogenous, unobservable heterogeneity and simultaneity – thereby basically desegregating the causal relationship from spurious correlation results. If corporate governance variables and firm performance variables are exogenous, then the static model (pooled, fixed and random) estimations will produce efficient and unbiased estimates.

However, in the presence of simultaneity, unobservable heterogeneity, and/or endogenous, alternative specifications are then considered necessary. Therefore, establishing the presence of endogeneity in the corporate governance variables and firm performance relationship before continuing with the GMM specifications is essential. When and if past inventions in the performance of companies have an influence on the present corporate governance structure, then the assumption of exogenous will be violated.

In that situation, any estimate from the pooled OLS, random and fixed-effects models will result in estimation bias. Overcoming the problems of estimating the governance and performance relationship is the emphasis of this analysis (Delgado-García et al., 2010). The GMM diagnosis is conducted to ensure the appropriateness

of the model includes the Arellano-Bond estimator for autocorrelation in the error term, Hansen J for over identification and the model specification and the variance inflation factor (VIF)

The Arellano-Bond estimator indicates the non-existence of autocorrelation in the model errors terms for the system GMM specifications. The Arellano-Bond at the first order serial correlation was 0.090; however, corrected in the second order serial correlation, the value was 0.98. Notably, the Arellano-Bond estimator is usually conducted on the estimated error term differences and hence, autocorrelation in the error terms is scheduled for one period because they are mathematically related. Thus, Arellano-Bond AR (1) statistical test is significance for the different error terms is uninformative. The Hansen J statistic of 0.36 shows that the conditions of GMM were not scientifically violated suggesting that the moment condition is well specified for the system GMM specifications.

Variance Inflation Factors (VIF) should always be lower than 10, indicating that no one of the explanatory variables is significantly explained by other explanatory variable (Vafeas & Theodorou, 1998). In this case, the VIF for all the explanatory variables (board size, board independence, board gender diversity, audit committee independence, CEO power, managerial shareholding, abnormal directors compensation and CG information disclosure) were all below 3 suggesting the absence of multicolinearity in the regression model.

In the GMM regression model, the lagged differences of CG and control variables were used as instrumental variables with the CG variables treated as endogenous variables while the control variables are predetermined. That is, lag values of 1 and 2 of the different CG variables; and lag values of 0 and 1 of the different control variables, constitute the vector instrument Z value. The Hansen J test for over identification, Arrelano-Bond test and variance inflation factor for all the variables are presented in the 5.7 below.

Table 5.7
GMM Regression Results

Variable	Coefficient	z-statistic	Probability	VIF
PCAV L1.	0.031	11.30***	0.00	
BS	0.088	61.07***	0.00	1.89
BI	1.717	75.15***	0.00	1.11
BGD	0.051	5.16***	0.00	1.41
ACI	0.024	8.18***	0.00	1.31
MSH	5.320	6.07***	0.00	1.27
CEOP	0.004	0.72	0.47	1.23
ADC	0.000	-0.54	0.59	1.13
CGD	0.018	4.52***	0.00	1.71
RISK	0.032	4.23***	0.00	1.61
NSE-AGE	-0.001	-3.12***	0.00	1.32
SIZE	0.017	3.45***	0.00	2.42
Intercept	-0.574	-14.58***	0.00	
Industry & year effect	Yes	Yes	Yes	
Mean VIF				1.45
AR1	0.090			
AR2	0.988			
Hansen J	0.363			
No. of observations	500			

Note: * = *** = significance at 1% level. PCAV L1. Lag value of the dependent variable (equity value multiple) computed from the PCA

Table 5.7 above presented the values of the variables obtained from the GMM regression results and are discussed below.

5.5.1 Hypothesis One (Board Size and the Equity Value Multiple)

The regression result in Table 5.7 above shows a positive coefficient of 0.08 between board size and the equity value multiple of Nigerian listed firms. This means that for every increase in board size from an average of 5, the equity value multiple of Nigerian listed firms will increase by 0.08 Nigerian Naira (NGN). The probability of board size as an explanatory variable to equity value multiple is 0.00 indicating a positive and significant relationship between the explained and the explanatory variable (equity value multiple and company board size). The interpretation is that board size of Nigeria listed firms impacts positively the equity value multiple of the shareholders at the 1% level of significance.

The result provides evidence for accepting the study hypothesis, which proposed that board size would have a significant and positive relationship with the equity value multiple of Nigerian listed firms. The implication of this result is that board size, as one of the internal corporate governance monitoring mechanisms, played an important role in increasing the value of shareholders. The findings agree with the prediction of agency theory that a board provides monitoring mechanisms for company management thereby increasing the value of shareholders and other stakeholders. The agency problem was more pronounced and complicated prior to the reforms in the corporate governance of listed in Nigeria according to the Securities and Exchange Commission.

In the Nigerian business environment, agency theory has been a serious problem, most especially in public companies where shareholders are spread across the country and abroad. The joint report of Central Bank of Nigeria CBN and Nigerian Deposit Insurance Corporation NDIC 2009 indicted many CEO and some board members of public companies for using their positions to defraud their respective organizations. Shareholders in the affected corporations have suffered seriously due to the problem self-serving (managers) agents. Reform on the board size of listed companies could be said to have yielded a desire result particularly to the value of equity shareholders. The result further suggests that the board members of the sampled firms act as stewards of the owners who appointed them to act on their behalf in accordance with the stewardship theory. The stewardship theory refers to situations wherein managements are not motivated by their individual objectives but instead are stewards whose motivations are aligned with those of their principals (owners).

This result conforms to Larmou and Vafeas (2010) who studied the role of board size in relationship to corporate monitoring and established a connection between size of the board and company value. The study also aligns with the results of Alimehmeti and Paletta (2014) and Mt Rahim et al. (2015) that documented a significant positive association between board size and firm value. However, the study contradicts the study of Andres and Vallelado (2008) who found that board size showed little evidence of predicting the impact of a firm‘s market valuation, except for small and medium entities and in particular industry sectors and the findings of Gherghina

(2015) that board size had no significant association with firm value measured by earnings per share.

5.5.2 Hypothesis Two (Board Independence and the Equity Value Multiple)

The regression results presented in Table 5.7 above show a positive coefficient of 1.72 between board independence and the equity value multiple of Nigerian firms. This means that for every 1% increases in board independence the equity value multiple of Nigerian listed firms will increase by 1.72 Nigerian Naira (NGN). The probability of board independence as an explanatory variable to equity value multiple was 0.00 and positive indicating a positive and significant association between the explained and the explanatory variable (equity value multiple and board independent) The interpretation is that board independence of Nigeria listed firms effects positively the equity value multiple of the shareholders at the 1% level of significance.

Evidence obtained from the regression results provides justification for accepting the hypothesis of the study that board independence has a significant and positive association with the equity value multiple of Nigerian firms. The implication of this finding is that board independence as one of the corporate governance monitoring mechanisms that plays a significant role in increasing shareholders value. The results of the study reaffirmed the assumption of agency theory that the independence of a company board would result in a corresponding increase in the value of

shareholders. This is possible because an independent board will always take proactive measures that will safeguard the interests of the entire firm rather than just management interests.

In the Nigerian business setting, agency theory has been a serious problem most especially in public companies where shareholders are spread across the country and abroad. In the previously issued code of 2003, non-executive directors were assumed to be independent. However, the joint report of Central Bank of Nigeria CBN and Nigerian Deposit Insurance Corporation NDIC 2009 demonstrated otherwise as many of the non-executive directors succumbed to the wishes of the management instead of the firm owners. Therefore, regulatory authorities made a clear distinction between non-executive directors and those that are truly independents.

