Empirical Essays on Corporate Governance and Corporate Outcomes in MENA Countries

Ahmed Attia Sarhan

BSc Accounting (Zagazig University, Egypt) and MSc Accounting (Zagazig University, Egypt)

A thesis submitted to the University of Huddersfield in partial fulfilment of the requirements for the degree of Doctor of Philosophy

September 2016

Copyright Statement

Abstract

The current thesis consists of three essays analysing recent corporate governance (CG) reforms in Middle Eastern and North African (MENA) countries. The three essays place emphasis on three closely related CG topics that quantitatively seek to investigate the extent to which MENA CG reforms have been effective in enhancing three main sets of corporate outcomes.

The first essay investigates the level and determinants of voluntary CG compliance and disclosure in MENA countries during the period from 2009 to 2014. Specifically, this essay aims to empirically examine two main research questions: first, what is the level of voluntary compliance with, and disclosure of, CG provisions among listed firms in MENA countries?; and second, what factors can explain the variance in the level of voluntary compliance with, and disclosure of, CG provisions among listed firms in MENA countries? Relying on insights from neo-institutional theory, the findings of this study reveal that in general MENA listed firms have a relatively lower level of voluntary compliance with, and disclosure of, CG practices compared to developed countries. However, the level of CG disclosure improved over period 2009 to 2014, indicating that MENA countries have responded positively to their CG codes of best practice and recommendations. The findings also suggest that firm-level factors (i.e., Islamic values, board characteristics and ownership structure mechanisms) and country-level factors (i.e., religion and the quality of national governance) have a significant impact on firm-level voluntary CG compliance and disclosure. Specifically, the findings suggest that Islamic values disclosure, board diversity on the basis of gender and ethnicity, board independence and separation of the Chief Executive Officer (CEO)/chairperson roles have a positive association with the level of CG compliance and disclosure, while board size and director ownership impact negatively on the level of CG compliance and disclosure. The findings also suggest insignificant relationship between government ownership and block ownership with the level of CG compliance and disclosure. With regard to country-level factors, the results indicate that corporations listed in countries complying with Islamic economic principles and having high-quality national governance are more likely to voluntarily comply and disclose more CG practices than those that do not.

The second essay investigates the influence of board diversity (based on gender, ethnic minorities and nationality) on corporate outcomes. Thus, this essay seeks to empirically examine the extent to which board diversity influences firm market value, accounting returns, executives pay (EP) and the pay-for-performance sensitivity (PPS). The findings attempt to

expand current understanding of the role that board diversity can play in enhancing market value, accounting returns, EP and the PPS among MENA countries' listed firms. Specifically, the MENA region has distinctive social norms, legal framework and structure of the economy, which suggest that the effect of board diversity on corporate outcomes may be different from those observed in developed countries. Informed by critical insights from agency, resource dependence, cognitive development, social identity and stakeholder theories, the empirical evidence reveals that boards of directors of MENA listed firms are dominated by national Arab male directors. The empirical evidence also shows that board diversity is a significant determinant of corporate outcomes in MENA listed firms. Specifically, firms with boards more diversified by gender, ethnic minorities and nationality are more likely to have higher accounting returns and market value. Additionally, a high percentage of female directors on the board improves firm market value and accounting returns, while foreign directors significantly and positively influence accounting returns. Further, the empirical results show that a firm's CG quality has no moderating effect on the relationship between board diversity and firm market value. However, a high percentage of ethnic and foreign directors positively and significantly impacts the accounting returns in firms with weak CG. With regard to the impact of board diversity on EP, the findings reveal that different measures of board diversity have no significant impact on EP, whereas the inclusion of female and minority ethnic directors on corporate boards appears to enhance the PPS.

The third and final essay examines the extent to which CG practices can explain auditor choice and observable changes in audit fees among listed firms in MENA countries. The key objective of this essay is to investigate how effective the CG practices, including CG Index, board characteristics and ownership structure mechanisms, are in influencing the auditor choice and fees. The results of this study have the potential to deepen current understanding of the ability of different CG practices to impact auditor choice and fees among firms listed in MENA countries. Specifically, the audit profession and its quality in the MENA region are relatively poorly established compared to developed countries. This suggests that the impact of CG measures on auditor choice and fees decisions may be different from that observed in developed countries. Employing insights from agency theory, the study finds that CG Index, board diversity based on gender and ethnicity, board independence, separation of the CEO/chairperson roles and concentrated ownership impact significantly and positively on firm choice of Big 4 auditors. Board size impacts positively, but insignificantly, on Big 4 auditor choice decision, whereas government ownership and director ownership are insignificant and negatively related to Big 4 auditor choice decision. The third essay also shows that CG Index,

board diversity based on gender and ethnicity and government ownership are significantly and negatively related to audit fees, whereas board size, board independence and director ownership have a significant, but positive effect on audit fees. Non-dual board leadership structure, and concentrated ownership have no significant impact on audit fees.

The documented empirical results of the three essays are fairly robust across a raft of econometric models and estimations that take into account potential endogeneity problems and alternative variables.

To summarise, empirical evidence for the extent of CG practices' influence on these three sets of corporate outcomes among MENA countries' listed firms is relatively rare. Accordingly, this study aims to contribute to the literature by providing new insights with specific focus on recent CG reforms that have been pursued in MENA countries. Particularly, this thesis contributes to the limited, but steadily growing body of literature on the effectiveness of CG mechanisms in influencing a number of crucial firm outcome, including voluntary CG compliance and disclosure, firm performance, EP, the PPS, and auditor choice and fees, among listed firms in MENA countries.

Table of Contents

Empirical Essays on Corporate Governance and Corporate Outcomes in MENA Countries 1

Copyright Statement 2

Abstract 3

Table of Contents 6

List of Tables 13

List of Figures 14

Acknowledgement 15

List of Abbreviations 16

List of Publications 17

Introduction 18

Essay 1 25

Antecedents of Corporate Governance Practices in MENA Countries 25

Abstract 26

1 Introduction 27

1.1 Background 27

1.2 Motivation 30

1.3 Contributions 31

1.4 Structure of the Essay 32

2 Corporate Governance in MENA Countries: Background and Institutional Framework 32

2.1 Egypt 34

2.2 Jordan 35

2.3 Oman 37

2.4 Saudi Arabia 39

2.5 United Arab of Emirates 40

3 Theoretical Framework, Literature Review and Development of Hypotheses 41

3.1 A Neo-institutional Framework for Good Corporate Governance Practices 41

3.2 Literature Review and Development of Hypotheses 44

3.2.1 Firm-level Antecedents of Voluntary Corporate Governance Compliance and Disclosure Practices 45

3.2.1.1 Islamic Values Disclosure 45

3.2.1.2 Corporate Board Characteristics Variables 47

3.2.1.2.1 Board Size 48
3.2.1.2.2 Board Diversity 49
3.2.1.2.3 Board Independence 51
3.2.1.2.4 Board Leadership Structure 52
3.2.1.3 Ownership Structure Mechanisms 54
3.2.1.3.1 Government Ownership 54
3.2.1.3.2 Director Ownership 55
3.2.1.3.3 Block Ownership 56
3.2.2 Country-level Antecedents of Voluntary Corporate Governance Compliance and Disclosure Practices 57
3.2.2.1 Religion 57
3.2.2.2 National Governance Quality 59
4. Research Design 62
4.1. Sample Selection and Data Sources 62
4.2. Measurement of Variables 64
4.2.1 Voluntary Corporate Governance Disclosure (Dependent Variable) Measurement 64
4.2.1.1 Data Sources for the MENA Corporate Governance Index 65
4.2.1.2 The Choice between Binary and Ordinal Coding Schemes 65
4.2.1.3 The Reliability and Validity of the Constructed Corporate Governance Index 66
4.2.1.3.1 The Reliability Test of the Corporate Governance Index 66
4.2.1.3.2 The Validity Test of the Corporate Governance Index 68
4.2.2 Independent Variables 69
4.2.3 Rationale for Control Variables 70
4.2.3.1 Firm Size 71
4.2.3.2 Firm Age 71
4.2.3.3 Growth Opportunity 72
4.2.3.4 Leverage 72
4.2.3.5 Profitability 73
4.2.3.6 Audit Firm Size 73
4.2.3.7 Industry Dummies 74
4.2.3.8 Year Dummies 74
4.2.3.9 Gross Domestic Product Growth 75
4.2.3.10 Inflation 75

4.2.3.11 Corruption Perception Index 76
4.3 Model Specification 78
4.4 Ordinary Least Squares Assumptions 79
5 Empirical Results and Discussion 82
5.1 Descriptive Analysis 82
5.2 Multivariate Regression Analysis 94
5.3 Robustness Tests 102
5.3.1 Results Based on Weighted Corporate Governance Index 102
5.3.2 Results Based on Non-Linear Assumption of Corporate Governance Measures 102
5.3.3 Results Based on the Lagged Structure Model 103
5.3.4 Results Based on the 2SLS Model 103
5.3.5 Results Based on the Fixed-Effect Model 103
6 Summary and Conclusion 106
6.1 Contributions, Policy Implications and Recommendations 106
6.2 Limitations and Avenues for further research 108

Essay 2 110
Board Diversity, Corporate Governance and Corporate Outcomes: Evidence from MENA Countries 110
Abstract 111
1 Introduction 112
1.1 Background 112
1.2 Motivation 113
1.3 Contributions 114
1.4 Structure of the Essay 115
2 Social and Cultural Context of Board Diversity within the MENA Region 115
2.1 MENA Dominated Culture, Traditions, Customs, Norms and Beliefs 116
2.2 Legal Framework in MENA Countries 117
2.3 Economic Structure and Institutional Context in MENA Countries 118
3 Theoretical Framework, Literature Review and Development of Hypotheses 119
3.1 Board Diversity and Firm Performance 119
3.1.1 Agency Theory 120
3.1.2 Resource Dependence Theory 121

3.1.3 Psychology/Cognitive Development Theory 121
3.1.4 Social Identity Theory 122
3.1.5 Stakeholder Theory 123
3.2 Moderating Effect of Corporate Governance on the Relationship Between Board Diversity and Firm Performance 125
3.3 The Association Between Board Diversity and Executive Pay (EP) 127
3.4 Moderating Effect of Board Diversity on the Pay-for-Performance Sensitivity (PPS) 128
4 Research Design 130
4.1 Sample Selection and Data Sources 130
4.2 Measurement of Variables 130
4.2.1 Dependent Variables 131
4.2.2 Independent Variables 131
4.2.3 Rationale for Control Variables 132
4.2.3.1 Board Size 132
4.2.3.2 Board Independence 133
4.2.3.3 Board Leadership Structure 133
4.2.3.4 Block Ownership 134
4.2.3.5 Government Ownership 135
4.2.3.6 Institutional Ownership 135
4.2.3.7 Firm Size 136
4.2.3.8 Leverage 137
4.2.3.9 Firm Age 137
4.2.3.10 Audit Firm Size 138
4.2.3.11 Growth Opportunity 138
4.2.3.12 Year and Industry Dummies 139
4.2.3.13 Country-level Control Variables 139
4.3 Model Specification 141
4.4 Panel Regression Specification Tests 143
4.4.1 Pooling Test 143
4.4.2 Tests for Individual and Time Effects 144
5 Empirical Results and Discussion 145
5.1 Descriptive Statistics 145
5.2 Multivariate Fixed Effect Regression Analyses 149

5.3 Robustness Tests 158
5.3.1 Results Based on the Number of Female Directors 158
5.3.2 Results Based on Alternative Firm Performance Measures 159
5.3.3 Results Based on Non-Linear Assumption 159
5.3.4 Results Based on Alternative Measures of Diversity 159
5.3.5 Results Based on Lagged Structure Model 159
6 Summary and Conclusions 163
6.1 Contributions, Policy Implications and Recommendations 163
6.2 Limitations and Avenues for Further Research 165

Essay 3 166
Antecedents of Auditor Choice and Fees in MENA Countries: The Effect of Corporate Governance 166
Abstract 167
1 Introduction 168
1.1 Background 168
1.2 Motivation 170
1.3 Contributions 170
1.4 Structure of the Essay 171
2 Audit Quality and Audit Profession in the MENA Region: Background and Institutional Framework 171
2.1 Institutional Framework and Audit Profession in MENA Countries 172
2.2 Corporate Governance and the Role of Big 4 Audit Firms in Developing Audit Profession in MENA Countries 174
3. Theoretical Framework, Literature Review and Development of Hypotheses 176
3.1 Agency Theory Framework for Auditor Choice and Fees 176
3.2 Literature Review and Development of Hypotheses 180
3.2.1 A Broad Composite Quality CG Index 180
3.2.2 Corporate Board Characteristics Variables 182
3.2.2.1 Board Size 183
3.2.2.2 Board Diversity 184
3.2.2.3 Board Independence 186
3.2.2.4 Board Leadership Structure 188

3.2.3 Ownership Structure Mechanisms 189
3.2.3.1 Government Ownership 189
3.2.3.2 Director Ownership 190
3.2.3.3 Block Ownership 192
4 Research Design 195
4.1 Sample and Data 195
4.2 Measurement of Variables 196
4.2.1 Dependent Variables 196
4.2.2 Independent Variables 197
4.2.3 Rationale for Control Variables 197
4.2.3.1 Firm Size 198
4.2.3.2 Busy 198
4.2.3.3 Quick Ratio and Leverage 198
4.2.3.4 Loss 199
4.2.3.5 Profitability 199
4.2.3.6 Growth Opportunity 200
4.2.3.7 Year and Industry Dummies 200
4.2.3.8 Country Control Variables 201
4.3 Model Specification 202
4.4 Ordinary Least Squares Assumptions 203
5 Empirical Results and Discussion 206
5.1 Descriptive Statistics 206
5.2 Multivariate Regression Analyses 210
5.3 Robustness Tests 217
5.3.1 Results Based on Alternative Proxies to Measure the Control Variables 217
5.3.2 Results Based on Non-Linear Assumption 217
5.3.3 Results Based on Lagged Structure Model 218
5.3.4 Results Based on the Effect of Client Size 218
6. Summary and Conclusions 222
6.1 Contributions, Policy Implications and Recommendations 222
6.3 Limitations and Avenues for Further Research 224
Concluding Chapter 225

Summary and Conclusion: Objectives, Findings, Implications and Recommendations, Contributions, Limitations and Avenues for Future Research 225
Appendices 235
References 237

Word count 91,490

List of Tables

Table1: Summary of sample composition 62
Table 2: Summary of variables and measures 77
Table 3: The OLS assumptions tests 80
Table 4: Summary of yearly descriptive statistics of levels of compliance with MCGI and CG mechanisms 83
Table 5: Summary of country descriptive statistics of levels of compliance with MCGI and CG mechanisms 85
Table 6: Summary of descriptive statistics of the MCGI, independent and control variables for all sampled firms 87
Table 7: Pearson and Spearman correlation matrices of all variables: firm-level analysis 91
Table 8: Pearson and Spearman correlation matrices of all variables: country-level analysis 93
Table 9: Determinants of voluntary corporate governance compliance and disclosure practices (MCGI) 96
Table 10: Country determinants of voluntary corporate governance compliance and disclosure practices (MCGI) 101
Table 11: Sensitivity analyses of the determinants of corporate governance disclosures 105
Table 12: Summary of variables and measures 140
Table 13: Summary of descriptive statistics of all variables for all sampled firms 146
Table 14: Pearson and Spearman correlation matrices of all variables 148
Table 15: Fixed-effect regression of the relationship between board diversity and firm performance 151
Table 16: Fixed-effect regression of the moderation effect on the relationship between board and firm performance 153
Table 17: Fixed-effect regression of the relationship between board diversity and executive pay and the moderation effect of board diversity on thee pay-for-performance sensitivity PPS 156
Table 18: Additional and sensitivity analyses of the determinants of CG disclosures 161
Table 19: Summary of variables and measures 201
Table 20: The OLS assumptions tests 204
Table 21: Summary of descriptive statistics of all variables for all sampled firms 207
Table 22: Pearson and Spearman correlation matrices of all variables 209
Table 23: Determinants of auditor choice and fees 215
Table 24: Sensitivity analyses of the determinants of auditor choice and fees 220

List of Figures

Figure 1: Thesis summary constructed by the researcher 24

Acknowledgement

In the name of God, the most compassionate, the most merciful, and may God bless upon our beloved Prophet Muhammad *Sallallahu Alaihi Wasallam*. I am extremely thankful to the Almighty Allah for his blessings and for honouring me with his guidance in order to complete this thesis successfully.

I am indebted to many people who helped and supported me throughout this research project. First, I would like to express my gratitude and heartfelt thanks to my distinguished supervisor Professor Collins Ntim for his guidance, knowledge, patience, time and support throughout every stage of my study. His regular constructive comments and evaluation significantly contributed to the quality of this thesis. Also, I am thankful to Professors Ahmed Hany Hamad and Ramadan Khalil for their valuable help and their wonderful supervision throughout the early stages of the study. I appreciatively acknowledge the financial support of the Ministry of Higher Education and Zagazig University in Egypt for funding two years of my doctoral study. I am really grateful to the Cultural and Educational Counsellor, Cultural Attaché, and all the administrative staff at the Egyptian Educational and Cultural Bureau in London for their great financial support and educational supervision during the period of my scholarship. Second, great thanks to all members of staff and my colleagues in the Accounting and Finance Department at the University of Huddersfield for their valuable suggestions.

Third, I dedicate this study to my parents Attia and Mona for their continuous prayers, motivation and encouragement, and ask Almighty Allah to keep them safe and grant them long lives. Fourh, my sincere gratitude goes to my brothers Islam and Ayman for their understanding, support and prayers. Last but not least, I would like to express my deepest gratitude to my wife Maha for her unlimited support and patience, and her constant encouragement. She shared all the challenges that I faced during my journey towards the completion of this study. I would also like to take this opportunity to thank my dearest children Yasmine and Hazem. I apologise, however, to my wife and children for being so busy with my studies, and also extend my apologies to anyone who assisted in improving the quality of this study but has not been acknowledged here.

List of Abbreviations

AAA	Accountants and Auditors Association
ACCA	Association of Chartered Certified Accountants
AFM	Amman Financial Market
AICPA	American Institute of Certified Public Accountants
APs	Analytical Procedures
ASE	Amman Stock Exchange
ASX	Abu Dhabi Securities Exchange
CAO	Central Auditing Organization
CBUAE	Central Bank of the United Arab of Emirates
CEO	Chief Executive Officer
CFIs	Conventional Financial Institutions
CG	Corporate Governance
CMA	Capital Market Authority
CSR	Corporate Social Responsibility
CSRC	China Securities Regulatory Commission
DFM	Dubai Financial Market
EASs	Egyptian Accounting Standards
ECGC	Egyptian Corporate Governance Codes
EFSA	Egyptian Financial Supervisory Authority
EGX	Egyptian Exchange
EIoD	Egyptian Institute of Directors
ESAA	Egyptian Society of Accountants and Auditors
ESCA	Emirates Securities and Commodities Authority
GAAP	Generally Accepted Accounting Principles
GCC	Gulf Cooperation Council
IASs	International Accounting Standards
ICB	Industry Classification Benchmark
IFAC	International Federation of Accountants
IFC	International Financial Corporation
IFIs	Islamic Financial Institutions
IFRS	International Financial Reporting Standards
ISAR	International Standards of Accounting and Reporting
JACPA	Jordanian Association of Certified Public Accountants
JSC	Jordan Securities Commission
M&As	Mergers and Acquisitions
MCGI	Middle East And North Africa Corporate Governance Index
MENA	Middle East and North Africa
MPH	Managerial Power Hypothesis
MSM	Muscat Securities Market
NASDAQ Dubai	Dubai International Financial Exchange
OCT	Optimal Contracting Theory
OECD	Organization for Economic Cooperation and Development
OLS	Ordinary Least Squares
PCEC	Professional Code of Ethical Conduct
SDC	Securities Depository Center
SMEs	Small and Medium-sized Enterprises
SOCPA	Saudi Organization for Certified Public Accountants
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Program
WBI	World Bank Institute
WGI	Worldwide Governance Indicators

List of Publications

Conference papers

1. The British Accounting and Finance Association (BAFA) doctoral conference, Manchester University, Manchester, United Kingdom, 22 – 23 March, 2015.

2. The 1st PGR Conference, the University of Huddersfied, Huddersfield, United Kingdom, Friday 13th November 2015.

Workshop papers

1. The 13th Workshop on Accounting and Finance in Emerging Economies (AFEE), The University of Huddersfied, Huddersfield, United Kingdom, Thursday 4th June, 2015.

Introduction

The world has witnessed a number of prominent corporate scandals, such as Enron in the US, Parmalat in Europe and Health International Holdings (HIH) in Australia. These scandals were followed by the financial crisis of 2007/2008, in which a substantial number of firms were exposed to financial distress and bankruptcy. These scandals are supposed to arise from the magnitude of the agency problem and the failure to execute effective CG practices. The agency problem arose as a result of the separation of ownership and control. Agency theory views the firm as an interrelated set of contracting relationships among different parties. This theory assumes that parties of the contract relationship will act to maximise their resources by using information available to them, and may result in information asymmetry. In this regard, academics, practitioners, professionals and regulatory authorities have suggested the adoption of good CG practices to mitigate agency problems (Cadbury Report, 1992; Organisation for Economic Cooperation and Development (OECD), 1999; Ho and Wong, 2001; Hussain and Mallin, 2002; Rainsbury *et al*., 2009). Accordingly, there is an international and national tendency for the issuance of rigorous legislations and reforms to encourage firms to commit to sound CG practices. For the purpose of improving the quality of firms' governance, many countries have responded to these recommendations by issuing national codes of good CG practice. For example, the US issued the Sarbanes-Oxley Act in 2002 to restore the credibility of the US financial reporting system after several high-profile corporate scandals (Krishnan and Visvanathan, 2008).

MENA countries like most other emerging economies, have therefore recognised the importance of having an efficient corporate regulatory framework and good CG codes. For instance, Egypt is considered as one of the leading countries in the MENA region in terms of developing CG standards. In 2003, Egypt established the Egyptian Institute of Directors (EIoD) under the affiliation of the Ministry of Trade. EIoD, the first institute to focus on improving CG standards in the Arab region, was the main participant in issuing the Egyptian CG Codes (ECGC), in collaboration with many leading international organisations (e.g., United National Development Programme (UNDP), World Bank Institute (WBI), OECD and the European Union (EU)). Policy makers and regulatory bodies in the MENA region also understood the need to issue good CG guidelines and standards to improve the quality of domestic firms' governance and thereby to ensure that they implement high standards of corporate behaviour. Accordingly, Oman, for example, issued a voluntary CG Code in 2002 to provide greater protection for all stakeholders. It was introduced to disseminate and promote a culture of

compliance, quality disclosure and accountability among Omani firms. Other MENA countries followed Oman in issuing national voluntary CG codes (e.g., Egyptian CG code 2005, Saudi CG code 2006, Jordanian CG code 2007, and UAE CG code 2007). These CG codes share a common objective of helping national firms to create effective internal controls that can alleviate agency problems associated with managers' opportunistic behaviour at the expense of other stakeholders. It is important to mention that the recommendations contained in theses codes largely derived from the 1992 UK Cadbury Report and were influenced by an Anglo-American CG tradition (Hussain and Mallin, 2002; Aguilera and Cuervo-Cazurra, 2009; Al-Abbas, 2009; Alshehri and Solomon, 2012; Piesse *et al*., 2012; Seidl *et al*., 2013). For instance, these codes recommend the adoption of a unitary-style board of directors, consisting of executive and non-executive directors (NEDs), and the separation of the positions of CEO and chairperson. Furthermore, companies are accountable for applying the recommendations included in the codes to shareholders through a voluntary 'comply or explain' compliance and disclosure regime.

Most MENA countries have specific contextual characteristics, which are different from those of developed corporate settings, which raises concern as to whether the reliance on an Anglo-American CG model can provide effective CG mechanisms that are able to enhance corporate outcomes. Particularly because of the differences in corporate contexts between MENA and developed countries, it is expected that CG recommendations proposed by CG codes influence corporate outcome, including CG voluntary disclosure, firm market value, accounting returns, EP, the PPS, and auditor choice and fees, in a way different from those of developed countries. Therefore, it is expected that the firms' compliance with good CG practices included in national CG codes will be different from developed countries' and may be affected by the unique characteristics of MENA countries, which include a strong hierarchical social structure, the importance of personal relationships, religious notions built around Sharia Law, concentrated ownership, and the nature of some socio-economic institutions.

The majority of previous studies, which examined the impact of internal CG mechanisms on voluntary CG disclosure, firm market value, accounting returns, EP, the PPS, and auditor choice and fees, have been conducted in developed countries. However, the CG literature shows that there is an obvious dearth of empirical evidence in emerging economies in general, and the MENA region in particular. Accordingly, examining the impact of CG on these topics in the MENA context enhances the CG literature by providing empirical evidence

on whether and the extent to which internal CG mechanisms have an impact on corporate outcomes in MENA countries.

Therefore, this thesis comprises three essays that investigate the influence of firms' internal CG mechanisms in MENA countries on three corporate outcomes: i) voluntary CG disclosure, ii) firm market value, accounting returns, EP and PPS, and iii) auditor choice and fees.

i) First Essay

The first essay investigates the extent of voluntary CG compliance and disclosure practices in MENA listed firms, and antecedents that may affect such disclosure. It addresses a number of research questions including: What is the level of voluntary compliance with, and disclosure of, CG practices among listed firms in MENA countries? This question gives rise to a number of sub-questions, as: (i) To what extent has the introduction of the national MENA CG codes improved CG compliance and disclosure practices?; (ii) With which CG-provision sub-groups do listed firms most comply?; (iii) Is there a significant difference among MENA sampled countries in terms of providing CG disclosure?; and (iv) Was there an improvement in the level of voluntary CG compliance and disclosure over the sampled period 2009 to 2014?

The first essay also aims to answer the second and third central research questions: whether firms' compliance with Islamic values, board characteristics and ownership structure mechanisms can explain observed cross-sectional differences in MENA listed firms' voluntary CG disclosure; and whether the national religion and quality of governance can explain noticeable variations in the level of voluntary CG compliance and disclosure practices. To answer these research questions, neo-institutional theory, which incorporates both efficiency and legitimation perspectives, was adopted to develop hypotheses and interpret the results. Ten hypotheses were developed and quantitatively examined, to specify: first, the nature of the relationship between firm-level voluntary CG disclosure and Islamic values, board size, board diversity on the basis of gender and ethnicity, board independence, separation of CEO and chairperson positions, government ownership, director ownership and block ownership; and second, the nature of the relationship between country-level voluntary CG disclosure and national religion and the quality of national governance. These hypotheses were examined using a sample of 100 listed firms from five MENA countries with 600 firm-year observations from 2009 to 2014 and multiple Ordinary Least Squares (OLS) regression analysis.

According to the unique institutional structures prevailing in the MENA region as will be detailed later, the first essay expects that CG disclosure in the MENA context may be different from what is reported in developed countries; hence, the MENA region represents an interesting context in which to empirically investigate the level and antecedents of voluntary CG disclosure. The first essay documents that in general MENA listed firms have a relatively lower level of voluntary compliance with, and disclosure of, CG practices compared to developed countries. However, the level of CG disclosure improved over the period 2009 to 2014. It also finds that in general Islamic values disclosure, board characteristics and ownership structure mechanisms have a significant impact on firm-level voluntary CG disclosure. Specifically, the results indicate that firms with higher Islamic values disclosure, more board diversity on the basis of gender and ethnicity, a higher percentage of NEDs and separate CEO/chairperson roles, are more likely to disclose more CG information. In contrast, the findings suggest that board size and director ownership impact negatively on firm-level voluntary CG disclosure. However, the results do not indicate any empirical evidence to suggest that government ownership and block ownership have any significant relationship with the level of CG disclosure. With regard to investigating country-level antecedents to voluntary CG disclosure in the MENA context, the first essay found that religion and the quality of national governance significantly influence firms' voluntary CG disclosure. These findings suggest that firms in countries complying with Islamic economic principles and having good national governance are more likely to disclose more CG practices than those that do not.

ii) Second Essay

The second essay empirically examines the relationship between board diversity (based on gender, ethnic minorities and nationality) and a number of corporate outcomes (i.e., market value, accounting returns, EP and the PPS). Motivated by the special characteristics of the MENA region, It addresses four research questions: (i) To what extent can board diversity based on gender, ethnic minority and nationality impact a firm's market value and accounting returns?; (ii) Does CG quality moderate the relationship between board diversity and the firm's financial performance?; (iii) What is the impact of appointing women, ethnic minorities and foreign directors on EP?; and (iv) Does board diversity enhance the PPS?

The second essay adopted a multi-theoretical approach to develop hypotheses and interpret the results, where the chosen theories were considered complementary rather than alternative perspectives. The multi-theoretical framework includes critical insights from

agency, resource dependence, cognitive development, social identity and stakeholder theories. The relationship between board diversity and firm market value, accounting returns, EP and the PPS were investigated. Specifically, the second essay developed four hypotheses that examine the impact of board diversity on firm market value, accounting returns, EP and the PPS. These hypotheses also investigate the moderating effect of CG quality on the relationship between board diversity and both firm market value and accounting returns. To empirically test these hypotheses, two data sets were used. The hypotheses relating to the market value and accounting returns and the moderating effect of CG quality were examined based on a sample of 600 firm-year observations over six years from 2009 to 2014 by the application of a fixed effect regression model, whereas the hypotheses relating to EP and the PPS were examined based on a sample of 502 firm-year observations for the same period, and also via the application of the fixed effect regression model.

Previous studies indicate mixed empirical evidence of the impact of board diversity on corporate outcomes. The second essay, however, expects that the MENA region's social norms, legal framework, and structure of the economy suggest that the influence of board diversity on corporate outcomes may be different from that observed in developed countries. This, therefore, underlies the need to empirically analyse the extent to which board diversity based on gender, ethnicity and nationality influence corporate outcomes (i.e., firm market value, accounting returns, EP and the PPS). The results of this essay show that boards of directors of MENA listed firms are dominated by national Arab males. These results also illustrate that board diversity on the basis of gender, nationality and ethnicity generally has a significant impact on corporate outcomes. First, firms with more diversified boards based on gender, ethnic minorities and nationality are more likely to attain higher accounting returns and market value. Second, the empirical evidence indicates that a high percentage of female directors on the board improves firm market value and accounting returns, while foreign directors impact significantly and positively on accounting returns. Third, a firm's CG quality has no moderating effect on the relationship between board diversity and firm market value. However, a high percentage of ethnic and foreign directors has a positive and significant effect on accounting returns in firms with weak CG. Fourth, different measures of board diversity have no significant impact on EP. Finally, the inclusion of female and minority ethnic directors on boards enhances the PPS.

iii) Third Essay

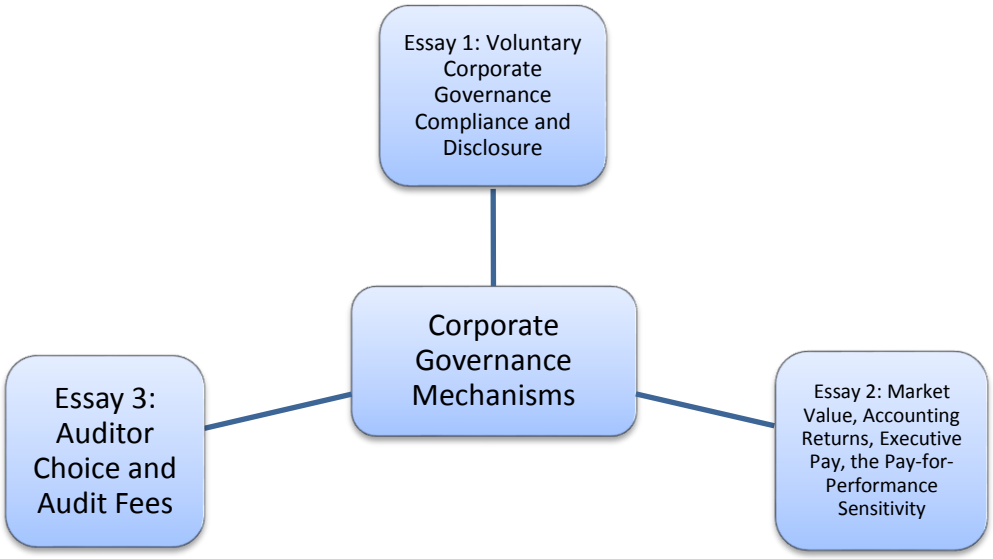
The third essay empirically investigates the extent to which CG measures can determine the auditor choice and fees among listed firms. It aims to answer its main research question: Are better-governed firms more or less likely to choose one of the Big 4 auditors and pay high audit fees? Two sub-questions were also examined: (i) Do a broad composite CG Index, board characteristics and ownership structure mechanisms influence auditor choice?; and (ii) Do the broad composite CG index, board characteristics and ownership structure mechanisms impact audit fees?

The third essay incorporates crucial insights from agency theory. Agency theory was used to develop eight hypotheses investigating the impact of the broad composite CG Index, board characteristics and ownership structure mechanisms on auditor choice and fees. Eight hypotheses were quantitatively examined to specify the nature of the relationship between auditor choice and fees on the one hand, and the CG Index, board size, board diversity, board independence, the separation of the CEO and chairperson positions, government ownership, director ownership and block ownership on the other hand. The hypotheses relating to auditor choice were examined based on a sample of 600 firm-year observations over six years by employing logistic regression technique, whereas the hypotheses relating to audit fees were examined based on a sample of 470 firm-year observations for the same period, but by employing multiple OLS linear regression analysis.

The third essay expects that audit quality and audit profession in the MENA region are relatively weakly established compared to developed countries. This indicates that the impact of CG measures on auditor choice and fees decisions may be different from that observed in developed countries. Thus, examining the ability of CG measures to impact firm-level auditor choice and fees may be crucial in providing a deeper understanding of why and how a firm's CG strategy might influence auditor choice and audit fees decisions. The results of this examination indicate that the CG Index, board characteristics and ownership structure mechanisms have a significant impact on auditor choice and fees. Specifically, the empirical evidence suggests that the CG Index, board diversity based on gender and ethnicity, board independence, separation of the CEO/chairperson roles and concentrated ownership have a significant and positive effect on the choice of the Big 4 auditors. Board size has a positive but insignificant impact on the Big 4 auditor choice decision, whereas government ownership and director ownership are insignificant and negatively related to this decision. Furthermore, the empirical evidence supports the negative and significant impact of the CG Index, board diversity based on gender and ethnicity and government ownership on audit fees, whereas, board size, board independence and director ownership impact significantly, but positively on

audit fees. However, non-dual board leadership structure and concentrated ownership have no significant impact on audit fees. Overall, the study's findings propose that external audit quality (Big 4 auditor, high audit fees) do have a CG monitoring role in MENA listed firms. Furthermore, auditor choice and fees decisions are affected by the firm-level CG.

Figure 1: Thesis summary constructed by the researcher



Overall the main topic of the thesis is CG practices and their effect on a number of firm outcomes in MENA countries. The first essay examines the extent of voluntary CG compliance and disclosure practices, and antecedents that may affect such disclosure. The second covers board diversity as a CG mechanism and its effect on market value, accounting returns, EP and the PPS. MENA countries have a lower representation of women, ethnic minorities and non-nationals on boards. Therefore, this second essay aims to provide a rationale for diversifying boards. Finally, paper three discusses the effect of a number of CG mechanisms on the auditor choice and audit fees among listed companies. In summary, these three essays seek to provide a comprehensive view of the role that sound CG mechanisms can play in enhancing firm outcomes in the MENA context.

Empirical Essays on Corporate Governance and Corporate Outcomes in MENA Countries

Essay 1

Antecedents of Corporate Governance Practices in MENA Countries

Abstract

This essay investigates the level of compliance with, and disclosure of, corporate governance (CG) best practice recommendations and the extent to which a set of firm-level CG variables (Islamic values, board characteristics and ownership structure mechanisms) and country-level factors (religion and national governance quality) can explain discernible differences in the level of CG disclosure in a number of Middle Eastern and North African (MENA) countries. Using a sample of listed corporations in MENA countries from 2009 to 2014, the findings of this study reveal that in general MENA listed firms have a relatively lower level of voluntary compliance with, and disclosure of, CG practices compared to developed countries. However, the level of CG disclosure improved over the examined period. It also finds that Islamic values disclosure, corporate board characteristics including board diversity, board independence and separation of the CEO/chairperson roles have a positive association with the level of CG disclosure. In contrast, the findings indicate that board size and director ownership impact negatively on the level of CG disclosure. The study does not, however, find any evidence to suggest that government ownership and block ownership have any significant relationship with the level of CG disclosure. With regard to country-level factors, the results suggest that firms in countries complying with Islamic economic principles and having high-quality national governance are more likely to voluntarily comply and disclose more CG practices than those that do not. The findings are generally robust to different types of firm- and country-level factors, and largely in line with the predictions of the neo-institutional theoretical perspective.

Keywords: Corporate governance. Disclosure. Religion. Board characteristics. Ownership structure. MENA economies. Neo-institutional theory.

1 Introduction

This study investigates the level of voluntary CG compliance and disclosure practices in MENA countries, and the extent to which a set of CG practices at the firm level (Islamic values, board characteristics and ownership structure mechanisms), religion and quality of national governance can explain noticeable variations in the level of voluntary CG compliance and disclosure practices. The analysis and interpretations of the findings draw inspiration from neo-institutional theory.

1.1 Background

There is increasing global interest in developing the level of corporate compliance with, and disclosure of, sound CG practices (Ntim *et al*., 2012b; Al-Janadi *et al*., 2013; Elshandidy and Neri, 2015; Elmagrhi *et al*., 2016). MENA countries have pursued economic and financial reforms aimed at encouraging domestic savings and attracting foreign investment (Ben Naceur *et al*., 2007; Lagoarde-Segot and Lucey, 2008; Bae *et al*., 2012; Al-Janadi *et al*., 2013; Aljifri *et al*., 2014). These can be achieved by improving the disclosure environment and CG practices (Hussain and Mallin, 2002; Al-Shammari and Al-Sultan, 2010; Ebaid, 2013; Aljifri *et al*., 2014; Albitar, 2015). Although previous studies have used a number of theories, including agency, legitimacy, resource dependence and stakeholder to examine possible reasons that may explain why public corporations comply with, and disclose of, sound CG practices (Beekes and Brown, 2006; Kent and Stewart, 2008; Lim, 2011; Samaha *et al*., 2012; Al-Janadi *et al*., 2013; Aljifri *et al*., 2014; Al-Bassam *et al*., 2015; Ntim, 2015), the recent discernible growth in the issuance and/or adoption of CG codes can arguably be explained within the context of neo-institutional theory (Judge *et al*., 2008; Zattoni and Cuomo, 2008).

Neo-institutional theory predicts that the prevalence of many business norms and practices among firms or countries is influenced by institutional aspects (e.g., economic, social and political forces) (DiMaggio and Powell, 1983, 1991; Scott, 2001). Different members of society (e.g., corporations and nations) are subject to institutional forces, which may be driven by the need to pursue economic efficiency (*substantive management*) and/or social legitimacy (*symbolic management*) (Aguilera and Cuervo-Cazurra, 2004; Zattoni and Cuomo, 2008). In this case, prior studies have successfully used neo-institutional theory at the national level to rationalise institutional forces, which drive or hinder the diffusion of several corporate practices. These include International Accounting Standards (IASs) (Judge *et al*., 2010) and CG codes (Aguilera and Cuervo-Cazurra, 2004; Judge *et al*., 2008; Zattoni and Cuomo, 2008).

Neo-institutional theory has also been used recently to explain company practices such as corporate social responsibility (CSR) (e.g., Ntim and Soobaroyen, 2013b) and the adoption of voluntary CG compliance and disclosure practices (Elmagrhi *et al*., 2016). However, there is a scarcity of studies which have employed neo-institutional theory at both national and company levels to explain the global adoption of CG practices (Yoshikawa and Rasheed, 2009).

Consequently, the current study aims to contribute to the CG and voluntary disclosure literature by applying the generalised neo-institutional theory, which incorporates both efficiency and legitimation motives of economic entities operating within an institutional environment. First, from a legitimation/morality perspective, corporations tend to improve their legitimacy and social acceptance by adhering to regulative institutional pressures to conform to expected social behaviour and international standards (Ashforth and Gibbs, 1990; Suchman, 1995). Thus, firms can gain organisational legitimacy by showing compliance with good CG practices in the form of increasing CG disclosure. This can facilitate congruence of corporate goals and norms with those of the larger society. Also, business can gain and maintain good links with corporate stakeholders in order to improve corporate legitimacy by involving or mimicking accepted social behaviour (Mizruchi and Fein, 1999; Aguilera *et al*., 2007). Accordingly, neo-institutional theory suggests that corporations can gain the support of powerful corporate stakeholders (e.g., governments, politicians, shareholders and trade unions) by improving organisational legitimacy through engaging in sound CG practices (Freeman and Reeds, 1983; Freeman, 1984).

Second, the theoretical implications of the efficiency/instrumental view of neo-institutional theory argue that adhering to coercive, mimetic and normative institutional forces can improve corporate image and goodwill and reduce political costs (Aguilera *et al*., 2007; Chen and Roberts, 2010). This in turn facilitates firms' capacity to secure access to critical resources (e.g., capital, social relations and business contracts) which are necessary to enhance corporate performance and the overall interests of shareholders (Aguilera *et al*., 2007; Chen and Roberts, 2010). Similarly, public companies may engage in good CG practices in order to reduce information asymmetry and agency costs, and as a result improve investor confidence in the reported accounting information (Beyer *et al*., 2010; Samaha *et al*., 2012).

Although a large number of past studies have investigated the extent, motives and antecedents of corporate voluntary disclosure practices (Xie *et al*., 2003; Hope and Thomas, 2008; Beyer *et al*., 2010; Dimitropoluos and Asterion, 2010; Al-Janadi *et al*., 2013; Aljifri *et al*., 2014; Al-Bassam *et al*., 2015; Albitar, 2015; Habash *et al*., 2015), they arguably suffer from a number of limitations. First, existing studies have investigated only a small number of

CG provisions (Samaha *et al*., 2012; Aljifri *et al*., 2014; Al-Moataz and Hussainey, 2014; Albitar, 2015; Ntim, 2015), and provided evidence from a limited number of observations and/or for short periods (e.g., one year) (Samaha *et al*., 2012; Al-Janadi *et al*., 2013; Aljifri *et al*., 2014; Al-Moataz and Hussainey 2014; Albitar, 2015). They have also captured compliance with CG best practices indirectly by using a survey (Conyon, 1994; Conyon and Mallin, 1997), or subjective analysts' ratings (Patel *et al*., 2002; Hussainey and Al-Najjar, 2012). Arguably, these weaknesses limit the generalisability of their findings. Second, emerging markets have shown observable interest in developing CG practices by the considerable number of reforms that have been introduced over the last decade (Hussain and Mallin, 2002; Al-Shammair and Al-Sultan, 2010; Ebaid, 2013, Habash *et al*., 2015). However, there is acute scarcity of studies that investigate CG practices in developing countries (Conyon and Mllin, 1997; Hussainey and Al-Najjar, 2012; Elmagrhi *et al.*, 2016). This also arguably impairs the applicability of the findings from developed countries to developing countries, such as those in the MENA region.

Third, although the neo-institutional theoretical perspective has been applied successfully to explain the institutional forces driving the diffusion of CG practices at the firm level (Ntim and Soobaroyen, 2013b; Elmagrhi *et al*., 2016), there is a dearth of studies that investigate reasons influencing the diffusion of CG practices at both company and national levels. As a result, this limits current understanding of the reasons underlying the world-wide diffusion of CG practices at both levels. Fourth, although disclosure decisions are perceived to be mainly influenced by top management and ownership structure mechanisms (Haniffa and Cooke, 2002, 2005; Ntim *et al*., 2012b), existing CG disclosure studies have investigated whether CG disclosure practices are largely driven by general company features, such as firm size, profitability, liquidity and gearing (Al-Moataz and Hussainey 2014; Waweru, 2014; Waweru *et al*., 2014). Fifth, although religion is often considered to be one of the main institutional and cultural pillars that may affect corporate activities (Archambault and Archambault, 2003; Chan-Serafin *et al*., 2013), few studies have examined the effect of religious practices on modern organisations' outcomes and decisions, including CG disclosures (Tracey, 2012; Chan-Serafin *et al*., 2013). Finally, existing studies on voluntary CG compliance and disclosure practices have focused on individual countries (Hussainey and Al-Najjar, 2012; Ntim *et al*., 2012a; Samaha *et al*., 2012; Elmagrhi *et al.*, 2016), with virtually no cross-country evidence. Therefore, and given the limitations of existing studies, the current study aims to examine CG practices within the MENA context.

1.2 Motivation

MENA countries provide an interesting context in which to conduct the current study for a number of reasons. First, most of these countries have many common cultural aspects (e.g., they speak Arabic, follow Islam, and share many customs and traditions). This affects their economic features, information environment and corporate practices (Kuran, 1995; Al-Shamri and Al-Sultan, 2010; Al-Bassam *et al*., 2015; Habash *et al*., 2015). It also provides opportunities for harmonisation and convergence of CG codes and practices at both national and company levels (Aguilera and Cuervo-Cazurra, 2004). Second, almost all MENA countries are emerging markets, which need to develop their investment environment, especially stock markets. Therefore, they have pursued economic and financial reforms in order to attract foreign direct investment (Lagoarde-Segot and Lucey, 2008; Piesse *et al*., 2012; Aljifri *et al*., 2014). The issuance and implementation of CG codes in these countries are, therefore, essential for their economic success (Solomon *et al*., 2003; Claessens and Yurtoglu, 2013). Thus, the findings of this study may have important implications not just for MENA countries, but also for other developing countries and emerging markets which have pursued CG reforms.

Third, the MENA context is characterised by strong Islamic beliefs that are expected to have important effects on the adoption and implementation of high CG standards. It is argued that societies with strong religious principles are more likely to exhibit higher levels of transparency and compliance with regulations (Haniffa and Cooke, 2002; Boytsun *et al.*, 2011; Al-Bassam and Ntim, 2016; Elghuweel *et al*., 2016). Typically, within the MENA region, individuals appear to rely mainly on religious norms in monitoring business activities (Rahman, 1998; Kamla *et al.*, 2006). Unlike most previous studies, which were conducted in western contexts, where business is not influenced by religious tenets, the current study is conducted in MENA countries, where Shariah Law significantly influences business.

Fourth, unlike developed countries where strong legal enforcement affects corporate practices, emerging economies including MENA countries have weak legal enforcement, meaning that firms operating in these countries are expected to be more influenced by informal rules (Allen *et al*., 2005). In this regard, MENA countries' corporate practices are expected to be affected by both formal and informal rules (Moideenkutty *et al*., 2011). Specifically, managers can be expected to be more influenced by informal rules (e.g., family, norms, Arabic custom and tribalism) and to give them higher priority than formal rules and CG mechanisms, such as board characteristics and establishing audit and CG committees (Haniffa and Hudaib, 2006; Metcalfe, 2007; Common, 2008; Boytsun *et al.*, 2011). Therefore, norms and community

aspects may negatively impact MENA directors' ability to independently monitor managers and encourage firms to comply with and disclose CG practices.

Finally, the distinctive features of the MENA context may lead to different results from what is reported in developed countries. There is a dearth of empirical research on MENA CG compliance and disclosure. Therefore, the current study is motivated to investigate the level and determinants of voluntary CG disclosure in the MENA context to enhance current understanding of the determinants of corporate voluntary disclosure of CG practices. A few studies address some aspects of CG in the MENA context, but they are limited in scope. Specifically, the current study is different in the following main aspects. First, previous studies' focus on a single country may threaten the generalisability of the results. For example, Al-Bassam *et al*. (2015) and Al-Motaz and Hussainey (2014) conducted their studies in Saudi Arabia, and Samaha *et al*. (2012) in Egypt. Second, the samples used by those studies are smaller than the current study's sample, again limiting the generalisability of their findings. For instance, Samaha *et al*. (2012) employed a sample of 100 firms at the financial year ending 2009, while the current study employs a sample of 100 listed firms from five MENA countries from 2009 to 2014.

1.3 Contributions

Consequently, the current study seeks to extend existing knowledge by offering a number of new contributions to the literature. First, it seeks to add to the extant literature by providing new cross-country evidence on the level of compliance with and disclosure of good CG practices in MENA countries, using the United Nations Conference on Trade and Development (UNCTAD 2006) guidance on good CG practices. Second, and distinct from past studies, this study investigates the effect of a newly identified antecedents (i.e. Islamic values at the levels of firms and countries) on voluntary CG compliance and disclosure practices. Third, the current study adds to the existing literature by examining whether board characteristics and ownership structure mechanisms can explain observable changes in voluntary CG compliance and disclosure practices. Finally, it uses a neo-institutional theoretical perspective to evaluate the diffusion of good CG practices at both the national and company levels.

1.4 Structure of the Essay

The remainder of the essay is structured as follows: Section 2 briefly discusses recent CG practices in MENA countries; Section 3 presents the theoretical framework, literature review and development of hypotheses; Section 4 discusses the research design; Section 5 presents the empirical analysis and analysis of robustness; and finally Section 6 offers concluding remarks.