This result supported the findings of Byrd and Hickman (1992) and Knyazeva et al. (2013) that a firm‘s market stock price reaction is more positive when a firm‘s board comprises independent directors. Similarly, Brickley et al. (1997) found the average equity market response was positive when a board had a majority of independent outside directors and negative when it did not. Similarly, Aebi et al. (2011) found that board independence influenced bank performance during financial crises. However, this current study contradicts Imanzadeh (2014), who said that the proportion of independent directors on a company board had a negative relationship with shareholders‘ wealth. Similarly, Black et al. (2012) said that greater board

independence forecast a lower Tobin's Q other governance mechanisms predicted the market value of only nonmanufacturing companies.

5.5.3 Hypothesis Three (Board Gender and the Equity Value Multiple)

The regression results as presented in the table above had a positive coefficient of 0.05 between board gender diversity and the equity value multiple of Nigerian firms. This suggests that for every increase in the number of females on a company‘s board the equity value multiple of Nigerian listed firms will have an increase of 0.05 Nigerian Naira (NGN). The probability of board gender diversity as an explanatory variable to equity value multiple was 0.00 positive indicating a positive and significant relationship between the explained variable (equity value multiple) and the explanatory variable (board gender diversity). The interpretation of this result is that a gender diverse board of Nigerian listed firms impacts positively the equity value multiple of the stockholders at the 1% level of significance.

The evidence from the results provide justification for accepting the hypothesis of the study that board gender diversity would have a significant positive relationship with the equity value multiple of Nigerian firms. The implication of this finding is that representation of females on boards of companies serves as a corporate governance monitoring mechanism that can play a significant role in increasing the value of shareholders. An increased impact of females on company value is likely in Nigeria considering the growing participation of females across all the industries including government organizations.

The results of the study confirmed the agency theory prediction that a diverse board would correspondingly increase stockholder value. This result reaffirmed the Higgs Report of 2003 in the United Kingdom that suggested the inclusion on females on corporate boards would provide more gender-balanced decisions in company management. This is possible because, as Adams and Ferreira (2009) found, female directors on boards attend more meetings than their male counterparts and are more willing to join monitoring committees of the firm in which critical company decisions are taken. In Nigeria, regulatory authorities have recommended that corporate boards consider the gender issue in the composition of those boards in order to provide a level playing field for females with respect to their male counterparts.

The results of this current study support the findings of Gul et al. (2011) who documented that gender diversity increases stock price through the machinery of public information disclosure in larger firms and by boosting confidential evidence gathering in smaller firms. Similarly, Adams and Ferreira (2009) established that female directors have a significant impact on board inputs and firm performance in selected firms in the United States. The finding also supports the results of Ku Ismail and Abdul Manaf (2016), that positive an abnormal return is related to the appointment of women on corporate board. However, this present study contradicts the studies of Chapple and Humphrey (2013) who reported a negative association between having multiple females on the board and the subsequent performance of a

company. Also, Rose (2007) could not establish any significant linkage between firm performance as measured by firm value and the representation of females on boards.

5.5.4 Hypothesis Four (Audit Committee Independence and the Equity Value Multiple)

The regression results in Table 5.7 above show a positive coefficient of 0.024 between audit committee independence and the equity value multiple of Nigerian listed firms. This implies that for every increase in audit committee independence the equity value multiple of Nigerian listed firms will have a corresponding increase of 0.024 Nigerian Naira (NGN). The probability of audit committee independence as the independent variable to equity value multiple was 0.00. The result signified a positive and significant relationship between the variables (equity value multiple and audit committee independence) of a firm‘s board. The interpretation is that audit committee independence of Nigeria listed firms influences positively the equity value multiple of the shareholders at the 1% level of significance.

The results obtained from the regression results provide convincing evidence for accepting the hypothesis of the study that audit committee independence would have a significant positive relationship with the equity value multiple of Nigerian firms. The implication of this result is that the independence of the audit committee is one of the governance monitoring mechanisms that play an important role in adding value to shareholders. The results of the current study reiterated the assumption of

agency theory that the independence of a company audit committee would result in a corresponding increase in value for shareholders.

In Nigeria, regulatory authorities such as the CBN, for example, have mandated that members of the audit committee must all be directors from the non-executive cadre while the majority must also be independent directors and have expertise in the financial profession. Thus, this governance provision has yielded results in the form of increasing value for shareholders.

The audit committee mediates between management and external auditors for proper accountability of their respective companies. An independent audit committee will take proactive measures that will protect the best interests of the entire firm rather than the interests of only the management. The results of the study have strengthened the proposition of agency theory that an independent audit committee is an important monitoring mechanism that reduces the agency problem. In Nigeria, particularly before reforms of corporate governance, the independence of an audit committee was not accorded much importance. This could be part of the reasons that public companies faced distress and bankruptcy even after receiving a clean audit from their respective audit firms. An important example is the case of failed Oceanic bank Nigeria PLC, which collapsed immediately after the receipt of a clean audit report by their external auditors due to solvency problems.

The result of this current study supports the findings of Uwuigbe (2013) who reported a positive correlation coefficient between the audit committee composition and stock price of Nigerian firms. Also, Klein (2002) added that audit committees of company boards can add to internal monitoring through an increase in the level of integrity of the financial auditing process. This significant relationship may be because an independent audit committee takes proactive measures to ensure compliance with internal control processes and procedures of their respective organizations. The result also confirms Sharma and Kuang (2014) who found that a firm‘s audit committee independence reduces incidences of aggressive earnings management.

However, the results of this current study contradict those of Malik (2012) who found that an audit committee of the company had no significant relationship with the stock price of listed companies in Korea. Similarly, Chen et al. (2005) established little relationship between audit committee independence and performance. In addition, Sunday (2008) found no relationship between performance and independence of the audit committee.

5.5.5 Hypothesis Five (Managerial Share and the Equity Value Multiple)

The regression result presented in the table above shows a positive coefficient of 5.32 between managerial share ownership and EVM of Nigerian listed firms. This means that for every increase in share ownership of management, the equity value multiple of Nigerian listed firms will have a corresponding increase of 5.32 Nigerian

Naira (NGN). The probability of managerial share ownership as an explanatory variable to explain the variable (equity value multiple) was 0.00 and positive indicating a positive and significant association between the variables. The interpretation of this result is that managerial shareholding in the Nigerian listed firms influences positively the EVM of the shareholders at the 1% level of significance.

The result obtained from the regression results provides substantial evidence for accepting the hypothesis of the study, which predicted a significant positive relationship between shareholding of management and the equity value multiple of Nigerian firms. The implication of this finding is that share ownership of management serves as a governance-monitoring mechanism that plays a significant role towards increasing the value of shareholders. Results of the research reiterated the assumption of agency theory that share ownership of management serves as a tool for controlling the excessiveness of self-serving managers. Thus, management may be more willing to take adequate actions for the overall best interests of the company if they also have a share stake in the company.

In fact, an increasing debate has grown amongst different stakeholders of corporate governance about the importance of share ownership of management towards ensuring their utmost accountability to the company. The results of this current study have provided further justification for the shareholding of management as a way of reducing agency problems thereby increasing the value of owners. In the Nigerian

corporate environment, managerial share ownership as a control mechanism for self-serving managers was not accorded much importance in the previous codes of corporate governance. However, the revised code of corporate governance provided extensive guidelines on managerial shareholding to ensure the alignment of owners and managers interests. The Central Bank of Nigeria in 2011 reported that banks with substantial ownership by managers exhibited more stewardship with respect to their respective banks compared to banks that have less managerial shareholding.

This result conformed to that of Masulis and Mobbs (2011) who found that firms with insider director's shareholding had better operational performance and market ratios. These companies make better purchasing decisions, have better cash holdings, and exhibited fewer overstatements of earnings. Similarly, Demsetz and Lehn (1985) argued that an increase in managerial shareholdings gives managers a stronger incentive to monitor performance of the firm thereby creating value to shareholders. The result also aligns with Liu el al. (2012) who found that managerial ownership was positively related with crisis-period performance of Chinese State-Owned Enterprises (SOEs).