2 Corporate Governance in MENA Countries: Background and Institutional Framework

Most MENA countries have many cultural, social and economic features in common, along with other characteristics of developing countries. Specifically, the people speak Arabic, follow Islam, and share many customs and traditions, which may have an effect on economic features and the information environment (Kuran, 1995; Al-Shamri and Al-Sultan, 2010; Al-Moataz and Hussainy, 2014; Al-Bassam *et al*., 2015; Albitar, 2015; Habbash *et al*., 2015). Although some MENA countries are oil exporters (e.g., the Gulf states), they are all still considered as developing countries with emerging stock markets. First, most companies in developing countries are either state owned or family held firms with concentrated ownership. As such, they differ from companies in developed countries which depend extensively on external finance from stock markets (Fawzy, 2004; Black *et al*., 2006; Omran *et al*., 2008; Piesse *et al*., 2012; Al-Janadi *et al*., 2013; Aljifri *et al*., 2014; Albitar, 2015). Second, the legal system is generally a civil law system, with frequent government intervention (Rabelo and Vascancels, 2002; Reed, 2002; Omran *et al*., 2008). Corporate law tends to provide limited protection to minority shareholders (Black *et al*., 2006). Additionally, accounting standards are established and implemented by government, with little involvement of national professional accounting bodies, which may be poorly organised or even non-existent (Al-Shammair and Al-Sultan 2010; Dimitropoulos and Asterious, 2010; Aljifri *et al*., 2014; Albitar, 2015).

Third, the financial systems in most MENA countries are bank-orientated (Ebaid, 2013), and they possess less developed capital markets (Rabelo and Vascancels, 2002). Most listed companies do not adhere to the disclosure and transparency requirements as there is little enforcement (Bolbol *et al*., 2005; Piesse et al., 2012; Samaha *et al*., 2012; Aljifri *et al*., 2014; Albitar, 2015). Therefore, minority shareholders' rights are limited because of the inefficiency in the information environment that encourages insiders and majority shareholders to gain from private information (Dimitropoulos and Asterious, 2010; Piesse *et al.*, 2012). Fourth, corporate

stakeholders (e.g., labour unions and minority shareholders) have a limited role in the development of good governance mechanisms in public corporations (Piesse *et al*., 2012). Finally, the regulatory policy, including formulating business-related laws and regulations, needs to be reformed by the following procedures: first, evaluating and overseeing the process of adopting regulations; and second, improved coordination between regulatory agencies to maximise the regulatory policy outcomes for both society and the economy (OECD, 2013).

Despite differences among MENA countries, almost all need to develop their investment environment, especially their stock markets and related CG mechanisms. Sound CG practices help firms to obtain finance, lower the cost of capital, achieve better performance, and provide fairer treatment for all stockholders (Claessens and Yurtoglu, 2013; Aljifri *et al*., 2014). Similarly, Gulf Cooperation Council (GCC) countries depend extensively on extracting and exporting oil and have recently discovered the need for diversifying their finance and investment by developing their financial markets, especially given the volatility of oil prices of the early 1980s and late 1990s (Piesse *et al*., 2012; Aljifri *et al*., 2014). For other MENA countries, active capital markets are considered essential to guarantee the success of the economic and financial reforms which began in the early 1990s. These reforms depend on large-scale privatisation programmes to sell inherited, failed public sector companies and have them taken over and floated by local or foreign private owners (Piesse *et al*., 2012).

Most MENA countries have thus engaged in economic and financial reforms (such as privatisation of state corporations, developing national stock exchanges and issuing national CG codes and business-related laws and regulations) to encourage domestic savings and to attract foreign investments (Hussain and Mallin, 2002; Al-Shammair and Al-Sultan 2010; Al-Janadi *et al*., 2013; Ebaid, 2013; Aljifri *et al*., 2014; Albitar, 2015). The empirical evidence supports the role of good CG practices in enhancing market efficiency and the information environment of the MENA countries (Lagoarde-Segot and Lucey, 2008; Samaha *et al.*, 2012; Al-Janadi *et al*., 2013; Al-Basaam *et al*., 2015; Albitar, 2015). However, other empirical evidence documents that their incentives for frequent disclosure and transparency are lower than their counterparts in developed countries (Alsaeed, 2006; Al-Shammair, 2008; Al-Shammair and Al-Sultan, 2010; Albitar, 2015), due to the absence of standards set out by authoritative accounting and reporting bodies to oblige public firms to improve their disclosure practices (Alsaeed, 2006; Khasharmeh and Aljifri, 2010; Aljifri, *et al*., 2014; Albitar, 2015). Consequently, the current study encourages the regulatory bodies and governments which control all aspects of accounting and financial reporting regulations to make better informed

decisions and more effective regulations (Al-Shammair and Al-Sultan, 2010; Aljifri, *et al*., 2014).

The following sub-sections briefly discuss the CG background and institutional framework of the sampled MENA countries.

2.1 Egypt

Egypt has one of the oldest capital markets in the region, going back to 1888 with the establishment of the Alexandria Exchange, followed by the Cairo Exchange in 1903. Although the Egyptian Exchange (EGX) was considered the fifth most active exchange market in the world during the 1940s, after the revolution of 1952 and the general trend toward nationalisation of a large number of Egyptian companies there was a long dormant period. Only in the 1990s did the wave of economic reform and privatisation begin, with the introduction of the government's economic liberalisation programme. The first step toward a free market economy was in 1992 with the introduction of Capital Market Law number 52 that established the Capital Market Authority (CMA) to ensure the reliability of the market. This was followed by many subsequent decisions and regulations until the establishment of the Egyptian Financial Supervisory Authority (EFSA) in 2009, which is responsible for supervising and regulating financial markets (other than banks) and securitisation. The recent financial and economic reforms, including the establishment of regulatory institutions and issuing laws, aim to improve financial disclosure and transparency, attracting more local and foreign investments (Samaha *et al*., 2012; Ebaid, 2013).

With regard to the Egyptian accounting and financial reporting environment, the government decided to implement the IASs on a gradual basis. This plan commenced in October 1997 with the introduction of Decree number 503 by the Ministry of Economics to establish the Egyptian Accounting Standards (EASs); these are the IASs with amendments suitable for the national economic and financial environment. The government amended the EASs in 2006 by Decree number 243 of the Minster of Investment. The new EASs were developed in accordance with the IAS and International Financial Reporting Standards (IFRS) that were current in 2005. Egyptian listed companies were also required to adopt IFRS if there was no comparable EAS.

As a code law country, Egypt is characterised by a weak level of investor protection, the published financial statements forming the basis for taxation, accounting standards established and enforced by the government, and a bank-oriented financial system, with a small

number of banks providing the major finance for companies. The financial statements are considered the main source of information available to investors in the capital market, as the financial analysis industry is still at an early stage of development and listed firms do not supply sufficient reliable voluntary disclosure (Ebaid, 2013).

Regarding CG, Egypt is considered one of the leading countries in the MENA region in its application of CG best practice. In 2003, the Egyptian Institute of Directors (EIoD) was established under the affiliation of the Ministry of Trade and Industry. EIoD was the first institute focusing on CG practices in the Arab region and the main participant in issuing the Egyptian CG Codes (ECGC). EIoD benefits from consultation and collaboration with many leading international organisations, including the UNDP, WBI, OECD and EU. EIoD has been affiliated to the Egyptian Financial Supervisory Authority (EFSA) since November 2011, under Presidential Decree number 251 issued by the Supreme Council of the Armed Forces (SCAF); between 2004 and 2011 it had been affiliated to the Ministry of Investment under Presidential Decree number 231, 2004.

EIoD has participated in the issuance of the three main ECGCs since 2005. The first ECGC was issued in October 2005 in accordance with CG principles issued by the OECD and a number of countries including South Africa, Malaysia and Philippines. Under this code, Egypt became the second country in the MENA region after Oman (2002) to develop a domestic CG code. ECGC 2005 was directed at listed joint stock companies, especially those being actively traded on the stock market, to achieve optimum protection and balance between the interests of directors, shareholders and other stakeholders. The second ECGC was released in July 2006 in accordance with CG guidelines on state-owned enterprises issued by the OECD in January 2005. State-owned enterprises in Egypt were to participate in liberalising the public enterprise sector from any constraints that would restrict them from competing with the private sector. The latest ECGC was issued in March 2011 in order to update the first ECGC, based on the latest Egyptian and international CG experience. It should be noted that the ECGCs are considered only as guidelines for the correct and proper conduct of corporate management, coinciding with international practice and standards in order to achieve an equitable arrangement of different stakeholders' interests; they are not enforceable under the law.

2.2 Jordan

The financial reporting environment in Jordan has disciplined by the International Accounting and Auditing Standards since 1997 when the Jordanian Companies Law number

22 was issued by the National Assembly (the legislative body). This law required the public and private shareholding companies, general partnerships, limited partnerships, limited liability companies, private shareholding companies and foreign companies operating in Jordan to organise their accounts and keep registers and books in accordance with recognised International Accounting and Auditing Standards. The other Jordanian regulatory parties (i.e., Jordanian Securities Commission, Central Bank of Jordan and Jordanian Insurance Commission) used their powers to require the adoption of IFRS for regulated companies under their jurisdiction. The Jordanian Association of Certified Public Accountants (JACPA) advises the government in the areas of accounting and auditing standards, as specified under law number 73 of 2003, for imposing compliance with International Accounting and Auditing Standards.

From the issuance of Companies Law number 22 in 1997, all Jordanian companies were required to comply with the IASs until 2007, when some accounting policy options permitted in IFRSs were withdrawn. This elimination was related to the revaluation of fair-value accounting policy options for all property, plant and equipment, intangible assets and investment property, involving amendment of the cost-depreciation-impairment model. This was because there was no active markets for property and intangibles in Jordan. However, it is considered as temporary amendment that may be cancelled if the regulators' concerns are removed.

The Amman Financial Market (AFM), a public financial institution with a legal, administrative and financial identity independent of the state, was established in accordance with law number 31 in January 1976. It was established with objectives including encouraging savings and investment in securities, to organise the issuance and dealings in securities. However, the real launch of the Jordanian Capital Market began with the issuance of Securities Law number 23 in 1997; from the AMF, three main institutions emerged: the Jordan Securities Commission (JSC), Amman Stock Exchange (ASE), and Securities Depository Centre (SDC) (Omar and Simon, 2011). JSC provides a supervisory and legislative role for the issuance and dealing in information associated with all activities and operations of securities. ASE, which was established in March 1999 to reflect the national privatisation policy, is a private, non-financial and separate entity. It also has the executive role and is governed by Securities Law number 76 issued in 2002. SDC, also a non-financial, private entity with a separate financial and administrative structure, was established in May 1999 (Omar and Simon, 2011).

Omar and Simon (2011) reported an improvement in the level of aggregated (voluntary and mandatory) disclosure in Jordan over time when they compared their results for 2003 with

previous Jordanian studies. They suggested that this improvement was due to the development of the regulatory system and the orientation of the economy toward privatisation.

In 2007 Jordan began issuing CG codes with one for banks under the Central Bank of Jordan, following the issuance of the Bank Director's Handbook of CG in 2004. The main purpose of this code is to promote the implementation of international best practice in the CG of Jordanian banks. Each bank was required to develop its own code by 31 December 2007 according to its particular needs and principles, besides incorporating the minimum standards of the Central Bank of Jordan. Each bank was also required to publish its own code in its annual report, stating the extent of its compliance with the code or otherwise explaining why any provisions had not been complied with. CG code 2007 was followed by the issuance of a CG code for shareholding companies listed on the ASE in 2008 by the JSC. The main purposes of this code is to enhance management performance and safeguard the rights of stockholders, in order to improve economic performance and the investment environment. Jordanian listed companies are required to comply with the rules of the CG code 2008 as a guide, otherwise to explain in their annual reports the reasons for non-compliance. In 2012 the Companies Control Department, which was established in 2003 as a department independent of the Ministry of Industry and Trade, in partnership with the International Financial Corporation (IFC) and World Bank Group, issued the Jordanian CG Code for private shareholding companies, limited liability companies, non-listed shareholding companies, private shareholding companies that are not for profit and limited liability companies that are not for profit. This recent CG code is based on the 'comply or explain' principle.

2.3 Oman

The main participant in formulating and supervising the business information environment in the Sultanate of Oman is the Capital Market Authority (CMA). A government entity, the Omani CMA was founded according to the Royal Decree (80/98) issued on 9 November 1998, and began its work on 9 January 1999 as a legal personality with independent administrative and financial identity. It is responsible for many activities related to the capital market and insurance sectors, such as regulating and supervising the issuance of securities in the capital market in addition to monitoring the Muscat Securities Market (MSM), public shareholding companies and auditing companies under Omani CMA jurisdiction.

Therefore, the Omani CMA performs three main roles regarding the capital market and insurance sectors. The first is the regulatory role, under which it sets rules and regulations

which organise the capital market and insurance sectors. Its second role is supervisory, through which it monitors the institutions under its jurisdiction to ensure the efficiency of the capital market and insurance sector, in addition to protecting investors and other participants. Finally, the Omani CMA performs an awareness role, developing awareness and knowledge among investors about matters related to their investments and rights. It also aims to make managers and directors of public companies aware of their responsibilities toward different stakeholders, and to spread knowledge among the general public about the importance of the capital market and insurance sectors in developing economic growth and ensuring the prosperity of society as a whole.

On 21 June 1988, the MSM was founded as an independent government entity according to Royal Decree (53/88). MSM has many objectives, including organising and regulating the Omani securities market, monitoring the process of buying and selling securities to ensure the integrity of the trading procedures and fairness of securities prices, and protecting investors' interests by encouraging corporate disclosure by companies listed in MSM.

Ten years later, on 9 November 1998, Royal Decree (80/98) was issued to cancel a previous one (50/88), replacing the original MSM with two separate entities. The first is the Muscat Securities Market (MSM) where the exchange process for all listed securities takes place. MSM is a government entity with independent administration and finance. The other body is the CMA which, among other functions, regulates and supervises MSM. Furthermore, on 25 February 1998 the Muscat Clearing and Depository Company (MCDC) was established according to Royal Decree (82/98) as an Omani closed joint stock company; 60% of its capital was owned by MSM and the remainder by banks, brokerage companies and investors. The main objective of MCDC is to ensure stable dealing in securities for a greater flow of foreign investments to the Sultanate.

With regard to financial reporting, Omanian listed companies adapted IFRS following Capital Market Law number 80 (Royal Decree 80/1998). Article 282 of the Executive Regulation of this law committed all listed companies in MSM to prepare financial statements according to IFRS. Article 79 of the Income Tax Law, which had been issued according to Royal Decree 47/1981, and Article 61 of its Executive Regulations imposed the use of IASs in treating financial leases. Article number 30 of the law organising the Accountancy and Auditing profession (Royal Decree 77/1986), stipulated that accountants should apply IASs when preparing balance sheet and financial accounts.

In conclusion, Omani companies are required to apply IFRS in preparing their financial statements, whether or not their securities are treated in a public market. The Chamber of

Commerce, Ministry of Finance, Central Bank of Oman and CMA collaborate with accounting firms to provide IFRS training programmes for Small and Medium Enterprises (SMEs).

Regarding CG practices, Oman was the first country in the MENA region to issue a national CG code, in 2002 (3 June 2002, according to Circular number 11/2002 later amended by Circular number 1/2003 for public listed companies). The Omani CMA had established a committee of members of different economic sectors to found this national CG code, reflecting recent trends in best CG practice internationally, and at the same time consistent with the Omani environment. The code was established to improve investors' confidence in the local securities market through guaranteeing equitable treatment of various stakeholders.

2.4 Saudi Arabia

The financial reporting environment in Saudi Arabia, much like others in the MENA region, is affected by culture and tradition (Piesse et al., 2012; Al-Moataz and Hussainey, 2014). Saudi companies were obligated to use Saudi Accounting Standards issued by the Saudi Organisation for Certified Public Accountants (SOCPA), a professional organisation established under Royal Decree number 12 in 1991 to promote the accounting and auditing profession. In 2012 SOCPA began an IFRS convergence plan, requiring listed firms other than banks and insurance companies to report using IFRSs with some modifications, which included: adding more disclosure requirements, removing optimal treatments and amending the requirements that contradicted Sharia or local laws. Meanwhile, the Saudi Arabia Monetary Authority (SANA), the Saudi central bank, required local banks and insurance companies to report under IFRS.

Even though SOCPA, which operates under the supervision of the Ministry of Commerce, is associated with reviewing, developing, and approving accounting and auditing standards, the ultimate authority enforcing Saudi companies to use a specific financial reporting framework is the Ministry of Commerce and Industry and the Saudi Capital Market Authority (CMA). The Saudi CMA, which is a government organisation, officially started in 1991 by establishing its basic regulations according to Royal Decree number M/30 to regulate and develop the Saudi Capital Market. The Saudi CMA issues rules and regulations for implementing the provisions of the Capital Market Law. Its main objectives are to reinforce transparency and disclosure standards in all listed companies and to enhance confidence in the investment environment by protecting investors and dealers from fraud and illegal acts in the market.

With regard to CG practices, the Board of the Saudi CMA has released CG codes in the kingdom since Resolution number 1/212/2006 of November 2006, based on the Capital Market Law number M/30 issued in August 2003 and amended by Resolution number 1/1/2009 issued in January 2009. The main objective of the rules and standards of the CG code issued in 2006, which were oriented mainly to listed joint companies, was to protect shareholders' interests and other stakeholders' rights. The rules and standards stated in this Saudi CG Code 2006 were merely guidelines, not binding for all companies listed in the stock exchange, but stipulating that companies must disclose in their board of directors' report which provisions have been implemented and which not, with the reasons for not implementing them. The Saudi CMA issued a second CG Code in 2010 to accommodate Resolution number 1-10-2010 issued in March 2010 by the Board of the Saudi CMA, amending the definition of the board of director's 'independent member' in the CG Code of 2006.

2.5 United Arab of Emirates

The United Arab Emirates (UAE) was established in 1971. With an economy heavily dependent on extracting and exporting oil as its main source of income (Aljifri et al., 2014), the UAE is considered one of the most active emerging markets in the region. The federal government is trying to create an environment that attracts investors not only from the region but also from all over the world. Five entities control the financial reporting requirements and practice: the Ministry of Economy, the Central Bank of the UAE (CBUAE), Emirates Securities and Commodities Authority (ESCA), Dubai International Financial Centre and Abu Dhabi Accountability Authority (Aljifri et al., 2014). The UAE Accountants and Auditors Association (AAA) is a consulting body and has no official role in regulating the profession.

The UAE's Federal Commercial Companies Law number 8 issued in 1984 and its amendment, law number 13 issued in 1988, were released by the Ministry of Economy. These two laws require firms to keep detailed records and to provide audited financial statements to the ministry and other authorities concerned, without determining particular standards. However, they can only recommend companies to follow International Accepted Accounting Practices. Circular number 20 issued in 1999 by the CBUAE, however, required all financial institutions reporting to it to adopt the IAS/IFRS in their annual reports. The ESCA was established according to Federal Law number 4 in 2000, requiring all listed public firms to submit interim and annual audited financial statements to it. The main objectives of the ESCA are overseeing the activities of the financial markets and promoting proper conduct amongst

members of the exchange, beside its other role in establishing and licensing public joint stock companies.

The UAE has three main independent securities markets: Abu Dhabi Securities Exchange (ASX), Dubai Financial Market (DFM), and Dubai International Financial Exchange (NASDAQ Dubai). ASX was established according to local law number 3 in November 2000 to trade the shares of the UAE companies. Companies listed in ASX applying IFRS. DFM was founded by resolution number 14 in March 2000, issued by the Ministry of Economy. It operates as a secondary market for trading in securities issued by local or foreign companies and governments, and permits its listed companies to use IFRS. NASDAQ Dubai began operation in September 2005 as one of the international financial exchanges in the Middle East. Its listing rules require companies to use IFRS in preparing their financial statements.

CG Codes and Principles in the UAE began with the issuance of a CG code for joint stock companies, according to decision number 32/R of April 2007, issued by the chairperson of the Securities and Commodities Authority. This CG code was followed by Ministerial Resolution number 518 in October 2009, which delegated to the Securities and Commodities Authority the control and verification of companies' compliance with the rules and provisions of CG code 2007. This code is applied to all listed companies and institutions in the country, except those wholly owned by the federal or local government, banks and other financial institutions under the supervision of the Central Bank, and foreign companies listed in any of the financial markets. Recently, in recognition of the importance of SMEs, which represent 95% of all firms registered in the UAE and contribute to Dubai's economy through 42% of the workforce and 40% of value added, the CG Code for SMEs was issued in September 2011. Its main objectives are overcoming both the lack of internal SMEs' implementation of CG expertise and the unavailability of external qualified specialists in the region, in order to improve SMEs' growth, profitability and sustainability.

3 Theoretical Framework, Literature Review and Development of Hypotheses

3.1 A Neo-institutional Framework for Good Corporate Governance Practices

Generally, institutions can be referred to as accepted value patterns of the common culture (e.g., socio-economic beliefs, norms and practices). These are integrated into different features of social system units, such as education, law, politics and religion (Judge *et al*., 2008,

2010). Therefore, institutions can be categorised into two groups: formal institutions (e.g., laws and regulations) and/or informal institutions (e.g., norms and conventions) (Judge *et al.*, 2008, 2010). Institutional theory argues that over time organisations tend to become structured, and to operate in the same way influenced by social norms, symbols, beliefs and rituals, meeting social expectation and being socially accepted (Meyer and Rowan, 1977; DiMaggio and Powell, 1983). Institutionalisation is described as the process of repeating actions over time, given that these actions have similar meanings as perceived by different society members (Scott, 1987). Institutional theory studies the interaction between the organisation and the environment in which it operates. In other words, how can organisations remain stable and enhance their survival prospects by incorporating institutionalised norms and rules (Meyer and Rowan, 1977; DiMaggio and Powell, 1983)? Institutional theory, like most other theories which are used as a theoretical framework for social and environmental accounting research (e.g., resource dependence theory and stakeholder theory), is system oriented. This assumes any organisation affects the society in which it is located as well as being affected by that society (Gray *et al.*, 1995; Chen and Roberts, 2010).

The institutional perception has three structural levels of analysis: social institutions, governance structures and actors in institutional settings (Scott, 2001). First, social (global) institutions have the power to shape the overall institutional context by imposing what is perceived as a socially acceptable system. Over time this imposed system is diffused informally (Judge *et al*., 2008, 2010). The governance level has also been divided into organisations and organisational sectors or fields (e.g., groups of organisations operating in the same industry), while individuals and groups are represented as actors on the bottom level of Scott's model.

From the neo-institutional perspective, there are three types of institutional pressure: coercive/regulative, cognitive/mimetic and normative. These pressures can be incorporated to rationalise the diffusion of good CG practices at the company or national levels. Neo-institutional theory argues that companies have to adhere to governmental or other equivalent regulations, such as capital markets, according to the coercive process. Organisations may follow the steps of those which are successful in their field, derived from a mimetic approach. Likewise, in order to gain investors' confidence, organisations may voluntarily follow conventional practices and norms, according to the normative process (Vaaler and Schrage, 2006; Yoshikawa and Rasheed, 2009). Therefore, institutional theory predicts that organisational practices tend to become isomorphic over time due to these three types of pressure (DiMaggio and Powell, 1983, 1991).

CG codes, which are issued either by the stock exchange (as in the UK, Australia, Jordan, Saudi Arabia and the UAE) or by investors' associations (as in Ireland and Germany), lead to coercive isomorphism either because these codes become part of the listing requirements for publicly traded firms or because institutional investors push for firms to comply with them. However, codes which are issued by directors (as in South Africa and Egypt), professional associations (as in Malaysia) and governments are more likely to be endorsed by normative isomorphism, as the companies comply with these codes as legitimate values and norms. Finally, CG codes which are issued by managers' associations (as in USA and India) are widespread and subject to the forces of mimetic isomorphism because companies try to follow the best practice already established by leading companies.

The motives driving institutional antecedents, which stimulate or constrain the diffusion of a number of organisational practices, can generally be categorised into efficiency (or instrumental) and legitimation (or moral/relational) (Aguilra and Cuervo-Cazurra, 2004, Aguilera *et al*., 2007; Zation and Cuomon, 2008). Institutional theory predicts the diffusion and/or imposition of a number of corporate practices that are driven either by competition to access economic resources (economic efficiency), and/or by seeking social approval for the right to exist (social legitimacy) (Zattoni and Cuomon, 2008).

Accordingly, the current study aims to apply the generalised neo-institutional theory which incorporates both efficiency and legitimation motives of economic variables operating within an institutional environment (Ntim and Soobaroyen 2013b; Elmagrhi *et al*., 2016), to explain differences in CG voluntary disclosure practices at both organisational and national levels. First, from a legitimation/moral perspective, corporations can improve their legitimacy and social acceptance by adhering to the regulative institutional pressures to conform to expected social behaviours and international standards (Ashford and Gibbs, 1990; Suchman, 1995). Therefore they gain organisational legitimacy by showing compliance with good CG practices in the form of increased CG disclosure. This facilitates the congruence of corporate goals and norms with those of the larger society. Similarly, economic units can access and maintain good links with corporate stakeholders to improve corporate legitimacy by being involved in or mimicking accepted social behaviour (Mizrachi and Fein, 1999; Aguilera *et al*., 2007). Furthermore, being involved in transparent CG practices helps firms to legitimise their corporate operations by reducing political costs (Branco and Rodrigues, 2008; Cheng *et al*., 2008) and improves their ability to access more resources (e.g., raw materials and government contracts) (Jensen, 2002; Kiel and Nicholson, 2003). As a result, neo-institutional theory suggests that corporations can win the support of powerful corporate stakeholders such as

governments, politicians, shareholders and trade unions, improving their organisational legitimacy by being involved in sound CG practices (Freeman and Reeds, 1983; Freeman, 1984).

On the other hand, the theoretical implications of the efficiency (instrumental) view of neo-institutional theory argue that adhering to coercive, mimetic and normative institutional forces helps economic entities gain critical resources to enhance corporate performance and the overall interests of shareholders (Aguilra, 2007; Chen and Roberts, 2010). Conducting good CG practices mitigates agency conflict by decreasing information asymmetry between management and shareholders (Jensen and Meckling, 1976; Sheu *et al*., 2010; Leung and Ilsever, 2013), reducing managerial monitoring and bonding costs (Beiner *et al*., 2006) and helping managers and investors to identify profitable investment opportunities (Bushman and Smith, 2001). As a result, the costs of external capital obtained by the firm are reduced, thereby improving company value (La Porta *et al*., 2002; Gompers *et al*., 2003; Durnev and Kim, 2005).

Neo-institutional theory has been used at the national level to explain the diffusion and/or imposition of a number of corporate practices. These include differences in the adoption of international accounting and CG standards (Aguilra and Jackson, 2003, Yoshikawa *et al*., 2007; Zation and Cuomon, 2008), other studies that used neo-institutional theory to explain CSR practices (Ntim and Soobarayen, 2013b), and the compliance with and disclosure of CG practices at company level (Elmagrhi *et al*., 2016). However, few studies (e.g., Elshandidy *et al*., 2015) have attempted to adopt neo-institutional theory (efficiency and legitimacy perspectives) at both national and company levels to study the diffusion of CG practices (Yoshikawa and Rasheed, 2009). This motivates the current study to add to the neo-institutional and CG disclosure literature by explaining the main institutional antecedents of the diffusion of CG voluntary disclosure at both organisational and national levels.

3.2 Literature Review and Development of Hypotheses

Past studies have examined a number of antecedents that explain the differences in the extent of voluntary disclosure of good CG practices (e.g., Haniffa and Cooke, 2002, 2005; Eng and Mak, 2003; Barako *et al*., 2006; Mallin and Ow-Yong, 2012; Ntim *et al*., 2012b; Samaha *et al*., 2012; Al-Moataz and Hussainey, 2014; Elmagrhi *et al*., 2016). The current study extends voluntary disclosure literature. In particular, it uses neo-institutional theory to investigate the association among firm-level CG factors (Islamic values, board characteristics and ownership

structure mechanisms), country-level factors (religion and quality of national governance) and the level of voluntary CG compliance and disclosure practices in MENA listed firms.

3.2.1 Firm-level Antecedents of Voluntary Corporate Governance Compliance and Disclosure Practices

3.2.1.1 Islamic Values Disclosure

Islamic financial products involve equity and risk sharing elements. These mitigate the problems arising from different timescales between short-term, on-sight demandable deposit contracts and long-term high-risk loan contracts (Beck *et al*., 2013). Sharia-compliant financial products are consistent with the religious beliefs of followers of Islam, meeting their need to use finance according to their beliefs (Beck *et al*., 2013). Sharia-compliant finance has the following characteristics. First, Islamic institutions do not charge interest (*riba*) for their Sharia-compliant products because only goods and services are allowed to bear a price (Beck et al., 2013; Baele *et al*., 2014). However, interest is replaced by an uncertain return which is dependent on the borrowing company's realised profits (Baele *et al*., 2014). Second, Islamic products do not include speculation or financing of specific prohibited activities (like drugs, alcohol and pork) (Beck *et al*., 2013). Third, Islamic finance is based on risk sharing between different parties (the idea of profit and loss) (Beck *et al*., 2013; Beal *et al*., 2014). Finally, all Sharia-compliant transactions have to be real economic transactions backed by a tangible asset (Beck *et al*., 2013).

Every Muslim has to pay a religious tax (*zakah*) based on his wealth when it reaches a certain threshold. Firms are either required by law to pay *zakah* (as in Saudi Arabia) or to pay it voluntarily on behalf and upon the request of their investors. Thus, they are probably more motivated to provide information to their shareholders to help them to calculate the amount of *zakah* due in respect of their investments (Baydoun and Willett, 1997; Maali *et al*., 2006). The main objective of corporate reporting by Islamic business enterprises is to show the firm's adherence to Sharia principles (Baydoun and Willett, 1997) and it helps Muslim shareholders to calculate and pay their *zakah* (Maali *et al*., 2006). Furthermore, Islamic businesses invest in more voluntary corporate disclosure as they are accountable to the Islamic community, *umma*, to show their operations and that they contribute to the well-being of the Islamic community (Maali *et al*., 2006).

From the efficiency perspective of neo-institutional theory, the relationship between Islamic banks and their borrowers is based on the principle of risk sharing (profit and loss

sharing). For instance, a *mudarba* contract includes an implied understanding that profits will be shared between bank and borrowers at a predetermined ratio, while the bank will absorb or be charged with losses (Beck *et al*., 2013). Under this *mudarba* contract, the borrower (entrepreneur) has limited liability provisions. Major investment decisions are still held in the hands of the entrepreneur. Firms cannot take any investment decision without approval of the bank (Beck et al., 2013). This means the bank is considered one of several investors (Baele *et al*., 2014). Other kinds of Sharia-compliant financial products provided by Islamic banks for firms to obtain finance include *musharakah*, *murabha* and *ijarah* contracts. *Musharakah* is a partnership where all partners invest both money and expertise. *Murabha* contracts are much like leasing contracts in conventional banking. The bank purchases goods on behalf of client and then resells them to him on credit in a different contract at a marked-up price and in instalments over a period of time or in a lump sum on maturity of the contract. *Ijarah* is similar to an operating lease where client rents the investment goods for a fee while the goods are still owned by the bank (Beck *et al*., 2013; Baele *et al*., 2014). Accordingly, firms obtaining Islamic finance are expected to be involved in more voluntary CG compliance and disclosure practices to meet Islamic finance providers' demand for information about their investments.

In general, firms with higher debt ratios arguably face higher levels of agency conflict because managers of firms with high leverage (gearing) are more likely to shift wealth from debtholders to shareholders by different mechanisms (e.g., issue more debt, declare and pay more dividends). Furthermore, debtholders use debt covenants which depend on accounting numbers to protect their interest. Thus, the existence of debt contracts will affect accounting choices by management, either to avoid covenant violations or to gain better debt-contract terms (i.e., lower interest rate or higher debt ratings) (Watts and Zimmerman, 1990; Altamuro *et al*., 2005; Rainsbury *et al*., 2009).

Moreover, obtaining debts motivates managers to disclose more information, because creation of a debt binds them to pay out future cash flows (i.e. principal and other debt costs). This reduces the free cash flow available for spending at their discretion. Also, the threat of failure to pay debts and their interest motivates managers to use debt funds and run the organisation more efficiently (Jensen, 1986). Accordingly, firms with higher leverage are more likely to disclose additional voluntary information, because this reduces information asymmetry and agency conflict, in turn reducing the likelihood of debtholders' price protection (e.g. increase in debt costs). This results from a fear of transferring their wealth to shareholders. As a result, firms are unable to settle obligations when they become due (Ettredg *et al*., 2002; Xiao *et al*., 2004; Al- Shammair and Al- Sultan, 2010; Omar and Simon, 2011).

Similarly, and from a legitimisation neo-institutional theoretical perspective, Islamic business ethics encourage transparency in business activities by increasing the extent of voluntary disclosure (Gambling and Abdelkarim, 1993; Sarker, 1999; Haniffa and Cooke, 2002, 2005; Abu-Tapanjeh, 2009; Farook *et al*., 2012). Borrowers seeking Islamic finance are different from their counterparts in conventional finance. Their religious beliefs encourage them not to default on Islamic loans (coercive pressure) (Iannaccone, 1998; Guiso, *et al*., 2006). The lower default rates of Islamic loans compared to conventional loans may be for two reasons. First, Islamic loans are governed by different contracts than conventional loans (Baele *et al*., 2014). Second, the distinctive properties of borrowers who decide to take Islamic loan is also different. Because loans are conducted according to Sharia, borrowers are expected to repay the loan as Sharia prohibits misappropriation of other people's property (Baele *et al*., 2014). Accordingly, firms obtaining Islamic finance are more likely to comply with high levels of voluntary CG disclosure to improve their reputation and image. Similarly, they legitimate their operations by working within the framework of society's values, norms and beliefs.

Even though there is an increase in the importance of Islamic transactions, especially in the MENA region, there are few studies on Islamic values and their effect on voluntary disclosure. For example, Ongena and Sendeniz-Yuncu (2011) find empirical evidence that Islamic banks mainly deal with more transparent firms, using 16,056 bank relationships from 1999 to 2008 in Turkey. Farook *et al*. (2012) document that Islamic governance (i.e., characteristics of the Sharia Supervisory Board) has a positive effect on the level of voluntary disclosure by Islamic banks. Maali *et al*. (2012) report that banks committed to *zakah* are associated with more social disclosures than banks not paying *zakah*. Al-Bassam and Ntim (2016), using a sample of 75 Saudi listed firms from 2004 to 2010, report that corporations that depict greater commitment towards incorporating Islamic values into their operations engage in higher voluntary CG disclosures than those that do not. Thus, based on these arguments, the first hypothesis is as follows:

H1. *There is a positive association between Islamic Values Disclosure Index and the level of voluntary corporate governance disclosure.*

3.2.1.2 Corporate Board Characteristics Variables

The board of directors is at the top of all decision-control systems in any firm that monitors executives' behaviour for their shareholders' interest (Fama and Jensen, 1983; Beeks *et al*., 2004). It is responsible for many functions such as controlling, monitoring, and advising

managers and connecting the organisation with the external environment (Lipton and Lorsch, 1992; Jensen, 1993; Ntim and Soobaroyen, 2013a, b). Previous studies have documented the effect of corporate board characteristics in taking many important decisions including the level of corporate disclosure (Ntim et al., 2012b; Ntim and Soobaroyen, 2013a; Tauringana and Mangena, 2014; Al-Bassam *et al*., 2015; Elmagrhi *et al*., 2016)

3.2.1.2.1 Board Size

From the efficiency perspective of neo-institutional theory, large boards are more efficient in monitoring and evaluating managers' behaviour to make sure they are consistent with shareholders' interests (Jensen and Meckling, 1976; Fama and Jensen, 1983; Pound, 1995; Dalton et al., 1998; Lin and Hwong, 2010). This is because large boards are less influenced by a dominant CEO than are small boards (Ntim and Soobaroyen, 2013b). The board of directors reduces agency conflict between managers and different stakeholders by controlling and monitoring managerial decisions relating to the quality of financial reporting; this decreases information asymmetry between managers and other external financial report users (Eisenhardt, 1989; Dimitropoulos and Asteriou, 2010; Leung and Ilsever, 2013). Similarly, and from the legitimisation perspective of neo-institutional theory, larger boards provide a better counselling (or expert) role. Large boards can have directors with company-specific knowledge and managerial expertise to help fulfil this role (Zahra and Pearce, 1989; Jensen, 1993; Dalton *et al*., 1998). Likewise, large boards are more likely to include directors with different areas of expertise and stakeholder representation (e.g., bankers and CEOs of other firms). This provides firms with resources and information, and effective board-environment links by engaging in good CG voluntary disclosure practices (Pfoffer and Salancik, 1978, Provon, 1980, Zahra and Pearce, 1989; Dalton *et al*., 1998; Ntim and Soobaroyen, 2013b). Accordingly, large boards which include diversified stakeholders with different information needs are better motivated to fulfil these needs by publishing more voluntary disclosure including good CG practices.

On the other hand, and from the efficiency neo-institutional theory perspective, a number of studies have argued that large boards lack coordination and channels of communication between members as a result of "free-rider" problems (Lipton and Lorsch, 1992). Thus, it is expected that small boards will be more effective in carrying out their monitoring role and engaging in more transparent voluntary disclosure practices (John and Senbet, 1998; Dimitropoulos and Asterious, 2010; Tauringana and Mangena, 2014; Ciampi, 2015). Furthermore, large boards are less likely to carry out their functions effectively, because they are more susceptible to CEO control (Jensen, 1993), and have high risk-averse policies

(Yermack, 1996). Additionally, with large boards, the decision-making process consumes more time, coordination problems are more likely to arise, and open discussions of managerial performance less likely (Jensen, 1993; Yermack, 1996; Coles *et al*. 2008). Consequently, the extent of voluntary disclosure (including CG practices) will deteriorate in firms with large boards.

The differences in theoretical evidence of the ideal board size have been supported by differing empirical results. Many studies conclude that board size is positively associated with the level of voluntary disclosure (e.g., Eng and Mak, 2003; Barako *et al*., 2006; Hussainey and Al-Najjar, 2012; Ntim *et al*., 2012b; Elmagrhi *et al*., 2016), while others document a negative association between board size and voluntary disclosure (e.g., Cerdioni and Parbonetti, 2007; Tauringana and Mangena, 2014). Some find no association at all (e.g., Lakhal, 2005; Cheng and Courtenay, 2006).

There is a gap in the literature examining the effect of board size on financial reporting quality in MENA countries. Ezat and El-Masry (2008), Al Janadi *et al*. (2013), Al-Bassam *et al*. (2015) and Albitar (2015) have found a positive association between board size and the extent of voluntary disclosure, while Samaha *et al*. (2012) find no evidence to support this relationship. There is disagreement among national CG codes about the appropriate size of a board. The Egyptian CG code 2011, for example, suggests that it should not be less than five members if they are to fulfil their duties effectively. The Saudi CG code 2010 recommends a board size of 3 to 11 members, and the Jordanian CG code 2012 3 to 13. Given the inconclusive theoretical and empirical literature, the second hypothesis is as follows:

H2. *There is an association between board size and the level of voluntary corporate governance disclosure.*

3.2.1.2.2 Board Diversity

Corporate boards are required to fulfil certain roles which include: advisory, monitoring and securing organisational resources (Jensen, 1993; Yermack, 1996; Ntim, 2015). Board diversity enhances their effectiveness (Carter *et al*., 2010; Lucas-Perez *et al*., 2015), improving their ability to fulfil their assigned roles. Diversity refers to the wide range of attributes and characteristics of board members (Vander Walt and Ingley, 2003), which can be divided into demographic attributes which are directly observable characteristics (such as gender, age, race and ethnicity) and cognitive or unobservable characteristics (such as education, religion and occupation) (Maznerski, 1994; Milliken and Martins, 1996; Mahadeo *et al*., 2012).

From the efficiency perspective of neo-institutional theory, board efficiency is more likely to be enhanced in boards whose members are of different genders, ethnicity or cultural backgrounds. This is because they can raise issues in board discussions and offer new thoughts better than more homogeneous boards (Carter *et al*., 2003; Walt and Ingley, 2003). Furthermore, Adams and Ferreira (2009) argue that a higher proportion of women represented on boards affects board performance positively by increasing the frequency of board meetings and thereby the board's allocated effort on monitoring. Additionally, more heterogonous boards can access external organisations' support through different channels of communication provided by the different directors (Pfeffer and Salancik, 1978; Ntim, 2015). Likewise, diversified boards enhance network ties that provide access to support, expertise and counselling from external organisations (Beckman and Haunscild, 2002; Carter *et al*., 2003; Bear *et al*., 2010; Ntim and Soobaroyen, 2013b). Similarly, and from the legitimation perspective, the more diversified boards provide better links between the company and its external environment and influential stakeholders (Bear *et al*., 2010; Ntim and Soobaroyen, 2013b), enhancing company legitimacy and the board's trustworthiness (Ntim and Soobaroyen, 2013b; Perrault, 2014). Recruiting directors with a broader range of attributes also enhances board efficiency by increasing board independence, improving managerial monitoring and performance (Ntim and Soobaroyen, 2013b; Elmagrhi *et al*., 2016), and bringing more ideas and opinions to board discussions (Carter et al., 2003). Accordingly, the members of more diversified boards are less likely to collude with each other, which enhances their monitoring role (Carter *et al*., 2003; Ayuso and Argandona, 2007). From the neo-institutional perspective, it is expected that heterogeneous boards are more likely to engage in greater compliance with voluntary CG disclosure than their less diversified counterparts.

A large number of empirical studies have supported the positive impact of diversified boards on voluntary CG disclosure (e.g., Haniffa and Cook, 2002, 2005; Barako and Brown, 2008; Ntim and Soobaroyen, 2013 a, b; Elmagrhi *et al*., 2016), although there are fewer such studies with regard to MENA countries. In Jordan, Ibrahim and Hanefah (2014) document that board diversity (independence, gender, age and nationality) has a positive significant impact on the level of CSR disclosure. Elghuweel (2015) reports empirical evidence from Omani firms, showing a positive significant association between voluntary CG disclosure and board diversity based on nationality, whereas board diversity based on gender has a negative but insignificant effect on it. Jordan's CG code 2012 recommends that boards should consider a balance between age, gender and experience to achieve its required roles and responsibilities effectively. To the best of the researcher's knowledge, the current research is the first cross-

MENA study to provide empirical evidence for the impact of board diversity on the extent of compliance with and disclosure of voluntary CG practices. Thus, based on these arguments, the third hypothesis is as follows:

***H3**. There is a positive association between board diversity on the basis of gender and ethnic minority and the level of voluntary corporate governance disclosure.*

3.2.1.2.3 Board Independence

Outside directors who are considered independent from management are referred to as non-executive directors (NEDs). They do not have ties that could materially concern their independent judgment (Dey, 2008). From the efficiency view of neo-institutional theory, boards of directors comprising more NEDs effectively monitor managers to protect shareholders' interests, because they are not tied by personal and/or professional relationships to the firm or its management (Dalton *et al*., 1998; Dey, 2008). Thus boards dominated by outside directors have strong monitoring incentives, while those dominated by inside directors have weak monitoring incentives (Ahmed and Duellman, 2007). Outside directors are also less likely to collude with managers, since the directors' human capital is valued according to how effectively they monitor managers (Fama, 1980; Fama and Jensen, 1983). Furthermore, the appointment of independent NEDs tends to bring more diversification to corporate boards (e.g., CEOs of other firms, investment bankers, major suppliers, or former government officials). Consequently, this helps organisations to face potential environmental pressure by gaining valued resources and information in addition to facilitating inter-firm commitments (Pfeffer and Salancik 1978; Proven, 1980). Similarly, outside directors with expertise in capital markets, corporate law or relevant technology contribute their specified knowledge and expertise to supporting top managers in dealing with specialised decision problems (Fama and Jensen, 1983).

Likewise, the legitimation view of neo-institutional theory argues that the appointment of independent NEDs increases the opportunity for representation across a wider range of outside stakeholders (Haniffa and Cooke, 2005; Ntim and Soobaroyen, 2013b), mitigating legitimacy concerns arising from separating ownership and control. Accordingly, outside directors who are less aligned to management monitor board activities better and limit opportunistic behaviour by managers. Thus, they encourage firms to disclose more information to outside investors (i.e. more voluntary disclosure) (Eng and Mak, 2003). Chen and Jaggi (2001) and Haniffa and Cook (2002) further suggest that a high proportion of outside directors is associated with more corporate disclosure. This reflects the role of powerful NEDs in forcing

management to produce higher levels of disclosure. Thus, boards with a large number of independent directors are expected to engage in more voluntary CG disclosure.

With regard to empirical evidence, a large number of studies have reported a positive impact of the presence of independent NEDs on the extent of voluntary disclosure (e.g., Chen and Jaggi, 2001; Abdelsalam and Street, 2007; Donnelly and Mulcahy, 2008; Mallin and Ow-Yong, 2012; Elmagrhi *et al*., 2016; Tauringana and Chithambo, 2016), although a few have reported a negative impact (e.g., Eng and Mak, 2003; Barako *et al*., 2006; Al-Moataz and Hussainey, 2014). In the MENA countries too, the literature has offered mixed results. While Ezat and El-Masry (2008), Samaha and Dahawy (2010; 2011), Samaha *et al*. (2012) and Al Janadi *et al*. (2013) have reported a positive impact of NEDs on the extent of voluntary disclosure, Al-Motaz and Hussainey (2014) find a negative association. Albitar (2015) reports empirical evidence from 124 listed Jordanian companies of a negative significant association between the percentage of independent directors and the extent of voluntary disclosure. Aljifri *et al*. (2014) find no significant association between the percentage of NEDs on boards and voluntary disclosure. Regarding MENA CG codes, the Egyptian CG code 2011, UAE CG code 2009, Saudi CG code 2010, and Omani CG code 2002 recommend that boards be dominated by non-executive and independent directors to ensure board independence and ability to fulfil the monitoring role efficiently. Thus, based on these arguments, the fourth hypothesis is as follows:

> ***H4.*** *There is a positive association between the proportion of NEDs and the level of voluntary corporate governance disclosure.*

3.2.1.2.4 Board Leadership Structure

The board chairperson is responsible for running board meetings, in addition to supervising, hiring, firing, evaluating and compensating the CEO (Jensen, 1993). Thus, the efficiency view of neo-institutional theory suggests that separation of the chairperson and CEO positions helps the chairperson to effectively fulfil this monitoring role. Boards dominated by the CEO as a chairperson tend to behave for the benefit of the CEO (e.g., receiving higher compensation) (Ahmed and Henry, 2012). Ahmed and Duellman (2007) argue that the dual CEO/chairperson position weakens the monitoring incentives of outside directors, because the CEO is more likely to influence their nomination and election. Separation of the chairperson and CEO positions is found to be associated with better performance (Brickely *et al*., 1997), while concentrating the board leadership structure (i.e. CEO serves simultaneously as chairperson) reduces the effectiveness of the board's monitoring regarding potential

domination of the board. This is because the manager who initiates and implements important decisions (as CEO) also has to control and monitor these decisions (as chairperson), and may make decisions for his own benefit at the expense of shareholders' interests (Jensen and Meckling, 1983; Rechner and Dalton, 1991; Finkelstein and D'aveni, 1994).

Similarly, the legitimation view of neo-institutional theory suggests that separation of the two roles improves the checks and balances over management performance. If the CEO helps to control board meetings, determine agenda items and select board members, this results in lack of trust between management and owners (Haniff and Cook, 2002, 2005), which may have a negative impact on the legitimacy of managerial decisions. However, concern over such legitimacy can be removed by separating the chairperson, who may even be a non-executive from outside the firm, from the CEO position. This separation of roles improves the quality of monitoring and therefore of corporate reporting, and reduces any advantage that might be gained from withholding information (Forker, 1992). Although the dual role of the CEO limits the monitoring role of the board over managers (Molz, 1988), lowering the quality of disclosure (Forker, 1992), it can facilitate supervising company performance and work toward achieving shareholders' interests. This is as a result of the unified firm leadership and removal of any internal or external ambiguity regarding the responsibility for company processes and outcomes (Donaldson, 1990; Donaldson and Davis, 1991; Finkelstein and D'aveni, 1994).

Despite the conflicting results reported in the literature, the majority of empirical evidence has supported the negative impact of CEO role duality on the extent of voluntary disclosure (e.g., Haniff and Cooke, 2002; Eng and Mak, 2003; Gul and Leung, 2004; Barako *et al*., 2006; Laksmana, 2008). Other studies have found no significant association between the two variables (e.g., Ho and Wong, 2001; Cheng and Courtenay, 2006; Ntin and Soobaroyen, 2013a). With regard to MENA countries, Samaha *et al.* (2012) find that CEO role duality is associated with lower CG disclosure, while Ezat and El-Masry (2008) and Al-Shemary and Al-Soultan (2010) report an insignificant association between the two variables. On the other hand Al Janadi (2013), using 87 companies from the Saudi stock market, finds that the separation of CEO and chairperson positions has a negative significant impact on voluntary CG disclosure. The Egyptian CG code 2011, UAE CG code 2009, Saudi CG code 2010 and Omani CG code 2002 recommend separation of chairperson and CEO to ensure that boards are capable of providing their monitoring role efficiently. Thus, based on these arguments, the fifth hypothesis is as follows:

H5. *There is an association between the separation of the board leadership position from CEO and the level of voluntary corporate governance disclosure.*

3.2.1.3 Ownership Structure Mechanisms

Ownership structure mechanisms have been reported to influence voluntary disclosure (Haniffa and Cooke, 2002; Dam and Scholtens, 2012; Al Janadi *et al*., 2013; Ntim and Soobaroyen, 2013b; Albitar, 2015; Ntim, 2016). The level of ownership concentration and the type of control exerted by majority shareholders determine the level of compliance with, and disclosure of, CG practices (Samaha *et al*., 2012; Mateescu 2015; Elmagrhi *et al*., 2016).

3.2.1.3.1 Government Ownership

From the neo-institutional theory perspective, governments represent the highest level of society institutions in Scott's (2001) three-level model, as they possess the coercive power of the state to regulate and control the actions of lower society actors, including firms and organisations (DiMaggio and Powell, 1983, 1991; Scott, 1987, 2001; Ntim and Soobaroyen, 2013b). Additionally, national governments are more likely to show compliance with international codes of good CG and prescriptions for voluntary practices (e.g., IFRS), supported by transnational institutions such as EU, OECD and the World Bank (Aguilera and Cuervo-Cazurra, 2004; Judge *et al*., 2008; Zattoni and Cuomo, 2008). These global institutions participate in the convergence of CG codes around the world, especially in developing countries, by issuing more general codes. Consequently, and from the efficiency view of neo-institutional theory, corporations with high government ownership seek to gain government support by engaging in good CG practices (Ntim and Soobaroyen, 2013b). Because winning the support of government not only legitimates corporate operations (Aguilera *et al*., 2007), it also in terms of efficiency aids in gaining essential resources such as subsidies, tax exemptions and contracts to improve company performance (Pfeffer and Salanick, 1978; Malherbe and Segal, 2003; Haniffa and Hudaib, 2006). Likewise, good voluntary CG practices adopted by corporations help to mitigate agency conflicts between management and influential owners, including governments (Jensen and Meckling, 1976; Ntim and Soobaroyen, 2013b). Additionally, corporations with a greater proportion of government ownership face a high level of agency conflicts between government and other shareholders that can be mitigated by increasing corporate disclosure (Eng and Mak, 2003).

As mentioned previously, the neo-institutional theoretical perspective suggests that firms with a large proportion of state ownership are more likely to adopt voluntary disclosure practice. However, a number of studies argue that higher levels of state ownership, with wide and powerful political connections, provide protection against review and discipline by

regulatory authorities (e.g., Jia *et al*., 2009; Hou and Moore, 2010). Consequently, firms with high government ownership are less likely to voluntarily disclose CG practices.

Empirically, there is a lack of studies examining the association between government ownership and the extent of voluntary disclosure in emerging markets in general and MENA countries in particular. Eng and Mak (2003), Ntim *et al*. (2012b), Ntim and Soobaroyen (2013b) and Al-Bassam *et al*. (2015) have documented that government ownership impacts positively on voluntary disclosure practices in emerging markets, while Dam and Scholtens (2012) and Al Janadi *et al*., (2013) find a negative significant impact of state ownership on voluntary disclosure. Thus, based on these arguments and mixed results, the sixth hypothesis is as follows:

> ***H6****. There is an association between government ownership and the level of voluntary corporate governance disclosure.*

3.2.1.3.2 Director Ownership

Director ownership probably influences decisions regarding voluntary CG disclosure practices (Eng and Mak, 2003; Ghazali and Weetman, 2006). However, the association between director shareholdings and organisational performance is not conclusive (Haniffa and Hudaib, 2006). From the efficiency perspective of neo-institutional theory, higher director ownership mitigates agency conflicts between directors and shareholders by aligning their interests (Jensen and Meckling, 1976, Lilienfield-Toal and Ruenzi, 2014). Consequently, boards need not bend to increase voluntary CG disclosure (Eng and Mak, 2003; Samaha *et al*., 2012). Furthermore, and from the legitimisation perspective, firms with lower director ownership tend to invest more in CG practices and voluntary CG disclosure to enhance company legitimacy and stakeholder confidence in the board (Eng and Mak, 2003; Ghazali and Weetman, 2006).

Empirically, most evidence has shown a negative association between director ownership and voluntary disclosure of CG practices (e.g., Ruland *et al*., 1990; Hussain and Al-Najjar, 2012). With regard to MENA and developing countries in general, Oh *et al*. (2011), Samaha and Dahawy (2011), Khan *et al*. (2013) and Albitar (2015) have reported a negative impact of director ownership on voluntary CG disclosure practices. However, Samaha *et al*. (2012) report an insignificant impact. Thus, based on these arguments, the seventh hypothesis is as follows:

> ***H7.*** *There is a negative association between director ownership and the level of voluntary corporate governance disclosure.*

3.2.1.3.3 Block Ownership

Concentration of ownership mitigates agency conflict by decreasing information asymmetry, thus improving firm value (Jensen and Meckling, 1976), while firms with diffused ownership tend to increase corporate disclosure to substitute for the greater monitoring that is required (Eng and Mak, 2003). Neo-institutional theory, from the efficiency perspective, suggests that concentrated or block ownership, when working as an additional monitoring tool, reduces agency conflicts. Consequently, there is less need for the increased voluntary disclosure which is normally required by powerful stakeholders, while firms with more dispersed ownership engage in greater voluntary disclosure to monitor management (Brammer and Pavelin, 2008; Reverte, 2009; Ntim and Soobaroyen, 2013b). Similarly, from the legitimation perspective, firms with a concentrated ownership structure are less likely to be subject to coercive, mimetic and normative institutional pressures to adopt more transparent disclosure practices. They do not encounter more public accountability from less powerful outside structures than their counterparts (Khan et al., 2013; Ntim and Soobaroyen, 2013b). On the contrary, firms with dispersed ownership structures are subject to more agency problems from managerial opportunism and conflicts of interest (Oh *et al*., 2011). This can be mitigated by engaging in more transparent practices that may work as bonding and monitoring mechanisms (Reverte, 2009). Summing up, from the neo-institutional perspective, firms with block ownership are less likely to engage in disclosing voluntary good CG practices compared to their counterparts with more diffused ownership.

Empirically, the literature is largely consistent with the theoretical perspective that firms with more concentrated ownership are less likely to conduct additional voluntary CG disclosure. For example, Haniffa and Cooke (2002), Marston and Polei (2004), Bozec and Bozec (2007), Al-Najjar and Abed (2014), and Elmagrhi *et al*. (2016) have documented that block ownership impacts negatively on CG disclosure. In the MENA region, Samaha and Dahawy (2011) and Samaha *et al.,* (2012) have reported empirical evidence from Egypt for the negative association between block ownership and CG disclosure, while Al-Bassam *et al*. (2015) find empirical evidence from Saudi Arabia for a positive but insignificant effect of block ownership on voluntary CG disclosure. Thus, based on these arguments, the eighth hypothesis is as follows:

> ***H8.*** *There is a negative association between block ownership and the level of voluntary corporate governance disclosure.*

3.2.2 Country-level Antecedents of Voluntary Corporate Governance Compliance and Disclosure Practices

3.2.2.1 Religion

The institutional environment may better explain CG practices than do firm-level factors (Judge *et al*., 2008, 2010). Although religion is considered one of the main institutional and cultural pillars that may affect corporate activities (Archambault and Archambault, 2003; Chan-Serafin *et al*., 2013), few scholars have investigated its impact on modern organisations' outcomes and decisions, including CG disclosure (Tracey, 2012; Chan-Serafin *et al*., 2013).

Contrary to western society where religion is considered as a private matter (Rice, 1999), in most Muslim countries Islam influences people's daily activities and business, as it is integrated in all aspects of society including politics, community, law and economy (Ryan, 2000; Tinker, 2004; Hassan and Christopher, 2005; Abu-Tapanjeh, 2009; Kamla, 2009; Aribi and Gao, 2010). Therefore, business, financial and all economic transactions are performed with the inspiration of Islamic principles. Governance of public corporations is also strongly influenced by Islamic values that emanate mainly from Sharia (Grais and Pellegrini, 2006; Safieddine, 2009; Judge, 2010). Muslims believe that resources are provided to an individual by God in the form of trust, and therefore accountability is ultimately to God (Bhatti and Bhatti, 2010). The *umma* or society also has the right to know about the operations and transactions of business organisations (Lewis, 2006). Therefore, Islamic economics requires business organisations to provide accurate and fair corporate disclosure to the different readers of their annual reports, so that they can make informed economic decisions (Maali *et al*., 2006; Abu-Tapanjeh, 2009). The Islamic ideals of unity of purpose of life, universal brotherhood and trust suggest that organisations should show greater transparency (Suleiman and Willett, 2003) and apply sound CG practices and more disclosure (Hassan and Christopher, 2005). Hassan and Christopher (2005) proposed that in Muslim societies, organisations can use annual reports as a medium for promoting Islamic values (compliance with Islamic Sharia, *zakah*, fairness and justice – vis-à-vis sound CG practices and disclosure). Accordingly, Islamic institutions are expected to disclose relevant corporate information to earn legitimacy for their continued existence (Baydoun and Willett, 2000; Haniffa, 2001; Lewis, 2001; Maali *et al*., 2006; Tracey, 2012).

Business organisations (particularly Islamic financial institutions) generally encounter unique agency relationships and CG challenges, requiring separate examination (Lewis, 2005; Safieddine, 2009). Agency conflicts arise because: first, unlike traditional organisations that seek to maximise shareholders' wealth, Islamic organisations need to comply with Sharia

before increase their value, thus any divergence from raising profits from Sharia-compliant investments creates an additional source of agency problems (Hamid *et al*., 1993; Archer *et al*., 1998; Chapra and Ahmed, 2002; Safieddine 2009). Second, the nature of some investment contracts separates cash flow and control rights (Sarker, 1999; Safieddine 2009). For example, in profit-sharing contracts (*mudaraba*), financial institutions are entitled to manage the capital of investors. The profits are shared in mutually agreed proportions, and financial loss is completely borne by the capital owner, unless it was the result of proven misconduct or negligence on the part of the bank (Aggarwal and Yousef, 2000). Hence, managers are presented with opportunities to extract personal benefits at the expense of investors' interests (Abdel Karim, 2001; Abdel Karim and Archer 2002, 2006). Agency conflicts do not, therefore, arise solely from the separation of ownership and shareholder control but also from the separation of cash flow and control rights (Safieddine 2009). This increases adverse selection, moral hazard and monitoring the costs of borrowing (Choudhury and Alam, 2006; Chong and Liu, 2009), in addition to exacerbating agency problems by increasing opportunities for managerial expropriation of corporate assets (Safieddine, 2009; Vinnicombe, 2010). One way to mitigate the unique CG conflicts facing Islamic business organisations is to provide shareholders and others stakeholders with true, fair and pertinent information on a timely basis (Sarker, 1999; Abu-Tapanjeh, 2009; Safieddine 2009). Therefore, and from the legitimacy view of neo-institutional theory, corporations in countries where Islamic values are dominant signal their intention to commit to sound governance standards by incorporating a greater level of compliance with and disclosure of CG practices.

The existing theoretical frameworks rarely recognise religion as a foundation for explaining why organisations comply with and voluntarily disclose CG information, or assess their performance in terms of fulfilling their obligation to God and society (Haniffa, 2001). This is reflected in the dearth of literature investigating the impact of religion on CG practices. Comparing the annual reports of 21 conventional financial institutions (CFIs) and 21 Islamic financial institutions (IFIs) operating in the Gulf region, Aribi and Gao (2010) find significant differences in the level and the extent of CSR disclosure between IFIs and CFIs. Using a sample of 761 industrial companies from 37 countries, Archambault and Archambault (2003) find empirical evidence supporting the positive and significant effect of religion (Islamic, Catholic, Protestant and Buddhist) on corporate financial disclosure. On the other hand, Hassan and Christopher (2005) investigated the impact of Islam on CG statement disclosure in the annual reports of Malaysian banks. They find that Islamic banks do not exhibit better CG practices and disclosure than do conventional banks. Maali *et al*. (2006) also suggest that social reporting

is not a major concern for most Islamic banks, although banks required to pay *zakah* do offer more social disclosures. The distinctive Islamic corporate form creates unique CG challenges that makes examining CG compliance and disclosure in MENA countries an interesting issue (Lawis, 2005; Safieddine, 2009; Al-Bassam *et al*., 2012).

Therefore, the ninth prediction is that wide implementation of Islamic economic values across countries will lead to an increase in the extent of compliance with and disclosure of CG practices. The Islamic economic values variable is measured using the Global Islamic Economy Indicator developed by Thomson Reuters in collaboration with the Dubai Islamic Economy Development Centre, which measures the development of the global Islamic economy across its multiple sectors. From the neo-institutional theory perspective, and following arguments from previous studies, the current study assumes that the Global Islamic Economy Indicator (GIEI) positively and significantly impacts voluntary CG disclosure practices. This leads to the following hypothesis:

> ***H9.*** *There is a positive association between the Global Islamic Economy Indicator and the level of voluntary corporate governance disclosure.*

3.2.2.2 National Governance Quality

After the GIEI, the current study examines the extent to which the quality of the institutional environment of governance impacts on the level of compliance with and disclosure of CG practices in the MENA region. Available data from international organisations, such as the World Bank Group and Transparency International, demonstrates that, compared to the rest of the world, MENA countries are generally characterised by poor governance indicators. This is supported by the often relatively high levels of corruption, political instability, poor regulatory quality, lack of accountability and general ineffectiveness of government institutions across several MENA countries (Bishara, 2011; Heidenhof, 2014: Tunyi and Ntim, 2016). Even though governance indicators in the MENA region show some improvement since the Arab Spring, they are still weak compared to the rest of the world (Bishara, 2011; Heidenhof, 2014). This part of the world encounters a number of governance challenges that include: "*the very high concentration of political and economic power by the governing elites and those close to them, a general lack of transparency and accountability of state actors and deeply felt feelings of a lack of dignity, social justice and inequality by the populace at large*" (Heidenhof, 2014:2).

CG legitimacy at the national level arises from perceiving CG as a means by which a nation constrains and directs corporate power so that it efficiently creates economic value and

fairly distributes national income (Monks, 2007; Judge *et al*., 2008). On the national level, Judge *et al*. (2008) argue that the legitimacy of CG practices is derived from the degree of law and order in the society, the cultural view of competitiveness, and the extent to which corruption is embraced within a nation. Corruption is defined as "*the misuse of public power (or office) for private benefit*" (Judge *et al*., 2008:771). Corruption has been found to have a negative impact on a firm's borrowing ability, stock valuations and CG practices (Ng, 2006). It not only deters the development of sound governance practices, it is also considered as an outcome of bad governance practices (Randall, 1999; Wu, 2005). The literature also demonstrates that disclosure is influenced by the level of corruption in a country. Firms operating in countries characterised by a high level of corruption are generally assumed to have a lower level of corporate disclosure because they may be engaged in unethical practices (Ioannou and Serafeim, 2012; Baldini *et al*., 2016). MENA countries have high levels of corruption and lack regulations to protect minority shareholders (Bishara, 2011). Stimulating transparency and disclosure are considered to be one of the main mechanisms required to overcome inefficiencies in governance in MENA countries (Bishara, 2011; Heidenhof, 2014).

Additionally, and with regard to the rule of law and regulations, corporate insiders are more likely to undertake activities to serve their own interests or those of other stakeholders at the expense of shareholders, and different countries have adopt legislation to protect shareholders (Ioannou and Serafeim, 2012). Government efficiency and reporting regulations influence the extent of corporate disclosure practices (Baldini *et al*., 2016). In countries characterised by the existence of many constitutional and political constraints, companies are less likely to disclose more information (Aguilera and Jackson, 2003; Roe, 2003; Ioannou and Serafeim, 2012). La Porta *et al*. (1996) argue that strong legal protection rights encourage small investors to enter the stock market, resulting in wide dispersion of ownership. In addition, better legal protection of creditors increases firms' likelihood of higher debt finance. Accordingly, countries with widely dispersed ownership and a high level of debt financing are likely to provide more detailed corporate disclosure to meet the demands of different groups of investors and creditors (Jaggi and Low, 2000). Political freedom and stability also provide a suitable environment for the development of the accounting profession in general and corporate reporting and disclosure in particular (Belkaoui, 1983).

In a cross-country study that used neo-institutional theory to explore potential antecedents of CG legitimacy from 1997 to 2005, Judge *et al*. (2008) find that CG legitimacy at the national level is influenced by the extent of law and order, cultural emphasis on global competitiveness, and the prevalence of corruption. Using 14,174 firm-year observations for the

period 2005 to 2012, Baldini, *et al*. (2016) find that a high level of corruption has a significant negative impact on the level of environmental, social and governance disclosure. The strength of formal institutions is also negatively related to environmental disclosure, although it has no impact on social and governance disclosure. Mateescu (2015) investigated national institutional and company-level factors affecting CG disclosure practices. Using a sample of 51 companies listed in four emerging European countries (Estonia, Poland, Hungary and Romania), he reports a significant positive impact of the country-level variables (rule of law, government effectiveness and regulatory quality) on companies' level of compliance with and disclosure of CG practices. Using 401 firms from six countries, Jaggi and Low (2000) find empirical evidence that firms from common law countries with widely dispersed ownership and a high level of debt financing are associated with higher financial disclosures, compared to firms from code law countries. In a cross-country study (examining data from 55 countries), Belkaoui (1983) finds no significant relationship between political freedom and corporate disclosure, although Goodrich (1986) finds a link between political systems and accounting clusters.

Consequently, the tenth prediction is that improvements in the quality of national governance across countries will lead to an increase in the extent of compliance with and disclosure of CG practices. In line with prior studies, we measure the quality of national governance and institutional environment using time-varying measures of corruption, including the World Bank's Control of Corruption Index (CCI), measures of political and legal maturity including the World Bank's Voice and Accountability Index (VAI), Political Stability Index (PSI), Government Effectiveness Index (GEI), Regulatory Quality Index (RQI) and Rule of Law Index (RLI). From the neo-institutional theory perspective, and following arguments from previous studies, the current study assumes that the quality of national governance is a significant structural factor influencing CG disclosure practices. This leads to the following hypothesis:

> ***H10.*** *There is a positive association between the quality of national governance and the level of voluntary corporate governance disclosure.*

4 Research Design

4.1. Sample Selection and Data Sources

The study uses a sample of 600 firm-year observations from five MENA countries' listed firms over the period 2009 to 2014. [1] For the purpose of the current study, the countries selected are Egypt, Jordan, Oman, Saudi Arabia and the UAE. The choice of these specific countries is to satisfy two main criteria. First, the selected countries should reflect the diversity in MENA countries in order to support the generalisation of the results. Specifically, from a capital perspective, whereas Saudi Arabia and the UAE are net capital exporting countries, Egypt and Jordan are considered net capital importing companies. Oman was the first country in the MENA region to issue its National CG Code in 2002. Second, in order to ensure data availability and sample homogeneity, some filtering rules were applied. Accordingly, some countries were excluded from the sample. For example, Israel was dropped because its firms are dual-listed and provide annual reports according to the SEC requirements (10-K form); and others, like Bahrain and Qatar, because their capital markets include mostly financial and investment corporations. Countries where most firms issue their financial reports in languages other than Arabic or English, such as Morocco and Tunisia, were excluded, as were those with non-active stock markets, such as Iraq and Libya.

Since financial and utility firms are subject to different regulations and have different capital structures, their impact on disclosure and CG practices is different (Reverte, 2009; Ntim and Soobaroyen, 2013b). Consequently, firms in these industries are excluded from the sample.

Table 1: Summary of sample composition

	Egypt	Jordan	Oman	Saudi Arabia	United Arab of Emirates
Total listed firms	214	236	117	169	123
Less: Financial and Utilities firms	71	115	46	57	76
Total firms available to be sampled	143	121	71	112	47
Final selected sample	20	20	20	20	20
Percentage of sample	14%	17%	28%	18%	43%

Sources: Sampled countries' stock exchanges

The remaining listed firms (total firms available to be sampled) are classified into five main industries: basic materials/oil and gas; industrial; customer goods; customer services/healthcare; and technology/telecommunication. The current study follows the Industry

[1]The MENA region includes Algeria, Bahrain, Djibouti, Egypt, the Islamic Republic of Iran, Israel, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, the United Arab Emirates, West Bank and Gaza, and the Republic of Yemen. http://www.worldbank.org.

Classification Benchmark (ICB). Since the number of observations from oil and gas, healthcare and telecommunication industries was relatively small, the observations from these three industries were added to basic-material, consumer-services and technology industries, respectively. The current study uses this industry stratified sample because voluntary CG compliance and disclosure practices could be influenced by industry type (Cooke, 1992; Street and Bryant 2000; Al Janadi *et al*., 2013; Habbash *et al*., 2015), and to be in line with previous voluntary disclosure literature (Ntim and Soobaroyen, 2013 a,b; Al-Bassam *et al*., 2015; Elmagrhi *et al*., 2016). The final sample was selected randomly from these five industry categories in the five countries (four firms in each industry), making 100 firms from 2009 to 2014 and giving a total of 600 firm-year observations. Firms to be included in the final sample should have annual reports for all six years and these reports should include detailed data related to CG disclosure (e.g., board characteristics and ownership structure mechanisms).

The study uses content analysis to measure CG attributes and CG disclosure in data collected by hand from the annual financial reports. Because traditional content analysis takes a significant amount of time and effort, only 600 firm-year observations are considered, starting in 2009. The financial crisis of 2007/2008 brought into question the effectiveness of CG and disclosure practices (Elmagrhi *et al*., 2016). This study may therefore explain how far the crisis has affected CG structures and disclosure practices. The sampling period ends in 2014, as this was the latest year for which the annual reports were available when the data collection began.

Therefore, the current study uses a time series and cross-sectional data. This panel data structure is characterised by its ability to provide more informative data, more reliability, less multicollinearity among variables, a greater degree of freedom and greater efficiency (Gujarati, 2003; Wooldridge, 2010). Additionally, the convergence of CG practices takes a relatively long time to materialise, so undertaking longitudinal studies will be more imperative (Yoshikawa and Rasheed, 2009).

Data on firms' Islamic values, board characteristics and ownership structure mechanisms were manually collected from firms' annual reports, their websites, capital markets websites and other websites. Financial and accounting variables were collected from the *Datastream* database. Finally, country-level data, including GDP and the quality of national governance, were collected from the website of the World Bank; the Global Islamic Economy Indicator and Corruption Perception Index were collected from Thomson Reuters and Transparency International websites, respectively, while the Inflation Index came from the International Monetary Fund's website.

4.2. Measurement of Variables

Two OLS regression models were employed to examine the hypotheses, investigating the impact of both firm-level CG mechanisms (Islamic values, board characteristics and ownership structure mechanisms) and country-level CG mechanisms (religion and governance quality) on the extent of CG voluntary disclosure. The hypotheses will be tested using a sample of MENA listed firms. The study variables are classified into three main categories: dependent, independent (firm-level and country-level CG measures) and control (firm-level and country-level) variables, as illustrated in Table 2.

4.2.1 Voluntary Corporate Governance Disclosure (Dependent Variable) Measurement

The main objective of the current study is to examine the level and determinants of compliance with the best CG measures practices among listed firms in MENA countries. Therefore, the CG index (MCGI) is the dependent variable used to investigate the main firm- and country-level antecedents that drive voluntary CG disclosure among MENA listed firms. The current study follows recent research which adopts the CG index as a methodological approach (e.g., Ntim *et al*., 2012a; Allegrini and Greco, 2013; AI-Bassam *et al*., 2015; Elmagrhi *et al*., 2016). This examines the level and determinants of CG compliance, particularly recently after many countries have issued their codes of good CG. With regard to the CG codes, past studies can be classified into two categories: the first relies on international CG codes (e.g., Organisation for Economic Co-operation and Development Report, 1999; Commonwealth Principles, 1999) (e.g., Samaha *et al*., 2012); and the second on national CG codes (e.g., King Report II, 2002; Saudi CG Code, 2006; UK Combined Code, 2010) (e.g., Ntim *et al*., 2012a; AI-Bassam *et al*., 2015; Elmagrhi *et al*., 2016).

The current study uses a constructed CG index (MCGI). This index follows a checklist developed by the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR), organised by the United Nations Conference Trade and Development (UNCTAD, 2006).[2] This checklist ("UNCTAD *ISAR benchmark"*) for good practice in CG disclosure is based on five sections used to construct five sub-indices: (i)

[2]Two benchmark items were removed from the original 2006 UNCTAD *ISAR benchmark* that included 53 items. A disclosure on "Practices on related party transactions where control exists" was removed because of substantive overlap with another item "Nature, type and elements of related-party transactions". Also disclosure on "Types and duties of outside board and management positions" was removed because of substantive overlap with another item "Number of outside board and management position directorships held by the directors". The UNCTAD *ISAR benchmark* (MCGI) is presented in Appendix (1).

ownership structure and exercise of control rights (OSH); (ii) financial transparency (TCY); (iii) auditing (AUD); (iv) corporate responsibility and compliance (RTY); and (v) board and management structure and process (BMS). The MCGI is constructed by awarding a value of 1 if each of the 51 CG provisions is disclosed, and 0 otherwise. With this binary scoring scheme a firm's total disclosure score in a particular firm-year can vary between 0 (perfect non-compliance and non-disclosure) and 100% (perfect compliance and disclosure). Obviously, the higher the index level, the better the compliance and disclosure process. The next sub-sections will discuss the dependent variable's measurement.

4.2.1.1 Data Sources for the MENA Corporate Governance Index

Firms' annual reports are used as the main source to collect CG data. The current study relies on this information source for the following reasons. First, although annual reports are used in conjunction with other sources, they have competitive advantages (e.g., verifiability, objectivity, regularity and standardisation) (Cascino *et al*., 2014). Second, the amount of disclosure provided by firms in annual reports is positively associated with the level of disclosure reported via other media (Lang and Lundholm, 1993). Finally, although a few studies rely on other means to examine voluntary disclosure, such as Internet reporting (e.g., Marston and Polei, 2004; Abdelsalam and Street, 2007; Ezat and El-Masry, 2008), the majority of researchers depend on annual reports. Thus, in line with most previous research, the current study uses annual reports that contain financial and non-financial information audited by external auditors to calculate the dependent variable (e.g., Barako *et al*., 2006; Ntim *et al.*, 2012a; Allegrini and Greco, 2013; AI-Bassam *et al*., 2015; Elmagrhi *et al*., 2016).

4.2.1.2 The Choice between Binary and Ordinal Coding Schemes

Two approaches could be used to score a voluntary CG disclosure index (Cooke, 1989), namely a simple binary coding scheme (un-weighted index) and a complex ordinal coding scheme (weighted index). The first approach provides an equal weight of 1 if a particular CG provision is applied, and 0 otherwise, whereas the second assigns a gradual scale for the degree of disclosure (e.g., qualitative information, quantified information, or both). Therefore, the complex ordinal coding approach assesses the quality of CG disclosure and reflects the relative importance of each CG provision (Gompers *et al.*, 2003; Beattie *et al.*, 2004).

Despite the possible advantages of using the complex ordinal coding, the current study applies simple binary coding to examine the level of voluntary CG disclosure for a number of reasons. First, the design of the MCGI enables the researcher to check whether its provisions

are applied or not. Therefore, this scheme is appropriate for the current study which measures neither the quality of CG disclosures, nor the relative impact of different CG provisions. Instead, it captures only the occurrence or absence of voluntary CG disclosure. Second, there is no strictly developed theoretical basis that rationalises giving certain weights to various CG disclosure provisions (Black *et al*., 2006). Thus, it is unnecessary to dominate the CG disclosure index by a particular set of CG provisions that could cause bias towards one or some of the provisions (Botosan, 1997; Owusu-Ansah, 1998; Bhagat *et al*., 2008). Third, it is easier to replicate an un-weighted index as it is more transparent (Beiner *et al*., 2006). The scheme assumes that all provisions are equally important. This enables the current study to avoid making judgments in assigning a particular provision (Owusu-Ansah, 1998). Fourth, many studies suggest that similar results are obtained from weighted and un-weighted indices (Botson, 1997; Barako *et al.*, 2006; Ntim *et al*., 2012a). Finally, as binary coding has been used so widely in recent studies, using it here enables direct comparison between the current study and those studies (e.g., Tsipouri and Xanthakis, 2004; Henry, 2008; Aggarwal *et al.*, 2011; Ntim *et al.*, 2012a; Samaha *et al.*, 2012; Allegrini and Greco, 2013; AI-Bassam *et al*., 2015; Elmagrhi *et al*., 2016).

Consistent with previous studies, the current study designed a CG disclosure score-sheet to code firms on their level of CG disclosure, and the annual reports of the 100 firms were examined and compared with the MCGI's provisions. Additionally, each firm's annual reports were thoroughly read before starting the coding to make sure that all disclosed the main items (Cook, 1989; Owusu-Ansah, 1998; Naser *et al*., 2002).

4.2.1.3 The Reliability and Validity of the Constructed Corporate Governance Index

To obtain effective inference from employing a measure of disclosure in the research, the instrument of measurement (MCGI) should be reliable and valid (Weber, 1990; Hassan and Marston, 2010) in measuring CG disclosure amongst MENA listed firms. The following sub-sections discusses the procedures carried out to test the reliability and validity of the disclosure measure.

4.2.1.3.1 The Reliability Test of the Corporate Governance Index

The coding scheme is considered to be reliable if the index scores awarded to the text (financial report) can be replicated by another coder (Weber, 1990; Marston and Shrives, 1991;

Beattie *et al.*, 2004). Therefore, reliability is largely related to two main issues: stability and consistency.

Stability can be defined as the ability of the researcher to achieve the same results at different times using the same measuring procedure (Beattie *et al.*, 2004). There are three types of reliability: inter-coder, test-retest and internal consistency reliability (Sekran, 2003). The content analysis for this study was conducted by a single researcher, so the test-retest reliability and internal consistency reliability were tested.

This study follows procedures proposed by other researchers to meet the test-retest reliability (e.g., Owusu-Ansah, 1998; Ghazali and Weetman, 2006; Omar and Simon, 2011; Samaha *et al.*, 2012). First, the annual reports for an initial sample of 25 firms (one from each of five main industries in the five countries) for 2009 to 2014 were read in their entirety before coding their CG disclosures. This procedure helps to ensure that companies are not penalised for non-disclosure of non-applicable items in their annual reports (Omar and Simon, 2011). Following Cook (1989; 1991), Samaha *et al.* (2012), Al-Bassam *et al*. (2015) and Elmagrhi *et al*. (2016), a first round of coding was performed for the whole six years for each firm of the initial sample before moving on to the next firm, to increase consistency and accuracy. [3] Second, a second round of coding was conducted for the entire sample (600 firm-year observations) after scoring the annual reports of the initial sample (Al-Bassam et al., 2015; Omar and Simon, 2011). Finally, after scoring the annual reports of all 600 firm-year observations, a third round was conducted as a final assessment, following Samaha *et al*. (2012) and Elmagrhi *et al*. (2016). This third round was conducted in order to improve the coding accuracy by identifying and correcting any mistakes or inconsistencies made during the previous two rounds. The results of the third round were largely similar to those of the two previous rounds, indicating that stability among the different rounds of coding was attained.

Consistency means that the same index scores awarded to companies can be attained by another researcher (Weber, 1990; Marston and Shrives, 1991). In order to measure the internal consistency of the MCGI, Cronbach's alpha test was conducted, following the example of previous studies which examined the impact of CG on corporate disclosure (e.g., Gul and Leung, 2004; Dey, 2008; Sharma, 2014; Elmagrhi *et al.*, 2016). DeVellis (1991) suggests that a disclosure index scoring a Cronbach's alpha coefficient between 0.7 and 0.8 indicates acceptable reliability. The coefficient for the five sub-indices in the MCGI is 0.713, indicating

[3] The first round of coding was performed under the advice of the researcher's supervisors, who are experts in CG and have published extensively in reputable journals, such as Accounting, Auditing & Accountability Journal, Corporate Governance: An International Review and Journal of Business Ethics.

that the power of the empirical test is less likely to be affected by a random measurement error. This value of Cronbach's alpha confirms that the set of items in the MCGI complement each other well in capturing several features of the same variable (Litwin, 1995). Therefore, the scoring scheme conducted in this study largely meets the stability and consistency considerations required to ensure that the MCGI is a reliable measurement tool.

4.2.1.3.2 The Validity Test of the Corporate Governance Index

The second issue associated with the construction of indices is validity. Validity means the ability of the index scores to reflect what they are intended to measure (Carmines and Zeller, 1991). The literature differentiates between two types of validity: content and construct validity. Content validity considers that the measurement index should include sufficient governance items to enable the researcher to perform the required examination, while construct validity means that the provisions included in the index must be match what the researcher intends to examine (Saunders *et al*., 2007).

The following procedures were applied with the purpose of ensuring both content and construct validity associated with the MCGI. First, the index was prepared on the basis of a consultative process and ISAR's deliberations during the period 2002-2005 and published in 2006 (UNCTAD, 2006). In addition, this benchmark has been used for many years as a key measurement tool in UNCTAD's research programme on CG disclosure (UNCTAD, 2011), and specifically to assess the level and determinants of voluntary CG disclosure in some emerging markets (e.g., Samaha *et al*., 2012). Accordingly, this ensures the validity of MCGI compared to researcher's constructed indices that may be subject to judgment, which might lead to potential bias and errors (Core, 2001; Francis *et al*., 2008).

Second, it is argued that validation of the measuring instrument can be ensured when conducting analysis that involves empirical evidence to support the measuring instrument (Carmines and Zeller, 1991; Shevlin, 2004). This suggests that the disclosure index is valid if it is associated with firm-specific characteristics identified by past studies as determinants of voluntary disclosure, such as board characteristics, ownership structure mechanisms, size, leverage and auditor type (Botosan, 1997; Brown and Tucker, 2011). In line with previous studies (e.g., Botosan, 1997; Brown and Tucker, 2011), the current study tests the construct validity of the MCGI by empirically examining the association between the level of voluntary disclosure and variables that have been identified in prior studies to drive voluntary disclosure (e.g., board characteristics, ownership structure mechanisms, firm size, leverage and auditor

type). The empirical analysis of the current study, as will be detailed in section 5, indicates that the level of CG disclosure in MENA listed firms can be explained by a number of firm and country factors, including Islamic values, board characteristics, ownership structure mechanisms, and country-level religion and governance qualities. These results add validity to the MCGI.

4.2.2 Independent Variables

The independent CG variables, of two types (firm-level and country-level), have been drawn from the CG literature to examine their impact on voluntary CG compliance and disclosure among MENA listed firms. The data for the firm-level explanatory variables were hand-collected from the firms' annual reports and websites, while country-level governance qualities were collected from several websites: the World Bank and Thomson Reuters. The choice of CG measures at both levels is consistent with many past studies, and is subject to the availability of data. Table 2 shows summary definitions of the dependent (MCGI), independent and control variables used in this study. However, this section will briefly discuss the measurement of independent variables.

As illustrated in Table 2, with regard to firm-level factors, Islamic values disclosure (e.g., Maali *et al*., 2006; Farook, *et al.*, 2011; Al-Bassam and Ntim, 2016) was measured using an index containing three provisions (whether a narrative regarding the fact that the firm's funds and loans are on the basis of interest-free (*riba*) is disclosed, whether the firm discloses any Islamic and conventional finance separately, and whether a narrative regarding the appropriate calculation and payment of the Islamic religious tax (*zakah*) for the financial year is disclosed); it takes 1 if each of the three provisions is disclosed, 0 otherwise, scaled to a value between 0 and 100%. With respect to board characteristics, board size was measured in a similar manner to that used in earlier studies (e.g., Ntim *et al.*, 2012b; Elmagrhi *et al*., 2016) as the natural log of the total number of directors on the board of a company. Board diversity was measured by the percentage of the total number of women and ethnic minority (non-Arab) directors to the total number of board directors (e.g., Ntim and Soobaroyen, 2013a; Gyapong *et al*., 2015; Elmagrhi *et al*., 2016). Board independence was measured as the percentage of NEDs to the total number of board directors (e.g., Eng and Mak, 2003; Samaha *et al.*, 2012). The board of directors' leadership structure was measured using a dummy variable that takes the value of 1 if the roles of chairperson and CEO are separate at the end of its financial year, 0 otherwise (e.g., Eng and Mak, 2003; Gul and Leung, 2004; Samaha *et al*., 2012). Government

and director[4] ownerships were measured as a percentage of each type of ownership out of total shareholdings, while block ownership was measured as a percentage of shares held by shareholders with at least 5% of the total (e.g., Haniffa and Huddaib, 2006; Samaha *et al*., 2012; Ntim *et al*., 2015a; Alotaibi and Hussainey, 2016). With regard to country-level explanatory variables, religion was measured using the Global Islamic Economy Indicator, which is an index reflecting the development of the global Islamic economy across multiple sectors (e.g., Archambault and Archambault, 2003). [5] Finally, the quality of national governance (i.e., voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption) is measured by indices developed by the World Bank (e.g., Judge *et al*., 2008; Mateescu, 2015; Baldini *et al*., 2016).

4.2.3 Rationale for Control Variables

The study controls for other variables found in previous studies to impact voluntary CG compliance and disclosure practices either at firm- or country-level (e.g., Hanifa and Cooke, 2002; Eng and Mak, 2003; Ntim *et al*., 2012a,b; Al-Moataz and Hussainey, 2014; Al-Bassam *et al*., 2015; Albitar, 2015; Elshandidy *et al.*, 2015; Elmagrhi *et al*., 2016). Control variables include: firm size (LNTA), firm age (AGE), growth opportunity (SGR), leverage (LEV), profitability (ROA), audit firm size (BIG4), year dummies (YDU) for the six years (2009-2014), industry dummies (INDU) for the five industries (i.e., basic materials/oil and gas (BM&OG); industrial (INDUTR); customer goods (CGODS); customer services/healthcare (CSER&HCARE) and technology/telecommunication (TECH&TELE)). With regard to country-level control variables, these are: gross domestic product growth (GDP); Inflation Index (INFL) and Corruption Perception Index (CPI).

[4] This study measures director ownership including both insiders and outsiders. Many of previous studies examining the effect of director ownership on firm value have assumed that all corporate directors (insiders and outsiders) have similar shareholding motives (e.g., Demsetz and Lehn, 1985; Morck *et al*., 1988; Welch, 2003; McConnell and Servaes, 1990; Davies *et al*., 2005; Golbe and Nyman, 2013; Ntim, 2013b).
[5] It is calculated by getting the average of 2013 and 2014 values as these are the only available data.

Firm-Level Control Variables

4.2.3.1 Firm Size

CG practices are affected by firm size (Samaha *et al*., 2012; Habbash *et al*., 2015). Larger firms with a complex capital structure and operations have greater agency problems (Jensen and Meckling, 1976; Bebchuk and Weisbach, 2010), and therefore might provide more voluntary CG disclosure in order to reduce information asymmetry and mitigate agency conflict (Jensen and Meckling, 1976; Eng and Mak, 2003). Furthermore, large firms have sufficient resources to afford the additional voluntary disclosure costs, unlike smaller firms. They also encounter greater political costs. Therefore, large firms are likely to disclose more voluntary corporate disclosure to reduce political costs (Cooke, 1989; Watts and Zimmerman 1990; Habbash *et al*., 2015).

Empirically, most previous studies have documented a positive impact of firm size on voluntary CG disclosure (e.g., Eng and Mak, 2003; Alsaeed, 2006; Omar and Simon, 2011; Ntim *et al*., 2012a; Samaha *et al*., 2012; Al-Bassam *et al*., 2015; Habbash *et al*., 2015; Elmagrhi *et al*. 2016). Thus, it is hypothesised that there is a positive association between firm size (LNTA), as proxied by the natural log of the book value of a firm's assets, and voluntary CG disclosure.

4.2.3.2 Firm Age

There is no consensus among scholars as to the impact of firm age on the level of corporate voluntary disclosure (Omar and Simon, 2011; Habbash *et al*., 2015). New firms have high operating risks, and thus are expected to provide more CG disclosure to reduce uncertainty about their operations and to increase the confidence of investors (Spero, 1979; Haniffa and Cook, 2002; Sehar *et al*., 2013). More voluntary disclosure also helps new firms to decrease information asymmetry and thereby increase their capital at lower costs, compared to older firms which depend more on internal funds (Haniffa and Cook, 2002; Omar and Simon, 2011). On the other hand new firms lack the financial resources and expertise to organise and disseminate more corporate voluntary disclosure (Owusu-Ansah, 1998; Akhtaruddin, 2005).

Empirically, a number of prior studies have found no relationship between firm age and voluntary corporate disclosure (e.g., Haniffa and Cook, 2002; Omar and Simon, 2011; Elmagrhi, *et al*. 2016). However, Habbash *et al*. (2015) find that older firms provide more voluntary corporate disclosure. Therefore, it is hypothesised that there is an association

between firm age (AGE), as proxied by the natural log of the total number of years since a company was established, and voluntary CG disclosure.

4.2.3.3 Growth Opportunity

Firms with growing business activities need to increase external capital (Beiner *et al*., 2006; Henry, 2008; Chung and Zhang, 2011). Therefore, growing firms may aim to enhance their CG practices to obtain more finance at lower costs (Klapper and Love, 2004; Bozec *et al*., 2010). Furthermore, voluntary CG disclosure ensures potential investors of the protection of their investments (Eng and Mak, 2003; Allegrini and Greco, 2013).

Empirically, although several previous studies have supported the positive relationship between firm growth and voluntary CG disclosure (e.g., Gompers *et al*., 2003; Haniffa and Hudaib, 2006; Henry, 2008; Ntim and Soobaroyen, 2013a) others have found no impact of firm growth opportunity on voluntary CG disclosure (e.g., Ntim *et al*., 2012b; Al-Bassam *et al*., 2015; Elmagrhi *et al*., 2016). Therefore, it is hypothesised that there is a positive association between firm growth opportunity (SGR), as proxied by the growth of sales, and voluntary CG disclosure.

4.2.3.4 Leverage

The level of voluntary CG disclosure may be affected by a firm's leverage. Agency theory argues that firms with high debt ratios are more likely to transfer wealth from creditors to shareholders (Jensen, 1986). Therefore, highly leveraged firms tend to increase their voluntary disclosure and enhance transparency to gain lenders' confidence and therefore to reduce financing costs (Haniffa and Cooke, 2002; Klapper and Love, 2004; Bozec *et al*., 2010; Omar and Simon, 2011).

Empirical studies have reported mixed results in examining the impact of the level of firm leverage on voluntary corporate disclosure. One group has found a positive impact (e.g., Alsaeed, 2006; Barako *et al.*, 2006; Al-Bassam *et al*., 2015; Elmagrhi *et al*. 2016), and another an insignificant impact (e.g., Ho and Wong, 2001; Haniffa and Cooke, 2002; Omar and Simon, 2011; Ntim *et al*., 2012a; Samaha *et al*., 2012; Allegrini and Greco, 2013). Accordingly, it is hypothesised that there is a positive association between leverage (LEV), as proxied by the percentage of total debt to total assets, and voluntary CG disclosure.

4.2.3.5 Profitability

Profitability may have a relationship with the level of voluntary CG disclosure. Agency theory argues that managers of firms with high profit have a strong incentive to disclose more information to justify the continuation of their position and compensation arrangements (Haniffa and Cooke, 2002; Omar and Simon, 2011). Similarly, firms with high profit ratios prefer to differentiate themselves from other companies with low profitability ratios (Owusu-Ansah, 1998; Haniffa and Cooke, 2002; Omar and Simon, 2011).

A number of empirical studies have found that firms with high profit ratios provide more voluntary corporate disclosure (e.g., Haniffa and Cooke, 2002; Ghazali and Weetman, 2006; Akhtaruddin et al., 2009; Omar and Simon, 2011; Ntim *et al.*, 2012b), while another group has found an insignificant relationship between voluntary disclosure and profitability (e.g., Ho and Wong, 2001; Eng and Mak, 2003; Alsaeed, 2006; Barako *et al*., 2006; Samaha *et al*., 2012; Allegrini and Greco, 2013; Elmagrhi, *et al*. 2016). Accordingly, it is hypothesised that there is a positive association between profitability (ROA), as proxied by the percentage of operating profit to total assets, and voluntary CG disclosure.

4.2.3.6 Audit Firm Size

External auditing is used to attest the reliability and validity of financial statements provided by management, helping to reduce agency conflict between shareholders and managers by improving the external monitoring of shareholders and limiting the opportunistic activities of managers (Hossain *et al*., 1994; Ali *et al*., 2004; Alsaeed, 2006; Barako *et al*., 2006; Omar and Simon, 2011; Luypaert and Van Caneghem, 2013). A number of previous studies have indicated that firms with high agency conflicts may hire a high-quality (BIG 4) auditor to mitigate probable agency conflicts (e.g., Fan and Wong, 2005; Hay and Davis, 2004; Gul *et al*., 2013). Large audit firms are more likely to provide better-quality audit process (DeAngelo, 1981; Palmrose, 1988; Eshleman and Guo, 2014), because they have more professional audit expertise, a wide range of skills, reputation, accounting-and-auditing knowledge and ethical standards (DeAngelo, 1981; Al-Ajmi, 2009; Ntim *et al*., 2012a, b).

Empirical studies have found mixed results of the relationship between audit firm size and the extent of voluntary disclosure. Some have found no association between disclosure level and audit firm size (e.g., Ali *et al*., 2004; Alsaeed, 2005; Barako *et al*., 2006), while other researchers support the theoretical proposition of agency theory that large audit firms are associated with clients disclosing more information (e.g., Owusu-Ansah, 1998; Naser *et al*.,

2002; Archambault and Archambault, 2003; Eng and Mak, 2003; Al-Janadi *et al*. 2013; Ntim and Soobaroyen, 2013a, b; Al-Bassam *et al*., 2015). Accordingly, it is hypothesised that there is a positive association between audit firm size (BIG4), as proxied by the auditor being one of the Big 4 audit firms, and voluntary CG disclosure.

4.2.3.7 Industry Dummies

Firms in different industries have varied financing structures, ownership structures, business characteristics and regulations (Hussainey and Al-Nodel, 2008; Ntim and Soobaroyen, 2013a, b; Habbash *et al*., 2015). This leads to variations in the levels of compliance with and disclosure of CG practices among firms by industry (Ntim *et al.*, 2012b; Al-Bassam *et al*., 2015; Elmagrhi *et al*. 2016). For instance, firms whose operations create environmental damage (e.g., mining companies), have to disclose more voluntary information about their operations (Arcay and Vazquez, 2005).

Therefore, and consistent with prior literature (e.g., Haniffa and Cooke, 2002; Barako *et al.*, 2006; Ntim *et al*., 2012b; Samaha *et al.*, 2012; Ntim and Soobaroyen, 2013a, b; Al-Bassam *et al*., 2015; Elmagrhi *et al*. 2016), five industry dummies are included as control variables to capture potential and unobserved industry-type heterogeneity.

4.2.3.8 Year Dummies

The literature suggests that firms' voluntary CG disclosures vary over time (e.g., Conyon, 1994; Patel *et al*., 2002; Barako *et al*., 2006; Haniffa and Hudaib, 2006; Mahadeo *et al*., 2012). For example, Albitar's (2015) study of 124 Jordanian listed firms between 2010 and 2012 finds that the extent of voluntary disclosure has mean scores of 32.1%, 34.5% and 38.3% for the years 2010, 2011 and 2012, respectively. Similarly, Al-Bassam *et al*. (2015), using 80 Saudi listed firms between 2004 and 2010, find that firms' compliance with the Saudi CG code improves overtime.

Changes in the global economy may also have an impact on a firm's voluntary CG disclosure. For instance, firms are expected to disclose more after periods of recession to reassure investors about their financial performance (Mangena *et al.*, 2012). Accordingly, and following previous studies, this study includes six year dummy variables in the model to capture potential unobserved firm-level heterogeneity over the six-year period from 2009 to 2014 (e.g., Haniffa and Cooke, 2002; Al-Bassam *et al*., 2015; Barako *et al.*, 2006; Ntim *et al.*, 2012a; Samaha *et al.*, 2012; Elmagrhi, *et al.* 2016).

Country-Level Control Variables

4.2.3.9 Gross Domestic Product Growth

Country-level economic factors may also explain variations in CG disclosure (Belkaoui, 1983; Doupnik and Salter, 1995; Salter, 1998; Archambault and Archambault, 2003). Corporate disclosure is influenced by national economic development (Archambault and Archambault, 2003), and theoretical evidence proposes that firms need to raise more capital in countries with increasing economic development. Thus, they are likely to provide more corporate disclosure to reduce information asymmetry and mitigate agency costs (Adhikari and Tondkar, 1992; Salter, 1998).

In line with theoretical expectations, a number of previous studies have confirmed that average firm disclosure is higher in developed countries than in emerging markets (e.g., Adhikari and Tondkar, 1992; Salter, 1998; Archambault and Archambault, 2003). For instance, Adhikari and Tondkar (1992) document that the level of disclosure requirements of 35 stock exchanges in different countries is positively related to the degree of economic development. Therefore, it is expected that there is a positive association between gross domestic product (GDP), as proxied by GDP growth and voluntary CG disclosure.

4.2.3.10 Inflation

Inflation is an environmental element that affects accounting practices, as it negatively impacts the reliability of financial reports that are based on the historical cost assumption (Meek and Saudagaran, 1990; Archambault and Archambault, 1999, 2003). Therefore, firms operating in environments with high inflation are more likely to provide higher corporate disclosure in order to help investors to make informed decisions (Archambault and Archambault, 2003).