On the other hand, this study contradicts the findings of Mustapha and Che Ahmad (2011) who found that managerial share ownership in Malaysian corporations had a significant negative association with total costs of monitoring as projected by the convergence of the interest proposition and agency theory. In addition, Sanda et al.

(2005) reported no significant relationship between director‘s ownership concentration and the price-to-earnings ratio of the sampled firms in Nigeria.

5.5.6 Hypothesis Six (CEO Power and the Equity Value Multiple)

The regression result as presented in the table above shows a coefficient of 0.00 between abnormal director‘s compensation and the equity value multiple of Nigerian firms. The probability of abnormal director‘s compensation as the explanatory variable to equity value multiple was 0.59 negative. This indicates an insignificant relationship between the explained and the explanatory variable (equity value multiple and abnormal director‘s compensation).

5.5.7 Hypothesis Seven (Abnormal Directors Compensation and the Equity Value Multiple)

The regression result as presented in the table above shows a coefficient of 0.00 between abnormal director‘s compensation and the equity value multiple of Nigerian firms. The probability of abnormal directors compensation as the explanatory variable to equity value multiple is 0.59 negative. This indicates an insignificant relationship between the explained and the explanatory variable (equity value multiple and abnormal directors compensation).

5.5.8 Hypothesis Eight (CG Disclosure and the Equity Value Multiple)

The regression result as presented in the table above shows a positive coefficient of 0.02 between disclosure of corporate governance information in the annual reports

and equity value multiple of Nigerian listed firms. This suggests that for every Nigerian company that discloses CG information in its annual reports, the company‘s equity value multiple will have an increase of 0.02 Nigerian Naira (NGN). The probability of CG information disclosure as the explanatory variable of EVM is 0.00 positive indicating a positive and significant relationship of companies that disclose CG information and the explained variable (equity value multiple). The interpretation of this result is that disclosure of CG information in the annual reports of Nigerian firm‘s impacts positively the EVM of the shareholders at the 1% significance level.

The regression results also provide evidence for accepting the hypothesis of the study, which predicted a significant positive relationship between CG information disclosure and the equity value multiple of Nigerian firms. The implication of this outcome is that the presentation of information about a firm‘s CG serves as one governance monitoring mechanism that plays an important role in increasing the value of stockholders. This is because investors would be more willing to invest in companies that disclosed detailed information particularly on their governance information. Disclosing information on board size, independent of board and audit committees, managerial shareholding and remuneration for directors helps investors make investment decisions.

The provisions of the respective codes (SEC, CBN and NAICOM) for good corporate governance recommend that companies to include governance information

in the annual accounts. The results of the study confirmed the decision usefulness theory prediction that accounting information must be prepared from the perspective of residual equity holders. Staubus (1959) explained that the purpose of accounting and other information disclosure was to provide information that will assist in economic decision making by investing units (investors) and credit granting units (creditors), referred to as makers of investment decisions. The author also posited that such types of information must relate to the periods and amounts of shareholders‘ future cash receipts.

The results conform with the findings of Croci and Petrella (2013) that disclosure effects are associated with the likelihood that the market expects future involvement and responds to the pronouncement of funds ownership performance. In addition, Mitton (2002) reported that firms with higher-quality disclosure, greater transparency and CG information experienced better share price performance during the East Asian financial crisis.

However, this current study contradicted the findings of Bhasin (2012) who observed that less than 50% of firms were following the disclosure index, and no significant change existed among the disclosure scores of the four industries and subsequent firm performance. Similarly, Poshakwalea and Courtisb (2005) reported a significant negative relationship between disclosure and price-to-earnings of the sampled banks across the six selected European countries.

5.6 Additional Analysis on Corporate Governance variables and Individual Equity Valuation Multiples

This section provides additional analysis on the role of corporate governance variables towards explaining equity value multiples of Nigerian firms (price-to-earnings, price-to-book, price-to-cash flow and price-to-sales). The objective is to see the influence of individual governance variables in predicting the equity value multiples. Table 5.8 below presents the GMM results.

Table 5.8
GMM Panel Regression Results for Equity Value Multiples

Variable	**Price-to-Earnings**		**Price-to-Book**		**Price-to-Cash**		**Price-to-Sales**	
PCAV L1.	**Coeff.**	**Prob.**	**Coeff.**	**Prob.**	**Coeff.**	**Prob.**	**Coeff.**	**Prob**
BS	-1.46***	0.00	0.48***	0.00	-0.81***	0.00	-0.06	0.56
BI	-1.41*	0.07	-0.06***	0.00	2.65	0.23	0.13	0.19
BGD	0.81***	0.00	0.05	0.32	1.43***	0.00	-0.44***	0.00
ACI	1.71***	0.00	-0.32***	0.00	1.19***	0.00	1.22***	0.00
MSH	3.45***	0.00	-3.65	0.93	1.49	0.21	1.29***	0.00
CEOP	-0.73***	0.00	-0.54***	0.01	0.77**	0.04	0.64	0.00
ADC	0.09***	0.00	-0.00***	0.00	-0.02***	0.00	0.00***	0.01
CGD	6.34***	0.00	0-.01	0.97	2.89***	0.00	0.44***	0.00
RISK	-3.49***	0.00	-0.41**	0.04	1.24**	0.02	-0.55***	0.00
NSE-AGE	0.01***	0.00	0.02***	0.00	0.00	0.15	0.03***	0.00
SIZE	5.15**	0.01	0.01	0.89	1.69***	0.00	0.62***	0.00
Intercept	-23.79		-1.04		-12.31		-5.05	
Industry & year effect	Yes		Yes		Yes		Yes	
AR1	0.03		0.01		0.01		0.03	
AR2	0.26		0.31		0.58		0.73	
Hansen j	0.32		0.37		0.32		0.1	
Observation	500		500		500		500	

Note: * = significant at 10%, ** = significant at 5% and *** = significant at 1%.

5.6.1 Corporate Governance Variables and Price-to-Earnings Multiple

Table 5.8 above presents a summary of the regression results for price-earnings. The results indicate that board size has a negative coefficient of 1.46 and a probability value of 0.00, suggesting a significant negative relationship between board size and price-to-earnings multiple. The result in the table above, also revealed a negative coefficient of 1.41 between board independence and price-to-earnings multiple of the sampled firms. The probability is statistically significant at the 1% level of significance contradicting the prediction of agency theory that board independence is positively related to value. On the other hand, board gender has a positive correlation with 0.81 on the price-to-earnings multiple.

The probability of board gender is statistically significant at the 1% level suggesting that board gender is statistically and positively related to PE multiple. The results agree with the study of Gul et al (2011) and contradict that of Chapple and Humphrey (2013). Audit committee independence has a positive coefficient of 1.71 and a probability value of 0.00 suggesting that audit committee independence is significant in explaining the price-to- earnings multiple consistent with Uwuighe (2013) and the proposition of agency theory. The coefficient of managerial shareholding is 3.45 positive and has a probability of 0.00 also suggesting that managerial shareholding is related significantly to PE multiple consistent with the stewardship and agency theories propositions.

The result is also consistent with the findings of Masulisa and Mabbs (2011). Chief executive officer power CEOP has a negative coefficient of 0.73 and probability value of 0.00 indicating that CEOP is statistically and negatively related to PE multiple. This suggests that CEOs are found to be stewards of their firms. Abnormal directors compensation has a positive coefficient of 0.09 and probability of 0.00 suggesting that abnormal directors compensation is positively related to PE multiple. The coefficient for corporate governance disclosure is 6.34 positive with a probability of 0.00 suggesting a significant positive relationship between the explained and the explanatory variables at the 1% level of significance. The disclosure of CG result is consistent with Croci and Patrella (2013).

5.6.2 Corporate Governance Variables and Price-to-Book Value Multiple

The second dimension of the dependent variable is price-to-book value. GMM results in table 5.8 revealed that board size has a positive coefficient of 0.48 and a probability value of 0.00 suggesting that board size of the sample firms is statistically and positively related to PB multiple at 1% level of significance. Board size to book value is consistent with Alimehmet and Paletta (2014). The coefficient of board independence is 0.06 negative with a probability of 0.00 indicating board independence is significantly and negatively related to PB multiple. This finding is contrary to the agency theory proposition that board independence reduces the agency problem.

The coefficient of audit committee independence to PB multiple is -0.32 with a probability value of 0.00 suggesting that audit committee independence is statistically and negatively related to PB multiple. This finding is also contrary to the agency theory proposition that audit committee independence reduced the agency problem. Similarly, chief executive power CEOP has a negative coefficient of 0.54 and a probability value of 0.00 suggesting that CEOP is negatively related to PB multiple at the 1% level of significance. This is consistent with the findings of Morey (2009) and contradicts Ali and Zhan (2014).

On the other hand, abnormal director‘s compensation has a coefficient of -0.00 and a probability value of 0.00 indicating that abnormal director‘s compensation is negatively related to PB multiple of the sampled firms. However, board gender diversity, managerial shareholding and corporate governance disclosure are statistically insignificant in predicting the price-to-book value multiple. On the overall, only board size is consistent with the theory, board independence, audit committee independence and abnormal director‘s compensation are contrary to the prediction of agency theory.

5.6.3 Corporate Governance Variables and Price-to-Cash Flow Multiple

The third dimension of the dependent variable is the price-to-cash flow multiple. GMM regression in Table 5.8 above indicates that board size has a negative coefficient of 0.18 and a probability value of 0.00 suggesting that board size is

significant and negatively related to the price-to-cash flow multiple. The coefficient of board gender diversity is 1.43 positive with a probability of 0.00 indicating that board gender diversity is statistically related to price-to- earnings multiple at the 1% level of significance. This finding is consistent with the findings of Adams and Ferreira (2009) and contradicts the findings of Humphrey (2013).

Similarly, audit committee independence has a positive coefficient of 1.19 and a probability value of 0.00 suggesting that audit committee independence played a significant role towards price-to-cash flow multiple of the sampled firms. The finding is consistent with Uwuighe (2013) and agency theory prediction that audit committee independence increased accountability thereby reducing manager-owner problems. The coefficient of chief executive power CEOP is 0.77 positive suggesting that CEOP is significant and positively associated with the price-to-cash flow multiple of Nigerian listed firms. This finding is also consistent with the study of Walters et al. (2007) but contradicts the findings of Core et al. (1999).

On the other hand, abnormal director‘s compensation has a negative coefficient of 0.02 and a probability value of 0.00 suggesting that abnormal director‘s compensation is significantly and negatively related to the price-to-cash flow multiple. This may be possible when managers only engage themselves in earnings manipulation just to maximize their remuneration. However, corporate governance disclosure has a positive coefficient of 2.89 and a probability value of 0.00 suggesting that disclosure of corporate governance information has significant

relationship with the price-to-cash flow multiple of Nigerian listed firms at the 1% level of significance. On their part, board independence and managerial shareholding are statistically insignificant. In general, board gender, CEOP and disclosure of corporate governance information are significant and consistent with the theory while board size and abnormal director‘s compensation are statistically insignificant.

5.6.4 Corporate Governance Variables and Price-to-Sales Multiple

The fourth dimension of the equity value multiple is the price-to-sales multiple. The regression results as presented in the Table 5.8 show that board gender diversity has a negative coefficient of 0.44 and a probability value of 0.00 indicating that board gender diversity is statistically and negatively related to price-to-sales of the sampled firms listed on the Nigerian Stock Exchange. On the other hand, audit committee independence has a positive correlation of 1.22 and a probability value of 0.00 suggesting that audit committee independence has a significant and a positive relationship with the price of sales of the sampled firms at the 1% level of significance.

The result of the audit committee is consistent with the finding of Uwuighe (2013), however, contradict Sunday (2008). Also, managerial shareholding has a positive correlation of 1.29 and a probability value of 0.00 suggesting that managerial shareholding as a monitoring mechanism is related significantly to price sales at the 1% level of significance. The result reaffirmed agency theory proposition that share

ownership of management is an important monitoring device against self-serving agents. Chief executive officer power CEOP has a positive coefficient of 0.64 and a probability value of 0.01 also suggesting that CEOP is statistically associated with the price-to-sales multiple of the sampled firms.

The CEOP result is consistent with Ali and Zhan (2014). Correspondingly, abnormal director‘s compensation has a positive coefficient 0.00 and a positive probability of 0.00 also indicating that abnormal director‘s compensation is significantly related to the price-to-sales multiple of the Nigerian firms. Moreover, corporate governance disclosure has a positive coefficient of 0.44 and a probability of 0.00 suggesting that corporate governance disclosure is significantly related to the price-to-sales multiple of Nigerian listed firms at the 1% level of significance. The result of abnormal director‘ compensation is consistent with the finding of Croci and Petrella (2013) and Milton (2012). A cross checks of the GMM regression results suggests that the basic estimation tests of Arrelano-Bond 1 & 2 and Hansen J test were satisfied.

In summary, the GMM results revealed that board size has a significant and negative relationship with price-to-earnings and price-to-cash flow multiples at the 1% significance levels, suggesting a significant and negative relationship between board size and the price-to-earnings multiple. On the other hand, board size was found to have a significant and positive relationship with the price-to-book value multiple implying that board size significantly influenced the price-to-book multiple of Nigerian firms. Board independence, on its part, was found to have no significant

effect on any of the four equity value multiples contrary to the agency theory proposition that board independence reduces the agency problem thereby increasing the value of owners.

The GMM result on board gender diversity was positively related to price-to-earnings and price-to-cash flow, however, negatively related to the price-to-sales multiple. Audit committee independence was positively related to price-to-earnings, price-to-cash flow and price-to-sales multiples at the 1% level suggesting a significant and positive relationship between three out of the four equity value multiples. Managerial shareholding, for its part, influences only price-to-earnings and price-to-sales multiples at the 1% significance level while price-to-book and price-to-cash were not statistically significant. The CEO power, on the other hand, was related negatively to price-to-earnings, and price-to-book, but, positively related to price-to-cash and price-to-sales all at the 1% level of significance.

In addition, abnormal director‘s compensation was positive and significantly related to price-to-earnings and price-to-sales and negatively related to price-to-book and price-to-cash flow multiples. Lastly, CG information disclosure was positive and statistically associated with price-to-earnings, price-to-cash flow and price-to-sales multiples at the 1% level of significance. This, therefore, suggests that the disclosure of corporate governance information has a significant and positive impact on price-to-earnings, price-to-cash flow and price-to- sales multiples. However, the disclosure of the CG is not significant in explaining the price-to-book value multiple.

The additional analysis further justified the application of the PCA technique that produced one uncorrelated value that represents all the equity valuation multiples. That is why the PCA results produced better results compared to individual equity value multiples and regression results, and most of the variables are consistent with theory.