Although theoretical evidence suggests a positive relationship between inflation and the level of voluntary CG disclosure, empirical evidence is mixed. Doupnik and Salter (1995) find a positive link between inflation and disclosure among countries with a macro-economic orientation. In contrast, using a sample of companies from 33 countries, Archambault and Archambault (2003) report a negative relationship between inflation and corporate disclosure. Consistent with theoretical and empirical evidence, it is expected that there is a positive association between inflation (INFL), as proxied by Inflation Index, average consumer price and voluntary CG disclosure.

4.2.3.11 Corruption Perception Index

The extant literature indicates that corruption is a country-level structural factor affecting CG disclosure. Corruption has a negative impact on financial markets, as it is found to be associated with higher borrowing cost, lower stock valuation and weak CG (Ng, 2006). In countries with a high level of corruption, firms may be involved in unethical practices and thus prefer to disclose less information (Ioannou and Serafeim, 2012; Baldini *et al*., 2016).

Consistent with theoretical assumptions, the literature has reported a negative impact of corruption on the level of corporate disclosure practices (e.g., Judge *et al*., 2008; Baldini *et al*., 2016). Accordingly, it is expected that there is a positive association between the perceived level of corruption, as proxied by the Corruption Perception Index (CPI) and voluntary CG disclosure.

Table 2: Summary of variables and measures

Dependent variables	
MCGI	Corporate governance (CG) Compliance and Disclosure Index containing 51 CG provisions using the CG benchmark of the United Nations Conference Trade and Development (UNCTAD 2006)'s guidance on good practice in CG disclosure, that takes 1 if each of the CG provisions is disclosed, 0 otherwise; scaled to a value between 0 and 100%.
OSH	Sub-index of MCGI related to ownership structure and exercise of control rights consisting of 9 provisions that take a value of 1 if each of the 9 provisions is disclosed 0 otherwise; scaled to a value between 0 and 100%.
TCY	Sub-index of MCGI related to financial transparency consisting of 8 provisions that takes a value of 1 if each of the 8 provisions is disclosed 0 otherwise; scaled to a value between 0 and 100%.
AUD	Sub-index of MCGI related to auditing consisting of 9 provisions that takes a value of 1 if each of the 9 provisions is disclosed 0 otherwise; scaled to a value between 0 and 100%.
RTY	Sub-index of MCGI related to corporate responsibility and compliance consisting of 7 provisions that takes a value of 1 if each of the 7 provisions is disclosed 0 otherwise; scaled to a value between 0 and 100%.
BMS	Sub-index of MCGI related to board and management structure and process consisting of 18 provisions that takes a value of 1 if each of the 18 provisions is disclosed 0 otherwise; scaled to a value between 0 and 100%.
Independent variables: Firm-level	
IVDI	Islamic Values Disclosure Index containing 3 provisions (whether a narrative regarding the fact that the firm's funds and loans are on the basis of interest-free (*riba*) is disclosed, whether the firm discloses any Islamic and conventional finance separately, and whether a narrative regarding the appropriate calculation and payment of the Islamic religious tax (*zakah*) for the financial year is disclosed) that takes 1 if each of provisions is disclosed, 0 otherwise; scaled to a value between 0 and 100%.
BSIZE	Natural log of the total number of directors on the board of directors.
BDIV	The percentage of the total number of women and ethnic minority (non-Arab) directors to the total number of board members.
BDIVG	The percentage of women directors to the total number of board members.
BDIVE	The percentage of ethnic minority (non-Arab) directors to the total number of board members.
NED	The percentage of non-executive directors to the total number of board members.
DBLS	A dummy variable that takes the value of 1 if the roles of chairperson and CEO of firm are separated at the end of its financial year, 0 otherwise.
GOWN	Percentage of shares held by government.
DOWN	Percentage of shares held by all members of the board of directors.
BOWN	Percentage of shares held by shareholders with at least 5% of the total firm shareholdings.
Independent variables: Country-level	
GIEI	Global Islamic Economy Indicator, developed by Thomson Reuters in collaboration with the Dubai Islamic Economy Development Centre, measures the development of the global Islamic economy across its multiple sectors.
VAI	Voice and Accountability Index. Voice and accountability captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.
PSI	Political Stability Index. Political stability and absence of violence/terrorism measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism.
GEI	Government Effectiveness Index. Government effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
RQI	Regulatory Quality Index. Regulatory quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.
RLI	Rule of Law Index. Rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.
CCI	Control of Corruption Index. Control of corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.
Control variables: Firm level	
LNTA	Natural log of the book value of the total assets of a firm.
AGE	Natural log of the total number of years since a company was established.
SGR	The percentage of current year's sales minus previous year's sales divided by previous year's sales
LEV	The percentage of total debt divided by total assets.
ROA	Percentage of operating profit to total assets at the end of its financial year
BIG4	A dummy variable that takes the value of 1 if a firm is audited by a Big 4 audit firm (PricewaterhouseCoopers, Deloitte & Touche, Ernst & Young, and KPMG), 0 otherwise.
YDU	Dummies for the years 2009 to 2014 inclusive.
INDU	Dummies for each of the five main industries: basic materials/oil and gas; industrial; customer goods; customer services/health care and technology/telecommunication.
Control variables: Country level	
GDP	Gross domestic product growth (annual %).
INFL	Inflation index, average consumer prices.
CPI	Corruption Perception Index. The Corruption Perceptions Index measures the perceived levels of public sector corruption.

4.3 Model Specification

The following OLS regression model is used to investigate whether variations in the MCGI are explained or predicted by firm-level CG variables, as follows:

$$MCGI_{it} = \alpha_0 + \beta_1 IVDI_{it} + \beta_2 BSIZE_{it} + \beta_3 BDIV_{it} + \beta_4 NED_{it} + \beta_5 DBLS_{it} + \beta_6 GOWN_{it} + \beta_7 DOWN + \beta_8 BOWN_{it} + \sum_{i=1}^{n} \beta_i CONTROLS_{it} + \varepsilon_{it} \quad (1)$$

Where MCGI is the overall MENA countries' CG disclosure index; *IVDI* is Islamic Values Disclosure Index, *BSIZE* is board size, *BDIV* is board diversity on the basis of both gender and ethnicity, *NED* is the percent of NEDs on the board, *DBLS* is the separation of CEO and chairperson roles, *GOWN* is governmental ownership, *DOWN* is director ownership, *BOWN* is block ownership and *CONTROLS* refers to a number of control variables: *LNTA* is firm size, *AGE* is firm age, *SGR* is growth opportunity, *LEV* is leverage, *ROA* is profitability, *BIG4* is audit firm size, *YDU* is six year dummies (2009 to 2014), *INDU* is five industry dummies (*BM&OG* is basic materials/oil and gas; *INDUTR* is industrial; *CGODS* customer goods; *CSER&HCARE* customer services/healthcare and *TECH&TELE* is technology/telecommunication), while country control variables are: *GDP* is gross domestic product growth; *INFL* is Inflation Index; and *CPI* is the Corruption Perception Index.

The second OLS regression model examines the effect of country-level religion and/or governance quality on the extent of voluntary CG disclosure. The model specification is of the following general form:

$$MCGI_{it} = \alpha_0 + \beta_1 GIEI + \beta_2 NGOV + \sum_{i=1}^{n} \beta_i CONTROLS_{it} + \varepsilon_{it} \quad (2)$$

Where *MCGI* is overall MENA countries' CG disclosure index; *GIEI* is Global Islamic Economy Indicator; *NGOV* stands for different measures of country-level governance variables: *VAI* is Voice and Accountability Index; *PSI* is Political Stability Index; *GEI* is Government Effectiveness Index; *RQI* is Regulatory Quality Index; *RLI* is Rule of Law Index; *CCI* is Control of Corruption Index. Controls are: *LNTA* is firm size, *AGE* is firm age, *SGR* is growth opportunity, *LEV* is leverage, *ROA* is profitability, *BIG4* is audit firm size, *YDU* is year dummies (2009 to 2014), *INDU* is industry dummies (*BM&OG* is basic materials/oil and gas; *INDUTR* is industrial; *CGODS* customer goods; *CSER&HCARE* customer services/healthcare and *TECH&TELE* is technology/telecommunication), while country control variables are: *GDP* is gross domestic product growth; and *INFL* is Inflation Index.

4.4 Ordinary Least Squares Assumptions

As indicated in the previous section and in line with CG studies (e.g., Black, 2001; Gompers *et al.,* 2003; Haniffa and Hudaib, 2006; Ntim *et al.,* 2012a; Samaha *et al.,* 2012; Ntim and Soobaroyen, 2013; Al-Bassam *et al*., 2015; Elmagrhi, *et al.* 2016), the Ordinary Least Squares (OLS) multivariate regression technique is used to test all the current study's hypotheses. In order to ensure that OLS is a suitable estimation method to run the analysis, the OLS assumptions must be met before performing the analysis. Therefore, this section discusses a number of statistical tests and procedures that have been conducted to address the OLS assumptions: normality, multicollinearity, heteroskedasticity, linearity and autocorrelation.

The normal distribution of continuous variables was tested using probability-probability (P-P), quintile-quintile (Q-Q) and histograms (Black, 2001; Ntim *et al*. 2012a; Al-Bassam et al., 2015). The *MCGI* appeared to be normally distributed. However, the explanatory variables show mixed results. For example, board independence (NED), and government ownership (GOWN) have a non-normal distribution, while board size (BSIZE), director ownership (DOWN) and block ownership (BOWN) are fairly normally distributed. Similarly, with regard to the control variables, most exhibit normal distribution. The non-normality problem was addressed by transforming affected variables (e.g., using the natural logarithm of the original values, square root and rank) such as sales growth (SGR).

In addition, skewness and kurtosis tests were run to validate the finding of fairly normal distribution of most of the variables. For example, they provide additional verification for the relatively normal distribution of *MCGI*. Table 3 illustrates that the skewness of the *MCGI* is –0.008, which is an approximate symmetric curve of a normal distribution, as the value of symmetrical distribution is zero according to Gujarati (2003) and Brooks (2008). Regarding kurtosis, Table 3 shows that the value of the *MCGI* is –0.740. This kurtosis value is not close to 3, so the null hypothesis cannot be rejected (Gujarati, 2003; Brooks, 2008).

Regarding other explanatory and control variables, Table 3 shows that the skewness values for most of the continuous variables fall between 0.000 and 1.512, except for government ownership at 1.655. For the kurtosis test statistics, the variables fall between –0.123 and 3.228, indicating slight mesokurtically in some of the data. However, a degree of non-normality in some of the data can be accepted, as it is difficult to ensure a perfectly normal distribution for any research data (Gujarati, 2003). Likewise, this study comprises 600 firm-year observations, which represents a relatively large sample and can minimise the negative

effect of any existing non-normality in some variables (Brooks, 2008). The histogram depicting the distribution of the MCGI is presented in Appendix 2.

Table 3: The OLS assumptions tests

Variable	VIF	Tolerance	Skewness	Kurtosis	Cook's distances		Leverage Values	
					Min	Min	Min	Max
MCGI			-0.008	-0.740				
IVDI	2.252	0.444	1.512	0.903	0.000	0.031	0.025	0.086
BSIZE	1.576	0.635	0.189	0.130				
BDIV	1.381	0.724	1.282	0.466				
NED	1.545	0.647	-1.437	2.015				
DBLS	1.946	0.514						
GOWN	1.844	0.542	1.655	1.655				
DOWN	2.653	0.377	-0.007	-1.072				
BOWN	2.543	0.393	-0.510	-0.495				
LNTA	3.300	0.303	0.501	-0.363				
AGE	1.380	0.725	-1.118	1.682				
SGR	1.249	0.801	0.000	-.123				
LEV	1.593	0.628	0.373	-.0677				
ROA	1.344	0.744	0.111	1.836				
BIG4	1.668	0.600						
GDP	1.177	0.850	-0.753	3.228				
INFL	2.157	0.464	0.612	-1.053				
CPI	1.808	0.553	0.265	-.485				

Notes: variables are defined as follows: the MENA countries overall Corporate Governance Disclosure Index (MCGI); Islamic Values Disclosure Index (IVDI); board size (BSIZE); board diversity on the basis of both gender and ethnic minority (BDIV); percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); government ownership (GOWN); director ownership (DOWN); block ownership (BOWN); firm size (LNTA); firm age (AGE); growth opportunity (SGR); leverage (LEV); profitability (ROA); audit firm size (BIG4); gross domestic product growth (GDP); Inflation Index (INFL); and Corruption Perception Index (CPI). Table 2 fully defines all the variables used.

The multicollinearity assumption is tested by using a correlation matrix among the variables. The correlation matrix also helps to examine the direction and magnitude of the linear relationship between the variables. Tables 7 and 8 report a correlation matrix for the MENA CG index and all the explanatory and control variables for the firm-level and country-level analyses, respectively. As already reported, the skewness and kurtosis statistics in Table 3 show that the variables generally have a slight non-normal behaviour. Accordingly, Tables 7 and 8 present both Pearson's parametric and Spearman's non-parametric correlation coefficients. The bottom left half of the table is used to illustrate the former, and the upper right

half the latter. The coefficients of both the parametric and non-parametric bivariate correlations presented in Tables 7 and 8 reveal similar patterns. This suggests that any remaining non-normalities in the variables may be trivial and it may be statistically tolerable to use the OLS technique to estimate the specified structural equations. Apart from the high correlation coefficients among country-level governance measures, [6] the matrices in Tables 7 and 8 both suggest that correlations among the variables are relatively low. This indicates that no serious multicollinearity problems, which would affect the use of the OLS regression model, remain (see Haniffa and Hudaib, 2006; Dam and Scholtens, 2012; Ntim *et al*., 2012a; Ramly, 2012; Al-Bassam *et al*., 2015).

After all the tests related to normality and transforming the data, multicollinearity may still pose a threat. Hence, Variance Inflation Factor (VIF) and tolerance statistics tests are run to examine the existence of multicollinearity among the variables (Dam and Scholtens, 2012; Kajananthan, 2012). Multicollinearity may be a problem when tolerance is close to zero (Gujarati, 2003; Kajananthan, 2012) and VIF values are over 10 (Gujarati, 2003). VIF values and tolerance statistics are reported in Table 3, the former ranging between 1.177 and 3.300, and the latter between 0.303 and 0.850. Both VIF values and tolerance statistics provide additional evidence that there is no serious problem of multicollinearity in interpreting the results of the OLS regressions. [7]

After running the normality and multicollinearity tests on the individual variables, heteroscedasticity, autocorrelation and linearity assumptions are examined to ascertain whether the OLS technique can be estimated properly. First, the existence of outliers that can cause heteroscedasticity and nonlinearity in the variables is tested using scatter plots, Breusch-Pagan test, Cook's distances and leverage values. Non-constant variance of the error term in the estimated model causes hetereoscedasticity. The constructed scatter plots for MCGI (for brevity not reported here) suggest the non-existence of severe outliers, with distributions looking fairly random and linear. Likewise, consistent with Cooke (1989), Ramly (2012), and Al-Bassam *et al*. (2015), the Breusch-Pagan test was conducted to diagnose heteroscedasticity. The test result provides additional evidence confirming that the model does not suffer from heteroscedasticity, where the null hypothesis of homoscedasticity cannot be rejected (i.e., constant variance).

[6] The threat of high significant correlations among country-level governance qualities was resolved by running the OLS regression model seven times for each of the seven governance variables.

[7] Variance Inflation Factor (VIF) and tolerance statistics tests are run to check for multicollinearity among the variables of the seven regression models that examine the impact of country-level governance factors on CG disclosure practices. For reasons of brevity the results of these tests are not presented here.

Second, following Haniffa and Hudaib (2006) and Ntim *et al*. (2012a), Cook's distance and leverage values tests were carried out to check the linearity of the variables used. It is argued that non-linearity poses a threat if these values are greater than one (Pryce, 2005; Maddala and Lahiri, 2009). Table 3 shows that the Cook's distance values are between 0.000 and 0.031. Similarly, leverage values range from 0.025 to 0.085. Therefore, the Cook's distance and leverage values do not exceed the critical values. This indicates that the association amongst the variables used in the OLS model is substantially linear.[8]

Finally, in line with Kajananthan (2012), Ntim *et al*. (2012a), Al-Bassam *et al*. (2015) and Elmagrhi et al. (2016), the existence of autocorrelation or serial correlation was checked by the Durbin-Watson test. This test is used to check for a relationship between an error and its lagged value. A Durbin-Watson value of two and above indicates that the null hypothesis of no autocorrelation could not be rejected (Gujarati, 2003; Brooks, 2008). The Durbin-Watson values are between 1.396 and 2.180 in the models used. This indicates the presence of reasonable rather than severe positive autocorrelation problems.

To summarise, a number of diagnostic tests were run to check OLS assumptions: P-P, Q-Q; histograms; skewness and kurtosis; correlation matrix; VIF; tolerance statistics; scatter plots; Breusch-Pagan test; Cook's distance; leverage values; and Durbin-Watson. The results from these tests suggest that OLS assumptions, in general, are met, except that some of the variables do not follow a normal distribution. Therefore, these variables were transformed. Furthermore, this relative violation of normality assumption does not pose a serious threat to the estimated coefficients, given the large sample size used in this study.

5 Empirical Results and Discussion

5.1 Descriptive Analysis

Table 4 summarises the descriptive analysis of the main dependent and independent variables over the six years investigated (2009-2014). Panel *A* shows descriptive statistics for the overall level of disclosure and compliance with the *MCGI*. First, the index shows wide variation, ranging from 31.37% (16 out of 51) to 84.31% (43 out of 51), with the average (median) firm complying with 56.45 % (56.86%) of the 51 CG provisions examined. Second, the findings in Panel *A* suggest that the sampled firms have generally shown an improvement

[8] Cook's distance and leverage values tests were conducted to check the linearity of the variables used in the seven regression models that examine the impact of country-level governance factors on CG disclosure practices. For reasons of brevity the results of these tests are not presented here.

in their CG voluntary disclosure practices over the investigated period. The average (median) aggregated compliance levels increased from 52.80% (53.92%) in 2009 to 59.43% (60.78%) in 2014. This in total represents a 6.63 (6.86) percentage point increase over the investigated six-year period. This improved disclosure over time is consistent with the literature on voluntary disclosure in developing markets in general (Patel *et al*., 2002; Barako *et al*., 2006; Mahadeo *et al*., 2012) and MENA countries in particular (e.g., Al-Bassam *et al*., 2015 from Saudi Arabia; Albitar, 2015 from Jordan). Also, Panel B shows a slight increase in the Islamic Values Disclosure Index (IVDI) average from 17% in 2009 to 19.33% in 2014. Furthermore, Panels *D*, *E* and *F* display an increase in average board diversity based on gender and ethnic minority (BDIV), board independence (NED) and separation of the CEO and chairperson roles (DBLS) over the period from 7.73%, 86.10% and 74% in 2009 to 8.72%, 88.55% and 84% in 2014, respectively.

Table 4: Summary of yearly descriptive statistics of levels of compliance with MCGI and CG mechanisms

Variables	2009	2010	2011	2012	2013	2014	All
Panel A: MENA countries CG Index (MCGI)%							
Mean	52.80	53.90	56.27	57.65	58.65	59.45	56.45
Median	53.92	54.90	58.82	59.80	60.78	60.78	56.86
STD	10.49	10.96	11.51	11.81	11.66	11.81	11.59
Min	31.37	31.37	31.37	35.29	35.29	37.25	31.37
Max	74.51	74.51	80.39	84.31	84.31	84.31	84.31
Panel B: IVDI%							
Mean	17	17	17.67	19	19.33	19.33	18.22
Median	0	0	0	0	0	0	0
STD	31.25	31.25	31.23	31.87	32.20	32.20	31.55
Min	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100
Panel C: BSIZE							
Mean	8.61	8.56	8.49	8.48	8.50	8.50	8.52
Median	9	9	9	8.50	9	9	9
STD	2.76	2.67	2.47	2.54	2.60	2.58	2.59
Min	4	5	5	5	4	4	4
Max	19	18	17	18	17	18	19
Panel D: BDIV%							
Mean	7.73	7.63	7.68	7.57	7.95	8.72	7.88
Median	0	0	0	0	0	0	0
STD	14.65	14.61	14.34	14.25	14.08	14.44	14.34
Min	0	0	0	0	0	0	0
Max	61.54	66.67	69.23	66.67	61.54	61.54	69.23
Panel E: NED%							
Mean	86.10	87.16	87.75	87.75	87.24	88.55	87.43
Median	88.89	88.89	90	90	88.89	90.91	88.89
STD	14.67	14.14	13.82	14.19	13.84	13.72	14.03
Min	40	40	40	40	40	40	40
Max	100	100	100	100	100	100	100

Panel F: DBLS%							
Mean	74	76	78	80	81	84	79
Median	100	100	100	100	100	100	100
STD	44.10	42.90	41.60	40.20	39.40	36.80	40.90
Min	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100
Panel G: GOWN%							
Mean	15.91	16.04	15.80	16.38	16.19	16.55	16.15
Median	3.98	3.61	3.07	2.80	1.54	3.51	3.29
STD	24.61	24.64	24.49	24.91	24.87	24.69	24.60
Min	0	0	0	0	0	0	0
Max	98.67	98.67	98.63	96.43	96.43	96.43	98.67
Panel H: DOWN%							
Mean	45.55	45.17	43.92	45.04	45.19	44.73	44.94
Median	49.23	48.76	44.17	48.01	46.22	47.29	47.89
STD	28.07	27.87	27.51	28.28	28.14	28.23	27.90
Min	0.06	0.06	0.02	0.02	0.02	0	0
Max	98.33	95.52	95.52	98.92	98.92	98.92	98.92
Panel I: BOWN%							
Mean	55.54	55.07	54.95	55.95	56.42	57.36	55.88
Median	58.93	58.51	58.76	58.34	60.05	62.55	59.49
STD	24.01	23.47	23.22	23.44	23.40	23.29	23.39
Min	5.46	5.41	5	5	5	5	5
Max	95.83	92.17	92.74	98.92	98.92	98.92	98.92
No. of observations	100	100	100	100	100	100	600

Notes: Variables are defined as follows: the MENA countries overall Corporate Governance Disclosure Index (MCGI); Islamic Values Disclosure Index (IVDI); board size (BSIZE); board diversity on the basis of both gender and ethnic minority (BDIV); percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); government ownership (GOWN); director ownership (DOWN); and block ownership (BOWN). Table 2 fully defines all the variables used.

Table 5 provides further inferences about *MCGI* and CG mechanisms but at the country level. The country-level descriptive statistics for the overall CG index presented in Panel *A* show that there is a substantial variation in the level of compliance with and disclosure of the *MCGI* among sampled countries. The UAE has the highest level of CG disclosure with the average (median) listed firms complying with 67.12% (66.67%) of the 51 CG provisions examined. On the other hand, Egyptian firms have the lowest level of CG disclosure with an average (median) of 45.36% (43.14%). Panel *B* suggests that Saudi firms are more compliant in conducting Islamic transitions, seeking Islamic finance and paying Islamic tax (*zakah*) with an average compliance with 68.89% of the *IVDI*, while Egyptian firms scoring the lowest compliance with 1.67% on the *IVDI*. Furthermore, Panel *C* shows that Egyptian firms have on average 10.39 members on the board, while Omani firms have on average 7.13 members. Regarding ownership structure mechanisms, Panel *G* shows that the highest average for government ownership (GOWN) is 26.69% in the UAE, and the lowest is for Jordanian firms,

with an average of 2.65%. Finally, results presented in Panels *H* and *I* show that Saudi listed firms have the lowest average director ownership (DOWN) and block ownership (BOWN) with 26.32% and 40.32%, respectively. On the other hand Egyptian firms have the highest average director ownership (DOWN) 64.52%, while Omani firms have the highest average block ownership (BOWN) with 68.49%.

Table 5: Summary of country descriptive statistics of levels of compliance with MCGI and CG mechanisms

Variables	Egypt	Jordan	Oman	Saudi Arabia	UAE	All
Panel A: MENA countries CG Index (MCGI) %						
Mean	45.36	47.68	60.75	61.36	67.12	56.45
Median	43.14	47.06	62.74	60.78	66.67	56.86
STD	11.67	4.39	4.98	7.41	9.04	11.59
Min	31.37	39.22	47.06	35.29	41.18	31.37
Max	78.43	60.78	68.63	76.47	84.31	84.31
Panel B: IVDI%						
Mean	1.67	8.61	3.33	68.89	8.61	18.22
Median	0	0	0	66.67	0	0
STD	7.29	23.47	12.52	24.34	19.56	31.55
Min	0	0	0	33.33	0	0
Max	33.33	100	66.67	100	66.67	100
Panel C: BSIZE						
Mean	10.39	8.38	7.13	8.36	8.37	8.52
Median	11	9	7	9	8.50	9
STD	3.62	1.85	1.48	1.62	2.64	2.59
Min	5	5	5	4	5	4
Max	19	11	11	11	18	19
Panel D: BDIV%						
Mean	10.64	4.57	19.19	3.30	1.70	7.88
Median	0	0	15.48	0	0	0
STD	16.59	12.58	16.84	9.16	5.15	14.34
Min	0	0	0	0	0	0
Max	69.23	66.67	66.67	37.50	28.57	69.23
Panel E: NED%						
Mean	77.12	83.91	97.70	87.26	91.15	87.43
Median	81.25	88.89	100	88.89	100	88.89
STD	15.51	13.88	5.82	11.03	12.72	14.03
Min	40	40	71.43	57.14	55.56	40
Max	93.75	100	100	100	100	100
Panel F: DBLS%						
Mean	38	61	100	96	100	79
Median	0	100	100	100	100	100
STD	48.60	49	0	20.10	0	40.90
Min	0	0	100	0	100	0
Max	100	100	100	100	100	100
Panel G: GOWN%						
Mean	23.43	2.65	15.57	12.39	26.69	16.15
Median	12.10	0	6.70	0	17.50	3.29
STD	29.93	7.04	22.48	22.43	26.99	24.60
Min	0	0	0	0	0	0
Max	98.67	31.90	70	83.69	82	98.67

Panel H: DOWN%						
Mean	64.52	39.99	58.26	26.32	35.59	44.94
Median	63.95	39.24	58.34	22.27	30.09	47.89
STD	22.51	24.53	21.63	25.32	25.96	27.90
Min	12.47	0.58	13.30	0.02	0	0
Max	98.92	89.77	93.85	84.31	83.95	98.92
Panel I: BOWN%						
Mean	65.16	47.97	68.49	40.32	57.48	55.88
Median	68.74	48.52	67.33	39.87	60	59.49
STD	20.25	23.31	15.53	24.31	20.28	23.39
Min	8.37	5.52	35.55	5	17.50	5
Max	98.92	90.21	93.85	83.69	83.95	98.92
No. of observations	120	120	120	120	120	600

Notes: Variables are defined as follows: the MENA countries overall Corporate Governance Disclosure Index (MCGI); Islamic Values Disclosure Index (IVDI); board size (BSIZE); board diversity on the basis of both gender and ethnic minority (BDIV); percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); government ownership (GOWN); director ownership (DOWN); block ownership (BOWN).Table 2 fully defines all the variables used.

Table 6 summarises the statistics of all the investigated variables (i.e. dependent, independent and control variables). Panel *A* shows descriptive statistics for the overall *MCGI* and its sub-indices over the six years examined (2009-2014). The *MCGI*'s five sub-indices also show substantial differences in their descriptive analysis. For example, ownership structure and exercise of control rights (OSH) ranges from a minimum compliance rate of 22.22% to a maximum of 100%, with the average firm complying with 63.31% of the nine CG provisions investigated. Also, board and management structure and process (BMS) ranges from a minimum compliance rate of 22.22% to a maximum of 88.89%, with the average firm complying with 58.09% of the 18 CG provisions investigated. Thus, descriptive statistics indicate considerable variations in the level of compliance and disclosure for both the overall *MCGI* and its five sub-indices, which is consistent with the CG disclosure literature in MENA countries (Al-Shammari, 2008; Samaha and Dahawy, 2010, 2011; Samaha *et al*., 2012; Al Janadi *et al*., 2013; Aljifri *et al*., 2014; Al-Moataz and Hussainey, 2014; Al-Bassam *et al*., 2015; Albitar, 2015). Accordingly, despite the existence of the CG good practices' convergence forces, MENA listed firms generally show a lower extent of compliance with and disclosure of the overall *MCGI* and its five sub-indices, along with significant disparities at this level compared to developed countries.[9] These findings support the notion that the lack of enforcing capabilities in MENA countries enables most listed companies not to comply with disclosure and transparency requirements (Bolbol *et al*., 2005; Piesse *et al*., 2012; Samaha *et al*., 2012; Al Janadi *et al.*, 2013; Albitar, 2015)

[9] For example, Bianchi *et al*., (2011) report that the average compliance with national CG code for Italy (85%); Mateescu, (2015) reports that the average compliance with national CG codes by four of Europe emerging countries was 86%; and Elmagrhi *et al*., 2016, using a sample of UK listed firms, find that the average compliance with UK CG index is 61.73%.

Table 6: Summary of descriptive statistics of the MCGI, independent and control variables for all sampled firms

						High-Low MCGI	
Variables	**Mean**	**Median**	**STD**	**Minimum**	**Maximum**	**Mean Diff.**	**Median Diff.**
Panel A: The MCGI based on all 600 MENA firms year observations							
MCGI%	56.45	56.86	11.59	31.37	84.31	-	-
OSH%	63.31	66.67	11.77	22.22	100	-	-
TCY%	74.12	75	13.03	37.50	100	-	-
AUD%	53.70	55.56	22.24	0	100	-	-
RTY%	26.76	14.29	21.59	0	85.71	-	-
BMS%	58.09	61.11	15.58	22.22	88.89	-	-
Panel B: Firms with high MCGI							
MCGI%	65.50	64.71	6.35	56.86	84.31	-	-
OSH%	63.10	66.67	11.54	22.22	100	-	-
TCY%	79.59	87.50	10.58	50	100	-	-
AUD%	68.83	66.67	13.89	33.33	100	-	-
RTY%	37.39	28.57	22.46	0	85.71	-	-
BMS%	69.70	66.67	8.32	50	88.89	-	-
Panel C: Firms with low MCGI							
MCGI%	45.84	45.10	5.98	31.37	54.90	-	-
OSH%	63.57	66.67	12.05	22.22	77.78	-	-
TCY%	67.71	62.50	12.73	37.50	87.50	-	-
AUD%	35.95	33.33	16.27	0	77.78	-	-
RTY%	14.29	14.29	11.56	0	57.14	-	-
BMS%	44.46	44.44	10.11	22.22	66.67	-	-
Panel D: Independent variables: Firm-level							
IVDI%	18.22	0	31.55	0	100	15.85***	13.23***
BSIZE	8.52	9	2.59	4	19	-0.47**	-0.34
BDIV%	7.88	0	14.34	0	69.23	3.66***	2.33**
BDIVG%	2.71	0	6.61	0	37.50	-1.45***	-1.78***
BDIVE%	5.20	0	12.78	0	66.67	5.15***	4.16***
NED%	87.43	88.89	14.03	40	100	10.25***	9.45***
DBLS %	79	100	40.90	0	100	40***	36.90***
GOWN%	16.15	3.29	24.60	0	98.67	6.69***	7.26***
DOWN%	44.94	47.89	27.90	0	98.92	-1.96	-2.16
BOWN%	55.88	59.49	23.39	5	98.92	5.47***	3.71*
Panel E: Independent variables: Country-level							
GIEI	45.64	47.71	13.34	27.15	67.51	16.13***	15.73***
VAI	17.49	18.72	8.16	2.84	27.49	-4.51***	-3.92***
PSI	43.20	33.80	24.03	6.60	81.04	27.95***	27.45***
GEI	58.22	59.47	17.56	20.19	90.38	17.00***	16.75***
RQI	57.56	57.18	12.97	25.00	80.29	12.57***	12.08***
RLI	60.45	62.56	10.66	31.25	76.44	9.35***	8.70***
CCI	59.31	60.77	16.19	27.96	87.56	14.42***	14.19***

Panel F: Control variables: Firm-level

LNTA ($000,000)	2091.00	184.45	5728.09	3.45	35222.66	3189.55***	3350.87***
AGE	21.84	20	10.06	1	47	-2.68***	-1.98**
SGR%	9.06	5.94	45.45	-92.59	594.06	8.07**	8.73**
LEV%	39.76	38.19	20.69	4.03	92.36	1.42	2.31
ROA%	6.43	6.06	7.66	-32.09	31.03	2.24***	1.93***
BIG4%	59	100	49.30	0	100	39.80***	38.70***
Panel G: Control variables: Country-level							
GDP%	3.46	3.30	2.58	-5.20	10	0.71***	0.68***
INFL%	179.70	149.43	59.92	110.50	316.99	0.33	6.60
CPI	48.20	47.00	11.68	28.00	70.00	11.35***	11.25***

Notes: the table shows summary descriptive statistics, and mean/median differences for sub-samples of firms with high and low Corporate Governance Index (MCGI) scores, respectively. ***, **, * indicate that mean/median difference between firms with high MCGI index scores (i.e. firms with MCGI score above the overall mean/median mark) and firms with low MCGI score (i.e. firms with MCGI score below the overall mean/median mark, respectively) is significant at the 1%, 5% and 10% level, respectively. Variables are defined as follows: the MENA countries overall Corporate Governance Disclosure Index (MCGI); ownership structure and exercise of control rights (OSH); financial transparency (TCY); auditing (AUD); corporate responsibility and compliance (RTY); board and management structure and process (BMS); Islamic Values Disclosure Index (IVDI); board size (BSIZE); board diversity on the basis of gender (BDIVG); board diversity on the basis of ethnic minority (BDIVE); board diversity on the basis of both gender and ethnic minority (BDIV); percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); government ownership (GOWN); director ownership (DOWN); block ownership (BOWN); Global Islamic Economy Indicator (GIEI); Voice and Accountability Index (VAI); Political Stability Index (PSI); Government Effectiveness Index (GEI); Regulatory Quality Index (RQI); Rule of Law Index (RLI); Control of Corruption Index (CCI); firm size (LNTA); firm age (AGE); growth opportunity (SGR); leverage (LEV); profitability (ROA); audit firm size (BIG4); gross domestic product growth (GDP); inflation index (INFL); and Corruption perception index (CPI). Table 2 fully defines all the variables used.

The descriptive statistics for independent and control variables are illustrated in Panels *D, E, F* and *G*. With regard to the independent variable Islamic values disclosure (IVDI), for example, the average (median) firm complies with 18.22% (0%) of the three Islamic CG provisions examined in this study. This indicates that a low percentage of sampled firms pay *zakah* and use Islamic finance as opposed to conventional finance. The board size (BSIZE) with a median of nine members is between a minimum of four and a maximum of 19. Board diversity (BDIV) on the basis of both gender and ethnic minority ranges from 0% to 69.23% with an average of 7.88%, which suggests that on average MENA listed firms' boards are dominated by Arab males. Board diversity on the basis of gender (BDIVG) and ethnic minority (BDIVE) ranges from 0% to 37.50% and 66.67%, respectively, with averages of 2.71% and 5.20%. These descriptive statistics suggest that boards of directors in MENA companies have low diversity measured in terms of gender and ethnicity. The results are consistent with Ibrahim and Hanefah (2014) who find the average number of females and non-nationals is 2.8% and 11%, respectively in 117 Jordanian listed companies for the period 2007-2011. With regard to independent directors (NED) the results document a minimum of 40% to a maximum 100% with an average of 87.43%. This indicates that independent directors dominate boards of MENA listed firms. Additionally, most sampled firms have separate board CEO/chairperson roles with an average of 79%. Ownership structure mechanisms show variation, where government ownership (GOWN), director ownership (DOWN) and block ownership (BOWN) range from a minimum of 0%, 0% and 5% to a maximum of 98.67%, 98.92% and 98.92% with an average of 16.15%, 44.94% and 55.88%, respectively. Ownership statistics are consistent with previous studies conducted in MENA countries. For example, Samaha *et al*., (2012) find block ownership to be 57.1% on average, while director ownership ranged from 0% to 97%. Elghuweel (2015) finds a similar high level of ownership concentration (55%) in Oman. The results demonstrate that firms in MENA countries have a relatively high level of concentrated ownership, similar to other firms in developing countries (for example Ntim and Soobaroyen (2013b) reveal an average block ownership of 53.14% in South Africa) and compared to firms in developed countries (for example Elmagrhi *et al*. (2016) document 41.98% average block ownership in the UK).

Panel *E* of Table 6 illustrates country-level independent variables. The GIEI shows wide variation, ranging from 27.15% to 67.51%, with 45.64% average country application of Islamic economic principles. National governance quality variables also demonstrate a wide variation. For example, the Government Effectiveness Index (GEI) ranges from 20.19% to 90.38% with an average of 58.22%. In summary, the findings support an adequate variation in dependent, independent and control variables among sampled firms. This suggests that the sample is relatively representative of firms in MENA countries.

In order to derive more informative analysis from the statistics, the total sampled observations have been divided into two sub-groups: (i) firms with high *MCGI* scores (i.e., firms with MCGI scores above the overall mean/median mark); and (ii) firms with low *MCGI* scores (i.e., firms with MCGI scores below the overall mean/median mark). Columns 8 and 9 of Table 6 illustrate the findings of the *t*-test of comparison of differences in means/medians for both independent and control variables, generally indicating that each of the two sub-groups has significant differences in their means and medians. For instance, the mean is significantly different between firms with high CG scores and those with low CG scores as follows: Islamic Values Disclosure Index (IVDI) (15.85); board size (BSIZE) (-0.47); board diversity on the basis of gender and ethnic minority (BDIV) (3.66); board diversity on the basis of gender (BDIVG) (-1.45); board diversity on the basis of ethnic minority (BDIVE) (5.15); board independence (NED) (10.25); separation of CEO and chairperson roles (DBLS) (40); government ownership (GOWN) (6.69); block ownership (BOWN) (5.47); Global Islamic Economy Indicator (GIEI) (16.13); Voice and Accountability Index (VAI) (-4.51); Political Stability Index (PSI) (27.95); Government Effectiveness Index (GEI) (17.00); Regulatory Quality Index (RQI) (12.57); Rule of Law Index (RLI) (9.35); and Control of Corruption Index (CCI) (14.42). The findings suggest that firms complying with and disclosing Islamic values, with more diverse boards, independent boards, separate CEO and chairperson roles, high government and block ownership, and found in countries applying Islamic economic values and national government quality, are considerably more likely to use voluntary CG compliance and disclosure practices. The reverse is true for firms with large board size, high director ownership and listed in countries with high Voice and Accountability Index.

Table 7 presents the correlation matrix (including both Pearson's parametric and Spearman's non-parametric coefficients) between the overall CG voluntary disclosure index (MCGI) and independent (firm-level) and control variables.[10] The correlation analysis (i.e., Pearson's parametric correlation coefficients only) demonstrates that *MCGI* positively and significantly correlates with Islamic Values Disclosure index (IVDI), diversity on prevalence of ethnic minorities employed at board level (BDIVE), board independence (NED*)*, separate CEO/chairperson roles (DBLS), and government ownership (GOWN). On the other hand, the correlation matrix shows that *MCGI* has a negative significant correlation with board diversity on the basis of gender (BDIVG*)* and director ownership (DOWN).

[10] The correlation matrix illustrates that there is no presence of multicollinearity among the variables, as the correlation coefficients do not exceed 0.80 (Hannifa and Hudaib, 2006; Ramly, 2012) (as cited by Gujarati, 2003).

Table 7: Pearson and Spearman correlation matrices of all variables: firm-level analysis

	MCGI	IVDI	BSIZE	BDIV	BDIVG	BDIVE	NED	DBLS	GOWN	DOWN	BOWN	LNTA	AGE	SGR	LEV	ROA	Big4	GDP	INFL	CPI
MCGI	1	.261***	-0.052	.034	-.178***	.245***	.399***	.501***	.166***	-.137***	-0.014	.467***	-.124***	.083**	.063	.120***	.420***	.220***	0.053	.508***
IVDI	.285***	1	.104**	-.188***	-.157***	.105***	-.017	.231***	-.044	-.274***	-.265***	.306***	-.171***	.139***	.067	.011	.146***	.126***	-.507***	-.100**
BSIZE	-.033	.117***	1	.054	.276***	-.119***	.011	-.243***	.273***	.093**	-.098**	.355***	-.005	.102**	.011	.081**	.150***	-.091**	0.083**	-.221***
BDIV	.055	-.190***	.062	1	.612***	.753***	.159***	-.039	.016	.308***	.281***	-.034	-.134***	-.022	.046	.163***	.163***	.070*	.077*	-.103**
BDIVG	-.167***	-.160***	.274***	.559***	1	.027	-.060	-.311***	.167***	.169***	.124***	-.042	-.063	-.019	-.055	.101**	0.018	-.042	.134***	-.219***
BDIVE	.237***	-.105***	-.074*	.786***	.030	1	.280***	.244***	-.097**	.236***	.269***	.054	-.157***	-.023	.126***	.136***	.233***	.101**	.002	0.068*
NED	.386***	.047	.029	.134***	-.087**	.246***	1	.448***	.226***	.107***	.137***	.138***	.000	.025	-.026	.143***	.339***	.159***	-.024	.365***
DBLS	.500***	.222***	-.249***	.003	-.279***	.236***	.435***	1	.023	-.068*	.017	.201***	-.067	-.016	-.014	.005	.296***	.152***	-.121***	.435***
GOWN	.140***	-.013	.167***	-.052	.077*	-.123***	.062	.027	1	.206***	.220***	.557***	.114***	.053	.029	.128***	.350***	-.033	.313***	0.027
DOWN	-.155***	-.243***	.107***	.323***	.152***	.262***	.022	-0.072*	.273***	1	.709***	.122***	-.143***	.116***	.118***	.266***	.154***	-.062	.255***	-.193***
BOWN	-.007	-.247***	-.067	.279***	.099**	.269***	.049	0.018	.328***	.710***	1	.153***	-.113***	.062	.081**	.222***	.178***	-.018	.300***	-0.017
LNTA	.457***	.369***	.353***	-.019	-.064	.062	.124***	.208***	.532***	.134***	.177***	1	-.102**	.155***	.221***	.083**	.492***	.013	.183***	0.066
AGE	-.172***	-.248***	-0.030	-.101**	-.042	-.117***	-.075*	-.117***	.053	-.082**	-.070*	-.226***	1	-.074*	-.230***	-.056	-.088**	-.050	.206***	.096**
SGR	.078*	.140***	-.096**	-.011	-.014	-0.020	.027	-.015	.033	.127***	.089**	.173***	-.116***	1	.066	.302***	.107***	-.003	.062	-0.062
LEV	.065	.082**	.003	.080*	-.042	0.156***	-.033	-.012	-.016	.119***	.102**	.272***	-.274***	.052	1	-.088**	.221***	-.027	.047	-.099**
ROA	.097**	.020	.089**	.156***	.084**	.137***	.080*	-.010	.044	.243***	.243***	.068*	-.009	.287***	-.139***	1	.164***	.086**	-.022	-0.005
BIG4	.421***	.201***	.135***	.181***	.026	.235***	.352***	.296***	.238***	.145***	.200***	.489***	-.123***	.117***	.219***	.145***	1	.053	.109***	.137***
GDP	.117***	.185***	-.025	.059	-.005	0.052	.059	.054	-.037	-.042	-.048	0.011	-.043	.016	.007	.052	.016	1	-.253***	.182***
INFL	.024	-.404***	.184***	-.031	.109***	-.089**	-.140***	-.160***	.282***	.199***	.240***	.243***	.184***	.064	.079*	-.073*	.098**	-.277***	1	.097**
CPI	.597***	-0.03	-.202***	-.166***	-.243***	-0.015	.322***	.466***	0.071*	-.262***	-0.042	.175***	0.044	-0.049	-.110***	-0.045	.157***	-0.046	.105***	1

Notes: the bottom half of the table contains Person's parametric correlation coefficients, whereas the upper right half of the table shows Spearman's non-parametric correlation coefficients. ***, **, and * indicate that correlation is significant at the 0.01, 0.05 and 0.1 levels, respectively. Variables are defined as follows: the MENA countries overall Corporate Governance Disclosure Index (MCGI); Islamic Values Disclosure Index (IVDI); board size (BSIZE); board diversity on the basis of gender (BDIVG); board diversity on the basis of ethnic minority (BDIVE); board diversity on the basis of both gender and ethnic minority (BDIV); percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); government ownership (GOWN); director ownership (DOWN); block ownership (BOWN); firm size (LNTA); firm age (AGE); growth opportunity (SGR); leverage (LEV); profitability (ROA); audit firm size (BIG4); gross domestic product growth (GDP); Inflation Index (INFL); and Corruption Perception Index (CPI). Table 2 fully defines all the variables used.

Table 8 presents the correlation matrix for the overall CG voluntary disclosure index (MCGI), independent (country-level) and control variables. The correlation analysis (i.e., Pearson's parametric correlation coefficients only) reveals that *MCGI* positively and significantly correlates with Global Islamic Economy Indicator (GIEI); Political Stability Index (PSI); Government Effectiveness Index (GEI); Regulatory Quality Index (RQI); Rule of Law Index (RLI); and Control of Corruption Index (CCI). On the other hand, it shows that *MCGI* has a negative significant correlation with Voice and Accountability Index (VAI).

Thus, the univariate analysis supports the prediction that firms complying with and disclosing Islamic values are more likely to comply with and disclose voluntary CG practices. Also, firms with highly diversified boards on the basis of ethnic minorities, independent boards and boards with separate leadership positions are more likely to voluntarily comply with, and disclose of, CG practices. It is also found that higher government ownership has an impact upon a firm's voluntary compliance with, and disclosure of, CG practices positively. With regard to country-level variables, the findings suggest positive relationships for firms listed in countries with more compliance with Islamic economic values; scoring a high level of national governance quality (political stability, government effectiveness, regulatory quality, rule of law and control of corruption). On the other side, firms with highly diversified boards on the basis of gender, high director ownership and listed in countries with high voice and accountability are less likely to voluntarily comply with and disclose CG practices. With regard to control variables, correlation analysis illustrates that larger firms (LNTA), younger ones (AGE), high growth opportunity (SGR), high profitability (ROA), audited by one of the Big 4 audit firms, in countries with high GDP growth rates (GDP), and having a strongly enforced control of corruption (CPI) are more likely to voluntarily comply with and disclose CG practices.

Table 8: Pearson and Spearman correlation matrices of all variables: country-level analysis

	MCGI	GIEI	VAI	PSI	GEI	RQI	RLI	CCI	LNTA	AGE	SGR	LEV	ROA	BIG4	GDP	INFL
MCGI	1	.694***	-.209***	.630***	.556***	.507***	.491***	.438***	.467***	-.124***	.083**	0.063	.120***	.420***	.220***	0.053
GIEI	.681***	1	-.161***	.821***	.741***	.629***	.542***	.656***	.373***	0.057	0.043	-.093**	-0.026	.242***	.172***	-0.076*
VAI	-.219***	-0.003	1	.141***	.304***	.341***	.312***	.490***	-.373***	0.065	-.174***	-0.04	-0.065	-.188***	-.180***	.156***
PSI	.596***	.876***	.196***	1	.926***	.879***	.788***	.830***	.167***	0.052	-0.011	-.129***	.093**	.242***	.236***	0.054
GEI	.554***	.890***	.185***	.888***	1	.888***	.842***	.923***	.091**	0.076*	-0.072*	-.119***	0.049	.184***	.209***	.092**
RQI	.532***	.785***	.168***	.877***	.924***	1	.847***	.877***	-0.015	0.048	-0.068*	-.137***	.107***	.157***	.265***	0.024
RLI	.481***	.690***	.107***	.767***	.873***	.942***	1	.816***	-0.071*	0.075*	-0.051	-.123***	.107***	.141***	.285***	0.043
CCI	.553***	.902***	.262***	.857***	.955***	.874***	.820***	1	0.006	.091**	-.118***	-.109***	-0.008	.087**	.244***	.081**
LNTA	.457***	.307***	-.345***	.123***	.130***	0.021	-0.034	.109***	1	-.102**	.155***	.221***	.083**	.492***	0.013	.183***
AGE	-.172***	0.001	.150***	0.016	0.009	-0.011	-0.025	0.02	-.226***	1	-0.074*	-.230***	-0.056	-.088**	-0.05	.206***
SGR	0.078*	0.015	-.168***	-0.018	-0.069*	-0.069*	-0.078*	-.093**	.173***	-.116***	1	0.066	.302***	.107***	-0.003	0.062
LEV	0.065	-.114***	-0.023	-.142***	-.137***	-.155***	-.153***	-.130***	.272***	-.274***	0.052	1	-.088**	.221***	-0.027	0.047
ROA	.097**	-0.021	-0.051	.098**	-0.004	0.061	0.054	-0.035	0.068*	-0.009	.287***	-.139***	1	.164***	.086**	-0.022
BIG4	.421***	.233***	-.161***	.242***	.150***	.139***	.096**	.121***	.489***	-.123***	.117***	.219***	.145***	1	0.053	.109***
GDP	.117***	-0.044	-.304***	-0.031	-0.024	.132***	.154***	-0.054	0.011	-0.043	0.016	0.007	0.052	0.016	1	-.253***
INFL	0.024	.085**	.253***	0.033	-.105***	-.282***	-.467***	-0.069*	.243***	.184***	0.064	0.079*	-0.073*	.098**	-.277***	1

Notes: the bottom half of the table contains Person's parametric correlation coefficients, whereas the upper right half of the table shows Spearman's non-parametric correlation coefficients. ***, **, and * indicate that correlation is significant at the 0.01, 0.05 and 0.1 levels, respectively. Variables are defined as follows: the MENA countries overall Corporate Governance Disclosure Index (MCGI); Global Islamic Economy Indicator (GIEI); Voice and Accountability Index (VAI); Political stability index (PSI); Government Effectiveness Index (GEI); Regulatory Quality Index (RQI); Rule of Law Index (RLI); Control of Corruption Index (CCI); firm size (LNTA); firm age (AGE); growth opportunity (SGR); leverage (LEV); profitability (ROA); audit firm size (BIG4); gross domestic product growth (GDP); and inflation index (INFL). Table 2 fully defines all the variables used.

5.2 Multivariate Regression Analysis

Regression results for the model investigating firm-level antecedents of the level of disclosure and compliance with CG practices are illustrated in Table 9. Models 1, 2 and 3 show the cross-sectional OLS regressions of Islamic values disclosure, board characteristics, ownership structure mechanisms and control variables on *MCGI*. In Model 1, board diversity is measured on the basis of both gender and ethnic minority, while in Models 2 and 3 board diversity is measured on the basis of gender (BDIVG) and ethnic minority (BDIVN), respectively.

With regard to Islamic values disclosure, Model 1 shows a positive and significant relationship between *IVDI* and *MCGI*, suggesting *H1* is empirically supported. This evidence is consistent with the theoretical predictions of the neo-institutional theory insights. The efficiency-led perspective suggests that firms complying with, and disclosing, Islamic values are more likely to comply with, and disclose, good CG practices, to attract more resources by meeting Islamic finance providers' demand for information about their investments. From the legitimisation perspective, firms practising Islamic values are more likely to voluntarily comply and disclose CG practices to improve their reputation and image. This legitimises their operations through working within the framework of their society's principles. Empirically, the results are in line with the finding of Al-Bassam and Ntim (2016), which indicates that Islamic values drive the extent to which Saudi listed firms voluntarily comply with and disclose CG provisions contained in the 2006 Saudi code. Additionally, the current study's result is in line with that of Ongena and Sendeniz-Yuncu (2011), which suggests that Islamic banks mainly deal with more transparent firms. The findings also support the empirical results of previous studies (e.g., Maali *et al*., 2006; Farook *et al.*, 2011), which argue that Islamic banks with effective Islamic governance (e.g., required to pay the Islamic religious tax *zakah*) provide more voluntary disclosures than those who do not adhere to Sharia.

Second, large boards (BSIZE) are found to have a negative significant impact on the extent of a firm's compliance with, and disclosure of, good CG practices, which supports *H2*. This finding is consistent with the suggestions of neo-institutional theory (efficiency perspective) that firms with large boards may suffer from problems in communication and coordination between board members. They also have an increased hazard of being dominated by the CEO, so large boards are inefficient in monitoring managers' behaviour and in taking decisions, including more voluntary disclosure of CG practices (Jensen, 1993; Yermack, 1996; Cerdioni and Parbonetti, 2007; Guest, 2009). Empirically, the findings are consistent with the literature (e.g., Cerdioni and Parbonetti, 2007; Tauringana and Mangena, 2014), which demonstrates that small boards of directors are more efficient in monitoring management and taking decisions related to expanding voluntary CG compliance and disclosure practices.

With regard to other board characteristics variables, the empirical evidence supports *H3*, which suggests that more diversified boards based on gender and ethnic minority are more likely to voluntarily comply with and disclose CG practices. This evidence is consistent with the neo-institutional theoretical framework (efficiency perspective), which suggests that boards with a higher proportion of women and ethnic minorities tend to fulfil their monitoring and counselling roles more efficiently. This can be accomplished by raising more discussion and innovative ideas in the boardroom. It also increases the opportunity to gain more resources by increasing voluntary CG compliance and disclosure practices. Additionally, from the neo-institutional theory (legitimation perspective), recruiting diversified members to the board of directors enhances a firm's legitimacy and trustworthiness. Furthermore, it helps to attract more resources from powerful stakeholders by binding executives to greater voluntary CG compliance and disclosure practices. Empirically, the findings are consistent with the literature (e.g., Haniffa and Cooke, 2002; Barako and Brown, 2008; Elmagrhi *et al*., 2016). However, Model 2 in Table 9 illustrates that board diversity based on gender (BDIVG) is positively but insignificantly associated with MCGI because of the significant low representation of women on boards, an average of 2.71%. Boards with members from diverse ethnic minorities (BDIVE), as illustrated in Model 3 of Table 9 are positively and significantly associated with the extent of voluntary CG compliance and disclosure practices. The findings reported in Models 2 and 3 of Table 9 are consistent with the findings documented by Elghuweel (2015) in the Omani context.

Fourth, the proportion of independent non-executive board members (NED) is positively and significantly associated with *MCGI*, which also supports *H4*. This indicates that boards with a higher proportion of independent directors are more likely to have greater compliance with, and disclosure of, good CG practices. Therefore, the findings are consistent with the neo-institutional (efficiency and legitimation) perspective which argues that independent boards are more likely to put pressure on managers to increase the extent of voluntary CG compliance and disclosure practices. Consequently this, in turn, can improve directors' human capital by protecting shareholders' interests (Dey, 2008). It also facilitates access to valuable resources and mitigates legitimacy concerns arising from separating ownership and control (Ntim and Soobaroyen, 2013b). Empirically, this finding is consistent with the previous studies of Ezat and El-Masry (2008), Samaha *et al*. (2012), Al Janadi *et al*. (2013) and Tauringana and Chithambo (2016), which suggest that the higher the proportion of independent directors the greater the extent of voluntary disclosure practices.

Table 9: Determinants of voluntary corporate governance compliance and disclosure practices (MCGI)

Independent variables		MCGI	MCGI	MCGI	OSH	TCY	AUD	RTY	BMS
(Model)	Predicted sign	1	2	3	4	5	6	7	8
Islamic Values Disclosure Index variable									
IVDI	+	0.057***	0.044***	0.060***	-0.173	-0.015	0.060**	0.156***	0.085***
		(0.000)	(0.001)	(0.000)	(0.384)	(0.394)	(0.032)	(0.000)	(0.000)
Board characteristics variables									
BSIZE	+/-	-0.020*	-0.018	-0.013	0.006	0.018	-0.059**	-0.086***	-0.005
		(0.092)	(0.137)	(0.264)	(0.721)	(0.256)	(0.021)	(0.002)	(0.791)
BDIV	+	0.147***			-0.115**	0.198***	0.227***	0.294***	0.158***
		(0.000)			(0.011)	(0.000)	(0.000)	(0.000)	(0.001)
BDIVG	+		0.076		-	-	-	-	-
			(0.299)						
BDIVE	+			0.237***	-	-	-	-	-
				(0.000)					
NED	+	0.074***	0.082***	0.062**	-0.030	0.159***	0.161***	0.033	0.061
		(0.002)	(0.001)	(0.011)	(0.423)	(0.000)	(0.002)	(0.549)	(0.123)
DBLS	+/-	0.025***	0.028***	0.017*	-0.046***	0.000	0.077***	-0.047**	0.073***
		(0.008)	(0.003)	(0.063)	(0.001)	(0.972)	(0.000)	(0.027)	(0.000)
Ownership construction mechanisms									
GOWN	+/-	-0.019	-0.032**	-0.002	0.020	0.096***	-0.063**	-0.123***	-0.028
		(0.200)	(0.039)	(0.893)	(0.386)	(0.000)	(0.050)	(0.000)	(0.248)
DOWN	-	-0.061***	-0.054***	-0.059***	0.032	-0.002	-0.148***	-0.078**	-0.085***
		(0.000)	(0.001)	(0.000)	(0.194)	(0.936)	(0.000)	(0.034)	(0.001)
BOWN	-	-0.000	0.009	-0.008	-0.051*	0.019	0.046	-0.055	0.014
		(0.979)	(0.640)	(0.675)	(0.072)	(0.435)	(0.247)	(0.199)	(0.647)
Control variables: Firm-level									
LNTA	+	0.011***	0.011***	0.009***	0.010***	-0.018***	0.020***	0.022***	0.014***
		(0.000)	(0.000)	(0.000)	(0.009)	(0.000)	(0.000)	(0.000)	(0.000)
AGE	+/-	-0.014**	-0.015***	-0.017***	-0.013	-0.027***	0.004	0.002	-0.022**
		(0.014)	(0.008)	(0.002)	(0.114)	(0.000)	(0.739)	(0.901)	(0.013)
SGR	+	0.003	0.001	0.003	-0.012	-0.001	.005	-0.009	0.015
		(0.659)	(0.922)	(0.635)	(0.232)	(0.924)	(0.723)	(0.580)	(0.173)
LEV	+	-0.023	-0.025	-0.030*	0.042	-0.015	-0.021	-0.030	-0.058**
		(0.160)	(0.150)	(0.072)	(0.102)	(0.495)	(0.547)	(0.432)	(0.033)
ROA	+	0.131***	0.146***	0.131***	-0.007	0.139**	0.073	0.089	0.243***
		(0.002)	(0.001)	(0.001)	(0.910)	(0.012)	(0.413)	(0.347)	(0.000)
BIG4	+	0.027***	0.032***	0.028***	-0.004	0.042***	0.036**	0.058***	0.019
		(0.000)	(0.000)	(0.000)	(0.732)	(0.000)	(0.018)	(0.000)	(0.103)
Control variables: Country level									
GDP	+	0.353***	0.385***	0.370***	0.294*	-0.065	0.518**	0.382	0.475**
		(0.002)	(0.001)	(0.001)	(0.094)	(0.670)	(0.036)	(0.148)	(0.011)
INFL	+	0.013**	0.010	0.015**	-0.036***	-0.061***	0.024*	0.161***	0.009
		(0.045)	(0.154)	(0.020)	(0.000)	(0.000)	(0.098)	(0.000)	(0.408)
CPI	+	0.452***	0.431***	0.454***	-0.138***	0.509***	0.890***	0.698***	0.406***
		(0.000)	(0.000)	(0.000)	(0.004)	(0.000)	(0.000)	(0.000)	(0.000)
YDU		Included	Included	Included	Included	Included	Included	Included	Included
INDU		Included	Included	Included	Included	Included	Included	Included	Included
Constant		0.185***	0.188***	0.213***	0.726***	0.679***	-0.274***	-0.409***	0.156
Durbin-Watson statistics		1.922	1.920	1.990	1.690	2.065	1.716	2.180	1.606
F-value		47.04***	44.27***	48.63***	8.51***	27.15***	33.56***	23.41***	24.98***
Adjusted R^2		66.65%	65.26%	67.40%	24.58%	53.16%	58.56%	49.31%	51.00
No. of observations		600	600	600	600	600	600	600	600

Notes: P-values are between brackets. ***, **, * indicate that the relationships are significant at the 0.01, 0.05 and 0.10 levels, respectively. Variables are defined as follows: the MENA countries overall Corporate Governance Disclosure Index (MCGI); Islamic Values Disclosure Index (IVDI); board size (BSIZE); board diversity on the basis of gender (BDIVG); board diversity on the basis of ethnic minority (BDIVE); board diversity on the basis of both gender and ethnic minority (BDIV); percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); government ownership (GOWN); director ownership (DOWN); block ownership (BOWN); firm size (LNTA); firm age (AGE); growth opportunity (SGR); leverage (LEV); profitability (ROA); audit firm size (BIG4); gross domestic product growth (GDP); Inflation Index (INFL); Corruption Perception Index (CPI); year dummies (YDU); and industry dummies (INDU). Table 2 fully defines all the variables used.

Fifth, separation of the board leadership role (DBLS) is found to have a positive significant association with *MCGI*, which supports *H5*. Theoretically, this finding is consistent with neo-institutional theory (efficiency and legitimation views). This suggests that boards with separate roles of chairperson and CEO are more likely to voluntarily comply with and disclose CG practices. Non-dual board leadership enhances the legitimacy of managerial decisions by developing checks and balances over management's performance and reducing advantages gained from withholding information (Forker, 1992). Empirically, the results support previous studies which have documented a positive and significant association between separate CEO/chairperson roles and the extent of voluntary disclosure of CG practices (Haniff and Cooke, 2002; Eng and Mak, 2003; Gul and Leung, 2004; Barako *et al*., 2006; Laksmana, 2008; Samaha *et al*., 2012).

With regard to the association between ownership structure mechanisms and *MCGI*, the results show that different mechanisms have diverse impacts on voluntary CG compliance and disclosure practices. Specifically, government ownership is negatively but insignificantly associated with voluntary CG compliance and disclosure practices, so *H6* is not supported empirically. From the efficiency view of neo-institutional theory, firms with high government ownership are more likely to voluntarily disclose good CG practices to facilitate gaining essential resources (Haniffa and Huddaib, 2006) and to mitigate agency conflict between management and owners (Ntim and Soobaroyen, 2013b). Additionally, the legitimacy view of neo-institutional theory proposes that firms can legitimate operations by increasing the extent of voluntary CG compliance and disclosure practices (Alguilera *et al*., 2007). Empirically, the negative association between government ownership and *MCGI* is congruent with the finding of Dam and Scholtens (2012). Alotaibi and Hussainey (2016) document that CSR disclosure level is negatively associated with percentage of government ownership in Saudi non-financial listed firms. Al Janadi *et al*. (2013) also report a significant negative relationship between state ownership and voluntary disclosure in Saudi Arabia. They suggest that governments in MENA countries with significant ownership have no interest in providing sufficient information to mitigate agency conflict.

On the other hand, the current results provide empirical evidence that supports *H7*. The neo-institutional (efficiency) perspective argues that a higher level of director ownership helps mitigate agency problems between directors and shareholders, thereby lowering the extent of voluntary CG compliance and disclosure practices (Eng and Mak, 2003; Samaha *et al*., 2012). Moreover, from the legitimisation perspective, firms increasing the level of voluntary CG compliance and disclosure practices to substitute for lower director ownership improve legitimacy and stakeholders' confidence in boards (Eng and Mak, 2003; Ghazali and Weetman, 2006). The current result is consistent with the empirical results provided by previous studies in developing countries which have documented a

negative impact of director ownership on CG disclosure practices (e.g., Oh *et al*., 2011; Samaha and Dahawy, 2011; Khan *et al*., 2013; Albitar, 2015).

The results in Table 9 indicate that block ownership is negatively but insignificantly associated with *MCGI*, and thereby *H8* is not empirically supported. This finding is not in line with the predictions of neo-institutional theory (efficiency and legitimation perspectives), which suggests that firms with more concentrated ownership have fewer agency conflicts than do firms with wider ownership. Thus, concentrated ownership works as a monitoring tool substituting the need for more voluntary disclosure. Empirically, although it is insignificant, the negative association between block ownership and *MCGI* supports findings of Haniffa and Cooke (2002), Marston and Polei (2004), Bozec and Bozec (2007), Samaha and Dahawy (2011), Samaha et al. (2012), Al-Najjar and Abed (2014) and Elmagrhi *et al*. (2016).

With regard to the association between control variables and MCGI illustrated in Table 9, Models 1, 2 and 3 produce mixed results. For example, firm size (LNTA), profitability (ROA), audit firm size (BIG4), gross domestic product growth (GDP), Inflation Index (INFL) and Corruption Perception Index (CPI) positively and significantly impact on voluntary CG compliance and disclosure practices. These results support the findings of Belkaoui (1983), Ntim *et al*. (2012b), Al Janadi *et al*. (2013), Albitar (2015), Habbash *et al.* (2015), Mateescu, (2015) and Elmagrhi *et al*., (2016). However, the other control variables, including leverage (LEV) and growth opportunity (SGR), have an insignificant impact on the *MCGI*. The insignificant influence of these variables is in line with previous studies which have found no association between these variables and voluntary disclosure (e.g., Haniffa and Cooke, 2002; Eng and Mak, 2003; Samaha *et al*., 2010; Ntim *et al*., 2012b; Ntim *et al*., 2013; Aljifri *et al*., 2014; Albitar, 2015; Mateescu, 2015). Furthermore, the results support the suggestion that young firms (AGE) are more likely to heighten the level of voluntary CG compliance and disclosure practices to gain market confidence by reducing uncertainty about their operations (Haniffa and Cooke, 2002; Sehar *et al*., 2013). Likewise, reported findings support the positive and significant effects of a country's economic and cultural variables (GDP, INFL and CPI) on the extent of a firm's voluntary CG compliance and disclosure practices. The findings of the current study illustrate that firms in countries with high economic growth (GDP) are associated with more voluntary CG compliance and disclosure practices, which is consistent with the empirical evidence provided by several authors (e.g., Belkaoui, 1983; Salter, 1998; Archambault and Archambault, 2003). Also, firms in countries suffering high inflation tend to disclose more (Doupnik and Salter, 1995). The Corruption Perception Index (CPI) was found to have a positive significant impact on CG voluntary disclosure, consistent with Judge *et al*. (2008) and Baldini *et al*. (2016).

The main CG index used in this study (MCGI) contains five sub-indices, namely ownership structure (OSH), financial transparency (TCY), auditing (AUD), corporate responsibility and compliance (RTY) and board and management structure and process (BMS). To infer the association between Islamic governance, board characteristics and ownership structure mechanisms with the five sub-indices and assess whether these relations differ from the overall *MCGI*, Table 9, Models 4 to 8, shows the results of OLS regression of the explanatory and control variables on the five sub-indices. For example, the coefficients of Islamic values disclosure (IVDI) remain statistically significant and positively associated with AUD, RTY and BMS sub-indices, but negatively and insignificantly associated with OSH and TCY sub-indices. With regard to board size (BSIZE) the coefficients (except for OSH, TCY and BMS) remain significant and negatively associated with both AUD and RTY sub-indices. In general, the coefficients of the ownership structure mechanisms (i.e., government ownership (GOWN) and block ownership (BOWN)) are insignificantly associated with most of the five sub-indices, while director ownership (DOWN) has a negative and significant effect on most of them. Generally, the findings presented in Models 4 to 8 of Table 9, empirically support the former results illustrated in Model 1 of Table 9.

Table 10 shows the regression results for the country-level antecedents of the level of disclosure and compliance with CG practices. Results which are demonstrated for Model 1 in Table 10 confirm that firms listed in countries applying the Islamic economic model are more likely to comply with and disclose CG practices, which supports *H9*. Theoretically, this finding is consistent with the neo-institutional (efficiency and legitimation views) perspective. This suggests that firms listed in countries with more dominant Islamic economic sectors are more likely to voluntarily comply with and disclose CG practices. Business organisations in the Islamic world generally encounter unique agency relationships and CG challenges, requiring them to disclose more information to mitigate agency conflict in addition to gain social legitimacy. Empirically, the results support previous studies which have documented a positive impact of religion on the extent of corporate disclosure (e.g., Archambault and Archambault, 2003).

Models 2-7 of Table 10 illustrate the results of the association between national governance quality variables and CG index (MCGI). In general, reported findings confirm that national governance quality (except, voice and accountability) is also positively related to CG disclosure (H10). This is consistent with the neo-institutional theory perspective which suggests that firms operating in countries characterised by high-quality governance (i.e., political stability, government efficiency, regulatory quality, rule of law and control of corruption) are generally assumed to have a higher level of corporate disclosure. The current results support *H10* and are consistent with the empirical results provided by several authors (e.g., Judge *et al*., 2008; Mateescu, 2015; Baldini *et al*., 2016).

Table 10: Country determinants of voluntary corporate governance compliance and disclosure practices (MCGI)

Independent Variables		MCGI	MCGI	MCGI	MCGI	MCGI	MCGI	MCGI
(Model)	Predicted sign	1	2	3	4	5	6	7
Global Islamic Economy Indicator variable								
GIEI	+	0.543***						
		(0.000)						
National governance quality variables								
VAI	+		-0.272					
			(0.644)					
PSI	+			0.275***				
				(0.000)				
GEL	+				0.352***			
					(0.000)			
RQI	+					0.471***		
						(0.000)		
RLI	+						0.614***	
							(0.000)	
CCI	+							0.378***
								(0.000)
Control variables: Firm-level								
LNTA	+	0.005***	0.017***	0.016***	0.012***	0.015***	0.015***	0.012***
		(0.003)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
AGE	+/-	-0.021***	-0.020**	-0.020***	-0.024***	-0.022***	-0.023***	-0.023***
		(0.000)	(.010)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGR	+	-0.002	-0.006	0.002	0.004	-0.003	0.004	0.005
		(0.752)	(0.529)	(0.735)	(0.552)	(0.638)	(0.639)	(0.461)
LEV	+	-.008	-.085***	-0.017	-0.027	-0.028	-0.032*	-0.029*
		(0.605)	(0.000)	(0.308)	(0.123)	(0.118)	(0.077)	(0.098)
ROA	+	0.110***	0.027	-0.012	0.071	0.026	0.034	0.086**
		(0.005)	(0.625)	(0.771)	(0.103)	(0.558)	(0.448)	(0.049)
BIG4	+	0.039***	.061***	0.026***	0.043***	0.039***	0.041***	0.046***
		(0.000)	(.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Control variables: Country-level								
GDP	+	0.468***	.310*	0.359***	0.451***	0.173	0.265**	0.517***
		(0.000)	(.063)	(0.003)	(0.000)	(0.179)	(0.043)	(0.000)
INFL	+	-0.013*	-.014*	-0.019***	0.001	0.014**	0.041***	-0.001
		(0.010)	(.082)	(0.001)	(0.855)	(0.025)	(0.000)	(0.818)
YDU		Included	Included	Included	Included	Included	Included	Included
INDU		Included	Included	Included	Included	Included	Included	Included
Constant		0.300***	.426***	.310***	.237***	0.111***	-0.020	.0.174***
Durbin-Watson statistics		2.008	1.396	1.985	1.856	1.843	1.818	1.876
F-value		69.66***	18.04***	58.55***	50.42***	47.19***	44.27***	46.87***
Adjusted R^2		67.36%	33.87	63.36%	59.76%	58.12%	56.53%	66.57%
No. of observations		600	600	600	600	600	600	600

Notes: P-values are between brackets. ***, **, * indicate that the relationships are significant at the 0.01, 0.05 and 0.10 levels, respectively. Variables are defined as follows: the MENA countries overall Corporate Governance Disclosure Index (MCGI); Global Islamic Economy Indicator (GIEI); Voice and Accountability index (VAI); Political stability index (PSI); Government Effectiveness Index (GEI); Regulatory Quality Index (RQI); Rule of Law Index (RLI); Control of Corruption Index (CCI); firm size (LNTA); firm age (AGE); growth opportunity (SGR); leverage (LEV); profitability (ROA); audit firm size (BIG4); country's gross domestic product growth (GDP); Country's Inflation Index (INFL); year dummies (YDU); and Industry dummies (INDU). Table 2 fully defines all the variables used.

5.3 Robustness Tests

To ascertain the robustness of the results, further analyses were run.

5.3.1 Results Based on weighted Corporate Governance Index

The first sensitivity test is related to the 51 CG provisions of the overall *MCGI*. Each of these provisions is assigned equal weight in the overall *MCGI*. The five sub-indices are allocated different weights due to the existence of different numbers of provisions in each sub-index: ownership structure, OSH 17.6% (i.e., nine CG provisions divided by 51) financial transparency, TCY 15.7% (i.e., eight CG provisions), auditing, AUD 17.6% (i.e., nine CG provisions), corporate responsibility and compliance, RTY 13.7% (i.e., seven CG provisions), and board and management structure and process, BMS 35.3% (i.e., 18 CG provisions). Accordingly, an alternative index (weighted-MCGI) is created in which each of the five sub-indices is assigned an equal weight of 20% to find out whether the results hold regardless of the weighting of the five sub-indices. Model 1 of Table 11 shows the results of the association between explanatory variables (firm-level) and weighted CG index (weighted-MCGI). Generally, the results are consistent with those obtained using the non-weighted CG index (MCGI) presented in Model 1 of Table 9.

5.3.2 Results Based on Non-Linear Assumption of Corporate Governance Measures

To investigate the existence of a non-linear association between some board characteristics (i.e., board size (BSIZE)), ownership structure mechanisms (i.e., government ownership (GOWN), director ownership (DOWN), block ownership (BOWN)) and voluntary CG compliance and disclosure practices (following Short and Keasey, 1999; Guest, 2009; Elmagrhi *et al*., 2016), Model 1 in Table 9 has been re-estimated by adding the square root of board size ($BSIZE^2$), government ($GOWN^2$), director ($DOWN^2$) and block ownership ($BOWN^2$). The results are documented in Models 2 to 5 in Table 11, respectively. The findings in Model 2 illustrate that the association between larger boards ($BSIZE^2$) and *MCGI* index is statistically insignificant, supporting the absence of a curvilinear relationship between board size and voluntary CG compliance and disclosure practices. This evidence is incongruent with the findings of Guest (2009) and Elmagrhi *et al*. (2016), which suggest a non-linear relationship between board size and firm performance. The findings reported in Model 3 of Table 11 do not support the existence of a curvilinear link between government ownership (GOWN) and *MCGI*. On the other hand, Models 4 and 5 show that the other ownership variables (i.e., $DOWN^2$ and $BOWN^2$) have a positive and significant impact on MCGI. For example, with regard to $BOWN^2$,

the evidence reported for Model 5 suggests that block owners become more entrenched at higher levels of ownership, which is consistent with theoretical suggestions that concentrated ownership is associated with less information asymmetry, and can ultimately lead to a reduction in agency problems (Reverte, 2009), thereby reducing the demand for more corporate disclosure (Ntim and Soobaroyen, 2013b).

5.3.3 Results Based on the Lagged Structure Model

Following Ntim and Soobaroyen (2013b), the study runs an additional robustness test, which regresses the current year's voluntary CG compliance and disclosure practices index (MCGI) on the previous year's Islamic Values Disclosure Index (IVDI), board characteristics and ownership structure mechanisms. This lagged structure is used to account for possible endogeneity problems that might be caused by simultaneous association among the explanatory variables Islamic Values Disclosure Index (IVDI), board characteristics (BSIZE, BDIV, NED and DBLS), ownership structure mechanisms (GOWN, DOWN and BOWN) and the dependent variable (MCGI). The results presented for Model 6 in Table 11 show that in general the findings for Model 1 in Table 9 are largely robust in estimating lagged Islamic values disclosure, board characteristics, ownership structure mechanisms and voluntary CG compliance and disclosure practices.

5.3.4 Results Based on the 2SLS Model

To address potential endogeneities that might arise as a result of omitted variables, a two-stage least squares (2SLS) model was estimated (following Beiner *et al*., 2006; Henry, 2008). First, the probability of existence of an endogenous relationship between Islamic values disclosure, board characteristics and ownership structure mechanisms on the one hand and voluntary CG compliance and disclosure practices on the other hand was examined by a Durbin-Wu-Hausman exogeneity test (Beiner *et al*., 2006). The results reject the null hypothesis of no endogeneity. Consequently, conducting a 2SLS test using a CG mechanisms instrument that is better correlated with CG mechanisms and less with the regression structural errors, is more appropriate than the OLS model. The findings reported for Model 7 in Table 11 to some extent suggest that the results of the OLS model presented in Model 1 of Table 9 are robust to the existence of endogeneities caused by omitted variables.

5.3.5 Results Based on the Fixed-Effect Model

Finally, it has been suggested that voluntary compliance and disclosure of CG practices may be influenced by other firm-specific opportunities and difficulties (Henry, 2008). Therefore, a fixed-

effect model was estimated to address potential unobserved firm-specific heterogeneities that the OLS regression model may fail to control (Henry, 2008; Guest, 2009; Ntim *et al*., 2012a; Elmagrhi *et al*., 2016). The estimated fixed-effect model is based on the re-estimation of Model 1 in Table 9, by including 99 dummies to represent the 100 sampled firms. The findings illustrated in Model 8 of Table 11 indicate that board size (BSIZE), board independence (NED) and block ownership (BOWN) have a significantly negative impact on voluntary CG compliance and disclosure practices. On the other hand, the separation of the CEO/chairperson role (DBLS) has a significantly positive association with the voluntary disclosure index (MCGI). Other results provide evidence that Islamic Values Disclosure Index (IVDI) and board diversity (BDIV) have a positive but insignificant relation with voluntary CG compliance and disclosure practices (MCGI). Similarly, government ownership (GOWN) and director ownership (DOWN) are found to have an insignificant and negative association with voluntary disclosure of CG practice. Zhou (2001) and Wooldridge (2010) argue that a fixed-effect approach may not be appropriate because intra-firm CG variables are relatively stable over time, while there are large differences between firms.

Untabulated results shows that the findings related to the association between country-level explanatory factors and the extent of compliance with, and disclosure of, CG practices (presented in Models 1-7 of Table 10) are generally robust across the non-weighted CG index, controlling for internal CG mechanisms (board characteristics and ownership structure mechanisms), lagged, 2SLS and fixed-effect models.

Table 11: Sensitivity analyses of the determinants of corporate governance disclosures

Independent Variables (Model)	Predicted sign	Weighted-MCGI (1)	Non-linearity test MCGI (2)	MCGI (3)	MCGI (4)	MCGI (5)	Lagged (6)	2SLS (7)	Fixed-effect (8)
IVDI	+	0.054***	0.056***	0.056***	0.052***	0.055***	0.076***	-0.103	0.018
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.317)	(0.307)
Board characteristics variables									
BSIZE	+/-	-0.025**	-0.129	-0.019	-0.016	-0.017	-0.025*	-0.059	-0.060***
		(0.026)	(0.240)	(0.118)	(0.177)	(0.163)	(0.058)	(0.337)	(0.006)
$BSIZE^2$	+/-		0.026						
			(0.318)						
BDIV	+	0.153***	0.143***	0.147***	0.141***	0.140***	0.147***	0.009	0.015
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.958)	(0.601)
NED	+	0.077***	0.077***	0.075***	0.069***	0.067***	0.094***	-0.059	-0.095***
		(0.001)	(0.002)	(0.002)	(0.004)	(0.006)	(0.000)	(0.586)	(0.001)
DBLS	+/-	0.011	0.025***	0.025***	0.021**	0.024***	0.018*	0.148***	0.031***
		(0.193)	(0.009)	(0.008)	(0.023)	(0.010)	(0.082)	(0.000)	(0.000)
Ownership structure mechanisms									
GOWN	+/-	-0.020	-0.019	-0.027	-0.021	-0.021	-0.021	-0.350***	-0.042
		(0.172)	(0.210)	(0.542)	(0.155)	(0.162)	(0.202)	(0.000)	(0.244)
$GOWN^2$	+/-			0.010					
				(0.860)					
DOWN	-	-0.056***	-0.064***	-0.062***	-0.176***	-0.064***	-0.075***	0.072	-0.002
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.316)	(0.931)
$DOWN^2$	-				0.141***				
					(0.001)				
BOWN	-	-0.005	0.002	-0.000	-0.020	-0.094*	0.008	-0.129***	-0.038*
		(0.762)	(0.921)	(0.978)	(0.296)	(.068)	(0.700)	(0.003)	(0.095)
$BOWN^2$	-					0.096*			
						(0.052)			
Control variables		Included	Included	Included	Included	Included	Included	Included	Included
YDU		Included	Included	Included	Included	Included	Included	Included	Included
INDU		Included	Included	Included	Included	Included	Included	Included	Included
Firm dummies		Excluded	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded	Included
Constant		0.176***	0.296**	0.183***	0.196***	0.196***	0.185***	0.071	0.513***
Durbin-Watson statistics		2.051	1.928	1.925	1.954	1.940	1.961	1.922	1.850
F-value		50.18***	45.34***	45.22***	46.54***	45.66***	41.74***	47.04***	30.76***
Adjusted R^2		68.10	66.65	66.59	67.24	66.81	67.12	66.65	94.87
No. of observations		600	600	600	600	600	600	600	600

Notes: P-values are between brackets. ***, **, * indicate that the relationships are significant at the 0.01, 0.05 and 0.10 levels, respectively. Variables are defined as follows: the MENA countries overall Corporate Governance Disclosure Index (MCGI); Islamic Values Disclosure Index (IVDI); board size (BSIZE); board diversity on the basis of gender (BDIVG); board diversity on the basis of ethnic minority (BDIVE); board diversity on the basis of both gender and ethnic minority (BDIV); percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); government ownership (GOWN); director ownership (DOWN); block ownership (BOWN); firm size (LNTA); firm age (AGE); growth opportunity (SGR); leverage (LEV); profitability (ROA); audit firm size (BIG4); gross domestic product growth (GDP); Inflation Index (INFL); Corruption Perception Index (CPI); year dummies (YDU); and Industry dummies (INDU). Table 2 fully defines all the variables used.

6 Summary and Conclusion

Although MENA countries have engaged recently in extensive economic and financial reforms (e.g., issuing CG codes) to attract more private and foreign investments, the literature examining their level of compliance with, and disclosure of, CG practices is still limited. Consequently, this study investigates the extent of compliance with, and disclosure of, good CG practices among firms listed in MENA countries. Specifically, it examines whether firm- and country-specific factors can explain cross-sectional variations in the extent of compliance with, and disclosure of, good CG practices in MENA countries using insights from neo-institutional theory.

The findings provide new evidence for the wide extent of heterogeneity in the level of compliance with and disclosure of good CG practices among MENA listed firms. MCGI ranges from a minimum of 31.37% to a maximum of 84.31%, with the average (median) firm compliance standing at 56.45% (56.86%). Despite the relatively large number of CG codes issued in MENA countries, companies still have a lower level of compliance with, and disclosure of, the provisions of these codes. The results are mostly consistent with the efficiency and legitimation inferences of neo-institutional theory, which indicates that the extent of voluntary compliance with, and disclosure of, CG practices (i) is higher for companies committed to voluntary embrace and incorporate Islamic values in business operations; and companies with more diversified boards (based on gender and nationality), independent boards and boards with separate board leadership; and (ii) is lower for large boards, and companies with a high level of director ownership. With regard to country-level antecedents, the findings support the the positive and significant relationship between religion, quality of national governance and voluntary compliance with, and disclosure of, CG practices.

6.1 Contributions, Policy Implications and Recommendations

The findings make a number of contributions to the voluntary CG compliance and disclosure practices literature. First, the majority of national CG codes issued in MENA countries are based on an Anglo-American model that may be inconsistent with the local corporate context and may not lead to the desired outcomes. The current study provides empirical evidence that national CG codes generally attain favourable outcomes over time, although the differences in the corporate contexts of emerging and developed countries should be taken into account in introducing new CG reforms or modifying existing ones. The evidence also supports the suggestion that emerging economies tend to implement CG best practice as proposed by leading international organisations (e.g., OECD), in order to be globally competitive, attain international legitimacy, and thereby attract foreign investment. This supports the notion of the international movement toward attaining CG harmonisation, with different countries tending to adopt national CG structures similar to the Anglo-American model.

Second, many studies investigating antecedents of voluntary compliance with, and disclosure of, good CG practices have been conducted in developed countries, where institutional structures and corporate settings are largely similar. However, there is limited evidence from emerging countries. Therefore, the current study contributes to the literature by investigating CG compliance and disclosure in MENA countries, using one of the largest and most extensive hand-collected data sets to date (a sample of 100 MENA listed firms from 2009 to 2014, with 600 firm-year observations) in order to permit generalisability of the results. Furthermore, unlike a large number of studies that rely on either time series or cross-sectional data, this study employs panel data that reduces the effect of multicollinearity, controls unobserved heterogeneity among variables and increases the degree of freedom.

Third, in line with the recommendation that CG can be better investigated by a composite CG index, this study used a CG index consisting of 51 provisions divided into five categories: ownership structure and exercise of control rights, financial transparency, auditing, corporate responsibility and compliance, and board and management structure and process. Through these, various issues associated with CG in the MENA countries' corporate setting can be examined. This provides more suggestions for researchers, policy makers and others in MENA countries who prefer to use a constructed index, especially if it has been designed by a number of experts to examine the application of best CG practices.

Fourth, unlike many other studies, this research adds to the literature by examining a number of CG measures that have not been widely investigated. It does not limit its analyses to a few types of board characteristics and ownership structure mechanisms in investigating why and how these antecedents may influence the CG disclosure and compliance level. Instead, it extends the existing literature by providing empirical evidence on firms' Islamic values disclosure, a number of board characteristics including, board size, board diversity on the basis of gender and ethnicity, board independence, non-duality of board leadership, and ownership structure mechanisms: government, block and director ownership. It also investigates the impact of country-level factors including religion and the quality of national governance. The results illustrate that these factors generally significantly influence CG compliance and disclosure in MENA countries.

Finally, unlike previous studies, the current research provides empirical evidence on whether the observed cross-sectional differences in voluntary CG disclosures can be explained by firm-level CG mechanisms (Islamic values disclosure, board characteristics and ownership structure mechanisms) and country-level mechanisms (religion and quality of national governance) using a variety of alternative models and estimations. A number of robustness analyses were conducted to

check the extent to which the main results holds or are sensitive to an alternative CG index: non-linear relationship, omitted variables, and a number of endogeneity problems.

Furthermore, the results have important implications for corporations, regulators and policy makers not only in MENA countries but also in other developing countries and emerging markets intending to apply CG reforms. For companies, the findings suggest that Islamic values disclosure (e.g. conducting Islamic finance and investments, and paying *zakah*), board characteristics (smaller efficient boards, more diversified boards, independent boards and boards with separate leadership), and ownership characteristics (a lower level of director ownership) significantly affect the extent of voluntary CG compliance and disclosure practices. Thus, firms can improve their commitment to good CG practice by considering these CG attributes. Additionally, with regard to governments and regulators in both MENA countries and other emerging markets, most of the findings imply that there is a low level of compliance with and disclosure of good CG practices. There is also a high degree of heterogeneity at this level among MENA listed firms. This is consistent with previous studies which have suggested that most listed companies in these countries do not adhere to disclosure and transparency requirements, given the lack of legislative enforcement. Therefore, this suggests that there is a need for the regulatory authorities and policy makers to further enhance CG compliance and enforcement. This can be attained by strengthening legislative enforcement and establishing a 'compliance and enforcement' unit that will continuously observe the implementation of CG practices.

6.2 Limitations and Avenues for Further Research

Although the findings are generally robust across a number of econometric models, there are some limitations that suggest further research. First, this study depends on a limited sample size (i.e., 600 firm-year observations collected from five MENA economies), because the content analysis used to collect data manually from financial reports consumes much time and effort. The study also had to consider the availability, accessibility, funding and time constraints of a PhD registration period. Thus, future studies could employ a larger representative sample sufficient to generalise the results. Second, the study investigates the impact of a limited set of firm-level internal CG mechanisms (i.e., Islamic values disclosure, board characteristics and ownership structure mechanisms) and country-level variables (i.e., religion and quality of national governance) on voluntary CG compliance and disclosure practices. Future studies might examine the impact of other sets of internal CG mechanisms (e.g., board of directors' efficiency and frequency of meetings, and existence and characteristics of the audit committee), along with other external CG characteristics (e.g., government regulations,

media exposure, market competition and takeover activities), and county-level cultural factors (e.g., cultural practices and social norms).

Third, the current essay's results depend on unweighted CG indices, and although these are generally robust, future studies might refine the analysis by employing a weighted CG index, after consulting independent professional organisations or finding a rigorously developed theoretical basis that rationalises the weightings of various CG provisions. Fourth, although the current study followed a number of procedures recommended in the literature to achieve a high level of reliability and validity, it was not possible to check the inter-coder reliability of the measurement index because the coding scheme was conducted by a single researcher, whose subjectivity may have affected the coding of the index. Therefore, future studies might compile a more reliable CG index by depending on more than one coder.

Fifth, the current study relied mainly on the annual reports to collect CG provisions because these are perceived to be highly credible. However, using other sources of information, including reports from analysts and professional organisations, could extend the range of data. Sixth, the study employs only quantitative analysis in investigating the level and determinants of voluntary CG compliance and disclosure in MENA countries. Therefore, future studies might use both quantitative and qualitative analysis to interpret the results. Finally, this essay contributes to the literature by using the efficiency and legitimation inferences of neo-institutional theory to explain firms' motivations for voluntary CG compliance and disclosure in MENA countries. However, future studies might depend on a multi-theoretical methodology (e.g., political cost theory, signalling theory, resource dependence theory and transaction cost theory) in order to arrive at a uniform theoretical framework that could be used to examine the antecedents of voluntary CG compliance and disclosure.

Empirical Essays on Corporate Governance and Corporate Outcomes in MENA Countries

Essay 2

Board Diversity, Corporate Governance and Corporate Outcomes: Evidence from MENA Countries

Abstract

Despite a large number of previous studies examining the link between board diversity and corporate outcomes, the evidence is mixed. This essay investigates the impact of corporate board diversity based on gender, ethnic minorities and nationality on corporate outcomes, using data from a number of MENA countries. The study documents a positive and significant impact of diversified boards on both firm value and accounting returns. Specifically, it finds that appointing female directors improves firm market value and accounting returns, while foreign directors have a positive and significant effect on accounting performance. This study also shows that the relationship between the percentage of ethnic minority directors, foreign directors and firm accounting returns is stronger in weak-governed firms. Furthermore, the appointment of female and ethnic minority directors in boardrooms enhances the pay-for-performance sensitivity (PPS). However, the study find no evidence for a significant effect of board diversity on executive-pay-packages (EP). The findings are robust across a number of corporate outcomes and different types of endogeneity. Overall, the results imply that recommendations and regulations concerning the appointment of women, ethnic minorities and foreigners to corporate boards should be based not only on moral implications but also on corporate outcome criteria in the MENA region and other developing countries.

Keywords: Corporate Governance, Board Diversity, Firm Outcome, Gender, Ethnicity, Nationality MENA.

1. Introduction

This essay aims to contribute to the literature on extant board composition and corporate outcomes in four main ways, by investigating whether: (i) board diversity based on gender, ethnic minority and nationality impacts firm market value and accounting returns; (ii) corporate governance (CG) quality moderates the relationship between board diversity and firm financial performance; (iii) appointing women, ethnic minorities and foreign directors determines EP; and (iv) board diversity moderates the PPS with specific focus on providing new empirical evidence from MENA countries. The analysis draws on multi-theoretical perspectives (e.g., agency, resource dependence, cognitive development, social identity and stakeholder).

1.1 Background

The board of directors is one of the top decision-making sub-groups in modern organisations (Roberson and Park, 2007; Mahadeo *et al*., 2012; Bart and McQueen, 2013; Dale-Olsen *et al*., 2013; Luckerath-Rovers, 2013; Arnegger *et al*., 2014; Ntim, 2012b, 2015). Boards are associated with the responsibility for taking strategic decisions on mergers, acquisitions, hiring/firing/promoting executives and capital structure (Lipton and Lorsch, 1992; Jensen, 1993; Forbes and Milliken, 1999; Adams *et al*., 2010; Lincoln and Adedoyin, 2012; Abdullah, 2013; Ntim *et al*., 2016a). In addition, boards of directors help modern organisations to have better contacts with sources of finance, contacts and business contracts (Welbourne *et al*., 2007; Triana *et al*., 2013; Wellalage and Locke, 2013; Estélyi and Nisar, 2016).

CG codes of best practices and reforms have focused mainly on the composition of the board of directors (e.g., size, independence, diversity) as an influential tool to enhance CG (Carter *et al*., 2003, 2010; Adams and Ferreira, 2009; Ntim, 2015). Appointing female, ethnic minority and non-national members not only improves board diversity and brings different talents, skills, backgrounds and experience to boardrooms (Carter, 2003, 2010: Ntim, 2015; Gyapong *et al*., 2015), but also enhances board independence and monitoring functions (Jamail *et al*., 2007; Hillman *et al*., 2002; Kramer *et al*., 2007; Baranchuk and Dybvig, 2009). Therefore, emerging interest in diversifying corporate board membership is driven by many growing cultural, political and societal views (Carter *et al*., 2010). Furthermore, there is a global desire for improving CG measures following financial scandals and governance failure (Carter *et al*., 2010; Adams *et al*., 2015). One way to improve corporate boards' governance role is to increase the number of women, ethnic minorities and foreigners (Rose, 2007; Carter *et al.*, 2010; Terjesen *et al*., 2015a; Estélyi and Nisar, 2016).

Recently, diversifying boards on the basis of gender, ethnicity and nationality has become one of the evolving CG issues encountered by authoritative bodies in many countries (Adams and

Ferreira, 2009; Mahadeo *et al.*, 2012; Gyapong *et al.*, 2015). Recent legislative initiatives, especially regarding board gender diversity, have been driven by the perception that the appointment of female directors may enhance the effectiveness of organisational governance (Adams and Ferreira, 2009). Scandinavian countries have shown a significant interest in issuing legislation to specify quotas for the number of female directors on publicly traded firms and/or state-owned enterprises (Rose, 2007; Terjesen *et al.*, 2015a). For example, Norway, Finland and Iceland passed laws in 2003, 2005 and 2010, respectively requiring 40% of board members to be female. The European Commission also proposed legislation for a 40% female quota on the boards of listed companies by 2020 (European Union, 2012). Developing countries also recognise the importance of board diversity as a good CG mechanism. Accordingly, these emerging countries have issued either legislation for quotas for women directors, or CG codes recommending the appointment of women on corporate boards (Terjesen *et al*., 2015a). Kenya, for instance, passed a law in 2010 requiring 33% of the directors of state-owned enterprises to be women. Similarly, South Africa, Malawi and Nigeria issued codes of good governance that include board gender recommendations, in 2009, 2010 and 2011, respectively.

Board diversity is driven by two main motives. First is social equity or equality of opportunity (Carter *et al*., 2003; Terjesen *et al*., 2009, 2015; Torchia, *et al*., 2011; Gregory-Smith *et al*., 2014; Gyapong *et al*., 2015). Appointing female, ethnic minority and foreign directors helps in building more inclusive and fair business institutions that better reflect the constituencies of existing stakeholders (Jamali *et al*., 2007; Terjesen *et al.*, 2009, 2015a; Terjesen and Sealy, 2016). Despite a number of previous studies documenting empirical evidence to support the negative impact of gender diversity on firm performance (e.g., Smith *et al.*, 2006; Adams and Ferreira, 2009; Adhern and Dittmar, 2012), the proposals for appointing women to boards would be better based on the moral value of equal opportunity (Gregort-Smith *et al*., 2014). As Gregort-Smith *et al*. (2014:125) state, "*The moral case that gender diversity is inherently valuable in and of itself does not require justification by citing performance effects*". Second, diversity improves corporate outcomes and increases shareholder value (Carter *et al.*, 2003; Gyapong *et al*., 2015). Diversified boards incorporate talented human capital to improve CG and thereby corporate outcomes (Terjesen *et al*., 2009, 2015; Ntim, 2015; Gyapong *et al*., 2015; Post and Byron, 2015; Estélyi and Nisar, 2016; Terjesen and Sealy, 2016).

1.2 Motivation

Apart from the distinctive context pursued, many previous studies have argued that the association between board diversity and firm value may not just be influenced by organisation-level variations (Baysinger and Butler, 1985; Baysinger and Hoskisson, 1990; Goodstein *et al*., 1994), but

also by differences in country-level regulatory and institutional structures (Van der Walt and Ingley, 2003; Singh and Vinnicombe, 2004; Singh, 2007; Byron and Post, 2016). Thus country-level institutions may influence the strength of the relationship between board diversity and corporate outcomes (Adams *et al*., 2015; Byron and Post, 2016; Estélyi and Nisar, 2016). Despite this development, most previous studies investigating the association between board diversity and firm value have been conducted in developed countries like Australia, the US and Denmark, which have relatively similar institutional contexts (Carter *et al*., 2003; Smith *et al.,* 2006; Kang *et al*., 2007; Rose, 2007; Adams and Ferreira, 2009; Carter *et al.,* 2010), with only a limited number of studies investigating emerging markets like China and South Africa (Liu *et al*., 2014; Gyapong *et al*., 2015; Ntim, 2015). Furthermore, most of the studies conducted in developed countries are concerned with board diversity on the basis of gender (Shrader *et al*., 1997; Burges and Tharenou, 2002; Erhardt *et al.,* 2003; Welbourne *et al*., 2007; Johnston and Malina, 2008; Dobbin and Jung, 2011; Lincoln and Adedoyin, 2012; Abdullah, 2013; Luckerath-Rovers, 2013). Despite the increasing interest in examining the impact of board diversity on corporate outcomes worldwide, the Middle East remains one of the few regions where this aspect has been seriously neglected (Piesse *et al*., 2012; Hasan et al., 2014). The economic, political, legal, cultural and CG structures in MENA countries differ from those of other areas, which limits the generalisability of their results (Jamali *et al*., 2007; Metcalfe, 2007; Samaha *et al*., 2012; Hasan *et al*., 2014). MENA countries as emerging economies have a unique regulatory, culture and institutional context (as will be illustrated in the next section), so the impact of board diversity on the basis of gender, ethnicity and nationality on corporate outcomes may be different from that documented for public corporations operating in developed countries.

1.3 Contributions

Adams *et al*. (2015) argues that the mixed findings in the literature on the relationship between diversity and corporate outcomes can be due to differences across studies in measures of performance, methodologies, time horizons, omitted variable biases and other contextual issues. Thus, this essay investigates the implications of appointing female, ethnic minority and foreign board members on the organisational outcomes in MENA countries, thereby enhancing the literature with a number of distinctive contributions. First, this study uniquely uses a sample of firms listed in five MENA countries to provide evidence on the relationship between diversity and firm outcomes. As explained above, empirical evidence to date is largely from developed countries (Kang *et al*., 2007; Gyapong *et al*., 2015; Ntim, 2015), and their findings may not be generalisable across contexts with varied regulatory and economic environments, cultural differences, market size and development of CG

measures. Accordingly, the impact of board diversity on corporate outcomes should be separately investigated in different countries (Kang *et al*., 2007).