5.7 Summary of the Chapter

This subsection summarizes the presentation of the results. The results of the descriptive statistics were presented and the behavioural nature of the variables was explained. The chapter also presented the correlation matrix results for a clearer picture of the correlations that existed between the independent variables, control variables and the dependent variable (equity value multiple). The result of the GMM regression was also presented in the chapter; including the analysis of the results related to the study variables. The post-estimation test of the GMM regression was also introduced and the regression results satisfied all the post-estimation tests thereby providing the appropriateness of the estimation method. Finally, the chapter presented the GMM regression results of individual equity valuation multiples and CG variables that provided further justifications for the use of PCA in this study.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATION

6.1 Introduction

The previous chapter presented the results of the descriptive statistics, correlation matrix and GMM regression results. The chapter extensively discusses the GMM results. The relationship between board size, board independence, board gender diversity, audit committee independence, managerial shareholding, CEO power, abnormal directors compensation and disclosure of CG information in relationship to the equity value multiple are discussed. The current chapter summarized the results of the study and presents conclusions drawn from the results. The implications and limitations of the study findings are also discussed. The chapter lastly presented suggestions for future research.

6.2 Summary of the Results

This section summarizes the results of the GMM regression on the relationship between the dependent variable (equity value multiple) and the independent variables (corporate governance variables). Table 6.1 below presents summary of the results in accordance with the study‘s hypotheses.

Table 6.1
Summary of the Results

Objective	Hypothesis	p-value	Sign	Results
1	Board Size	P 0.00***	+	Supported
2	Board Independence	P 0.00***	+	Supported
3	Board Gender Diversity	P 0.00***	+	Supported
4	Audit Committee Independence	P 0.00***	+	Supported
5	Managerial Shareholding	P 0.00***	+	Supported
6	Chief Executive Officer Power	P 0.47	+	Not supported
7	Abnormal Directors Compensation	P 0.59	-	Not supported
8	CG Disclosure	P 0.00***	+	Supported

Note. *** Significant at the 1% level.

Table 6.1 above presented a summary of the thesis based on the objectives and hypotheses. The results show that board size, board independence, board gender diversity, audit committee independence, managerial shareholding and corporate governance information disclosure have a significant and positive relationship with the equity value multiples of Nigerian listed firms. On the other hand, chief executive officer power and abnormal director‘s compensation are statistically insignificant in explaining the equity value multiples of Nigerian listed firms.

6.3 Conclusion

This thesis examined whether various corporate governance variables play a significant role in determining the performance of a firm in relationship to equity value multiples of Nigerian firms. The recent failures of corporate organizations in both developed and developing economies, together with the ambiguous findings of the significance of CG mechanisms in theoretical literature, have emphasized the

need for more thorough empirical investigations. Besides, the ability to disaggregate causal relations and spurious correlations are of specific importance with regard to policy deliberation and implementation. The preceding analysis used the system GMM panel regression to distinguish between causal relations and spurious correlations within the CG variables and equity value multiple.

This study served as the first of its kind by using a broad set of CG mechanisms to equity value multiples in the Nigerian context. The study established that board size, board independence, board gender diversity, audit committee independence, managerial shareholding and CG information disclosure were positively and significantly related to the equity value multiple of Nigerian listed firms. The reasons why six of the eight explanatory variables are significant could be explained as follows. Prior to the reforms of corporate governance by the regulatory authorities most boards of firms were dominated by former and serving military personnel making the affected firms have poor corporate governance.

The Nigerian political environment is dominated by the military regime thus allowing the military personnel to dominate the corporate setting. However, after the reforms and coupled with the transition of the country to democracy most of the dominance of military on boards of public companies has been addressed. Technocrats, experienced individuals and professional with the integrity to protect a firm‘s and its stakeholders‘ interests are now mostly people appointed to corporate boards due to the current regulatory provisions in corporate governance.

An additional possible reason is the application of appropriate sanctions for erring firms for corporate governance violations. For example, the Central Bank of Nigeria CBN and Nigerian Deposit Insurance Corporation NDIC joint audit report indicted three deposit money banks in 2011 (Afri Bank, Bank PHB and Spring Bank) and the boards of the affected banks were dissolved by the government and new boards constituted by the CBN. This action and other stiff measures have sent a clear message to the boards of the public firms to focus on the overall objective of their respective organizations.

Therefore, the current study concludes that above-mentioned corporate governance variables (board size, board and audit committee independence, board gender diversity, managerial shareholding and CG information disclosure) explained the equity value multiples of Nigerian firms satisfactorily. According to statements issued by regulatory authorities, particularly the Central Bank of Nigeria and Securities and Exchange Commission in 2012, corporate governance reforms have reduced agency problem and have made management more effective stewards of their respective companies by acting more diligently compared to their acts prior to the CG reforms. The study also concluded that CEO power and abnormal director‘s compensation are insignificant in influencing equity value multiple of Nigerian listed firms.

6.4 Implications of the Study Findings

This study empirically examined the effects of selected CG variables on the equity value multiples of firms listed on the Nigerian Stock Exchange. The conclusions drawn from the study findings have the following implications. The study established significant correlations between the equity valuation multiples. Therefore, it implied that the EVMs are better explained with PCA methods due to the correlations that exist between them. The composition of the film board and its corresponding independence provides great value to shareholders, thus, suggesting the achievement of the objectives of regulatory bodies. The number of women serving on corporate boards influences shareholders' value in a positive manner, also implying that the regulatory recommendation for gender diversity board has been achieved.

Similarly, the regulatory authorities have emphasized the importance of the board and audit committees' independence, and the results obtained from the study suggest a significant and positive relationship between the duo and the equity value multiple. This, therefore, implied that the objective of ensuring board and audit committees independence for effective monitoring was also achieved. On the other hand, managerial shareholding is regarded as a monitoring mechanism that aligns the interests of managers and shareholders. The results of this study reaffirmed the role of managerial shareholding in increasing the value of equity holders. The disclosure of governance information in annual reports was also found to be significant and positively related to the equity value multiple. However, a crosscheck of the sample

firms shows that not all firms disclosed CG information in their annual reports. Therefore, various regulatory bodies such as the SEC, CBN and NAICOM can use the outcome of this research to improve the level of CG information disclosure among Nigerian firms.

6.5 Limitations of the Study

The following are the limitations identified in both corporate governance variables and the valuation multiples.

1. The study examined eight structured corporate variables with respect to equity value multiples. Therefore, generalizations cannot be made with respect to the other CG variables, particularly to the unstructured corporate governance variables.
2. The current study used a sample of only those companies listed on the Nigerian Stock Exchange. Thus, the study cannot make a generalization on the companies that are not listed on the Nigerian Stock Exchange.
3. This study used four equity valuation multiples to generate a single equity value multiple. Therefore, no conclusion on the entity valuation multiples because they are not captured in the study.

6.6 Suggestions for Future Research

This study makes the following recommendations for future research.

1. This study focused only on the equity valuation multiples. Entity or enterprise valuation multiples are not covered within this thesis, so future research is

therefore recommended on entity valuation multiples to examine their potential influence of CG variables on them.

2. This study also recommends the replication of this research in a different environment to see whether what is obtained in Nigeria could also be obtainable in other environments, especially in emerging markets like Nigeria.

6.7 Concluding Remarks

The current thesis examined corporate governance variables measured by board size, board independence, audit committee independence, board gender diversity; managerial shareholding, chief executive officer power, abnormal director's compensation and disclosure of corporate governance information on the equity value multiples of Nigerian listed firms. The study used the Principal Component Analysis PCA technique to produce one principal component that represents all the four equity value multiples. The PCA post-estimation test established that a correlation exists between the equity value multiples and the first principal component computed from the PCA that produced 62% of the proportion of all the four EVMs. Similarly, the study established that board size, board independence, board gender diversity, audit committee independence, managerial shareholding and disclosure of corporate governance information have a significant relationship with equity value multiple of Nigerian listed firms. Therefore, the study concludes that, in the Nigerian business setting, the above-mentioned corporate governance variables played significant role for equity shareholders.