Second, the study offers new critical insights on the impact of board diversity on corporate outcomes. It considers gender, ethnicity and nationality, unusual in the literature. While the majority of studies investigate the impact of board gender diversity on corporate outcomes (Carter *et al*., 2010; Ntim, 2015), it is argued that ethnic, national and gender diversity are dissimilar phenomena, and they will impact corporate outcomes in different ways (Hillman *et al*., 2002, Carter *et al*., 2010; Ntim, 2015; Gyapong *et al*., 2015). Third, this study aims to shed light on a more comprehensive impact of gender, ethnic and nationality board diversity on different aspects of firm outcome. Although most studies have investigated the impact of board diversity on financial performance (i.e., accounting returns and/or firm market value) (Campbell and Minguez-vera, 2008; Carter *et al*., 2006, 2010; Luckerath-Rovers, 2013; Ntim, 2015, Gyapong *et al*., 2015), a limited number have examined the association between board diversity and EP (e.g., Adams and Ferreira, 2009; Elkinawya and Staterb, 2011; Vieito, 2012). Fourth, the study documents evidence on the relative impact of gender versus ethnic and nationality diversity on different organisational outcomes. Fifth, this essay is distinct from previous studies in that it depends on a multi-theory (agency, resource dependence, cognitive development, social identity and stakeholder) framework to infer the results. Finally, the study uses different econometric methods to ensure the robustness of the results.

1.4 Structure of the essay

The rest of the essay is structured as follows. The second section provides a brief overview of the social and cultural context of board diversity within the MENA region. The third section documents the existing theoretical and empirical literature on the impact of board diversity on different corporate outcomes. The fourth section presents the research design. The fifth section reports empirical analyses, whilst the final section contains the summary and conclusion.

2. Social and Cultural Context of Board Diversity within the MENA Region

Recent corporate scandals have directed more attention to CG mechanisms (Hasan *et al*., 2014), mainly the importance of board of directors' roles, effectiveness and the board composition, with particular interest on board diversity (Hyland and Marcellino, 2002; Burke, 2003; Carter *et al*., 2003, 2010). The MENA region has also recognised the importance of diversifying boards to improve corporate outcomes (Jamali *et al*., 2007; Ibrahim and Hanefah, 2014; Loukil and Yousfi, 2016). The

events of the Arab Spring seemed to initiate a demand for change throughout the region, reflecting new aspirations. Young people, especially women, wanted to play a greater role in society, with better economic opportunities. In addition, women in MENA countries today are generally younger, better educated, and have fewer children (Jamali *et al*., 2007; Chamlou, 2008; World Bank, 2013). Moreover, most MENA countries have made significant progress toward education and health outcomes and gender equality. According to the United Nations Development Program (UNDP) (2010), MENA countries have made the world's fastest progress in human development since 1970 (five MENA countries, Algeria, Morocco, Oman, Saudi Arabia and Tunisia, were among the top ten fastest movers). However, this investment in human development is not yet reflected in higher rates of female participation in senior management positions, on corporate boards, and in the labour force in general: it is 'a gender equality paradox'[11] (Jamali *et al*., 2007; Metcalfe, 2007; World Bank, 2013).

In a cross-country study, Terjesen and Singh (2008) find that boards' gender diversity is influenced by social, political and economic macro-environmental factors. Thus, specific national contextual factors such as social norms, legal framework and structure of the economy can have a powerful influence on the incentives, preferences, opportunities and ability of women to participate in work and politics (Metcalfe, 2007; World Bank, 2013). Therefore, in this section the current study attempts to explore the 'gender equality paradox' in the MENA region by finding new important empirical insights on social norms, legal framework, and the structure of the economy in the MENA region.

2.1 MENA Dominated Culture, Traditions, Customs, Norms and Beliefs

MENA countries have inherited cultural practices, traditions, customs and beliefs that are biased against women and support the dominance of men (Jamali *et al*., 2007; Metcalfe, 2007; World Bank, 2013). According to Chamlou (2008), the World Values Survey 1999-2004 shows that both men's and women's perceptions of working women are less positive in the MENA region than elsewhere. The variation in male and female perception of working women also is far wider in the MENA region. Men's less favourable attitude toward working women may affect women's participation in the labour force, especially because women have to obtain the permission of their husbands to travel and work in most Middle East countries. More negative attitudes toward working

[11] In fact the female labour force grew by 5.2% during the period 2000-2005 compared to 4.7% during the 1990s. Women's share in the labour force rose from 25% in the period from 1990 to 2000 to 27% from 2000 to 2005, where new female entrants in the labour market rose from 32% in the 1990s to 36% in 2005 (World Bank, 2007). The increase in the number of women entering the labour market is because of rising education, falling fertility and growing economies (Chamlou, 2008). However, given the general increase in unemployment in the MENA region, the female unemployment rates are higher than for men. For example, despite, male unemployment rates decreasing in Bahrain, Iran, Jordan and Tunisia, female unemployment rates increased. Egypt, with the largest gender unemployment gap in the region, recorded unemployment for women four times that for men (World Bank, 2007).

women also hinder female participation in top management positions and on corporate boards. Using focus-group research in Jordan, Miles (2002) shows that the limited economic participation of women in communities in and around Amman are driven by gender norms related to their restricted mobility, household burdens, occupational segregation and preference for male children. Miles reports, for example, that families are more willing to use their connections to help their educated sons, rather than their educated daughters, to secure good jobs.

Undeniably, religion has played a significant role in the evolution of customs, social norms and laws in the MENA region (World Bank, 2013; Syed and Van Buren, 2014). In Muslim-majority countries, culture and religion are mutually reinforcing (Metcalfe, 2007; Syed and Van Buren, 2014). Within Islam both women and men have equal rights for work and compensation (Syed and Van Buren, 2014), and Islam equally binds both women and men to seek education as a religious duty (Ibn Majah, 1952). Islam also allows women to operate their own business (Hassan, 1994), and recognises a woman's economic rights (Hussain, 1987). Hussain further argues that in Islam, women have economic, political and social separate identities, and the right to earn money and vote. Islamic traditions place significant value on women as mothers; men are responsible for supporting their families economically, so women are less likely to seek paid jobs unless they are forced by special circumstances or for their personal fulfilment (Chamlou, 2008; Syed and Van Buren, 2014). However, much of the Islamic impetus for gender equality in educational, economic and employment rights has been modified because of the influence of pre-existing attitudes, customs and traditions (Hussain, 1987; Mernissi, 1991; Lewis, 1995). Women in many Muslim-majority countries still face relatively higher gender discrimination than women in the West, because of the narrow interpretation of Islamic female modesty and gender segregation (Ali, 2000; Syed *et al.*, 2005; Syed and Van Buren, 2014).

2.2 Legal Framework in MENA Countries

Equal citizenship is stated in almost all MENA countries' constitutions. According to the World Bank Women Business and the Law database, ten of the 14 MENA countries have constitutions or laws that mandate gender equal pay for equal work, and five have legislation that prohibits discrimination in employment practices (World Bank, 2012). However, the practical enforcement of anti-discrimination laws in countries like Algeria and Egypt is not effective. The provisions for gender equality payment are not applied efficiently in practice as many non-wage benefits, such as child and family allowances, are usually paid to the husband (Kelly and Breslin, 2010). All countries in the MENA region mandate laws that require firms to pay for maternity leave and child-care facilities. On the other hand, pension laws stipulate an earlier retirement age for women than for men. In the MENA region, women's participation in numerous sectors of the economy is

limited by laws that ban women from working in certain industries that are considered dangerous, hazardous, or morally harmful to their reputation, or involve night work; this is in order to protect women (World Bank, 2013). Likewise, many MENA countries have guardianship laws that restrict women's mobility and occupational choices. These laws require permission from a husband or male relative for a woman to obtain a passport, travel outside the country, apply for a job and get married. For example, Jordan, Iran, Oman, Saudi Arabia and Yemen have issued laws that require male permission for women to travel outside the country. Gender discriminating pension laws effectively reduce the amount of pension that a woman receives, and can negatively impact women's expected career progression (World Bank, 2013).

2.3 Economic Structure and Institutional Context in MENA Countries

Most listed companies in MENA countries have highly concentrated ownership, with dominance of the state and family controls (Fawzy, 2003; Jamali *et al*., 2007; Omran *et al*., 2008; Ararat *et al.*, 2010; Weir, 2011; Piesse *et al*., 2012; Hasan *et al*., 2014). Smith (2009) documents that 75% of the region's companies are controlled by families. Powerful families in the MENA region tend to actively shape the board of directors by choosing one of their own inner circle (a close relative or senior manager) to be appointed to the board, so the family continues to influence and control the decision-making process (Jamali *et al*., 2007; Weir, 2011). Loukil and Yousfi (2016) report that the director's effect on corporate outcomes (cash holding and investment opportunities) is maximised if the director is a state officer/bureaucrat and/or politically connected. In their exploratory study in Egypt and Saudi Arabia, Piesse *et al*. (2012) find that board independence is influenced by the powers of large shareholders (families and state). A better overall governance environment and investment climate, with greater emphasis on qualifications and meritocracy, would have a positive impact on women's opportunity to compete for jobs. Conversely, wide corruption, poor governance and weak rule of law in MENA societies may negatively impact women's participation in the workforce, and their opportunities for appointment to top management positions and boardrooms, because preference might be given to those (men) with connections (Chamlou, 2008). Most MENA countries began to introduce economic and governance reforms in the mid-1990s, aiming for more market-driven, open and diversified economies; this was well after the collapse of oil prices in the mid-1980s (World Bank, 2007; Piesse *et al*., 2012; Aljifri *et al*., 2014). More recently, corporations in MENA countries have begun to attract a significant number of foreign equity investors,[12] many of which are holding

[12] According to the World Bank (2007), the MENA region witnessed a huge raise in foreign direct investment (FDI) that records $24.4 billion with 40 percent increase in 2006, and three times the level of 2004. This is can be a result of the completion of major privatization reforms in the region and increase investment in energy, infrastructure, real estate and

companies listed on stock exchanges with stricter listing requirements than existing standards on MENA stock exchanges (Jamali *et al*., 2007; World Bank, 2007). Thus, it is expected that foreign investors influence the composition of the board of directors, for example by asking for diversification of the board to include female, ethnic minority and foreign members (Jamali *et al*., 2007; Estélyi and Nisar, 2016).

Many governments in the MENA region responded to the Arab Spring in the wake of earlier (2011) protests by increasing spending on subsidies and public sector wages. Consequently, public sector employment and compensation increased at the expense of private sector job creation. According to the World Bank (2013), on average, the public sector in MENA countries accounts for 45% of total employment. However, there is a recent trend for the proportion of public sector jobs to decline, especially in the resource-poor countries (e.g., Egypt, Jordan, Morocco, Tunisia and Lebanon). In the MENA region many women prefer to work in the public sector especially in "female-friendly" fields such as teaching and administration, especially as private sector employers tend to perceive women as less productive and more costly. In conclusion, many women are discouraged from entering the workforce after graduation, because of the lack of suitable public sector jobs and the difficulty of finding attractive private employment (Assad, 2006; Chamlou, 2008; World Bank, 2013).

3 Theoretical Framework, Literature Review and Development of Hypotheses

3.1 Board Diversity and Firm Performance

The main functions of the board of directors are controlling and monitoring managers, providing advice and counsel to managers, monitoring organisational compliance with applicable rules and legislation, and connecting the organisation to the external environment (Lipton and Lorsch, 1992; Jensen, 1993; Mallin, 2004; Monks and Minow, 2004; Lincoln and Adedoyin, 2012; Abdullah, 2013). Many theories have been used to investigate the association between board diversity and firm performance, including resource dependence theory, human capital theory, agency theory, stakeholder theory and social psychology theory. The arguments driven by these theories suggest that the gender, ethnic and nationality diversity of board members may impact firm value either positively, negatively or neutrally (Kang *et al*., 2007; Singh, 2007; Campbell and Minquez-Vera, 2008; Du Plessis, 2008; Carter *et al*., 2010; Ntim, 2015; Estélyi and Nisar, 2016).

tourism sectors. For example the FDI in Egypt increases to $6.1 billion in 2006, due to investment in telecommunications, banking sector and oil and gas.

3.1.1 Agency Theory

Agency theory suggests that more diversified boards are more independent and better able to perform their monitoring function (Kesner, 1988; Carter *et al*., 2003; Van der Walt and Ingley, 2003; Johnston and Malina, 2008; Adams and Ferreira, 2009; Lincoln and Adedoyin, 2012; Triana *et al*., 2013; Abdullah, 2014). Females, foreigners and ethnic minorities as sub-groups are more coordinated and effective in their monitoring role (Adams and Ferrira, 2009; Gul *et al*., 2011; Butler, 2012; Gyapong *et al*., 2015), and thus the appointment of women, foreigners and different ethnic directors reduces the extent of agency conflict (Ntim *et al*., 2012a; Xiao and Zahoo, 2014) and enhances firm value (Ntim, 2015; Estélyi and Nisar, 2016). Adams and Ferreira (2009) find that not only do women directors have better attendance records than men, but also that the presence of women on boards improves male attendance records, and that females are more likely to joint monitoring committees (e.g., audit, nominating and CG) which indicates that gender diversified boards perform their monitoring function more efficiently. Estélyi and Nisar (2016) suggest that foreign directors improve performance through their positive effect on the board monitoring function (high attendance records not only for foreign national directors but also for the whole board, with foreign directors sitting on audit and CG committees). Estélyi and Nisar also argue that foreign directors are more likely to improve their reputation in labour capital markets as good monitors. Board gender, nationality and ethnicity diversity enhances the decision-making process by adding various ideas, skills, backgrounds, perspectives and business knowledge (Watson *et al*., 1993; Gilbert and Stead, 1999; Baranchuk and Dybvig, 2009; Luckerath-Rovers, 2013), increasing the board's ability to deal with different opportunities and challenges in the organisational external environment (Ntim, 2015). Kandel and Lazear (1992) argue that group diversity helps in controlling 'freeriding', as greater diversity among team members increases mutual monitoring.

On the other hand, agency theory argues that qualified women directors tend to hold multiple directorships (Sealy *et al*., 2008). This 'director busyness' has a negative impact on their ability to provide their monitoring and advisory roles, increasing agency problems and thereby reducing firm value (Fich and Shivdasani, 2006; Jiraporn *et al*., 2009; Faleye *et al*., 2011; Falato *et al*., 2014; Field *et al*., 2014). Women and ethnic minorities may lack the necessary level of skills, qualifications and experience required for directorship (Hillman *et al.*, 2002; Terjesen *et al*., 2009), as women, compared to men, may have lower levels of investment in education and work experience (Tharenou *et al*., 1994). Thus, the monitoring and advisory roles of the board will be affected negatively by the appointment of women and ethnic minorities, and consequently the firm value will decrease (Gyapong *et al*., 2015). Adams and Ferreira (2009) argue that management may choose not to distribute important strategic information to boards which provide intense monitoring. Therefore,

firm value may decrease as a result of the reduction in the quality of the advisory role provided by female and ethnic directors (Upadhyay, 2014).

3.1.2 Resource Dependence Theory

Resource dependence theory argues that the appointment of women, foreigners and ethnic minority directors increases board legitimacy (Carter *et al*., 2003; Branco and Rodrigues, 2008; Liao and Yu, 2012; Liu *et al*., 2014; Wang *et al*., 2014; Saeidi *et al*., 2015). This legitimacy is associated with gaining stakeholders' appreciation, increased capital inflows, investment opportunities, government support and community acceptance (Goodstein *et al*., 1994; Westphal and Bednar, 2005; Mahadeo *et al.*, 2011; Arnegger *et al*., 2014; Loukil and Yousfi, 2016). Consequently, this will be positively associated with increase in firm value (Gyapong *et al*., 2015; Ntim, 2015). Estélyi and Nisar (2016) and Masulis *et al*. (2012) also suggest that foreign directors bring differing perspectives and contracts to the board and facilitate access to different national and international markets, enhancing geographic and product diversification and thereby firm performance. Miletkova *et al*. (2014) argue that foreign directors may provide advice, using their expertise and business networks, to large firms with rapidly growing foreign operations that need access to global capital markets. The international expertise and business networks of foreign directors could facilitate their firms' access to global capital markets. Similarly, Pfeffer and Salancik (1978) and Hillman *et al*. (2000) argue that the board of directors links the organisation to the external environment through performing the following functions: providing information, perspectives and expertise, connecting the organisation with important constituents, getting support from important stakeholders in the external environment, and creating legitimacy for the organisation in the external environment. Consequently, more diversified boards help organisations to gain important resources that may improve performance and outcomes (Carter *et al*., 2010).

3.1.3 Psychology/Cognitive Development Theory

Cognitive development theory argues that since children recognise their gender during their first years, they are motivated to pursue gender-compatible behaviour and characteristics (Lewis and Brooks-Gunn, 1979:270). Children also identify their gender differences instinctively without any external influences (Cazden, 1968), and naturally use a developing gender schema to deal with information (Bem, 1983). This means that gender schematic processing affects the way of taking decisions (Bem, 1983), so natural gender cognitive behaviour drives the process by which men and women make the decisions that have an effect on firm value (Gyapong *et al*., 2016). Sunden and Surette (1998) and Loukil and Yousfi (2015) argue that women are less confident and more likely to

take risk-averse decisions than men. These characteristics improve a board's ability to take strategic decisions (Carter *et al*., 2010). Women fill their monitoring role better than men as a result of their inquisitive nature (Carter *et al*., 2003). Consequently, board diversity on the basis of gender improves a firm's earning capacity and CG quality, and thereby its value (Adams and Ferreira, 2009; Gul *et al*., 2011). Gender-diverse boards are more likely to consider, discuss and integrate available information deeply and extensively (Post and Byron, 2015) because female directors tend to value interdependency, benevolence and tolerance (Adams and Funk, 2012). These values help elicit information and perspectives from, and enhance collaboration among, all board members (Post and Byron, 2015). Bart and McQueen (2013) find that female directors prefer the cooperative decision making that helps in taking fair decisions, particularly with regard to competing interests, while male directors are more likely to use rules, regulations and traditional ways of doing business. Similarly, Rosener (1995) argues that women in top management positions are characterised by flexible and better dealing with ambiguous situations than males, and that these characteristics are essential for the success of modern organisations, especially those working in high-risk environments. Likewise, diversified boards whose members have different cognitive abilities improve creativity and innovation in decision making (Wiersema and Bantel, 1992; Carter *et al*., 2003; Welbourne *et al*., 2007; Lincoln and Adedoyin, 2012; Bart and McQueen, 2013), and thereby improve firm value (Ntim, 2015).

3.1.4 Social Identity Theory

On the other hand, social identity theory argues that more diverse boards, with different backgrounds, ideas and perceptions, have a heterogeneous working environment which includes a number of sub-groups based on race, gender or nationality. Thus, board diversity may increase communication problems and thereby degrade the board's decision-making process and increase organisational and operational risk (Smith *et al*., 1994, Lau and Murnighan, 1998, Westphal and Milton, 2000; Carter *et al*., 2010; Dumas *et al*., 2013; Delias *et al*., 2016). Westphal and Milton (2000) argue that demographic diversity weakens the social cohesion in boardrooms. Thus, majority viewpoints will dominate board decisions and individual directors will be unable to influence the boards. Similarly, Campbell and Mínguez-Vera (2008) suggest that the appointment of women directors introduces conflicting viewpoints and unnecessary critical thinking that delays and negatively impacts the decision-making process.

3.1.5 Stakeholder Theory

Gender, national and ethnic diversity reflecting stakeholders and society constituents has become a recent requirement for investment choices among a large number of investors and funds (Jamali *et al*., 2007; Estélyi and Nisar, 2016). Thus, stakeholder theory argues that the appointment of women and ethnic minorities enhances the organisation's connections with its stakeholders, such as customers and suppliers, and may improve its reputation and value (Shrader *et al*., 1997; Ryan and Haslam, 2007; Mahadeo *et al*., 2012; Wellalage and Locke, 2013), and improve access to new markets (Carter et., 2003). Female directors are found to have new and different understandings of customer markets (Bilimoria and Wheeler, 2000; Carter *et al*., 2003; Campbell and Minguez-Vera, 2008), a more diverse set of network interests, and greater interest in philanthropy and community service (Groysberg and Bell, 2013). Accordingly, female directors with different interests and social networks may enhance a board's insights with regard to the firm's multiple stakeholders (Post and Byron, 2015). Firms are more likely to appoint foreign directors to mirror their shareholder population (Estélyi and Nisar, 2016). Diversified boards can serve as a tool to signal to investors and markets that they can deal with operating challenges (Wiersema and Bantel, 1992; Goodstein *et al*., 1994).

In line with this inconsistency in the theoretical literature on the expected impact of board diversity on firm performance, previous studies have offered mixed empirical evidence for the association between diversified boards and firm performance (e.g., Zahra and Stanton, 1988; Wiersema and Bantel, 1992; Shrader *et al.,* 1997; Carter *et al*., 2003, 2010; Ujunwa, 2012; Dale-Olsen *et al.,* 2013; Post and Byron, 2015). The first group of studies has reported a positive impact of board heterogeneity on performance. In the context of developed countries, Carter *et al*. (2003), Campbell and Minguez-vera (2008), Francoeur *et al.* (2008) and Luckerath-Rovers (2013) find empirical evidence of the positive impact of diversified boards on firm value in the US, Netherlands, Spain and Canada, respectively. Erhardt *et al.* (2003) investigated the link between board demographic diversity and firm performance in a total of 127 large US companies for 1993 and 1998. Their findings suggest a positive association between board diversity and financial performance. Based on 1,085 firms listed on the London and North American stock exchanges during the period 1999 to 2012, Delis *et al*. (2016) find that appointing board members from countries with different levels of diversity (i.e., social, cultural, physiological and institutional characteristics) improves performance. Using data from UK listed firms over the period 2001-2011, Estélyi and Nisar (2016) report that nationality-diverse boards are significantly associated with shareholder heterogeneity, product market diversification, firms' international market operations and operating performance. Similarly, but in a developing country context, Mahadeo *et al.* (2012), Abdullah (2013), Wellalage and Locke (2013) and Ntim (2015) document a positive association between diversified boards and

firm value in Mauritius, Malaysia, Sri Lanka and South Africa, respectively. Gyapong *et al*. (2015), using data from 245 South African listed firms from 2008-2013, find a positive and significant effect of both gender and ethnic diversity on firm value. Also, Ntim (2015), using 169 South African listed firms from 2003 to 2007, finds board diversity based on women and ethnic minorities have a positive relationship with firm value.

On the other hand, another group of studies has found a negative effect of board diversity on firm performance (e.g., Watson *et al*., 1993; Shrader *et al.,* 1997; Hillman *et al.*, 2007; Ujunwa 2012; Ujunwa *et al.*, 2012; Dale-Olsen *et al*., 2013). The results of these studies suggest that not only women and ethnic minorities have a token status on the board but they may also have financial consequences for the organisation, resulting in a negative impact on firm value (Ntim, 2015). Adams and Ferreira (2009), investigating the impact of female directors on board inputs and corporate outcomes in a sample of 1,939 firms for 1998-2003, find that gender diversity has a negative impact on performance, which further suggests that assigning gender quotas may have a negative impact on performance in better governed firms. Surveying Danish firms, Smith *et al*. (2006) also find a negative effect of board gender diversity on firm performance. A third set of empirical studies (e.g., Zahra and Stanton, 1988; Farrell and Hersch, 2005; Westphal and Bednar, 2005; Rose, 2007; Gregory-Smith *et al*., 2014) has documented no link between board diversity and firm value. For example, Carter *et al*. (2010) examine the relation between appointment of women and ethnic minority members of the board and board committees and financial performance for a sample of 641 US firms for the five-year period 1998-2002. They document no significant impact of diversified boards and performance, which supports the contingency explanation that board gender and ethnic diversity have different effects on performance under different circumstances at different times. Consequently, the various results may offset each other to produce no effect. In the Danish context, Rose (2007) also finds no significant association between board diversity based on gender and Tobin's Q.

Most developing countries, including the MENA region, have adopted a set of CG guidelines inspired by the OECD's CG principles (Ararat *et al*., 2010). These principles emphasise some issues related to corporate board composition, such as its size and independence, in addition to the construction and functions of board committees (e.g., audit, compensation and nomination committees) in enhancing board effectiveness. For example, the Jordanian CG code 2012, which is based upon the "comply-or-explain" principle, recommends that the structure of boards of directors should take into consideration a balanced mix of age, gender and experience in order to achieve its roles and responsibilities. Although several MENA countries have established CG codes, there is still a deficit of empirical studies investigating the effect of best practice on improving corporate outcomes (Bishara, 2011; Hasan *et al*., 2014). In the MENA context, M'hamid *et al*. (2011) document that

female presence in the boardroom has a positive impact on Tunisian firms' performance. Aliani *et al*. (2011) illustrate the effectiveness of women's monitoring role in Tunisian boardrooms, and find that gender diversity helps in minimising tax optimisation. Furthermore, using a sample of 30 Tunisian-listed firms between 1997 and 2010, Loukil and Yousfi (2015) find that women have a risk perception that leads to risk-avoidance behaviour, as the presence of women directors is positively associated with cash ratio. Using 95 listed firms on the Istanbul stock exchange in 2006, Ararat *et al*. (2010) find that a more diverse board (based on gender, age, education and nationality) is positively associated with board monitoring intensity and firm performance. They also find that the monitoring intensity mediates the relation between board diversity and firm performance. The current study tries to resolve many deficiencies in these studies. First, they examine a single country (e.g., Aliani *et al*. (2011) and Loukil and Yousfi (2015) from Tunisia; Ararat *et al*. (2010) from Turkey), while the current study uses a cross-country design for better generalisation of the results. Second, they depend on a small sample size, for example, Ararat *et al*.'s (2010) 95 observations for one year, 2006. Thus, based on these arguments and mixed results, the first hypothesis is as follows:

H1. *There is an association between board diversity on the basis of gender, ethnicity and nationality, and firm performance.*

3.2 Moderating Effect of Corporate Governance on the Relationship between Board Diversity and Firm Performance

Although, the association between board diversity and firm performance may be affected by organisation-level heterogeneities (Baysinger and Butler, 1985; Baysinger and Hoskisson, 1990; Goodstein *et al*., 1994), it is probably also affected by variation in country-level regulations, CG reforms and institutional features (Ntim, 2015; Post and Byron, 2015; Byron and Post, 2016). Firms might use their internal CG mechanisms (e.g., board charactristics and ownership structure mechanisms) to compensate for a poor legal environment and enhance investors' protection in aligning managers' and shareholders' interests (Shleifer and Wolfenzon, 2002; Klapper and Love, 2004), thereby improving firm performance (Yermack, 1996; Gompers *et al*, 2003; Castrillo *et al*., 2010). Gul *et al*. (2011) suggest that board diversity substitutes other CG measures in monitoring firms. Therefore, board diversity's positive impact on firm value is more observable in weakly governed firms (Adams and Ferreira, 2009; Gul *et al*., 2011). In well governed firms, the extra monitoring provided by diversified boards may lead to negative effects on value (Adams and Ferreira, 2009; Gul *et al*., 2011). For example, Adams and Ferreira (2007) argue that the CEO is less likely to communicate with boards that provide more monitoring intensity. Furthermore, strong board monitoring discourages the CEO from carrying out risky projects with high NPV. Adams and Ferreira

(2009) also document that gender-diversified boards improve the sensitivity of CEO turnover to firm market value (tougher monitoring of the CEO). As a result, management may choose not to distribute important strategic information to boards which provide intense monitoring (Adams and Ferreira, 2009), so the firm value may decrease as a result of the reduction in the quality of the advisory role provided by women and ethnic directors (Upadhyay, 2014). On the other hand, Gyapong *et al*. (2015) suggest that developing countries, compared to developed countries, have weaker investor protection and a weaker external regulatory environment. Thus, the additional monitoring function performed by female directors is of more value in firms with strong CG mechanisms. This is supported by the findings of Miletkov *et al*. (2014) which confirm that, in countries with lower levels of investor protection, the presence of foreign directors is associated with positive impact on operating performance.

The implication of the firm's regulatory and CG context on the association between board diversity and firm performance has been investigated widely in developed countries (Adams and Ferreira, 2009; Gul *et al*., 2011) but less so in developing countries (Gyapong *et al*., 2015). Therefore, this essay investigates whether the association between board diversity and firm performance is affected by the firm's CG in the MENA context where sound CG mechanisms may work to substitute for weak investor protection and regulatory environment. Developing countries, including the MENA region, are characterised by concentrated ownership that is dominated by families and governments (Jamali *et al*., 2007; Omran *et al*., 2008; Piesse *et al*., 2012; Samaha *et al*., 2012). Furthermore, these countries have a weak external corporate regulatory environment, weak legal enforcement, and inadequate external discipline by the market for corporate control (LaPorta *et al*., 2000; Ntim *et al*., 2012a; Khalil and Ozkan, 2016). Accordingly, these features participate in reducing shareholders' rights and increasing agency problems (Gyapong *et al*., 2015).

Using empirical evidence from the US, Adams and Ferreira (2009) and Gul *et al*. (2011) confirm that board gender diversity is strongly associated with firm performance and stock price informativeness, respectively for firms with weak governance. This means that gender-diverse boards might act as a substitute mechanism for weak CG. However, in the South African context Gyapong *et al*. (2015) find that the additional monitoring function performed by minority ethnic directors is more value-relevant than that performed by female directors in better governed firms. Given the previous theoretical and empirical literature, the second hypothesis is as follows:

> ***H2.*** *The strength of the association between board diversity based on gender, nationality and ethnic minority directors, and firm performance is weaker/stronger in better-governed firms.*

3.3 The Association between Board Diversity and Executive Pay (EP)

Executive pay (EP) is highly influenced by the efficiency of the board's control and monitoring (Lambert *et al.*, 1993; Boyd 1994; Lin, 2005: Ozkan, 2007; Conyon and He, 2011; Ntim *et al*., 2016a). Agency theory argues that board members monitor managers on behalf of stockholders (Jensen and Meckling, 1976), to align the interests of managers with those of shareholders (Fama and Jensen, 1983; Estélyi and Nisar, 2016). The monitoring role of directors includes, for example, hiring and firing top managers and determining EP (Monks and Minow, 1995).

In general, the association between good CG practice and EP can be interpreted from two main perspectives of agency theory: optimal contracting theory (OCT) and managerial power hypothesis (MPH) (Jensen and Murphy, 1990; Bebchuk *et al*., 2002; Bebchuk and Fried, 2004, 2005; Edmans and Gabaix, 2009; Andreas *et al*., 2012). OCT argues that firms with independent corporate boards perform arms-length negotiations with executives in order to set EP schemes that are able to optimise executive performance (Edmans and Gabaix, 2009; Conyon, 2014). Thus, OCT assumes that more diversified boards have an essential impact on the effectiveness of the board of directors, since they are able to constrain managers from expropriating shareholders' wealth by enhancing the controlling and monitoring role of the board (Adams and Ferreira, 2009; Gul *et al*., 2011; Ntim, 2015; Gyapong *et al*., 2015), as well as by bringing diverse talents, backgrounds, ideas, knowledge and experience to the board (Carter *et al*., 2003; Adams and Ferreira, 2009; Triana *et al*., 2013; Abdullah, 2014). Accordingly, agency theory suggests that managers' payment is associated with their efforts to ensure that directors and executives behave in the interest of shareholders (Adams and Ferreira, 2009); thus, better governed firms (more diversified boards) are less likely to overpay their executives (Stulz, 1988).

In contrast, MPH suggests that EP packages are set by opportunistic corporate executives in firms with weak CG structures (Bebchuk *et al*., 2002; Bebchuck and Fried, 2004). Accordingly, MPH proposes that women and minority ethnic board members are perceived as tokens (Hillman *et al*., 2007; Adams and Ferreira, 2009; Kristie, 2011; Abdullah, 2014) and are appointed to boards mainly for symbolic reasons (Carter *et al*., 2003; Terjesen *et al*., 2009, 2015; Torchia *et al*., 2011; Gregory-Smith *et al*., 2014; Gyapong *et al*., 2015). Thus, corporate executives can influence the decisions of more diversified boards, especially those relating to the structure and level of EP. Westphal and Zajac (1995) find evidence that CEOs are more likely to attempt to influence the hiring of directors who have similar demographic characteristics to themselves. They also document that in firms where CEOs and directors share similar demographic attributes, CEOs are more likely to be awarded higher salaries.

Although a number of prior studies have documented the positive association between board diversity and firm performance (e.g., Carter *et al.,* 2003; Campbell and Minguez-vera, 2008; Luckerath-Rovers, 2013; Ntim, 2015; Gyapong *et al*., 2015), studies investigating the impact of gender, ethnicity and nationality on EP are rare, and thus this study provides a timely contribution to the extant literature. For example, Adams and Ferreira (2009) document that directors on gender-diversified boards receive comparatively more equity-based compensation, which provides more performance-based incentives, while they have found no statistical evidence for the impact of board gender diversity on CEO compensation. They argue that the absence of the relation between a high percentage of female directors on boards and CEOs' pay is consistent with lower representation of women in compensation committees. Using unbalanced panel data composed of 62,418 firm-year observations from US listed firms during 1992 to 2004, Vieito (2012) reports that female CEOs are better than male CEOs at improving performance, and that there is a smaller compensation gap between the CEO and company vice-presidents (VPs). Using data from US listed firms from 1996 to 2004, Elkinawya and Staterb (2011) report that more female directors appointed to boards improves gender equality in executives' salary. Given the previous theoretical and empirical literature, the third hypothesis is as follows:

H3. *There is an association between board diversity based on gender, nationality and ethnic minority directors, and executive pay.*

3.4 Moderating Effect of Board Diversity on the Pay-for-Performance Sensitivity (PPS)

Agency theory has been developed as a result of the separation of ownership and control, where the firm is viewed as an interrelated set of contracting relationships among different parties (Jensen and Meckling, 1976). Likewise, the theory assumes that both parties of the contract relationship will act to maximise their utility by using the information available to them. Thus, EP is introduced as one of the mechanisms that can be used to direct managers' behaviour in the interest of shareholders (Jensen and Murphy 1990; Beatty and Zajac 1994; Tosi *et al*., 1997).

In this context, the literature on the link between EP and organisational performance has been influenced by two main standpoints: OCT and MPH already mentioned (Core *et al*., 2003; Basu *et al*., 2007; Goergen and Renneboog, 2011; Chen and Jermias, 2014). First, OCT argues that independent corporate boards construct EP schemes after arms-length negotiations with executives. Therefore, corporate boards can enhance a firm's value by linking executive performance to the EP package (Edmans and Gabaix, 2009; Conyon, 2014). Consequently, OCT suggests that because executives are less involved in determining their own pay, there is a positive and/or strong association

between EP and their performance (Van Essen *et al*., 2015). In contrast, MPH suggests that close negotiations between a weak/dependent board and strong executives may lead to the foundation of an inefficient EP contract, increasing agency problems (Bebchuk *et al*., 2002; Bebchuk and Fried, 2004). Thus, MPH proposes a negative and/or weak link between EP and firm performance, because of strong interference from executives in setting their own incentive schemes (Van Essen *et al*., 2015).

Both internal CG mechanisms (as monitoring mechanisms) and EP contracts (for alignment of interests) can be used by modern organisations to limit the implications of agency conflict (Chen *et al*., 2015; Lee and Isa, 2015; Ntim *et al*., 2015a, b). A number of previous studies have recognised the importance of controlling for a comprehensive number of internal CG variables (e.g., board characteristics and ownership structure mechanisms) when investigating the association between EP and firm performance (e.g., Benito and Conyon, 1999; Core *et al*., 1999; Conyon and Sadler, 2001; Buck *et al*., 2003; Ozkan, 2011; Balafas and Florackis, 2014; Dong, 2014; Kuo *et al*., 2014; Newton, 2015; Ntim *et al*., 2015a, b). A major limitation of these studies is that they undermine possible endogeneity concerns of simultaneous use of both CG mechanisms and EP to mitigate agency problems (Chen *et al*., 2015; Lee and Isa, 2015; Ntim *et al*., 2015a, b). Thus, and in order to take into consideration the possible impact of interdependency/simultaneities between CG mechanisms and EP when investigating the PPS, this study conducts regression analysis containing interaction terms between performance measures (i.e., Tobin's Q) and gender, nationality and ethnicity board diversity variables.

Many scholars have documented the importance of the boardroom monitoring role in enhancing the link between EP and firm performance (Conyon and He, 2011). For example, Conyon and He (2011), using 1,342 publicly listed Chinese firms from 2001 to 2005, find evidence that firms with more independent directors on the board have a higher pay-for-performance link. Adams and Ferreira (2009) document that directors on gender-diversified boards receive comparatively more equity-based compensation, which provides more performance-based incentives. They also cite empirical evidence from the US that, in boards with more female directors, poor stock return performance increases the likelihood of CEO turnover. In addition, Vieito (2012) finds that smaller differences in the total compensation gap between CEO and vice-presidents (VPs) are associated with better performance in US firms managed by a female CEO. Given the previous theoretical and empirical literature, the fourth hypothesis is as follows:

> ***H4.*** *Board diversity moderates the association between executive-pay and performance, with the pay-for-performance sensitivity being stronger in firms with more diversified boards.*

4. Research Design

4.1 Sample Selection and Data Sources

The current study depends on a sample of 600 firm-year observations of 100 firms listed on five MENA countries' stock markets for six years from 2009 to 2014.[13] Listed firms in the selected five countries are classified into five main industries: basic materials/oil and gas; industrial; customer goods; customer services/health care; and technology/telecommunication. Financial and utility firms are excluded from the sample selection due to their different capital structure and regulations (Gyaponge et al., 2015; Ntim, 2015). CG variables (i.e., board characteristics and ownership structure mechanisms) were collected from the sampled firms' annual reports, their websites, capital markets websites, and other websites. Financial and accounting variables were collected from the *Datastream* database. Finally, country-level data, including GDP and Control of Corruption Index, were collected from the website of the World Bank, while the Inflation Index came from the International Monetary Fund's website.

Two criteria have been used in order to include organisations in the final sample: the accessibility of an organisation's CG data for the six-year period from 2009 to 2014; and the availability of financial data for the same time period. These criteria have been used for the following reasons. First, it helps in satisfying the requirements for a balanced panel data analysis (Yermack, 1996; Carter *et al*., 2003); the data set includes both time series and cross-sectional observations. This panel data structure is characterised by its ability to provide a greater degree of freedom, lower multicollinearity among examined variables (Gujarati, 2003; Wooldridge, 2010), opportunity to examine whether the link between board diversity and corporate outcomes holds over time (Carter *et al.*, 2003, 2010; Ntim *et al*., 2012a; Ntim, 2015) and opportunity to compare the findings with those of previous studies (Adams and Ferreira, 2009; Ntim, 2015; Gyaponge *et al*., 2015). The *DataStream* provides full data for firm performance (Tobin's Q and ROA). However, financial reports do not identify executives' compensation for the whole sample (600 firm-year observations). It provides data for 502 firm-year observations. Thus, the study employs firm-year observations that could be identified for the executives' compensation in order to test *H3* and *H4*.

4.2 Measurement of Variables

This section illustrates dependent, independent and control variables of the study. Table 12 contains a full definition of these variables.

[13] For the purpose of conducting the current study, five countries are selected: Egypt, Jordan, Oman, Saudi Arabia and the UAE. The criteria followed to select these countries were discussed in detail in the first essay.

4.2.1 Dependent Variables

The current study selects firm performance and EP to measure corporate outcomes. Firm performance is measured using Tobin's Q and ROA, as market- and accounting-based firm value measures, respectively, for the following reasons. First, Tobin's Q has been used to measure market performance/long-term firm value, while ROA measures accounting return/short-term firm performance (Bhagat and Black, 2002; Thomas and Eden, 2004, Gyapong *et al*., 2015). Carter *et al*. (2010), Post and Byron (2015) and Estélyi and Nisar (2016) argue that market performance (Tobin's Q) shows the wealth position of both shareholders and creditors (firm value). It also refers to the market behaviour of a security or asset, reflecting external perceptions and expectations of an organisation's future or long-term value (Thaler, 2004) and predicting the firm's ability to gain future cash flows and investment opportunities (Carter *et al.*, 2010). On the other hand, ROA, as a measure of accounting returns, reflects past or short-term financial performance and illustrates how efficiently the organisation utilises its assets and investments to generate earnings (Combs *et al.*, 2005; Gentry and Shen, 2010; Estélyi and Nisar, 2016). Carter *et al*. (2003) and Yermack (1996) document a statistical relation between both Tobin's Q and ROA. Second, they have been commonly used in literature to measure financial performance (e.g., Adams and Ferreira, 2009; Carter *et al*., 2010; Ntim, 2015; Post and Byron, 2015; Estélyi and Nisar, 2016), allowing for comparing the findings with those of previous studies.

Executive compensation (EXE_PAY) is measured using the natural log of all executives' cash compensation (e.g., salary, bonus, and other benefits) scaled by the total number of executives in a financial year to get an estimate of the average EP. The use of cash compensation is consistent with previous research (e.g., Firth *et al*., 2007; Chen *et al*., 2010; Conyon and He, 2011; Wang and Xiao, 2011).[14]

4.2.2 Independent Variables

Literature employs different measures of board diversity (e.g., age, race, gender, educational background, experience and professional qualifications); the current study uses gender, nationality and ethnic diversity for two reasons. First, these three measures can be observed and calculated easily (Milliken and Martin, 1996; Forbes and Milliken, 1999; Carter *et al*., 2010; Miletkov *et al*., 2014; Gyapong *et al*., 2015). Second, they have been widely investigated (Carter *et al*., 2003; Ntim 2015; Estélyi and Nisar 2016).

[14]Public traded firms in some MENA countries such as Oman and Saudi Arabia are required to report the sum of total compensation for the five highest-paid executives. For example Omani CG code 2002 requires listed firms to disclose, in their report of CG, details of remuneration paid to all directors and the top five officers. In other countries such as Egypt listed firms voluntarily disclose executive compensation data.

Following Adams and Ferreira (2009), Liu *et al*. (2014), Gyapong *et al*. (2015) and Ntim (2015), diversity is measured using percentage of women, foreign and ethnic minority directors on the board of directors (BDIV). The main independent variable is divided into the following sub-measures: board diversity on the basis of ethnicity (BDIVE); board diversity on the basis of gender (BDIVG); and board diversity on the basis of nationality (BDIVN).

4.2.3 Rationale for Control Variables

Consistent with previous studies (e.g., Carter *et al*., 2003, 2010; Chamlou, 2008; Johnston and Malina, 2008; Dale-Olsen *et al.*, 2013; Ntim, 2015; Hasan *et al.*, 2014), the study controls for possible omitted variables bias by including a number of control variables. The study controls for CG mechanisms that have been examined in previous studies: board characteristics (e.g., board size, CEO role non-duality, board independence) and ownership structure mechanisms (e.g., government, institutional and block ownership). The study also controls for firm-level variables that could be related to firm's outcome such as firm size, sales growth, leverage, age, and audit quality; and country-level variables such as control of corruption, inflation and GDP growth (Miletkov *et al.*, 2014; Delis, *et al*., 2016). Finally, some scholars argue that firm performance and EP may be affected by industry type and financial years (e.g., Roberson and Park 2007; Welbourne *et al*., 2007; Johnston and Malina, 2008; Ntim, 2015; Reddy *et al*., 2015). Therefore, the study includes industry dummies (INDU) for the five industries: basic materials and oil and gas; consumer goods; consumer services and health care; industrials; and technology and telecoms; and year dummies (YED) for the financial years from 2009 to 2014.

Board Characteristics

4.2.3.1 Board Size

One of the main functions of the board of directors is to monitor management and the CEO, thus board size could have a positive influence on firm value (Jensen, 1993; Adams and Ferriera, 2007; Adams *et al*., 2010; Lincoln and Adedoyin, 2012; Abdullah, 2013) and designing a pay package that may be more closely aligned with executive performance (Jensen and Murphy, 1990). Larger boards may have directors with different expertise, capable of accessing a wider range of contracts and resources (Haniffa and Hudaib, 2006; Welbourne *et al*., 2007; Triana *et al*., 2013; Wellalage and Locke, 2013; Estélyi and Nisar, 2016). On the other hand, larger boards may have problems in communication and coordination among their members, leading to a negative effect of board size on firm performance (Lipton and Lorsch, 1992; Sonnenfeld, 2002). Likewise, larger boards may be

associated with paying their executives more than necessary compared with firms with smaller boards.

Empirically, previous studies examining the association between board size and firm performance have shown mixed results. The first group of studies has documented a positive relationship between board size and firm performance (e.g., Dalton *et al*., 1998; Cheng, 2008). On the other hand, the second group has documented a negative impact (e.g., Yermack, 1996; Haniffa and Hudaib, 2006; Adams and Ferreira, 2009; Guest, 2009; Gyapong *et al*., 2015), whilst Carter *et al*. (2010) and Ntim and Soobaroyen (2013b) find no relationship between board size and firm performance. With regard to EP, many studies report that firms with larger boards are more likely to pay their CEOs higher than their counterparts (e.g., Yermack, 1996; Guest, 2009; Schultz *et al*., 2013; Reddy *et al*., 2015).

4.2.3.2 Board Independence

CG codes issued in many countries, including MENA countries, recommend that boards be dominated by non-executive and independent directors to ensure board independence and ability to fulfil the monitoring role efficiently. Firms with outsiders dominating the board of directors are more likely to replace the CEO on the basis of the performance of the firm (Weisbach, 1988; Dahya *et al.*, 2002). Furthermore, independent outside directors have an incentive to monitor the opportunistic behaviour of management in the form of excessive EP (Mehran, 1995; Byrd *et al*., 2010), so they can improve their current and future reputation in the labour market (Fama and Jensen, 1983).

Many empirical studies have found a significant positive relationship between the degree of board independence and financial performance (e.g., Pearce and Zahra, 1992; Mashayekhi and Bazaz, 2008; Ehikioya, 2009; Uadiale, 2010; Rashid *et al.*, 2010; Faleye *et al*., 2011; Khan and Awan, 2012), and pay of CEOs (e.g., Boyd, 1994; Johnston, 2007; Ozkan, 2007, 2011; Conyon and He, 2011; Van Essen *et al.*, 2015). On the other hand, Bhagat and Black (2002) report a negative relationship between board independence and firm performance (measured by Tobin's Q, turnover ratio, return on asset, sales per employee and operating margin). Byrd *et al.* (2010) and Armstrong *et al*. (2012) report that outside directors are more effective in monitoring CEO pay. Others' findings show an insignificant relationship between board independence and firm performance (e.g., Klein, 1998; Cotter and Silvester, 2003) and CEO pay (e.g., Mangel and Singh, 1993; Sapp, 2008; Gregory-Smith, 2012).

4.2.3.3 Board Leadership Structure

Despite the important role of the chairperson at the head of modern firms, combining it with the CEO's role represents a significant concentration of power. This weakens the monitoring

effectiveness of the board of directors (Finkelstein and D'Aveni, 1994; Lo and Wu, 2016). Therefore, the dual role of the CEO may crucially affect firm performance and EP. The CEO may seek his own interest at the expense of the shareholders which could increase agency problems (Jensen, 1993; Yermack, 1996). Therefore, shareholders will pay more monitoring and residual costs to mitigate these problems (White and Ingrassia, 1992). In companies with dual role of the CEO, the board is unable to ensure discipline of the CEO or replacing an underperforming CEO (Goyal and Park, 2002). In addition, the CEO/Chairperson uses his power to influence board decisions in order to gain higher payment (Lo and Wu, 2016).

Empirically, a considerable number of studies have reported a positive significant impact of separating the CEO and chairperson roles on firm performance (e.g., Abdul Rahman and Haniffa 2005; Jackling and Johl, 2009; Ujunwa, 2012; Gyapong *et al*., 2015). Likewise, other studies have documented that CEOs who are also the Chair of their boards receive higher compensation (e.g., Core *et al.*, 1999; Cyert *et al.*, 2002; Grinstein and Hribar, 2004). However, Conyon and Murphy (2000) and Carter *et al*. (2010) find no significant association between combining the CEO and chairperson positions and corporate performance. Conyon and Peck (1998) find no evidence supporting the notion that firms with CEO role duality are paying excessive EP. On the contrary, Al-Najjar *et al*. (2016) confirm that CEOs get lower compensation when they chair the board.

Ownership Structure Mechanisms

4.2.3.4 Block Ownership

Unlike developed countries, ownership concentration is high in the MENA region where minority shareholders have less protection (Fawzy, 2003; Jamali *et al*., 2007; Omran *et al*., 2008; Ararat *et al*., 2010; Weir, 2011; Piesse *et al*., 2012; Hasan *et al*., 2014). Higher ownership concentration may encourage large shareholders to expropriate firm resources (i.e. wealth) through benefit transfer dealings or tunnelling behaviours (Jensen and Meckling, 1976; Demsetz and Lehn, 1985; Fan and Wong, 2002; La Porta *et al*., 2002; Anderson *et al*., 2004; Chau and Leung, 2006), leading to a decrease in firm performance. This justifies the intent of firms with concentrated ownership to avoid being monitored by higher-quality auditors to maximise self-interest (Lin and Liu, 2009, 2010). Furthermore, block shareholders may connive with executives to maximise their own interests (pay themselves an excessively high rate) at the expense of minority shareholders (Johnson *et al*., 2000; Conyon and He, 2011, 2012; Wang and Xiao, 2011). In contrast, ownership concentration provides a strong incentive and ability of large shareholders to monitor managerial opportunistic behaviour (Alchian and Demsetz, 1972; Shleifer and Vishny, 1986, 1997; La Porta *et al*., 2002; Nguyen *et al*., 2013; Dong *et al.*, 2014; He *et al*., 2014) and to set EP in such a way that

aligns executives' interests with those of shareholders, leading to minimise agency problems (Hartzell and Starks, 2003) and increase firm value.