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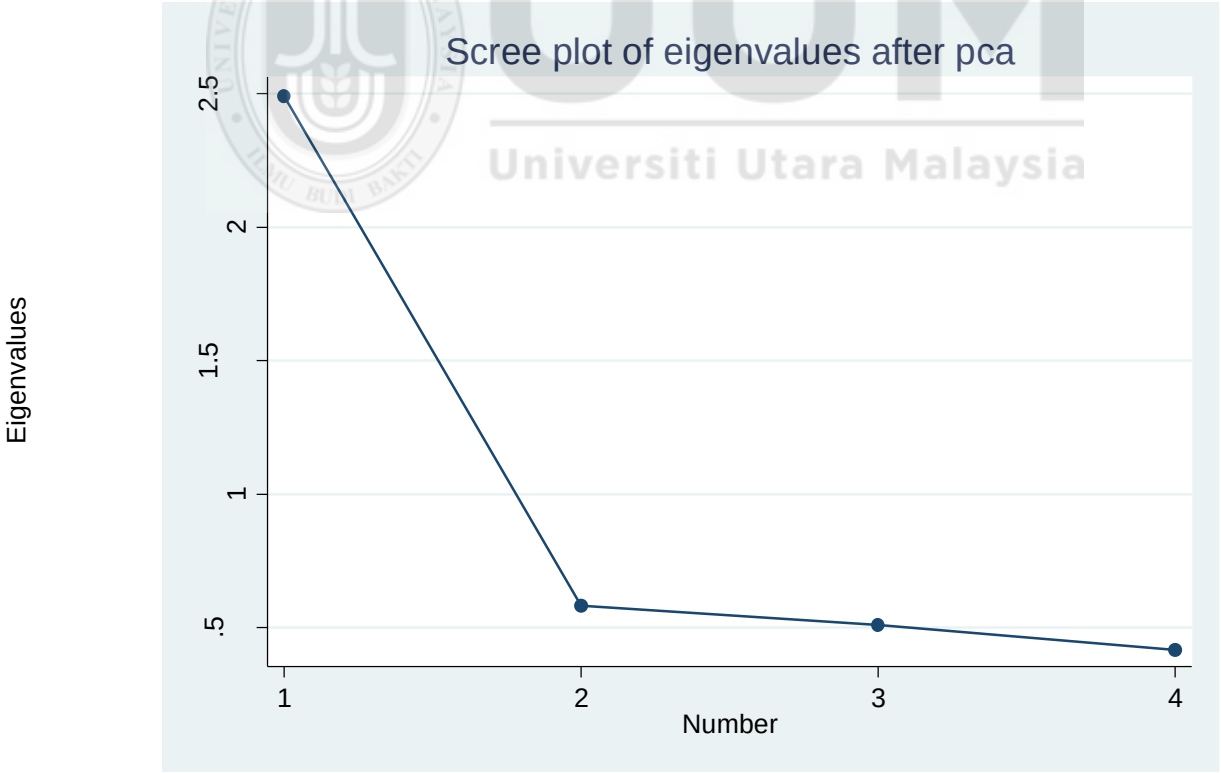
Appendix A

Principal Component Analysis Results

```
pca pe1 pb1 ps1 pc1
Principal components/correlation                  Number of obs    =        500
                                                  Number of comp.  =          4
                                                  Trace            =          4
    Rotation: (unrotated = principal)             Rho              =     1.0000

    --------------------------------------------------------------------------
       Component |   Eigenvalue   Difference         Proportion   Cumulative
    -------------+------------------------------------------------------------
           Comp1 |      2.49083      1.90813             0.6227       0.6227
           Comp2 |      .582702     .0733121             0.1457       0.7684
           Comp3 |       .50939     .0923132             0.1273       0.8957
           Comp4 |      .417077            .             0.1043       1.0000
    --------------------------------------------------------------------------

Principal components (eigenvectors)

    ----------------------------------------------------------------------
        Variable |    Comp1     Comp2     Comp3     Comp4 | Unexplained
    -------------+--------------------------------------+-------------
           lnpe1 |   0.4795    0.7966    0.1107    0.3512 |           0
           lnpb1 |   0.5246    0.0735   -0.3497   -0.7727 |           0
           lnps1 |   0.5025   -0.4641   -0.5056    0.5258 |           0
           lnpc1 |   0.4923   -0.3804    0.7809   -0.0554 |           0
    ----------------------------------------------------------------------

.
```

```
 estat kmo

Kaiser-Meyer-Olkin measure of sampling adequacy

    ----------------------
        Variable |     kmo
    -------------+--------
               pe1 |  0.8091
               pb1 |  0.8074
               pc1 |  0.7830
               ps1 |  0.7830
    -------------+--------
             Overall |  0.7872
    ----------------------

. screeplot
```



APPENDIX B

Summary of Descriptive Statistics

```
summarize  bosize boid size nse_age1 industy1 ceopd1 female1 cgdi1 adircom1 risk1 msh
aci_01 pca/evm tl_ta
```

Variable	Obs	Mean	Std. Dev.	Min	Max
bosize	500	9.568	2.958866	5	20
boid	500	.63524	.170742	.17	1
size	500	7.278	.8806313	5.71	9.59
nse_age1	500	22.68	14.42407	4	68
industy1	500	.41	.4587165	0	1
ceopd1	500	.648	.4780723	0	1
female1	500	.906	1.019432	0	6
cgdi1	500	.47	.499599	0	1
adircom1	500	100.018	70.335	3.463	532.1043
risk1	500	.524	.5039165	0	1
msh	500	.56998	.24302	0	.78451
aci	500	.6437	.1538397	.33	.93
pca/evm	500	4.4110	1.172601	-4.311341	15.24245
tl_ta	500	.57424	.271438	-2.53	1.23

Appendix C

GMM Results for PCA Value

```
xtabond2 PCAV l.  PCAV  bosize boid female audits ceopd audits cgdi1 adircom riskv
mash nse_age1 size industy Yrddum3 Yrddum4 Yrddu m5, gmm (industy riskv size audits
ceop ceopd audits cgdi1 mash adircom, lag (1 2)) twostep Favoring space over speed.
Two-step estimated covariance matrix of moments is singular. Using a generalized
inverse to calculate optimal weighting matrix for two-step estimation
Dynamic panel-data estimation, two-step system GMM
------------------------------------------------------------------------------
Group variable: cid                             Number of obs      =       500
Time variable : year                            Number of groups   =       100
Number of instruments = 84                      Obs per group: min =         5
Wald chi2(16) = 459170.93                                      avg =      4.00
Prob > chi2   =     0.000                                      max =         5
------------------------------------------------------------------------------
        PCAV |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        PCAV |
         L1. |    .031002   .0027433    11.30   0.000     .0256252    .0363787
             |
      bosize |   .0876237   .0014348    61.07   0.000     .0848115    .0904358
        boid |    1.71748   .0228534    75.15   0.000     1.672689    1.762272
      female |   .0512283   .0099344     5.16   0.000     .0317573    .0706994
      audits |   .0236042   .0028869     8.18   0.000      .017946    .0292624
       ceopd |   .0036685   .0050969     0.72   0.472    -.0063212    .0136582
       cgdi1 |   .0177783   .0039302     4.52   0.000     .0100752    .0254814
     adircom |  -.0000115   .0000215    -0.54   0.592    -.0000536    .0000306
       riskv |   .0319658   .0075568     4.23   0.000     .0171547    .0467769
        mash |   5.320008   8.750009     6.07   0.000     3.600008    7.030008
    nse_age1 |  -.0012824   .0004106    -3.12   0.002    -.0020872   -.0004777
        size |   .0172589   .0050063     3.45   0.001     .0074467    .0270711
     industy |  -.0405922   .0110076    -3.69   0.000    -.0621667   -.0190178
     Yrddum3 |   -.010908   .0013462    -8.10   0.000    -.0135465   -.0082696
     Yrddum4 |  -.0045279    .001735    -2.61   0.009    -.0079285   -.0011274
     Yrddum5 |  -.0027761   .0017522    -1.58   0.113    -.0062103     .000658
       _cons |   -.574005   .0393659   -14.58   0.000    -.6511607   -.4968492
------------------------------------------------------------------------------
```

```
Instruments for first differences equation
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    L(1/2).(industy riskv size audits ceop ceopd audits cgdi1 mash adircom)
Instruments for levels equation   Standard     _cons
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    D.(industy riskv size audits ceop ceopd audits cgdi1 mash adircom)
------------------------------------------------------------------------------
Arellano-Bond test for AR(1) in first differences: z =  -1.70  Pr > z =  0.090
Arellano-Bond test for AR(2) in first differences: z =   0.01  Pr > z =  0.988
------------------------------------------------------------------------------
Sargan test of overid. restrictions: chi2(67)   =  80.15  Prob > chi2 =  0.130
  (Not robust, but not weakened by many instruments.)
Hansen test of overid. restrictions: chi2(67)   =  70.44  Prob > chi2 =  0.363
  (Robust, but weakened by many instruments.)

Difference-in-Hansen tests of exogeneity of instrument subsets:
  GMM instruments for levels
    Hansen test excluding group:     chi2(35)   =  28.64  Prob > chi2 =  0.767
    Difference (null H = exogenous): chi2(32)   =  41.80  Prob > chi2 =  0.115
```

PRICE-TO-EARNINGS MULTIPLE

xtabond2 pe l. pe bosize boid female audits ceop audits cgdi1 mash adircom dirshar riskv nse_age1 size industy Yrddum3 Yrddum4 > Yrddum5, gmm (industy riskv size audits ceop ceopd dirshar mash audits cgdi1 adircom, lag (1 2)) twostep Favoring space over speed. To switch, type or click on mata: mata set matafavor speed, perm.

Dynamic panel-data estimation, two-step system GMM

Group variable: cid		Number of obs	= 500
Time variable : year		Number of groups	= 100
Number of instruments = 94		Obs per group: min	= 5
Wald chi2(16) = 4.81e+07		avg	= 4.00
Prob > chi2 = 0.000		max	= 5

---

pe	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
pe						
L1.	.0433621	.0192226	2.26	0.024	.0056864	.0810377
bosize	-1.458351	.1131935	-12.88	0.000	-1.680206	-1.236495
boid	1.405832	1.279471	1.10	0.070	-1.101885	3.913548
female	.8116954	.1622796	5.00	0.000	.4936333	1.129758
audits	1.712751	.1658546	10.33	0.000	1.387682	2.03782
ceop	-.7322834	.01969	-37.19	0.000	-.770875	-.6936918
cgdi1	6.426462	.4737718	13.56	0.000	5.497887	7.355038
mash	3.452306	6.934307	4.98	0.000	2.096506	4.812106
adircom	.091572	.0018166	5.04	0.000	.0055967	.0127177
riskv	-3.489542	.3174626	-10.99	0.000	-4.111757	-2.867327
nse_age1	.101238	.0217482	4.66	0.000	.0586123	.1438637
size	5.154576	.4381251	11.77	0.000	4.295866	6.013285
industy	-6.534906	.5840852	-11.19	0.000	-7.679692	-5.39012
Yrddum3	-4.13001	.1590264	-25.97	0.000	-4.441696	-3.818324
Yrddum4	-4.593725	.319141	-14.39	0.000	-5.219229	-3.96822
Yrddum5	-3.02907	.3574466	-8.47	0.000	-3.729653	-2.328488
_cons	-23.78732	2.909483	-8.18	0.000	-29.4898	-18.08484

```
Instruments for first differences equation
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    L(1/2).(industy riskv size audits ceop ceopd dirshar mash audits cgdi1
    adircom) Instruments for levels equation Standard _cons
  GMM-type (missing=0, separate instruments for each period unless collapsed)
------------------------------------------------------------------------------
Arellano-Bond test for AR(1) in first differences: z =  -2.18  Pr > z =  0.029
Arellano-Bond test for AR(2) in first differences: z =   1.14  Pr > z =  0.256
------------------------------------------------------------------------------
Sargan test of overid. restrictions: chi2(77)   =  45.42  Prob > chi2 =  0.998
  (Not robust, but not weakened by many instruments.)
Hansen test of overid. restrictions: chi2(77)   =  82.21  Prob > chi2 =  0.321
  (Robust, but weakened by many instruments.)

Difference-in-Hansen tests of exogeneity of instrument subsets:
  GMM instruments for levels
    Hansen test excluding group:     chi2(41)   =  43.28  Prob > chi2 =  0.374
    Difference (null H = exogenous): chi2(36)   =  38.93  Prob > chi2 =  0.339
```

PRICE-TO-CASH FLOW MULTIPLE

```
xtabond2  pc l. pc osize  boid female audits  ceopd audits cgdi1 adircom riskv  mash
nse_age1 size  industy Yrddum3  Yrddum4 Yrddum5, gmm (industy riskv size audits ceop
ceopd audits cgdi1  mash adircom, lag (1 3)) twostep Favoring space over speed. To
switch, type or click on mata: mata set matafavor speed, perm.
Dynamic panel-data estimation, two-step system GMM
------------------------------------------------------------------------------
Group variable: cid                             Number of obs      =       500
Time variable : year                            Number of groups   =       100
Number of instruments = 100                     Obs per group: min =         5
Wald chi2(16) =  1.21e+06                                      avg =      4.00
Prob > chi2   =     0.000                                      max =         5
------------------------------------------------------------------------------
          pc |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          pc |
         L1. |   .1464317   .0154548     9.47   0.000     .1161408    .1767225
             |
      bosize |  -.8090781   .0963141    -8.40   0.000    -.9978504   -.6203058
        boid |   2.651457   2.221757     1.19   0.233    -1.703106    7.006021
      female |   1.430104   .1509913     9.47   0.000     1.134167    1.726042
      audits |    1.18516   .1089447    10.88   0.000     .9716319    1.398687
       ceopd |   .7691386   .3789279     2.03   0.042     .0264535    1.511824
       cgdi1 |   2.888586   .2843545    10.16   0.000     2.331261     3.44591
     adircom |  -.0151596   .0011237   -13.49   0.000     -.017362   -.0129572
       riskv |   1.241599   .5339382     2.33   0.020     .1950991    2.288098
        mash |   1.480006   6.410007     2.31   0.021     2.250007    2.740006
    nse_age1 |    .005285    .019835     5.81   0.015     .0764091    .1541608
        size |   1.691083   .5571205     3.04   0.002      .599147    2.783019
     industy |  -1.450599   .7307452    -1.99   0.047    -2.882834   -.0183651
     Yrddum3 |  -2.633338   .2571898   -10.24   0.000    -3.137421   -2.129255
     Yrddum4 |  -1.639234   .2602618    -6.30   0.000    -2.149338    -1.12913
     Yrddum5 |  -3.393602   .2748841   -12.35   0.000    -3.932365   -2.854839
       _cons |  -12.31015   4.275978    -2.88   0.004    -20.69091   -3.929387
------------------------------------------------------------------------------
Instruments for first differences equation
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    L(1/3).(industy riskv size audits ceop ceopd audits cgdi1 mash adircom)
```

```
Instruments for levels equation   Standard     _cons
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    D.(industy riskv size audits ceop ceopd audits cgdi1 mash adircom)
------------------------------------------------------------------------------
Arellano-Bond test for AR(1) in first differences: z =  -2.90  Pr > z =  0.004
Arellano-Bond test for AR(2) in first differences: z =  -0.55  Pr > z =  0.581
------------------------------------------------------------------------------
Sargan test of overid. restrictions: chi2(83)   =  95.35  Prob > chi2 =  0.167
  (Not robust, but not weakened by many instruments.)
Hansen test of overid. restrictions: chi2(83)   =  88.65  Prob > chi2 =  0.315
  (Robust, but weakened by many instruments.)

Difference-in-Hansen tests of exogeneity of instrument subsets:
  GMM instruments for levels
    Hansen test excluding group:     chi2(51)   =  57.16  Prob > chi2 =  0.257
    Difference (null H = exogenous): chi2(32)   =  31.49  Prob > chi2 =  0.492
```