Similar to theoretical evidence, empirical literature has shown mixed results. Many previous studies have reported a negative relationship between concentrated ownership and firm performance (e.g., Gursoy and Aydogan, 2002; Gunasekarage *et al*., 2007; Reddy *et al*., 2015) and EP (e.g., Bertrand and Mullainathan, 2001; Gomez-Mejia *et al*., 2003; Lin, 2005; Sapp, 2008; Baixauli-Soler and Sanchez-Marin, 2015). On the other hand, another group of studies has documented a positive impact on firm performance (e.g., Claesses and Djankov, 1999; Xu and Wang, 1999; Gorton and Schmid, 2000; Hiraki *et al.*, 2003) and EP (e.g., Reddy *et al*., 2015).

4.2.3.5 Government Ownership

The relationship between government ownership on the one hand and firm performance and EP on the other hand is controversial. Government tends to own shares in a firm to achieve political or multiple objectives, such as employment growth, instead of commercial objectives such as profit maximization (Shleifer and Vishny, 1994; La Porta *et al*., 2002; Najid and Abdul Rahman, 2011). Thus, government owned firms may set contracts with lower pay-for-performance incentives (Conyon and He, 2011) and can suffer from weak monitoring and accountability (Mak and Li, 2001), leading to poor firm performance. Likewise, state owned firms are more likely to appoint a bureaucrat in the position of the CEO (Firth *et al*., 2007) and employ poor-quality executives with lower equilibrium wages compared to private controlled firms (Conyon and He, 2011). On the other hand, firms with higher government ownership have better connections with senior government officials and influential political figures that helps in gaining government support and investment opportunities (Shleifer and Vishny, 1994; Yu, 2013). Furthermore, government, with a large portion of shares, tends to fulfil its monitoring and counselling roles more efficiently to minimise agency costs and maximise firm performance (Eng and Mak, 2003).

In line with theoretical evidence, empirical studies have provided mixed results. A number of past studies have found a negative impact of government ownership on firm performance (e.g., Qi *et al*., 2000; Sun and Tong, 2003; Orden and Garmendia, 2005; Alfaraih *et al*., 2012) and EP and CEO incentives (e.g., Conyon and He, 2011). Other studies have documented no impact on firm performance (e.g., Hovey et al., 2003) while Jiang *et al*. (2008) report a positive impact.

4.2.3.6 Institutional Ownership

Institutional investors are more sophisticated than any other shareholders; more professional regarding capital markets, business and industries; and better informed. Therefore, they have better

capability and motivation to control and monitor managers' decision more effectively and less costly, leading to minimising agency problems and maximising firm value (Shleifer and Vishny, 1986; Smith, 1996; Bushee, 1998; Guercio and Hawkins, 1999; Gillan and Starks, 2000; Cremers and Nair, 2005; Koh, 2007; Alfaraih *et al*., 2012). Institutional ownership is a CG mechanism used to monitor managers by reducing their pay excesses and to align their interests with those of shareholders through designing suitable incentive schemes that connect EP to the firm value and performance (Hartzell and Starks, 2003). In contrast, institutional investors may be more interested in maximising their own liquidity and short-term profits (Coffee, 1991; Maug, 1998). Accordingly, this may encourage managers to maximise their own utility by paying themselves excessively high rewards at the expense of shareholders and thereby negatively affecting firm performance and value.

The relationship between institutional ownership, and firm performance and EP has been widely investigated. Most empirical evidence has confirmed a positive relationship between institutional ownership and firm performance (e.g., Guercio and Hawkins, 1999; Gillan and Starks, 2000; Cornett *et al*., 2007; Koh, 2007; Alfaraih *et al*., 2012). Similarly, David et al. (1998), Almazan *et al*. (2005), Khan *et al*. (2005), Dong and Ozkan (2008), Ozkan (2007), (2011), Zheng (2010) and Victoravich *et al*. (2012) report a negative impact of institutional ownership on EP. However, Cosh and Hughes (1997) document no link between institutional investors and CEO pay.

Firm-Level Characteristics

4.2.3.7 Firm Size

Short and Keasey (1999) argue that firm size may impact firm performance in two ways. First, large firms are able to generate funds internally and have easier access to external sources of funds that could be used to support investment in profitable projects. Second, large firms are able to put entry obstacles to improve their performance. Large organisations also may benefit from economy of scale, market power and wider connections to attain higher performance and firm value (Beiner *et al*., 2006; Roberson and Park, 2007). Furthermore, large organisations tend to appoint executives with a higher level of skills and managerial talent in order to deal with a higher degree of complexity and diversity of activities within these organisations (Canarella and Nourayi, 2008). Gaver and Gaver (1993) report a significant positive relationship between level of cash compensation and firm size. Cyert *et al*. (2002) find a significant positive relationship between contingent compensation and firm size, and that the level of total CEO compensation is related to firm size. Therefore, it is expected that EP tends to increase with company size. On the other hand, the market perceives that small firms perform better than larger firms, as small firms may have greater growth opportunity than larger firms (Haniffa and Hudaib, 2006; Kang *et al*., 2007; Guest, 2009; Dale-Olsen *et al*., 2013; Triana *et al*.,

2013). Jensen and Murphy (1990) find that CEOs in large firms have fewer compensation based incentives than CEOs in smaller firms, as large firms have more diversification of ownership and their management could be disciplined by other control measures.

A large number of previous studies have documented a positive impact of firm size on firm performance (e.g., Carter *et al*., 2010; Gyapong *et al*., 2015) and EP (e.g., Girma *et al*., 2007; Ozkan, 2007; Gabaix and Landier, 2008; Gregg *et al*., 2012; Ferri and Maber, 2013; Gabaix *et al*., 2014). Thus, and consistent with previous studies examining the relationship between board diversity and corporate outcomes (e.g., Carter *et al*., 2003, 2010; Johnston and Malina, 2008; Adams and Ferreira, 2009; Dale-Olsen *et al*., 2013; Gyapong *et al*., 2015; Ntim, 2015), firm size proxied by natural log of the total sales is included as a control variable.

4.2.3.8 Leverage

There is a controversy among researchers about the possible effect of leverage on firm performance. On the one hand, more debt is considered as an internal CG mechanism that plays an important role in mitigating agency problems, as it can reduce the ability of opportunistic managers to extract 'free cash flows' (Jensen and Meckling, 1976; Jensen, 1986; Guest, 2009). Furthermore, lenders are more likely to exert effective control of managerial behaviour compared to shareholders (Stiglitz, 1985; Agrawal and Knoeber, 1996). This can impact positively on firm performance. On the other hand, organisations with high levels of leverage have less ability to fully utilise commercial opportunities, as they may be not able to raise new debt. Therefore, this may increase the risk of financial distress and bankruptcy, and thereby negatively impact firm performance (Myers, 1977; Stulz, 1988; Andrade and Kaplan, 1998; Ntim *et al*., 2012a; Ntim, 2015). Furthermore, debt ratio may affect the firm's policy in designing executives' compensation schemes to ensure greater interest alignment between management and shareholders (Bryan *et al*., 2000; Brick *et al*., 2006; Sundaram and Yermack, 2007).

Many previous studies have reported a negative impact of leverage on firm performance (e.g., Gyapong *et al*., 2015; Ntim, 2015) and EP (e.g., Bryan *et al*., 2000). Therefore and consistent with prior literature (e.g., Gyapong *et al*., 2015; Ntim, 2015; Estélyi and Nisar, 2016), leverage proxied by the percentage of total debt to total assets is added as a control variable in the fixed effect regression models.

4.2.3.9 Firm Age

Older firms are more likely to have experience and skills, liquid trading, diversified activities, better disclosure, and attention from analysts (Evans, 1987; Lipczynski and Wilson, 2001; Claessens

et al., 2002; Black *et al*., 2006; Boone *et al*., 2007; Borghesi et al., 2007). This may lead to lower risk of financial distress and bankruptcy but less flexibility in dealing with adjustments in the business environment and thereby fewer growth opportunities. On the other hand, younger firms are less experienced, trying to establish their own presence in the market, seeking to cover their cost structure, and exposed to adverse market conditions. However, they have better growth opportunities. Therefore, firm age may impact their performance and EP.

Consistent with previous studies (e.g., Berger and Udell, 1998; Gregory *et al*., 2005; Boone *et al.*, 2007; Borghesi *et al*., 2007), this essay controls for firm age proxied by the natural log of the total number of years since a company was established.

4.2.3.10 Audit Firm Size

Large audit firms are more likely to provide higher audit quality (DeAngelo, 1981; Lennox, 2005; Lin and Liu, 2009; Eshleman and Guo, 2014), because they usually have superior training programmes, a higher degree of independence and industrial expertise, which qualify them to detect and report irregularities and misstatements in financial statements provided by management (DeFond, 1992; Lennox, 1999; Reed *et al*., 2000; Mansi *et al*., 2004; Eshleman and Guo, 2014). Therefore, organisations audited by large audit firms are more likely to have higher market value. Pittman and Fortin (2004) find evidence suggesting that retaining one of the Big 6 auditors improves the credibility of financial statements, helping young firms to minimise their borrowing costs. Thus, it is predicted that the size of the audit firm (BIG4) has a positive impact on firm performance and influence EP.

Empirically, Ntim (2015) and Ntim *et al*. (2015a) document a positive relationship between auditor size and firm market value, while Gyapong *et al*. (2015) find an insignificant association between the two variables. In line with past studies (e.g., Gyapong *et al*., 2015; Ntim, 2015; Ntim *et al*., 2015a), this essay controls for audit firm size by including a dummy variable that takes the value of 1 if a firm is audited by a Big 4 audit firm, 0 otherwise.

4.2.3.11 Growth Opportunity

Companies with greater investment opportunities often grow faster (Beiner *et al*., 2006; Ntim *et al.*, 2012a; Ntim, 2015) and hence, they are more likely to have high market value. Bracker *et al.* (1988) argue that small firms in growing industries and incorporating sophisticated strategic management procedures are more likely to attain high levels of financial performance. Moreover, firms with growing business activities need to increase voluntary CG disclosure in order to attract more investors and improve their ability to access more finance at lower cost (Collett and Hrasky, 2005; Hossain *et al.*, 2005, Khurana *et al*., 2006), leading to reduction in information asymmetry,

mitigation of agency problems among different stakeholders and increase in firm value. Additionally, firms with greater growth opportunities usually require more highly qualified and talented managers and hence, need to pay higher levels of remuneration (Rosen, 1982; Smith and Watts, 1992).

Empirical evidence is generally consistent with theory. For example, Ntim (2015) and Ntim *et al*. (2015a) find that growth opportunity is positively associated with firm value and EP, respectively. In line with prior studies, growth opportunity is calculated as a percentage of current year's sales minus previous year's sales divided by previous year's sales (e.g., Ozkan, 2007; Conyon et al., 2009; Ntim *et al*., 2012a; Gyapong *et al*., 2015; Ntim, 2015; Ntim *et al*., 2015a).

4.2.3.12 Year and Industry Dummies

Firm performance could be sensitive to the industry and year influences (Demsetz and Lehn, 1985; Short and Keasey, 1999; Black *et al*., 2006; Roberson and Park, 2007; Welbourne *et al*., 2007; Johnston and Malina, 2008; Gyapong *et al*., 2015; Ntim, 2015). Yu (2013) documents that the relationship between CG measures and firm performance varies among different industries and different years. CG practices vary among different industries due to the differences in capital structure, complexity of operations and line of business (Haniffa and Cooke, 2002; Lim *et al*., 2007; Elsayed, 2007), which could also affect firm performance. Likewise, CG practices and firm performance may change over time during the periods of economic boom and recession (Tan *et al*., 2011). Gabaix and Landier (2008) document a significant increase in CEO pay over time.

Following previous studies (e.g., Hanifia and Cook, 2002; Roberson and Park, 2007; Welbourne *et al*., 2007; Johnston and Malina, 2008; Mandaci, 2010; Lin et al., 2012; Gyapong *et al*., 2015; Ntim, 2015; Reddy *et al*., 2015), industry dummies for the five industries (i.e., basic materials and oil and gas; consumer goods; consumer services and health care; industrials; and technology and telecoms) and year dummies for the financial years from 2009 to 2014 are included as control variables for the possible relationship between them and firm performance and EP.

4.2.3.13 Country-level Control Variables

Board diversity may be influenced by the institutional environment (Terjesen and Singh, 2008; Estélyi and Nisar, 2016). Country-level institutional and contextual factors such as inflation, economic growth, tax policies, corruption perception and government regulations may also impact CG structure, financial performance and EP (Eggertsson, 1990; Short and Keasey, 1999; Wan and Hoskisson, 2003; Conyon and He, 2011; Tan *et al*., 2011). For instance, Wan and Hoskisson (2003) find that country-level factors and institutions influence companies' performance outcomes of product and international diversification strategies adopted. Similarly, Gugler *et al*. (2003) find that

CG measures' effectiveness in aligning managers and shareholders' interests is considerably different between developed and developing countries. Conyon and He (2011) find differences in the level of EP between the US and China and they argue that country culture and institutional arrangements such as voice and accountability, control of corruption and economic factors may justify these differences.

Consistent with previous studies examining the impact of board diversity on firm performance and EP in a cross-country context (e.g., Conyon and He, 2011; Miletkov *et al*., 2014; Terjesen *et al*., 2015b; Delis *et al.*, 2016; Estélyi and Nisar, 2016), this study controls for a number of country level institutional factors: Control of Corruption Index, Inflation and GDP growth that may impact corporate outcomes.

Table 12: Summary of variables and measures

Dependent variables: Corporate outcomes	
Q	Ratio of total assets minus book value of equity plus market value of equity to total assets in a financial year.
ROA	Percentage of operating profit to total assets in a financial year.
EXE_PAY	Natural log of total cash (salary, performance bonus, pension contribution and others)-based pay of all executives scaled by the total number of executives in a financial year.
Independent variables: Board diversity	
BDIV	The percentage of the total number of women, ethnic minority and foreign directors to the total number of board members.
BDIVG	The percentage of women directors to the total number of board members.
BDIVE	The percentage of ethnic minority (non-Arab) directors to the total number of board members
BDIVN	The percentage of non-national directors to the total number of board members.
Control variables: Corporate Governance	
BSIZE	Natural log of the total number of directors on the board of directors.
NED	The percentage of non-executive directors to the total number of board members.
DBLS	A dummy variable that takes the value of 1 if the roles of chairperson and CEO of firm are separated at the end of its financial year, 0 otherwise.
BOWN	Percentage of shares held by shareholders with at least 5% of the total firm shareholdings.
GOWN	Percentage of shares held by government.
IOWN	Percentage of shares held by institutional investors.
Control variables: Firm-level	
LNTS	Natural log of the total sales of a firm.
LEV	Percentage of total debt to total assets in a financial year
AGE	Natural log of the total number of years since a company was established.
BIG4	A dummy variable that takes the value of 1 if a firm is audited by a Big 4 audit firm (PricewaterhouseCoopers, Deloitte & Touche, Ernst & Young, and KPMG), 0 otherwise.
SGR	Percentage of current year's sales minus previous year's sales divided divided by previous year's sales.
YDU	Dummies for the years 2009 to 2014 inclusive.
INDU	Dummies for each of the five main industries: basic materials/oil and gas; industrial; customer goods; customer services/health care and technology/telecommunication.

Control variables: Country-level variables	
CCI	Control of Corruption Index. Control of corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.
INFL	Inflation, average consumer prices.
GDP	Gross domestic product (current US$).

4.3 Model Specification

The relationship between board characteristics and corporate outcomes is jointly and dynamically determined (Hermalin and Weisbach, 2003; Guest, 2009). Therefore, a number of endogenous problems emerge as a result of possible omitted variables that concurrently impact both the appointment of women and ethnic minority directors and corporate outcomes (Adams and Ferreira, 2009). In addition, endogenous problems may increase due to organisation specific characteristics, such as financial leverage, challenges, opportunities and managerial skills, which change overtime (Adams and Ferreira, 2009; Guest, 2009; Carter, 2010; Ntim *et al*., 2012a). Thus, and given the panel nature of the data, as well as in line with previous studies (e.g., Adams and Ferreira, 2009; Guest, 2009; Carter *et al*., 2010; Gyapong *et al*., 2015; Ntim, 2015), the study estimates a fixed-effects regressions in order to control for possible omitted variables and unobserved organisation-specific heterogeneities.[15]

The study starts its analysis with a fixed effects regression model which is specified as follows:

$$Q_{it} / ROA_{it} = \alpha_{it} + Diversity_{it} + \sum_{i=1}^{n} \beta_i CONTROLS_{it} + \delta_{it} + \varepsilon_{it} (1)$$

Where Q_{it} is Tobin's Q for firm *i* at time *t* and *ROA* is return on assets for firm *i* at time *t*; $Diversity_{it}$ refers to *BDIV*, *BDIVG*, *BDIVE*, or *BDIVN*; Controls stands for *BSIZE*, *NED*, *DBLS*, *BOWN*, *GOWN*, *IOWN*, *LNTS*, *LEV*, *AGE*, *BIG4*, *SGR*, *CCI*, *INFL*, *GDP*, *INDU*, *YED*; and δ is the fixed effect of a vector of the mean differences of all time-variant variables. All variables are fully defined in Table 12.

For the purpose of examining the moderating effect of the strength of CG on the relation between different board diversity measures and firm value (Q) and accounting returns (ROA), the study uses the CG Index (MCGI). The *MCGI* follows a checklist developed by the Intergovernmental

[15] In order to determine the suitable panel estimation technique (Gujarati, 2003; Wooldridge, 2010), the study first conducts the Breusch and Pagan (1980) LM test. The result of the test rejects the null hypothesis of the existence of zero variance across entities. Thus, OLS is inappropriate technique to test the hypothesis. Second, the study tests whether the individual effects are correlated with the repressors by performing Hausman (1978) test and the findings reject the null hypothesis, supporting the appropriateness of the fixed effect model for the study. Sub-section 4.4 shows detailed discussion of these tests.

Working Group of Experts on International Standards of Accounting and Reporting (ISAR), organised by United Nations Conference Trade and Development (UNCTAD, 2006). This checklist ("UNCTAD *ISAR benchmark*") for good practice in CG disclosure is based on five sections used to construct five sub-indices: (i) ownership structure and exercise of control rights (OSH); (ii) financial transparency (TCY); (iii) auditing (AUD); (iv) corporate responsibility and compliance (RTY); and (v) board and management structure and process (BMS). The MCGI is constructed by awarding a value of 1 if each of the 51 CG provisions is disclosed, and 0 otherwise. With this binary scoring scheme a firm's total disclosure score in a particular firm-year can vary between 0 (perfect non-compliance and non-disclosure) and 100% (perfect compliance and disclosure), with higher index levels indicating better compliance and disclosure. Following Gyapong *et al*. (2015), the *MCGI* is interacted with each board diversity measure in different regression estimates of the following fixed effects regression model:

$$Q_{it} / ROA_{it} = \alpha_{it} + Diversity_{it} + MCGI_{it} + Diversity_{it} * MCGI_{it} + \sum_{i=1}^{n} \beta_i CONTROLS_{it} + \delta_{it} + \varepsilon_{it} (2)$$

Where Q_{it} is Tobin's Q for firm *i* at time *t* and *ROA* is return on assets for firm *i* at time *t*; $Diversity_{it}$ refers to *BDIV*, *BDIVG*, *BDIVE*, or *BDIVN*; *MCGI* denotes CG disclosure; *Diversity*MCGI* refers to the interaction variable between Diversity and the *MCGI*; Controls stands for *LNTS*, *LEV*, *AGE*, *BIG4*, *SGR*, *CCI*, *INFL*, *GDP*, *INDU*, *YED*; and δ is the fixed effect of a vector of the mean differences of all time-variant variables. All variables are fully defined in Table 12.

The effect of different diversity measures on EP is examined using the following fixed effect regression model:

$$EXE\_PAY_{it} = \alpha_{it} + Diversity_{it} + \sum_{i=1}^{n} \beta_i CONTROLS_{it} + \delta_{it} + \varepsilon_{it} (3)$$

Where EXE_PAY_{it} is the natural log of total cash (base salary, performance bonus, pension contribution and others)-based pay of all executives scaled by the total number of executives for firm *i* at time *t*; $Diversity_{it}$ refers to *BDIV*, *BDIVG*, *BDIVE*, or *BDIVN*; *MCGI* denotes CG disclosure; Controls stands for *BSIZE*, *NED*, *DBLS*, *BOWN*, *GOWN*, *IOWN*, *LNTS*, *LEV*, *AGE*, *BIG4*, *SGR*, *CCI*, *INFL*, *GDP*, *INDU*, *YED*; and δ is the fixed effect of a vector of the mean differences of all time-variant variables. All variables are fully defined in Table 12.

To examine the moderating effect of different diversity variables on the association between EP and performance, the study conducts its analysis with a fixed effects regression model which is specified as follows:

$$EXE\_PAY_{it} = \alpha_{it} + Q_{it} + Diversity_{it} + Q_{it} * Diversity_{it} + \sum_{i=1}^{n} \beta_i CONTROLS_{it} + \delta_{it} + \varepsilon_{it} (4)$$

Where EXE_PAY_{it} is the natural log of total cash (base salary, performance bonus, pension contribution and others)-based pay of all executives scaled by the total number of executives for firm *i* at time *t*; Q_{it} is Tobin's Q for firm *i* at time *t* ; $Diversity_{it}$ refers to *BDIV*, *BDIVG*, *BDIVE*, or *BDIVN*; *MCGI* denotes CG disclosure; *Q*EXE_PAY* refers to the interaction variable between *Q* and *EXE_PAY*; Controls stands for *LNTS*, *LEV*, *AGE*, *BIG4*, *SGR*, *CCI*, *INFL*, *GDP*, *INDU*, *YED*; and δ is the fixed effect of a vector of the mean differences of all time-variant variables. All variables are fully defined in Table 12.

4.4 Panel Regression Specification Tests

Using panel data has a number of advantages over the traditional cross-sectional or time series data analysis. First, panel data allows both time series and cross-sectional observations to be used. That means, the time effect is taken into account that is not detectable when using pure cross-section data (Gujarati, 2003; Wooldridge, 2010). Second, it also helps to minimise the multicollinearity among the variables (Gujarati, 2003; Wooldridge, 2010). The large number of observations used in panel data increase the degrees of freedom and reduce any collinearity problems among the explanatory variables, increasing the estimation efficiency and providing more reliable and stable parameter estimates (Baltagi, 2005). Third, the use of panel data mitigates the problems arising because of omitted variables and controls for unobservable individual heterogeneity and dynamics which is not affordable when using the traditional cross-sectional or time series data analysis (Hsiao, 2013). Finally, examination of six-year data with both cross-sectional and time series properties may be useful in detecting whether the observed cross-sectional relationships among board diversity and different sets of corporate outcomes hold over time. Despite the advantages of using panel data, it is rarely employed in accounting literature. This represent an opportunity for the current study to add to the literature by providing novel evidence for the impact of board diversity on accounting returns, firm market value, EP and the PPS from MENA countries.

This section discusses a number of diagnostic tests and procedures to check whether the regression model specification fits the data. These tests also try to address some concerns that include: whether to run the regression analysis based on pool data or panel data, and the tests for individual and time effects.

4.4.1 Pooling Test

One of the main assumptions of the OLS method is to ensure that observations are independently distributed across time and thereby error terms are not likely to be correlated across different time periods. However, this correlation between the error terms is not considered as a

problem when using panel data models, which represents an important advantage of them. Therefore, an important procedure is to justify the need for panel data models compared to an OLS regression model. Two tests have been used to ensure the appropriateness of the panel data model, namely Chow test and Breusch-Pagan Lagrangian multiplier (LM) (1980) test.

Chow test is used to compare the pooled and unpooled estimates, and thereby to decide whether to use panel data models or not (Beck, 2001). Normality of residuals is the main underlying assumption of the Chow test. To ensure that this assumption is met, the Jacques Bera Test for normality of residuals has been run. The Jacques Bera provides a test for normality based on skewness and another based on kurtosis and then combines the two tests into an overall test statistic, with p-value based on the assumption that the distribution is normal. The Jacques Bera test result supports the absence of the non-normality problem where the null hypothesis of normality of error terms cannot be rejected.

After conducting the Jacques Bera, The following step is to perform the Chow test statistic which follows an F-distribution. This statistic is generated automatically after running a fixed effect regression in Stata. The Chow test result rejects the null hypothesis of homogeneity among individuals at the level of 1%, indicating that panel data models are more appropriate for conducting the regression analysis.

Following Kennedy (2008), Ntim (2015), and Gyapong *et al*. (2015), the Breusch and Pagan LM test has been conducted to test for the appropriateness of either a pooled OLS or a random-effects regression model. The result of the test rejects the null hypothesis of the existence of zero variance among individuals. Thus, OLS is an inappropriate technique to test the current study hypothesis.

4.4.2 Tests for Individual and Time Effects

The results of Chow and the Breusch and Pagan LM tests suggest the presence of specific effects in the current study's cross-sectional time series data. Therefore, the OLS model is no longer the best unbiased linear estimator. On the other hand, the panel data models, namely fixed effects and random effects models are able to deal with these problems.

The Hausman (1978) test, which compares a random effect model to its fixed counterpart, has been run to reveal which model provides accurate inference from current studies' panel data. The test's result rejects the null hypothesis that the individual effects are uncorrelated with the regressors at the 1% level. This indicates that random effects estimation is unsuitable and the fixed effects model is more fitting for the panel data.

The next step after the Hausman test result of supporting the use of a fixed effects model is to decide whether time fixed effects are needed when running a fixed effects regression. Accordingly,

the Stata command *testparm* has been used after running a fixed effect regression with year dummies. The test result rejects the null hypothesis that all years coefficients are jointly equal to zero at the level of 1%, indicating that time fixed effects are needed.

To summarise, the results of the Chow test and Breusch-Pagan (LM) test suggest that panel data models are more appropriate to the current study data. After that, the Hausman (1978) test and *testparm* STASTA command findings support the use of an individual and time fixed effects regression model to provide better estimates of the regression parameters.

5. Empirical Results and Discussion

5.1 Descriptive Statistics

Table 13 shows detailed descriptive statistics of different measures of board diversity within MENA listed firms. Panel *A* reveals the wide variation of different measures of corporate outcomes. For example, Tobin's Q (Q) ranges from 0.08 to 9.07, with an average (standard deviation) of 1.38 (.98), which means firm values display wide variation which is consistent with previous studies (e.g., Delis *et al*., 2016). Furthermore, accounting returns (ROA) ranges from –32.09% to 31.03%, and has a mean (median) of 6.43% (6.06%) and standard deviation of 7.66%. The average EP records a minimum of $4,413, maximum of $3,887,360, mean of $290,945 and median of $131,877. Similarly this means that the *EXE_PAY* is highly varied among firms listed in MENA countries. Panel *B* illustrates that board diversity based on gender, nationality and ethnicity (BDIV) has widespread variation ranging from 0% to 76.92%, and averaging of 14.08%. With regard to gender board diversity (BDIVG), the ethnic board diversity (BDIVE) and nationality board diversity (BDIVN) results range from 0% to 37.50%, 66.67% and 72.73%, with an average of 2.71%, 5.20% and 11.40%, respectively. The findings document that on average the boards of directors in the MENA region firms are dominated by Arab national men. This low representation of women, foreigners and non-Arab directors on board rooms is in line with evidence coming from most developing countries (e.g., Ararat *et al*., 2010; Mahadeo *et al*., 2012; Loukil and Yousfi, 2015). For example, Ibrahim and Hanefah (2014) document that the average number of females and non-nationals is 2.8% and 11%, respectively in 117 Jordanian listed companies for the period between 2007 and 2011.

Moreover, the descriptive statistics for CG variables are illustrated in panel *C*. Board size (BSIZE) with an average of 8.52 board members ranges between a minimum of four and a maximum of 19. Panel *C* also shows that *NEDs* dominate boards of MENA listed firms with an average (median) of 87.43% (88.89%). Moreover, most sampled firms have separate CEO and chairperson positions (DBLS) with average of 79% and median of 100%. Ownership structure mechanisms also display an adequate variation, where block ownership (BOWN), government ownership (GOWN) and

institutional ownership (IOWN) range from 5%, 0% and 0% to 98.92%, 98.87% and 98.23% with an average of 55.89%, 16.15% and 34.01%, respectively. Ownership statistics are consistent with previous studies conducted in MENA countries (e.g., Samaha *et al*., 2012; Al-Janadi *et al*., 2013). Similarly, the descriptive statistics for firm control variables and country control variables, which are illustrated in Panels *D* and *E*, respectively, display wide variation.

Table 13: Summary of descriptive statistics of all variables for all sampled firms

Variables	Mean	Median	STD	Minimum	Maximum
Panel A: Dependent variables					
Q	1.38	1.18	0.98	0.08	9.07
ROA %	6.43	6.06	7.66	-32.09	31.03
EXE_PAY	290945.50	131876.86	432203.18	4413.15	3887360
Panel B: Independent variables					
BDIV%	14.08	0	20.17	0	76.92
BDIVG%	2.71	0	6.61	0	37.50
BDIVE%	5.20	0	12.78	0	66.67
BDIVN%	11.40	0	19.34	0	72.73
Panel C: Control variables: Corporate Governance					
BSIZE	8.52	9	2.59	4	19
NED%	87.43	88.89	14.03	40	100
DBLS%	79	100	40.9	0	100
BOWN%	55.89	59.49	23.39	5	98.92
GOWN%	16.15	3.29	24.60	0	98.87
IOWN%	34.01	27.45	27.50	0	98.23
Panel D: Control variables: Firm-level					
LNTS ($000)	3599.51	252.10	9390.71	0.12	62010.88
LEV%	20.29	17.76	17.65	0	69.75
AGE	21.84	20	10.06	1	47
BIG4%	59	100	49.30	0	100
SGR%	9.06	5.94	45.45	-92.59	594.06
Panel E: Control variables: Country-level					
CCI%	59.31	60.77	16.19	27.96	87.56
INFL%	179.70	149.43	59.92	110.50	316.99
GDP ($000,000)	265136.31	244774.61	228668.68	23818.32	746248.53

Notes: the table shows summary descriptive statistics. Variables are defined as follows: Tobin's Q (Q); return on assets (ROA); executive pay (EXE_PAY); board diversity on the basis of gender, ethnic minority and nationality (BDIV); board diversity on the basis of gender (BDIVG); board diversity on the basis of ethnicity (BDIVE); board diversity on the basis of nationality (BDIVN); board size (BSIZE); percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); block ownership (BOWN); government ownership (GOWN); institutional ownership (IOWN); firm size (LNTA); leverage (LEV); firm age (AGE); audit firm size (BIG4); growth opportunity (SGR); Corruption Control Index (CCI); Inflation Index (INFL); and gross domestic product (GDP). Table 12 fully defines all the variables used.

Table 14 presents the correlation matrix (including both Pearson's parametric and Spearman's non-parametric bivariate coefficients) among different corporate outcomes variables, independent

and control variables.[16] The correlation analysis (i.e., Person's parametric correlation coefficients only) reveals that Tobin's Q positively and significantly correlates with the percentage of female directors on the board. Additionally, it shows that *ROA* has a positive significant correlation with all board diversity measures (BDIV, BDIVG, BDIVE, and BDIVN). *EXE-PAY* has a positive correlation with *BDIV*, *BDIVE* and *BDIVN*, while it has a negative significant correlation with *BDIVG*. In general, the results of the correlation matrix support that different board diversity measures have a significant impact on various corporate outcomes.

[16] The correlation matrix shows that there is no presence of multicollinearity among the variables, as the correlation coefficients do not exceed 0.80 (Hannifa and Hudaib, 2006; Ramly, 2012) (as cited by Gujarati, 2003).

Table 14: Pearson and Spearman correlation matrices of all variables

	Q	ROA	EXE_PAY	BDIV	BDIVG	BDIVE	BDIVN	BSIZE	NED	DRLS	BOWN	GOWN	IOWN	LNTA	LEV	AGE	Big4	SGR	CCI	INFL	GDP
Q	1	.377***	.223***	0.047	0.119***	-0.020	0.009	0.010	0.044	0.049	0.063	-0.089**	0.051	0.094**	-0.059	-0.127***	0.017	0.070*	-0.199***	-0.300***	0.112***
ROA	0.349***	1	0.248***	0.183***	0.101**	0.136***	0.169***	.081**	0.143***	0.005	0.222***	0.128***	0.139***	0.285***	-0.163***	-0.056	0.164***	0.302***	-0.017	-0.022	-0.076*
EXE-PAY	0.178***	0.213***	1	0.057	-0.068	.088**	0.108**	0.290***	0.240***	0.414***	0.001	0.419***	-0.098**	0.724***	0.207***	-0.149***	0.575***	0.250***	0.066	0.055	0.563***
BDIV	0.062	0.183***	0.085*	1	0.431***	.615***	0.881***	0.130***	0.225***	0.029	0.253***	0.017	0.392***	0.130***	0.044	-0.234***	0.206***	0.066	-0.016	0.040	-0.160***
BDIVG	0.128***	0.084**	-0.093**	0.306***	1	0.027	0.023	0.276***	-0.060	-0.311***	0.124***	0.167***	0.071*	0.007	-0.147***	-0.063	0.018	-0.019	-0.203***	0.134***	-0.148***
BDIVE	-0.003	0.137***	0.08*	0.664***	0.030	1	0.700***	-0.119***	0.280***	0.244***	0.269***	-0.097**	0.367***	0.101**	0.135***	-0.157***	0.233***	-0.023	0.035	0.002	-0.126***
BDIVN	0.03	0.166***	0.114***	0.945***	-0.005	0.694***	1	0.024	0.278***	0.179***	0.239***	-0.083**	0.412***	0.149***	0.130***	-0.236***	0.232***	0.082**	0.093**	-0.020	-0.121***
BSIZE	-0.041	0.089**	0.308***	0.121***	0.274***	-0.074*	0.041	1	0.011	-0.243***	-.098**	0.273***	-0.101**	0.310***	0.016	-0.005	0.150***	0.102**	-0.213***	0.083**	0.080*
NED	0.049	0.08*	0.253***	0.214***	-0.087**	0.246***	0.246***	0.029	1	0.448***	0.137***	0.226***	0.136***	0.122***	0.023	0	0.339***	0.025	0.333***	-0.024	-0.020
DBLS	0.04	-0.01	0.410***	0.124***	-0.279***	0.236***	0.212***	-0.249***	0.435***	1	0.017	0.023	0.067*	0.149***	0.085**	-0.067	0.296***	-0.016	0.372***	-0.121***	0.232***
BOWN	0.042	0.243***	-0.019	0.258***	0.099**	0.269***	0.241***	-0.067	0.049	0.018	1	0.220***	0.490***	0.185***	0.033	-0.113***	0.178***	0.062	-0.019	0.300***	-0.126***
GOWN	-0.074*	0.044	0.303***	-0.114***	0.077*	-0.123***	-0.152***	0.167***	0.062	0.027	0.328***	1	-0.311***	0.493***	-0.012	0.114***	0.350***	0.053	0.007	0.313***	0.181***
IOWN	0.062	0.149***	-0.127***	0.456***	0.089**	0.370***	0.453***	-0.090**	0.175***	0.069*	0.538***	-0.409***	1	-0.057	0.059	-0.183***	0.128***	0.027	0.010	0.126***	-0.258***
LNTS	.099**	0.262***	0.721***	0.158***	-0.002	0.117***	0.165***	0.301***	0.080*	0.152***	0.223***	0.443***	-0.054	1	0.368***	-0.102**	0.535***	0.216***	-0.023	0.143***	.440***
LEV	-0.031	-0.207***	0.198***	0.060	-0.151***	0.145***	0.114***	0.027	0.033	0.078*	0.051	-0.054	0.057	0.355***	1	-0.221***	0.223***	0.047	0.013	-0.028	0.080**
AGE	-0.134***	-0.009	-0.215***	-0.240***	-0.042	-0.117***	-0.230***	-0.030	-0.075*	-0.117***	-0.070*	0.053	-0.168***	-0.204***	-0.273***	1	-0.088**	-0.074*	0.092**	0.206***	0.051
BIG4	0.022	0.145***	0.567***	0.222***	0.026	0.235***	0.226***	0.135***	0.352***	0.296***	0.200***	0.238***	0.113***	0.527***	0.208***	-0.123***	1	0.107***	0.078*	0.109***	0.230***
SGR	0.074*	0.287***	0.228***	0.074*	-0.014	-0.020	0.083**	0.096**	0.027	-0.015	0.089**	0.033	0.040	0.232***	0.059	-0.116***	0.117***	1	-0.121**	0.062	0.158***
CCI	-0.152***	-0.036	0.238***	-0.037	-0.254***	-0.008	0.042	-0.230***	0.330***	0.460***	-0.072*	0.019	-0.082**	0.048	0.013	0.018	0.119***	-0.094**	1	0.071*	-0.146***
INFL	-0.304***	-0.073*	0.095**	-0.052	0.109***	-0.089**	-0.085**	0.184***	-0.140***	-0.160***	0.240***	0.282***	0.056	0.185***	0.008	0.184***	0.098**	0.064	-0.074*	1	0.095**
GDP	0.182***	-0.078*	0.498***	-0.175***	-0.160***	-0.170***	-0.133***	0.081**	-0.037	0.210***	-0.242***	0.092**	-0.275***	0.399***	0.105***	-0.075*	0.169***	0.132***	-0.005	0.016	1

Notes: the bottom half of the table contains Person's parametric correlation coefficients, whereas the upper right half of the table shows Spearman's non-parametric correlation coefficients. ***, **, and * indicate that correlation is significant at the 0.01, 0.05 and 0.1 levels, respectively. Variables are defined as follows: Tobin's Q (Q); return on assets (ROA); executive pay (EXE_PAY); board diversity on the basis of gender, ethnic minority and nationality (BDIV); board diversity on the basis of gender (BDIVG); board diversity on the basis of ethnicity (BDIVE), board diversity on the basis of nationality (BDIVE); board size (BSIZE); percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); block ownership (BOWN); government ownership (GOWN); institutional ownership (IOWN); firm size (LNTA); leverage (LEV); firm age (AGE); audit firm size (BIG4); growth opportunity (SGR); Corruption Control Index (CCI); Inflation Index (INFL); and gross domestic product (GDP). Table 12 fully defines all the variables used.

5.2 Multivariate Fixed Effect Regression Analyses

Fixed effect regression results of the impact of different board diversity measures on firm value (Q) and accounting returns (ROA) are illustrated in Table 15. First, to determine the impact of board diversity (BDIV) on firm performance, the study runs *Q* on *BDIV* and control variables without including CG measures in Model 1 and including CG measures in Model 5; while, Models 9 and 13 document the results of regressing *ROA* on *BDIV* and control variables without including and including CG measures, respectively. These Models show that diversified boards have a positive and significant impact on both firm value (Q) at 10% level and accounting returns (ROA) at 1% level. These findings provide support for *H1* and are in line with previous studies that have investigated the impact of board diversity on Q and/or ROA (e.g., Erhardt *et al*., 2003; Francoeur *et al*., 2008; Dobbin and Jung, 2011; Wellalage and Locke, 2013; Ntim, 2015). This evidence is consistent with the theoretical predictions of agency theory (Kesner, 1988; Carter *et al*., 2003; Van der Walt and Ingley, 2003; Johnston and Malina, 2008; Adams and Ferreira, 2009; Lincoln and Adedoyin, 2012; Triana *et al*., 2013; Abdullah, 2014), resource dependence theory (Goodstein *et al*., 1994; Westphal and Bednar, 2005; Mahadeo *et al.*, 2011; Arnegger *et al*., 2014; Loukil and Yousfi, 2016), cognitive development theory (Sunden and Surette, 1998; Loukil and Yousfi, 2015; Gyapong *et al*., 2015; Post and Byron, 2015) and stakeholder theory (Shrader *et al*., 1997; Carter *et al*., 2003; Ryan and Haslam, 2007; Mahadeo *et al*., 2012; Wellalage and Locke, 2013; Estélyi and Nisar, 2016), suggesting that board diversity based on gender, ethnic and nationality enhances board independence and monitoring function, and helps companies to gain legitimacy, contracts and investment opportunities. Diversified boards also provide expertise, knowledge and opinions that improve decision making effectiveness and hence firm performance.

Second, Models 2, 6, 10, and 14 illustrate that board diversity measured on the basis of gender (BDIVG) similarly has a positive and significant effect on firm value (Q) at 1% level and accounting returns (ROA) at 10% level, providing further support for *H1* and similar findings of previous studies (e.g., Johnston and Malina, 2008; Adams and Ferreira, 2009; Adler, 2010; Bart and McQueen, 2013; Luckerath-Rovers, 2013; Wellalage and Locke, 2013; Gyapong *et al*., 2015; Ntim, 2015; Terjesen *et al*., 2015b). These findings are consistent with the theoretical predictions of agency theory that female directors are more likely to provide better monitoring function compared to male directors (Adams and Ferreira, 2009); resource dependence theory which predicts that appointing female directors improves firm legitimacy and provides firms with more capital inflows, investment opportunities, government support and community acceptance (Goodstein *et al*., 1994; Westphal and Bednar, 2005; Mahadeo *et al*., 2011; Loukil and Yousfi, 2016); and development cognitive theory which argues that more gender diversified boards are more likely to deeply and extensively consider, discuss and

integrate available information (Adams and Funk, 2012; Bart and McQueen, 2013; Post and Byron, 2015), because of female distinctive interests, characteristics and cognitive behaviour, leading to increase in firm performance and value (Gyapong *et al*., 2015; Ntim, 2015; Terjesen *et al*., 2015b).

Third, to examine the effect of ethnic minority board members (non-Arab) on firm value (Q) and accounting returns (ROA), the study regresses *BDIVE* on *Q* and *ROA* by re-estimating equation (1). The results reported in Models 3, 7, 11, and 15, generally, indicate that board diversity measured on the basis of ethnicity (BDIVE) has an insignificant impact on firm value (Q) and accounting returns (ROA) (except Model 7 which shows that appointing ethnic minority directors on boards is valued significantly and negatively by the market at 10% level). The results are in line with previous studies that have documented no relationship between appointing ethnic minority directors and different measures of firm performance (Zahra and Stanton, 1988; Carter *et al.,* 2010). Fourth, equation (1) was re-estimated by regressing *BDIVN* on firm value (Q) and accounting returns (ROA) including control variables, in order to examine the impact of appointing foreign directors on firm performance. Findings stated in Models 4, 8, 12 and 16 display mixed results. Model 4 and 8 document no relationship between national board diversity and firm value *Q*, while the positive significant impact of foreign directors on accounting returns is illustrated in Models 12 and 13 at 10% and 5% levels, respectively, supporting *H1* and in line with resource dependence theory and previous studies which have suggested that appointing directors with diverse nationalities brings different perspectives and contracts to the board and facilitates access to different national and international markets that enhance the geographic and product diversification, and thereby improves firm performance (Mahadeo *et al*., 2011; Masulis *et al*., 2012; Miletkova *et al*., 2014; Estélyi and Nisar, 2016). Finally, with regard to control variables, results reported in Models 1 to 8 show that board independence, institutional ownership and auditor quality have a positive and significant impact on firm market value, while block ownership and inflation have a negative and significant effect on firm market value. On the other hand and with reference to the results illustrated in Models 9 to 16, there is a positive and significant association between separation of chairperson and CEO roles, firm size, age, sales growth and accounting returns (ROA). However, the results report that firms with high leverage and listed in countries with high *GDP* have lower *ROA*.

Table 15: Fixed-effect regression of the relationship between board diversity and firm performance

Indepdent Variables		**Q**								**ROA**							
Model	**Pred. sign**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
BDIV	+/-	.857*				.802*				.091***				.086***			
		(.059)				(.075)				(.004)				(.006)			
BDIVG	+/-		3.773***				3.884***				.141*				.131*		
			(.001)				(.000)				(.067)				(.085)		
BDIVE	+/-			-1.231				-1.469*				.024				.030	
				(.132)				(.075)				(.676)				(.601)	
BDIVN	+/-				-.030				-.199				.080*				.081**
					(.960)				(.733)				(.053)				(.046)
Control Variables: Corporate Governance																	
BSIZE	+/-					-.551	-.612	-.393	-.529					-.009	-.009	-.009	-.006
						(.163)	(.118)	(.329)	(.182)					(.754)	(.747)	(.753)	(.839)
NED	+					1.443***	1.428***	1.510***	1.506***					.0123	.016	.018	.014
						(.006)	(.006)	(.004)	(.004)					(.735)	(.668)	(.629)	(.699)
DBLS	+					0.048	.050	.051	.048					.043***	.043***	0.043***	.044***
						(.765)	(.754)	(.752)	(.768)					(.000)	(.000)	(.000)	(.000)
BOWN	+/-					-1.843***	-1.897***	-1.925***	-1.849***					.015	.013	.017	.018
						(.000)	(.000)	(.000)	(.000)					(.656)	(.697)	(.625)	(.603)
GOWN	+/-					.916	.931	1.186	1.064					.039	.049	.050	.046
						(.239)	(.226)	(.128)	(.172)					(.470)	(.365)	(.359)	(.401)
IOWN	+/-					.792*	.798*	.862*	.824*					.040	.042	.041	.040
						(.080)	(.075)	(.057)	(.070)					(.209)	(.188)	(.192)	(.202)
Control Variables: Firm-level																	
LNTS	+/-	.085	.080	.093	.090	.052	.048	.053	.059	.026***	.027***	.027***	.027***	.028***	.028***	.028***	.028***
		(.202)	(.224)	(.162)	(.175)	(.444)	(.491)	(.439)	(.408)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
LEV	+/-	-.134	-.138	-.230	-.192	-.007	-.002	-.111	-.072	-.118***	-.1222	-.123***	-.121***	-.108***	-.112***	-.113***	-.111***
		(.703)	.690	(.513)	(.584)	(.983)	(.995)	(.751)	(.837)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
AGE	+/-	.086	.080	.148	.077	.248	.251	.306	.230	.068***	.068***	.066***	.068***	.072***	.071***	.069***	.070***
		(.722)	(.739)	(.551)	(.751)	(.317)	(.306)	(.223)	(.354)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
BIG4	+	.329***	.299***	.322***	.327***	.328***	.300***	.315***	.323***	-.002	-.003	-.002	-.001	-.005	-.006	-.005	-.004
		(.001)	(.003)	(.001)	(.001)	(.001)	(.003)	(.002)	(.001)	(.759)	(.627)	(.751)	(.837)	(.521)	(.417)	(.508)	(.574)

SGR	+	-.071	-.062	-.083	-.074	-.045	-.034	-.056	-.047	.021***	.021***	.021***	.020***	.020***	.021***	.020***	.020***
		(.206)	(.270)	(.146)	(.190)	(.427)	(.539)	(.319)	(.402)	(.000)	(.000)	(.000)	(.004)	(.000)	(.000)	(.000)	(.000)
Control Variables: Country -level																	
CCI	+/-	-.896	-.859	-.916	-.869	-.896	-.858	-.940	-.878	.062	.065	.066	.065	.050	.052	.053	.052
		(.130)	(.143)	(.122)	(.143)	(.126)	(.138)	(.109)	(.134)	(.133)	(.116)	(.114)	(.116)	(.223)	(.202)	(.198)	(.203)
INFL	+/-	-.222*	-.219*	-.244*	-.226*	-.238*	-.234*	-.265*	-.242*	-.010	-.010	-.010	-.010	-.017*	-.017*	-.017*	-.017*
		(.098)	(.100)	(.070)	(.093)	(.078)	(.080)	(.051)	(.074)	(.282)	(.277)	(.285)	(.285)	(.065)	(.064)	(.070)	(.065)
GDP	+/-	.199	.218	.214	.221	.086	.080	.093	.094	-.074***	-.072***	-.072***	-.074***	-.083***	-.081***	-.080***	-.082***
		(.354)	(.306)	(.319)	(.306)	(.754)	(.710)	(.668)	(.667)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
INDU		Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
YDU		Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT		-4.351	-4.760	-4.743	-4.827	-.588	-.688	-1.514	-1.230	1.461***	1.414***	1.411***	1.448***	1.618***	1.574***	1.567***	1.595***
F-value		2.95***	3.93***	2.80***	2.53***	3.31***	4.03***	3.31***	3.09***	13.80***	13.11***	12.67***	13.16***	10.06***	9.67***	9.43***	9.75***
Adjusted R^2		0.7341	0.7385	0.7334	.7805	.7426	.7477	.7426	.7410	0.7940	0.7919	0.7906	0.7921	0.8007	0.799	0.7978	.8375
No. of obse		600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600

Notes: P-values are between brackets. ***, **, * indicate that the relationships are significant at the 0.01, 0.05 and 0.10 levels, respectively. Variables are defined as follows: Tobin's Q (Q); return on assets (ROA); board diversity on the basis of gender, ethnic minority and nationality (BDIV); board diversity on the basis of gender (BDIVG); board diversity on the basis of ethnicity (BDIVE); board diversity on the basis of nationality (BDIVN); board size (BSIZE); percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); block ownership (BOWN); government ownership (GOWN); institutional ownership (IOWN); firm size (LNTA); leverage (LEV); firm age (AGE); audit firm size (BIG4); growth opportunity (SGR); Corruption Control Index (CCI); Inflation Index (INFL); gross domestic product (GDP); industry dummy (INDU); and year dummy (YDU). Table 12 fully defines all the variables used.