PRICE-TO-SALES MULTIPLE

```
.xtabond2  ps l. ps  lbosize  lboid female laudits  ceopd cgdi1 adircom riskv  mash
nse_age1 size  industy Yrddum3  Yrddum4 Yrddum5, gmm (I ndusty riskv size audits ceop
ceopd cgdi1  mash adircom, lag (1 3)) twostep Favoring space over speed. To switch,
type or click on mata: mata set matafavor speed, perm.
Dynamic panel-data estimation, two-step system GMM
------------------------------------------------------------------------------
Group variable: cid                             Number of obs      =       500
Time variable : year                            Number of groups   =       100
Number of instruments = 100                     Obs per group: min =         5
Wald chi2(16) = 562477.55                                      avg =      5.00
Prob > chi2   =     0.000                                      max =         5
------------------------------------------------------------------------------
          ps |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          ps |
         L1. |   .3642835   .0111744    32.60   0.000     .3423821     .386185
             |
      bosize |  -.0623828   .1061912    -0.59   0.557    -.2705137    .1457481
       boid |   .1251508   .0948461     1.32   0.187    -.0607441    .3110457
     female |  -.4438451    .024185   -18.35   0.000    -.4912468   -.3964434
     audits |   1.224203   .0908278    13.48   0.000     1.046184    1.402222
      ceopd |   .6424703   .0500958    12.82   0.000     .5442843    .7406563
      cgdi1 |   .4372114   .0664237     6.58   0.000     .3070235    .5673994
    adircom |   .0007854   .0002768     2.84   0.005      .000243    .0013279
      riskv |  -.5521871   .0583355    -9.47   0.000    -.6665227   -.4378516
       mash |   1.292306   6.872308    18.75   0.000     1.152306    1.422306
   nse_age1 |   .0304239   .0030478     9.98   0.000     .0244503    .0363974
       size |   .6241043   .0622783    10.02   0.000      .502041    .7461676
    industy |  -.3428345   .0786858    -4.36   0.000    -.4970558   -.1886132
    Yrddum3 |  -.3285319   .0191892   -17.12   0.000    -.3661421   -.2909217
    Yrddum4 |  -.0425719   .0235951    -1.80   0.071    -.0888175    .0036737
    Yrddum5 |   .1426626   .0227402     6.27   0.000     .0980926    .1872325
      _cons |  -5.015271   .4345275   -11.54   0.000    -5.866929   -4.163613
------------------------------------------------------------------------------
Warning: Uncorrected two-step standard errors are unreliable.

Instruments for first differences equation
```

```
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    L(1/3).(industy riskv size audits ceop ceopd cgdi1 mash adircom)
Instruments for levels equation   Standard     _cons
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    D.(industy riskv size audits ceop ceopd cgdi1 mash adircom)
------------------------------------------------------------------------------
Arellano-Bond test for AR(1) in first differences: z =  -1.53  Pr > z =  0.026
Arellano-Bond test for AR(2) in first differences: z =  -0.34  Pr > z =  0.731
------------------------------------------------------------------------------
Sargan test of overid. restrictions: chi2(83)   = 127.95  Prob > chi2 =  0.101
  (Not robust, but not weakened by many instruments.)
Hansen test of overid. restrictions: chi2(83)   =  74.82  Prob > chi2 =  0.727
  (Robust, but weakened by many instruments.)

Difference-in-Hansen tests of exogeneity of instrument subsets:
  GMM instruments for levels
    Hansen test excluding group:     chi2(51)   =  47.94  Prob > chi2 =  0.121
    Difference (null H = exogenous): chi2(32)   =  26.88  Prob > chi2 =  0.724
Difference-in-Hansen tests of exogeneity of instrument subsets:
  GMM instruments for levels
    Hansen test excluding group:     chi2(11)   =   9.56  Prob > chi2 =  0.570
    Difference (null H = exogenous): chi2(32)   =  35.99  Prob > chi2 =  0.287
```

PRICE-TO-BOOK VALUE MULTIPLE

xtabond2 pb1 l. pb1 bosize boid female audits ceopd audits cgdi1 adircom riskv lnmash nse_age1 size industy Yrddum3 Yrddum4 Y rddum5, gmm (industy riskv size audits ceop ceopd audits cgdi1 mash adircom, lag (2 4)) twostep Favoring space over speed. To switch, type or click on mata: mata set matafavor speed, perm.

Dynamic panel-data estimation, two-step system GMM

Group variable: cid — Number of obs = 500

Time variable : year — Number of groups = 100

Number of instruments = 76 — Obs per group: min = 2

Wald chi2(16) = 4250.76 — avg = 3.93

Prob > chi2 = 0.000 — max = 4

---

pb1	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
pb1						
L1.	.1797354	.0105767	16.99	0.000	.1590054	.2004654
bosize	.4872032	.0233258	3.74	0.000	.0414854	.132921
boid	-.061667	.2693297	3.83	0.000	.5037909	1.559544
female	.0598979	.0336194	3.57	0.320	.0540051	.1857907
audits	-.3274104	.0489028	-3.22	0.001	-.2532581	-.0615627
ceopd	.0397531	.143862	0.28	0.782	-.2422112	.3217174
cgdi1	.0005336	.1210414	3.23	0.001	.1532968	.6277704
adircom	-.0028489	.000525	-5.43	0.000	-.0038778	-.00182
riskv	-.2023549	.116521	-1.74	0.042	-.4307319	.0260221
mash	-3.653207	1.641327	-1.14	0.932	-5.083207	1.346507
nse_age1	.029773	.0052332	5.69	0.000	.0195161	.0400299
size	.0117439	.0867305	0.14	0.892	-.1582447	.1817325
industy	-.8081158	.2064753	-3.91	0.000	-1.2128	-.4034317
Yrddum3	-.3096286	.0315025	-9.83	0.000	-.3713723	-.2478849
Yrddum4	-.2547391	.0471673	-5.40	0.000	-.3471854	-.1622928
Yrddum5	-.2546954	.0592853	-4.30	0.000	-.3708924	-.1384984
_cons	-1.014473	.593426	-1.71	0.087	-2.177566	.1486211

Instruments for first differences equation

GMM-type (missing=0, separate instruments for each period unless collapsed)

L(2/4).(industy riskv size audits ceop ceopd audits cgdi1 mash adircom)

```
Instruments for levels equation
  Standard     _cons
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    DL.(industy riskv size audits ceop ceopd audits cgdi1 mash adircom)
------------------------------------------------------------------------------
Arellano-Bond test for AR(1) in first differences: z =  -2.23  Pr > z =  0.005
Arellano-Bond test for AR(2) in first differences: z =  -1.46  Pr > z =  0.311
------------------------------------------------------------------------------
Sargan test of overid. restrictions: chi2(59)   = 111.46  Prob > chi2 =  0.100
  (Not robust, but not weakened by many instruments.)
Hansen test of overid. restrictions: chi2(59)   =  52.72  Prob > chi2 =  0.705
  (Robust, but weakened by many instruments.)
Difference-in-Hansen tests of exogeneity of instrument subsets:
  GMM instruments for levels
    Hansen test excluding group:     chi2(35)   =  29.18  Prob > chi2 =  0.374
    Difference (null H = exogenous): chi2(24)   =  23.54  Prob > chi2 =  0.488
```