Table 16 shows the fixed effect regression results of the moderating effect of CG strength on the association between different diversity measures and firm value (Q) and accounting returns (ROA). The study runs Q/ROA on different board diversity measures, *MCGI*, interaction of different diversity measures and *MCGI*, and control variables. With reference to the interaction variables, the evidence generally indicates no relationship between interaction variables (Diversity*MCGI) and *Q* in Models 1 to 4, which appear to be at variance with *H2*. On the other hand, Models 5 to 8 show the moderating effect of the CG strength on the association between board diversity and *ROA*. The results of the interaction variables indicate statistically significant and negative effect of the interaction variables (except BDIVG*MCGI) on *ROA* in Models 5, 7 and 8. However, *MCGI* has a significantly positive impact on ROA in Models 5 to 8. Additionally, the interaction variable improves the magnitudes of the coefficients of board diversity variables *BDIV*, *BDIVE* and *BDIVN* compared to Models 13, 15 and 16 in Table 15, supporting *H2*. In well-governed firms, the more monitoring effort provided by highly diversified boards and diversified boards on the basis of ethnicity and nationality impact firm accounting returns (ROA) negatively. Accordingly, the results are consistent with results of Adams and Ferreira (2009) and Gul *et al*. (2011), which suggest that board diversity substitutes other CG measures in monitoring firms.

Table 16: Fixed-effect regression of the moderation effect on the relationship between board and firm performance

	Q				ROA			
Ind. Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
BDIV	.463				.314***			
	(.776)				(.006)			
BDIVG		-3.009				.578		
		(.571)				(.127)		
BDIVE			-.2.442				1.219***	
			(.658)				(.002)	
BDIVN				.661				.335**
				(.744)				(.018)
CG variable								
MCGI	-2.479***	-2.552***	-2.393***	-2.342***	.111**	.099*	.140**	.110*
	(.002)	(.001)	(.004)	(.004)	(.050)	(.078)	(.015)	(.053)
Interaction variable								
BDI* MCGI	.727	11.662	2.002	-1.022	-.382**	-.750	-1.772***	-.416*
	(.785)	(.192)	(.804)	(.744)	(.041)	(.238)	(.002)	(.058)
Control Variables: Firm-level								
LNTS	.091	.086	.099	.099	.027***	.026***	.027***	.027***
	(.169)	(.180)	(.134)	(.135)	(.000)	(.000)	(.000)	(.000)
LEV	-.119	-.134	-.216	-.162	-.122***	-.122***	-.127***	-.124***
	(.734)	(.696)	(.536)	(.583)	(.000)	(.000)	(.000)	(.000)

AGE	.005	-.022	.062	.023	.078***	.072***	.079***	.075***
	(.985)	(.928)	(.806)	(.926)	(.000)	(.000)	(.000)	(.000)
BIG4	.355***	.323***	.346***	.350***	-.004	-.004	-.004	-.003
	(.000)	(.001)	(.001)	(.001)	(.600)	(.538)	(.586)	(.685)
SGR	-.071	-.069	-.082	-.076	.021***	.021***	.020***	.020***
	(.205)	(.218)	(.184)	(.179)	(.000)	(.000)	(.000)	(.000)
Control Variables: Country level								
CCI	-.309	-.253	-.361	-.297	.037	.042	.051	.044
	(.616)	(.677)	(.560)	(.630)	(.387)	(.335)	(.239)	(.310)
INFL	-.183	-.200	-.208	-.193	-.012	-.010	-.010	-.013
	(.170)	(.133)	(.122)	(.152)	(.194)	(.271)	(.299)	(.174)
GDP	.589**	.619**	.591**	.602**	-.089***	-.087***	-.089***	-.088***
	(.589)	(.012)	(.018)	(.016)	(.000)	(.000)	(.000)	(.000)
INDU	Included	Included	Included	Included	Included	Included	Included	Included
YDU	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT	-13.278**	-13.845**	-13.352**	-13.698**	1.773***	1.758***	1.746***	1.738***
F-value	3.33***	4.30***	3.12***	2.96***	12.00***	11.13***	11.73***	11.41***
Adjusted R^2	.7382	.7434	.7371	.7362	.7960	.7928	.7950	.7938
No. of observ	600	600	600	600	600	600	600	600

Notes: P-values are between brackets. ***, **, * indicate that the relationships are significant at the 0.01, 0.05 and 0.10 levels, respectively. Variables are defined as follows: Tobin's Q (Q); return on assets (ROA); board diversity on the basis of gender, ethnic minority and nationality (BDIV); board diversity on the basis of gender (BDIVG); board diversity on the basis of ethnicity (BDIVE); board diversity on the basis of nationality (BDIVE); the MENA countries overall Corporate Governance Disclosure Index (MCGI); firm size (LNTA); leverage (LEV); firm age (AGE); audit firm size (BIG4); growth opportunity (SGR); Corruption Control Index (CCI); Inflation Index (INFL); gross domestic product (GDP); industry dummy (INDU); and year dummy (YDU). Table 12 fully defines all the variables used.

Models 1 to 8 in Table 17 show the fixed effect regression results of the influence of different diversity measures on EP. The findings reported in Models 1 to 8 suggest that different measures of board diversity (BDIV, BDIVG, BDIVE and BDIVN) have no impact on EP. These results do not support *H3*, but are consistent with findings of Adams and Ferreira (2009) who report that gender diversified boards are less likely to impact CEO pay due to lower representation of female directors in compensation committees. With regard to control variables, Models 1 to 8 document that the separation of board leadership positions between chairperson and CEO (DBLS) and inflation impact EP negatively and significantly, while firm size and *GDP* have a positive and significant relationship with *EP*.

Models 10 to 13 present the fixed effect regression results of the moderating effect of different measures of diversity on the relationship between EP and performance. Model 9 shows the fixed effect regression results of the *EXE_PAY* on corporate performance (Q) and control variables in order to determine the PPS. The results suggest that there is a positive and significant association between corporate performance and EP in MENA countries. This result is consistent with OCT which argues that, as executives are less involved in determining their own pay, a positive and strong association exists between EP and performance. The results reported in Models 10 to 13 show that the coefficients of *Q* on *EXE_PAY* in models 11 and 12 are positive and statistically significant.

Crucially, it is clearly observable from the results that the PPS has noticeably improved, suggesting that gender and ethnic minority directors moderate the PPS. The coefficient of *Q* has increased from .046 (.094) in Model 9 to .055 (.065) and .064 (.044) in Models 11 and 12, respectively, supporting *H4* and suggesting that board diversity based on gender and ethnicity moderates the association between EP and performance. This means that the PPS being stronger in firms with higher gender and ethnicity diversified boards. The findings are in line with predictions of OCT that board diversity can enhance firm value by linking EP to performance (Edmans and Gabaix, 2009; Conyon, 2014).

Table 17: Fixed-effect regression of the relationship between board diversity and executive pay and the moderation effect of board diversity on the pay-for-performance sensitivity (PPS)

Independent variables		EXE-PAY												
Model	**Pred. sign**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Q	+									.046*	.044	.055*	.064**	.049
										(.094)	(.155)	(.065)	(.044)	(.108)
BDIV	+/-	-.010				-.054					-.049			
		(.972)				(.848)					(.828)			
BDIVG	+/-		1.046				.925					2.286*		
			(.145)				(.198)					(.084)		
BDIVE	+/-			.138				.618					.747	
				(.776)				(.900)					(.284)	
BDIVN	+/-				-.018				-.063					.041
					(.959)				(.853)					(.921)
Interaction variable														
Q*DIV	+/-										.018	-.712	-.365	-.035
											(.891)	(.203)	(.273)	(.806)
Control Variables: Corporate Governance														
BSIZE	+/-					.062	.065	.058	.061					
						(.813)	(.802)	(.826)	(.814)					
NED	-					.234	.183	.230	.232					
						(.495)	(.593)	(.501)	(.498)					
DBLS	-					-.383***	-.365***	-.382***	-.382***					
						(.002)	(.003)	(.002)	(.002)					
BOWN	+/-					-.372	-.368	-.362	-.374					
						(.229)	(.232)	(.245)	(.228)					
GOWN	+/-					-.050	-.122	-.075	-.054					
						(.920)	(.804)	(.881)	(.913)					
IOWN	+/-					.110	.071	.095	.109					
						(.734)	(.825)	(.768)	(.736)					
Control Variables: Firm-level														
LNTS	+	.240***	.239***	.240***	.240***	.215***	.213***	.215***	.215***	.233***	.233***	.230***	.232***	.234000
		(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.130)	(.000)	(.000)	(.000)	(.000)	(.000)
LEV	+/-	.271	.282	.276	.270	.211	.231	.218	.212	.277	.277	.267	.286	.272
		(.210)	(.189)	(.201)	(.210)	.330	(.283)	(.314)	(.328)	(.196)	(.201)	(.213)	(.184)	(.209)
AGE	+/-	.067	.061	.060	.067	.062	.059	.058	.062	.074	.075	.068	.058	.074
		(.652)	(.681)	(.691)	(.652)	(.685)	(.698)	(.709)	(.684)	(.618)	(.615)	(.649)	(.701)	(.619)
BIG4	-	.039	.030	.040	.038	.063	.056	.064	.062	.023	.023	.016	.020	.022
		(.506)	(.606)	(.495)	(.511)	(.287)	(.344)	(.281)	(.294)	(.693)	(.693)	(.782)	(.736)	(.708)
SGR	+	.005	.010	.006	.005	.017	.021	.018	.018	.009	.010	.122	.011	.009
		(.884)	(.786)	(.859)	(.883)	(.622)	(.578)	(.616)	(.617)	(.788)	(.784)	(.728)	(.753)	(.798)
Control Variables: Country-level														
CCI	+/-	.291	.306	.298	.290	.450	.464	.453	.449	.290	.300	.295	.291	.285
		(.434)	(.409)	(.423)	(.434)	(.227)	(.213)	(.226)	(.228)	(.433)	(.426)	(.424)	(.433)	(.444)
INFL	+/-	-.314***	-.313***	-.311***	-.314***	-.346***	-.342***	-.343***	-.345***	-.305***	-.306***	-.323***	-.302***	-.306***
		(.003)	(.002)	(.003)	(.003)	(.001)	(.001)	(.001)	(.001)	(.003)	(.003)	(.002)	(.004)	(.003)
GDP	+/-	.586***	.590***	.587***	.586***	.697***	.697***	.696***	.697***	.559***	.560***	.577***	.556***	.561***
		(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)

INDU	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
YDU	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT	-5.804*	-5.888*	-5.814*	-5.807*	-8.216**	-8.18**	-8.181**	-8.210**	-5.118	-5.126	-5.545	-5.020	-5.157
F-value	12.10***	12.40***	12.11***	12.10***	8.41***	8.56***	8.41***	8.41***	12.49***	10.18***	10.53***	10.33***	10.18***
Adjusted R^2	.9365	.9369	.9366	.9365	.9379	.9509	.9379	.9379	.9270	.9367	.9371	.9369	.9367
No. of obs.	502	502	520	520	502	502	502	502	502	502	502	502	502

Notes: P-values are between brackets. ***, **, * indicate that the relationships are significant at the 0.01, 0.05 and 0.10 levels, respectively. Variables are defined as follows: Executive pay (EXE_PAY); board diversity on the basis of gender, ethnic minority and nationality (BDIV); board diversity on the basis of gender (BDIVG); board diversity on the basis of ethnicity (BDIVE); board diversity on the basis of nationality (BDIVN); board size (BSIZE); percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); block ownership (BOWN); government ownership (GOWN); institutional ownership (IOWN); firm size (LNTA); leverage (LEV); firm age (AGE); auditor size (BIG4); growth opportunity (SGR); Corruption Control Index (CCI); Inflation Index (INFL); gross domestic product (GDP); industry dummy (INDU); and year dummy (YDU). Table 12 fully defines all the variables used.

5.3 Robustness Tests

This section discusses the effect of the number of female directors on firm value in addition to a number of additional analyses that have been carried out to further examine the robustness of the results to the existence of alternative measures of diversity and firm performance measures, non-monotonic associations and lagged effect.

5.3.1 Results Based on the Number of Female Directors

Section 1.1 discusses the recent worldwide effort to empower women in the business field by, for instance, specifying a female quota on boards to achieve gender parity. On the other hand, firms may not voluntarily respond to gender empowerment views unless there is a business rationale for it. According to token status theory (Kanter, 1977) and critical mass theory (Kramer *et al*., 2007; Kristie, 2011), which states that one is a token, two is a presence, three is a voice, and driven by results which are reported in Table 15, the value relevance of increasing the number of female directors on boardrooms was investigated. Following, Liu *et al*. (2014) and Gyapong *et al.* (2015), equation (1) was re-estimated using the following dummies; *GENDER_1* refers to a dummy variable equal to 1 if a firm has one female director on the board, otherwise 0; *GENDER_2* refers to a dummy variable equal to 1 if a firm has two female directors on the board, otherwise 0; *GENDER_3* refers to a dummy variable equal to 1 if a firm has three or more female directors on the board, otherwise 0. Results reported in Models 1–3 in Table 18 show that appointing one female director *GENDER_1* has a positive and significant impact on firm value (Q) (.328 (.006)), while increasing the number of female directors *GENDER_2* and *GENDER_3* have a positive but insignificant impact on firm value and thus critical mass theory is not applicable to female directors in MENA countries. This finding supports that qualified women appointed in corporate boards are limited, and in most cases they hold multiple directorship (Sealy *et al.*, 2008). This 'director busyness' has a negative impact on women's ability to provide their monitoring and advisory roles, increases agency problems and thereby reduces firm value (Fich and Shivdasani, 2006; Jiraporn *et al*., 2009; Faleye *et al*., 2011; Field *et al.*, 2013). Alternatively, firms are motivated by increasing their legitimacy, public image and shareholders' representation to appoint female directors (Goodstein *et al*., 1994; Westphal and Bednar, 2005; Jamali *et al*., 2007; Arnegger *et al.*, 2014; Loukil and Yousfi, 2016). The possible dearth of qualified women directors and the intervention of control families and the state to appoint directors from their inner circle in MENA countries (Jamali *et al.*, 2007; Loukil and Yousfi, 2016) leads to appointing less-qualified directors.

5.3.2 Results based on Alternative Firm Performance Measures

Following literature (e.g., Adams and Ferreira, 2009, Liu *et al*., 2014; Ntim, 2015), the association between firm performance and board diversity was re-investigated using total share return (TSR) and return on equity (ROE) as alternative market value and accounting return measures, respectively. The results in Models 4 and 5 in Table 18 illustrate that, board diversity has a positive and insignificant relationship with *TRS*, while board diversity has a positive but significant effect on *ROE*.

5.3.3 Results Based on Non-Linear Assumption

In order to examine whether there is a non-linear relationship between board diversity and firm performance, equation (1) was re-estimated using percentage of board diversity (BDIVE) and its quadratic form ($BDIVE^2$). Models 6 and 7 in Table 18 show positive and insignificant effect of $BDIVE^2$ on *Q*, supporting that the positive impact of *BDIVE* on *Q* holds against non-monotonic specification, and consistent with findings of Cotter *et al*. (2002) and Ntim (2015). In contrast, Model 7 shows positive but statistically significant impact of $BDIV^2$ on *ROA*, confirming a probable concave relationship between *BDIV* and *ROA*, and consistent with findings of Gyapone *et al*. (2015).

5.3.4 Results Based on Alternative Measures of Diversity

Following Carter *et al*. (2003, 2010), Gyapong *et al*. (2015) and Louki and Yousfi (2016), the study includes tests of sensitivity of its results to alternative measures of board diversity. It therefore uses the number of women, ethnic minority and foreign directors on the board (BDIV_NO) and a dummy variable equal to 1 if the board has at least one woman, ethnic minority or foreign director, and 0 otherwise (BDIV_DU). Equation 1 was re-run using the two alternative diversity measures. The results are presented in Models 8 to 11 in Table 18. The results are fairly robust to the use of the number of diversified directors (BDIV_NO) or board diversity dummy measure (BDIV_DU), instead of percentage of diversified directors on the board (BDIV).

5.3.5 Results based on Lagged Structure Model

A number of previous studies have argued that the current year's firm performance is affected by the last year's governance structure (e.g., Yermach, 2009; Ntim *et al*., 2012a). Accordingly, and following Ntim (2015), a one year lag between board diversity and firm performance (Q and ROA) was introduce to account for possible endogeneity problems probably caused by simultaneous association between explanatory variables (i.e., BDIV) and dependent variables (i.e., Q and ROA).

Statistically significant and positive impact of lagged board diversity *BDIV* on *Q* and *ROA* is presented in Models 12 and 13 in Table 18, suggesting that the findings in Models 1 and 9 in Table 15 are largely robust to estimating a lagged board diversity.

Table 18: Additional and sensitivity analyses of the determinants of CG disclosures

	Q			TSR	ROE	Q	ROA	Q	ROA	Q	ROA	Q	ROA
	GENDER_1	GENDER_2	GENDER_3			No-linearity		BDIV_NO		BDIV_DUM		Lagged	
Independ. Var.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
BDIV				.520	.167*	.649	-.071					1.218**	.075*
				(.434)	(.051)	(.483)	(.266)					(.028)	(.077)
BDIV_NO								.061	.009***				
								(.205)	(.005)				
BDIV_DUM										.272**	-.006		
										(.050)	(.559)		
$BDIV^2$						.398	.312***						
						(.796)	(.004)						
GENDER_1	.328***												
	(.006)												
GENDER_2		.028											
		(.859)											
GENDER_3			.108										
			(.660)										
Control variables: Firm-level													
LNTS	.087	.091	.089	-.053	.033***	.084	.026***	.086	.026***	.094	.027***	.058	-.008
	(.187)	(.174)	(.183)	(.583)	(.009)	(.208)	(.000)	(.198)	(.000)	(.159)	(.000)	(.435)	(.160)
LEV	-.157	-.193	-.186	-.171	-.324***	-.128	-.113***	-.161	-.120***	-.186	-.124***	-.221	-.057**
	(.653)	(.582)	(.597)	(.739)	(.000)	(.717)	(.000)	(.646)	(.000)	(.595)	.000	(.545)	(.041)
AGE	.049	.077	.085	-.302	.005	.088	.070***	.084	.069***	.073	.068***	.314	.031
	(.840)	(.753)	(.727)	(.396)	(.897)	(.717)	(.000)	(.729)	.000	(.762)	(.000)	(.234)	(.132)
BIG4	.303***	.327***	.328***	-.196	.000	.328***	-.003	.328***	-.002	.331***	-.002	.179*	.006
	(.003)	(.001)	(.001)	.181	(.981)	(.001)	(.635)	(.001)	(.746)	(.001)	(.730)	(.075)	(.454)
SGR	-.063	-.075	-.073	.131	.048***	-.072	.020***	-.072	.021***	-.069	.020***	.058	.011**
	(.264)	(.186)	(.200)	(.115)	(.000)	(.203)	(.000)	(.203)	.000	.222	(.000)	(.313)	(.011)
Control variables: Country-level													
CCI	-.756	-.873	-.883	2.538***	.201*	-.891	.066	-.902	.060	-.899	.065	1.554***	-.005
	(.200)	(.141)	(.137)	(.003)	(.072)	(.133)	(.105)	(.128)	(.148)	(.128)	(.115)	(.006)	(.914)
INFL	-.195	-.222	-.238	.586***	-.050**	-.224*	-.011	-.228*	-.011	-.181	-.011	-.268	-.016
	(.146)	(.103)	(.083)	(.003)	(.048)	(.096)	(.218)	(.089)	(.247)	(.182)	(.233)	(.131)	(.233)
GDP	.216	.220	.221	-.157	-.023	.203	-.071***	.212	-.073***	.165	-.071***	-.007	-.016
	(.313)	(.307)	(.306)	(.619)	(.562)	(.347)	(.000)	(.325)	.000	(.447)	(.000)	(.974)	(.323)
INDU	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
YDU	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Constant	-4.730	-4.811	-4.797	3.272	.307	-4.432	1.398***	-4.624	1.442***	-3.584	1.386***	-.685	.520
F-value	3.41***	2.54***	2.56***	2.25**	7.25***	2.66***	13.46***	2.72***	13.76***	2.98***	12.69***	2.84***	2.17**
Adjusted R^2	.7362	.7322	.7323	.0826	.7007	.7336	.7971	.7331	.7939	.7343	.7907	.7931	.7938
No. of obs.	600	600	600	600	600	600	600	600	600	600	600	600	600

Notes: P-values are between brackets. ***, **, * indicate that the relationships are significant at the 0.01, 0.05 and 0.10 levels, respectively. Variables are defined as follows: Tobin's Q (Q); return on assets (ROA); board diversity on the basis of gender, ethnic minority and nationality (BDIV); board diversity on the basis of gender (BDIVG); board diversity on the basis of ethnicity (BDIVE); board diversity on the basis of nationality (BDIVN); firm size (LNTA); leverage (LEV); firm age (AGE); audit firm size (BIG4); growth opportunity (SGR); Corruption Control Index (CCI); Inflation Index (INFL); gross domestic product (GDP); industry dummy (INDU); year dummy (YDU); square the percentage of the total number of women, ethnic minority, and foreign directors to the total number of board directors ($BDIV^2$); number of the total number of women, ethnic minority, and foreign directors to the total number of board directors (BDIV_NO); dummy variable equal 1 if the board has one women, ethnic minority, or foreign director and 0 otherwise (BDIVG_DU); A dummy variable equal to 1 if a firm has one woman director on the board (GENDER_1); A dummy variable equal to 1 if a firm has two woman directors on the board (GENDER_2); A dummy variable equal to 1 if a firm has more than 2 woman directors on the board (GENDER_3); return on equity (ROE); and total shareholder returns (TSR). Table 12 fully defines all the variables used.

6 Summary and Conclusions

The board of directors is the top decision-making sub-group in modern organisations, and is associated with responsibility for a set of functions (e.g., advising, controlling, monitoring, hiring, motivating and firing executives), in addition to taking strategic decisions (e.g., mergers, acquisitions and capital structure). However, previous studies investigating the impact of board diversity on corporate outcomes have provided mixed results. Consequently, this study attempts to determine whether board diversity affects corporate outcomes. Specifically, it examines the relationship between board diversity, based on gender, nationality and ethnicity, and firm value and accounting returns, and whether firm governance moderates this relationship. It also investigates the effect of board diversity on EP and on the PPS. The study sample was 600 firm-year observations of 100 publicly listed firms in five MENA countries from 2009 to 2014.

Summary descriptive statistics reveal a wide variation of board diversity on the basis of gender, nationality and ethnicity, ranging from 0% to 76.92%, with an average of 14.08%. This indicates that most boards of MENA listed firms are dominated by national Arab males. Furthermore, the results document a positive and significant impact of diversified boards, based on gender, nationality and ethnicity, on both firm market value and accounting returns. Specifically, appointing female directors improves firm market value and accounting returns, while foreign directors have a positive and significant effect on firm accounting returns. Furthermore, the study found no empirical evidence for a moderating effect of CG quality on the link between board diversity and market value, although board diversity based on ethnic minority and nationality was found to substitute for other CG measures in monitoring firms. Therefore, the positive impact of board ethnic and national diversity on firm accounting returns is more observable in weakly governed firms. Moreover, the study found no empirical evidence for the effect of different measures of board diversity on EP. However, the inclusion of female and minority ethnic directors improves the PPS.

6.1 Contributions, Policy Implications and Recommendations

The results of this essay contribute to the literature in a number of ways. First, most studies examining the impact of board diversity on corporate outcomes were conducted in developed countries, where institutional structures and corporate settings are largely similar. However, there is limited evidence from emerging countries. Therefore, the current study contributes to the literature investigating board diversity in MENA countries using one of the largest and most extensive hand-collected data sets to date (a sample of 100 MENA listed firms from 2009 to 2014, with 600 firm-year observations) in order to enhance the generalisability of the results. Also, distinct from previous studies that relied on either time series or cross-sectional data, this study employed panel data to

mitigate the effect of multicollinearity, control unobserved heterogeneity among variables and increase the degree of freedom.

Second, unlike past studies that have restricted their investigation to a single theoretical framework, the current study offers a uniform theoretical framework that can be used to explain the impact of board diversity on corporate outcomes by articulating a multi-theoretical framework. This framework includes most related theories, namely agency, resource dependence, cognitive development, social identity and stakeholder theories. This methodology is useful in predicting hypotheses and interpreting results, especially in the unique and distinctive corporate context of MENA countries, whose distinctive features are expected to result in mixed predictions on the impact of board diversity on corporate outcomes. Generally, the findings are consistent with the multi-theoretical framework, which suggests that appointing gender, national and ethnic diversified directors increases boards' ability to exercise their monitoring, advising and decision making, independently and efficiently, as well as helping boards to better reflect stakeholder composition. This may improve legitimacy, securing critical resources, government blessing and thereby enhancing firm performance.

Third, unlike many previous studies that restrict their investigation to one feature of board diversity (e.g., gender) or one set of corporate outcomes (e.g., market value), this study offers comprehensive evidence for how and why board diversity affects corporate outcomes among MENA listed firms. In particular, it contributes to the existing literature by offering evidence on the effects of wide features of board diversity on the basis of gender, ethnicity and nationality on various types of corporate outcome, namely firm accounting returns, market value, EP and the PPS. This provides comprehensive evidence for the possible influence of wide features of board diversity on various types of corporate outcomes in the distinct context of MENA countries.

Fourth, unlike previous studies, this research offers empirical evidence on whether the observed differences in corporate outcomes can be explained by board diversity, using alternative models and estimations. A number of analyses were conducted to test the extent to which the main results are robust or sensitive to different types of endogeneity problems and corporate outcomes measures. Overall, the findings are insensitive across the range of econometric models.

The evidence has important implications for governments, policy makers and regulatory authorities, especially in the MENA region, other devolving countries and emerging markets. The recent Arab Spring called for a greater role for young people and women in society, and access to better economic opportunities. In addition, the significant increase in foreign direct investments and the number of higher-level educated women and declining fertility rates strongly influenced women to enter the workforce. However, the findings are consistent with the arguments of Jamali *et al*. (2007), Ibrahim and Hanefah (2014) and Loukil and Yousfi (2015) that the under-representation of

women on corporate boards in MENA countries is influenced by the glass ceiling hypothesis, and the importance of the issuance of government regulations in line with international CG best practices to address the weak representation of women in top management and corporate board level positions. Thus, the results suggest that decisions about board diversity are not merely influenced by moral values; they arise because of the cost-benefit considerations of what diversity can bring to the firm.

6.2 Limitations and Avenues for Further Research

The current study is subject to a number of weaknesses. The sample size was small (i.e., 600 firm-year observations collected from five MENA countries) because using content analysis to collect data manually from financial reports and websites consumes much time and effort. The availability, accessibility, funding and time constraints of completing the PhD within the appointed timeframe further limited the size of the sample that could be handled. Thus, future studies might use a larger representative sample to enhance the generalisability of the results.

Second, the current study employs only quantitative analysis to investigate the influence of board diversity based on gender, nationality and ethnicity on firm performance (i.e., accounting returns and market value), EP and the PPS, and to examine its hypotheses. However, quantitative and qualitative analysis together might result in better inferences and interpretation of the results.

Finally, given the unavailability of data on different features of boards of directors, this study focuses on board diversity based on gender, nationality and ethnicity, to examine the impact of board diversity on corporate outcomes. However, there are other features of board diversity that may have a significant impact on corporate outcomes, such as educational background, age, experience and professional qualifications. Future studies with more data sources could capture different features of board diversity and examine its impact on various corporate outcomes.

Empirical Essays on Corporate Governance and Corporate Outcomes in MENA Countries

Essay 3

Antecedents of Auditor Choice and Fees in MENA Countries: The Effect of Corporate Governance

Abstract

This essay investigates the effect of corporate governance (CG) on auditor choice and fees using a sample of 100 listed firms from MENA countries over the period 2009-2014. The findings in general suggest that auditor choice and fees can be significantly influenced by firm-level CG. First, the empirical results demonstrate that the CG Index, board diversity based on gender and ethnicity, board independence, separation of the CEO/chairperson roles, and concentrated ownership impact significantly and positively on the choice of the Big 4 auditors. Board size impacts positively, but insignificantly on the Big 4 auditors choice, whereas government ownership and director ownership are insignificantly negatively related to the Big 4 auditor choice. Second, the CG Index, board diversity based on gender and ethnicity, and government ownership are significantly and negatively related to audit fees, whereas board size, board independence and director ownership impact significantly, but positively on audit fees. Non-dual board leadership and concentrated ownership have no significant impact on audit fees. Overall, the study findings suggest that external audit quality (Big 4 auditor, high audit fees) do have a CG monitoring role in MENA countries. Furthermore, auditor choice and fees decisions are affected by the firm-level CG MENA listed firms.

Keywords: Corporate Governance, Auditor Choice, Audit Fees, MENA.

1. Introduction

The purpose of this study is to contribute to the extant CG and auditing literature by examining whether firm-level CG quality, board characteristics (i.e., board size, board diversity, board independence and separation of CEO/chairperson roles) and ownership structure mechanisms (government, director and block ownership) impact (i) auditor choice; and (ii) auditor fees, with specific focus on providing new empirical evidence from MENA countries. The analysis is drawn from agency theory perspective.

1.1 Background

Recently the world has witnessed an increased interest in the quality of CG, particularly the role of CG in enhancing the quality of corporate financial reporting (Ntim *et al*., 2012b, Al-Bassam *et al*., 2015; Elghuweel *et al*. 2016; Elmagrhi *et al*. 2016). The audit process also seeks to provide independent verification of the financial statement prepared by management (O'Sullivan, 2000). Financial scandals in the early 1990s directed attention to the quality and reliability of audited information (Cadbury, 1992; Humphrey *et al*., 1993; O'Sullivan, 2000; Asthana *et al*., 2010). Most existing CG codes aim to keep the external auditor independent from corporate management. In an attempt to increase the objectivity of managerial behaviour, these codes tend to recommend the appointment of more non-executive independent directors in addition to avoiding the duality of the chairperson and CEO positions. These codes also recommend the establishment of an audit committee, composed primarily of non-executive and independent directors, to help auditors provide their independent verification of the financial statement and to maintain an objective relation between external auditors and management. Therefore, independent auditing is considered as an essential governance mechanism through which shareholders can monitor management. This motivates researchers to investigate the association between external auditing and other CG mechanisms applied by modern organisations (O'Sullivan, 2000; O'Sullivan and Diacon, 2002; Fan and Wong, 2005; Zaman *et al*., 2011).

The primary concern of CG is to direct and control any deviation in the interests of corporate managers from those of shareholders (O'Sullivan, 2000; Ntim *et al*., 2016a). Agency theory proposes a set of mechanisms to mitigate the conflict of interest between managers and shareholders, including board characteristics (e.g., existence of independent non-executive directors) (Fama and Jensen, 1983) and ownership structure mechanisms (e.g., block and executive ownership) (Jensen and Meckling, 1976; Shleifer and Vishny, 1986). The likelihood of manager-shareholder conflict may also be monitored by the audit process, whereby the external auditor annually provides shareholders with a report assessing the appropriateness of the financial statements prepared by management

(Watts and Zimmerman, 1983). Therefore, external auditing is considered one of the CG mechanisms used to attest the credibility of accounting information provided by management; it helps to alleviate agency conflicts between owners/shareholders and management because it enhances the external monitoring of owners/shareholders (Abdel-khalik, 2002; Cohen *et al*., 2002; Ashbaugh and Warfield, 2003; Beck *et al*., 2013; Luypaert and Van Caneghem, 2013). Several previous studies have reported that firms facing high levels of agency conflict are advised to hire a high-quality auditor to improve their CG and to mitigate probable agency conflicts (e.g., Fan and Wong, 2005; Hay and Davis, 2004; Gul *et al*., 2013), because low-quality auditors will probably be unable to exercise appropriate monitoring of the client's financial reports (Claessens *et al*., 2002; Mayhew *et al*., 2003). The literature has documented that firms applying stronger CG mechanisms are more likely to provide higher-quality financial reporting, as a result of the positive impact on the improvement of audit quality and CG (Wang, 2006; Lin and Liu, 2009, 2010). On the other hand, firms with weaker internal CG mechanisms may be more opaque and thus less likely to select high-quality (Big 4) auditors in order to avoid more effective audit monitoring (Lin and Liu 2009; 2010).

Audit fees are determined according to the economic costs of efficient auditors (Carcello *et al*., 2002); these costs vary with the size, complexity, risk and other characteristics of the auditee (Simunic and Stein, 1996; Kalelkar and Khan, 2016). Auditors tend to seek to minimise total costs by reducing the amount of additional audit work, and at the same time trying to avoid future losses from legal liability (Simunic and Stein, 1996, Kalelkar and Khan, 2016). Larger audit investigations require more audit hours and/or use of more specialised audit staff, resulting in higher audit fees (O'Sullivan, 2000). Chaney *et al*. (2004) argue that large audit firms invest heavily in technology, training and other facilities and are able to provide more efficient audit for large and relatively complex clients. The costs of these investments are passed on to clients in the form of high audit fees. Generally, the expected superior quality offered and benefits received may drive public listed firms to pay premium fees for larger audit firms (Chaney *et al*., 2004; Bills and Cunningham, 2015; Bills and Stephens, 2015). Beck *et al*. (2013) find empirical evidence that audit fee disclosures affect investor perceptions of audit characteristics. Big 4 audit firms have greater resources, technical knowledge and global reach, allowing them to deal with clients more objectively without fear of termination. In addition, the key factors which enhance the credibility of an audit report provided by one of the Big 4 auditors include professional audit expertise, a wide range of skills, reputation, accounting-and-auditing knowledge, real value for fees, and ethical standards (Al-Ajmi, 2009; Samaha and Hegazy, 2010; Eshleman and Guo, 2014). Therefore, audit fees and Big 4 auditors can be used as indicators of audit quality.

1.2 Motivation

The current study is driven by a number of motives. First, previous studies investigating the antecedents of the variation in the level of audit fees paid by companies, and auditor choice, have reported mixed results (Chan *et al*., 1993; Hay *et al*., 2008). Therefore, this study is motivated to offer further evidence relating to the determinants of audit fees and auditor choice in MENA countries. Second, most studies on auditor choice and fees concentrate on the client's characteristics (e.g., size, complexity, free cash flow and risk) (Simunic, 1980; Gul and Tsui, 1998), and the client-auditor relationship (e.g., auditor tenure and the type of non-audit services) (Barkness and Simnett, 1994; Ezzamel *et al*, 1996; Firth, 1997a, b; O'Sullivan and Diacon, 2002) to explain variations in auditor choice and fees. In response to calls for empirical testing of the relationship between CG and audit quality (Defond and Francis, 2005; Al-Ajmi, 2009), this essay is motivated to investigate the impact of various internal CG mechanisms (CG index, board characteristics and ownership structure mechanisms) on audit fees and auditor choice.

Despite considerable research on audit fees and auditor choice, such studies in the MENA region are scarce (Al-Ajmi, 2009). Therefore, the third motive driving this study is to provide MENA-related evidence on CG determinants of audit fees and auditor choice. Most of the audit literature derives from developed countries (e.g., the US and UK) where the audit market and CG environment are not identical with those in the MENA region (Chan *et al*., 1993; Carcello *et al*., 2002; Al-Ajmi, 2009). Hence, this research provides additional insights into determinants of audit pricing and auditor choice. Finally, external auditing is one of many potential monitoring mechanisms designed to mitigate agency conflicts in public traded firms by ensuring the quality of financial reports (Larcker and Richardson, 2004; Fan and Wong, 2005). Furthermore, a large number of previous studies have documented the positive impact of internal CG mechanisms on monitoring and improving the quality of financial reporting (e.g., Eng and Mak, 2003; Alsaeed, 2006; Omar and Simon, 2011; Ntim *et al*., 2012a; Samaha *et al*., 2012; Al-Bassam *et al*., 2015; Habbash *et al*., 2015; Elghuweel *et al*. 2016; Elmagrhi *et al*., 2016). Therefore, examining the association between the external auditing process and alternative governance mechanisms provides a comprehensive analysis of the associations among the determinants of financial reporting quality.

1.3 Contributions

Both the literature and current regulatory developments can benefit from this study. First, the findings meet the demand for an examination of the effects of internal governance mechanisms on the auditor choice and fees (Johansen and Pettersson, 2013). Second, they may be useful to policy makers. Many authors are concerned about the effectiveness of audit markets and the failure resulting

from their limited ex-ante differentiation (e.g., Oxera, 2006; Department of the Treasury, 2008; European Commission, 2008; OECD, 2009). The current study proposes that internal governance has economic implications on the audit market, developing earlier work on the extent to which market players select auditors, using criteria other than the size of the audit firm and its industry expertise (Francis, 2004). Third, the context beyond traditional Western settings is explored (Carcello *et al*., 2011). Within developed countries the auditing environments are similar to each other (Lin and Liu, 2009), but this essay extends the literature to MENA countries. Fourth, the findings suggest ways of improving CG and audit monitoring to ensure the reliability of corporate reporting; this is necessary to the development of MENA capital markets. Finally, the findings shed light on recent developments on MENA countries' audit functions and CG, encouraging close monitoring of the independent auditing process by investors and market regulators and increasing the reliability of financial reporting.

1.4 Structure of the Essay

The essay is organised as follows. Section 2 presents the audit quality and audit profession in the MENA region. Section 3 reviews the literature and formulates hypotheses to examine the association between internal CG mechanisms, and auditor choice and fees decisions. The research design is presented in Section 4. Section 5 discusses the empirical results and conducts sensitivity tests. Section 6 concludes the essay.

2 Audit Quality and Audit Profession in the MENA Region: Background and Institutional Framework

MENA countries, like other developing countries, share common cultural characteristics such as a strong hierarchical social structure, importance of personal relationships, religion, accountability and trust, and the nature of some of the socio-economic institutions (Haniffa and Hudaib, 2007; Al-Ajmi, 2009). The MENA stock market and auditing environment have some distinct features, different from most developed countries. For instance, there is concentrated ownership dominated by the state and powerful families (Fawzy, 2004; Wahdan *et al*., 2005a, b; Al-Ajmi, 2009; Samaha and Hegazy, 2010; Mohamed and Habib, 2013). In addition, the auditing profession is directly regulated by the government and the utility of auditing services may not be fully realised in the relatively less efficient capital market of the MENA region (Wahdan *et al*., 2005a, b; Al-Ajmi, 2009; Samaha and Hegazy, 2010; Mohamed and Habib, 2013). Thus, care is needed when interpreting the results of this

study; in particular the effects of different environmental factors should be taken into account when comparing auditing practices in MENA and developed countries.

2.1 Institutional Framework and Audit Profession in MENA Countries

The quality of the audit process and the audit profession in the MENA region are not well established compared to developed countries. In Egypt, for example, in accordance with law number 52 of 1942, the State Audit Bureau was established to audit public sector accounts. This was the start of the auditing profession in Egypt. Auditing of private businesses was regulated under Accounting Practice Law number 133, 1951, and after the expansion of public sector in 1964, the Central Auditing Organisation (CAO) of Egypt was established by Law number 129. In 1946, the Egyptian Society of Accountants and Auditors (ESAA) was established by Royal Decree. This widely recognised association of chartered accountants and auditors plays a central role in developing educational and professional standards of accounting. It was reorganised in 1977 as a non-profit organisation, and in 1983 it became a member of the International Federation of Accountants (IFAC). The association between external auditors and corporations has been regulated by Company Law number 159 since 1981. This act requires listed companies in Egypt to maintain proper accounting records separate from those of their owners, and to hire an external auditor at the end of each fiscal year. It also requires that external audits be carried out in compliance with the Accounting Practice Law 133/1951, and that the General Assembly is responsible for deciding whether to renew the audit engagement or change the external auditor (Wahdan *et al*., 2005a, b).

Haniffa and Hudaib (2007) explained that the Saudi auditing profession is regulated according to the Companies Act 1965 (amended 1985), the Income Tax and Zakah Law 1950, the Banking Control Law 1966, the General Auditing Bureau Constitution and Regulation 1970, the Saudi Auditing Standards 1985, the Statutory Accountants Act 1973 (amended 1994), as well as the Professional Code of Ethical Conduct (PCEC) 1994. These rules are derived from Anglo-American sources without amendments to meet the local socio-economic environment (Shinawi, 1970; Haniffa and Hudaib, 2007; Hussainey and Al-Nodel, 2008; Baydoun *et al*., 2013). The Saudi Organisation for Certified Public Accountants (SOCPA), a professional membership organisation, was established by Royal Decree No. M/12 in 1992. It has many objectives, such as to review, develop and approve accounting and auditing standards, and to organise continuous education programmes for its members. However, it has had little power or impact on the accounting and auditing profession (Haniffa and Hudaib, 2007). Similarly, the Bahrain Accountants Association (BAA), which was established in 1972 as a non-governmental organisation, provides workshops, seminars and public lectures. It has limited power in the further development of the profession (Al-Ajmi, 2009).

The state and powerful families and classes in most MENA countries can influence the recruitment and appointment of staff members in most of professions, including audit firms (Al-Awaji, 1971; Helms, 1981; Wahdan *et al*., 2005a, b; Mohamed and Habib, 2013). Some of these countries also have laws requiring audit firms to hire a certain percentage of nationals; SOCPA, for example, requires all audit firms to have at least 30% of their staff composed of Saudi nationals. This may affect the quality of the audit service provided in these countries (Haniffa and Hudaib, 2007). The political and legal structure and social values (religion, norms and ethics) may also impact the audit profession and the quality of audit services provided (Haniffa and Hudaib, 2007). The appointments of auditors, as required by company law in most MENA countries, should be made on a yearly basis at annual stockholders' meetings. In practice, boards of directors may be empowered by annual meetings to appoint auditors and to determine their remuneration. This practice conflicts with the auditor's role of mitigating agency problems that might exist between the board and the shareholders (Al-Ajmi, 2009).

Mohamed and Habib (2013) report many factors negatively affecting audit quality in Egypt. First, there is no effective code of professional ethics governing the accountants' and auditors' work and practices. Although the Commercial Syndicate's Law number 40, 1972, discusses breach of ethics criteria including fraud, some accountants and auditors ignore this code (Wahdan *et al*., 2005a; Samaha and Hegazy, 2010; Mohamed and Habib, 2013). Second is the absence of a powerful professional organisation responsible for developing the auditing profession, despite the existence of the ESAA, which has no authority to issue auditing standards or to license auditors for public practice. The ESAA is unable to confirm that its members are complying with ethical conduct standards and auditing best practice (Samaha and Hegazy, 2010; Mohamed and Habib, 2013). Third, most audit firms provides both audit and non-audit services, including management advisory services. This increases the auditor's economic interest in the client, thus giving rise to conflict of interest and threatening auditor independence (Moizer, 1985; Wahdan *et al*., 2005a; Samaha and Hegazy, 2010; Mohamed and Habib, 2013). Fourth, although the Egyptian Company Law number 159 of 1981 stipulates that shareholders hire the auditor and decide the audit fees in the general assembly, the concentrated ownership of most Egyptian companies enables powerful shareholders to intervene in these decisions. Therefore, auditors may face a conflict of interests between their fairness on the one hand and their selection and fees on the other hand (Wahdan *et al*., 2005b; Mohamed and Habib, 2013). Finally, there are few opportunities for new audit services to enter the Egyptian market, limiting auditors' independence and therefore audit quality (Mohamed and Habib, 2013).

2.2 Corporate Governance and the Role of Big 4 Audit Firms in Developing the Audit Profession in MENA Countries

The CG codes issued by most MENA countries stress the importance of the services provided by the external auditor in enhancing the quality and credibility of corporate financial statements. In addition, these codes recommend measures to ensure external auditors' independence from management. For example, the Egyptian CG code 2011 stipulates that shareholders select auditors, only in the annual general assembly. It recommends that the general assembly should not allow the board to choose the external auditor or determine his/her annual fees without specifying a maximum value. Similarly, boards of directors should not assign additional non-audit services to the company's external auditor as this might affect his/her independence, unless the board consults the audit committee. Similarly, Jordanian CG code 2012 and Omani CG code 2002 rule that, during their annual general meeting, shareholders shall appoint the external auditor for one year, to be renewable as appropriate. The board of directors, after consulting the audit committee, can make recommendations for the selection, appointment, reappointment and terms of the auditor's engagement. In order to ensure the independence of the external auditor, these codes also proposed that the audit engagement should not be renewed after four consecutive years, and the external auditor should not provide non-audit services that might weaken their independence.

Similarly, in developed countries CG codes stress the importance of the objective relationship between auditors and management. Cadbury (1992), for example, recommended that audit firms should not provide other types of service to their audit clients. However, it supported full disclosure of fees paid to audit firms for non-audit work, and proposed the introduction of some form of compulsory rotation of audit firms in order to maintain the objectivity of relationships between management and auditors.

Despite the undevelopment of the audit profession and audit market in the MENA region, most MENA countries experienced a rapid shift in economic development following the oil boom of the 1970s, thereby increasing the demand for high-quality auditing (Haniffa and Hudaib, 2007). Other factors which encourage the development of the accounting and auditing profession in these countries are the strong presence of multinational firms and international financial institutions, and governments having long-standing policies of attracting foreign investments. Furthermore, the shift of ownership rights from the state to private and institutional investors as a result of increasing economic diversification (Abd-Elsalam and Weetman, 2003) requires better protection of such investments through better-quality audit by more reputable auditors (Al-Ajmi, 2009; Samaha and Hegazy, 2010). The region has experienced an increase in the number of foreign investors, raised awareness of investors, improvement in the efficiency of the judiciary system, increase in the

probability of materialisation of risk, more investment in continuing education programmes for qualifying accountants and auditors, an increase in government privatisation programmes and a reduction in government ownership in listed firms: these factors are likely to increase the demand for better quality audit services (Al-Ajmi, 2009).

Given the relatively recent development of the accounting and auditing profession in MENA countries, and the lack of qualified and experienced nationals, foreign professional audit firms tend to dominate the local audit and accountancy market, introducing standards and procedures, as well as professional ethical codes, from their home countries (Al-Rehaily, 1992; Al-Ajmi, 2009). They have also created an image as providers of high-quality audits (Haniffa and Hudaib, 2007). In Egypt, reputable audit firms with international affiliations representing the large international audit firms usually employ qualified staff, mostly members of international professional bodies such as American Institute of Certified Public Accountants (AICPA) and Association of Chartered Certified Accountants (ACCA). On the other hand, the small- and medium-sized firms hire practitioners who lack sufficient knowledge and formal qualifications in both accounting and auditing standards, and who perform audit examination for tax purposes only (World Bank, 2002; Samaha and Hegazy, 2010). Most the MENA region's accounting and auditing markets are dominated by large audit firms; for example Al-Ajmi (2009) reports that 82.5% of the 41 companies listed on the Bahrain Stock Exchange were audited by one of the Big 4 audit firms. He suggests that Big 4 have greater resources, technical knowledge and global reach, allowing them to deal with clients more objectively without fear of termination. He identifies the key factors which ensure the credibility of an audit report provided by one of the Big 4 auditors as professional audit expertise, a wide range of skills, reputation, accounting-and-auditing knowledge, real value for fees, and ethical standards.

Likewise, Samaha and Hegazy, (2010) provide an empirical evidence from Egypt illustrating that there is general lack of training and proper knowledge for supporting high-quality financial reporting. This restricts ensuring sound audit practice and quality. However, auditors from Big 4 firms are more professional and complying with international auditing standards (found to use International Standards on Auditing (ISA) No. 520 relating to analytical procedures (APs) to a greater extent) than auditors from non-Big 4 firms. Similarly, and using a survey of 300 credit and financial analysts in Bahrain, Al-Ajmi, (2009) reports that firm specific CG mechanisms (e.g., effective audit committee) enhances the perceived quality of the audit report. He also documents that credit and financial analysts believe that Big 4 audit firms have required qualifications, expertise and independency for conducting high-quality audit process. Therefore, the credibility of financial statements may be a function of audit firm size. In addition, the dual providing of audit and non-audit services affects auditor's independence negatively and probably impair audit quality.

3 Theoretical Framework, Literature Review and Development of Hypotheses

3.1 Agency Theory Framework for Auditor Choice and Fees

The separation of ownership and management in modern corporations encourages management to undertake opportunistic behaviour and hence increase the cost of agency problems that may be ultimately borne by management (Jensen and Meckling, 1976). The separation of ownership and management is not the only source of agency conflict. Since various interested parties are associated with business organisations, there have been different types of principal-agent relationship (e.g., between controlling shareholders and minority shareholders, creditors and owners/management). Therefore, CG's main objective is to monitor the behaviours of different interested parties and ultimately to reduce the agency costs raised by different principal-agent relationships (Karpoff *et al*., 1996; Singh and Davidson, 2003; Lashgari, 2004; Maniam *et al*., 2006). Thus, CG is a set of external and internal rules, regulations, procedures and measures to govern the behaviours of different interested parties within a firm to maximise its value (Denis and McConnell, 2003; Lin and Liu, 2009). Previous studies have revealed the positive impact of CG on firms' operating efficiency and effectiveness (e.g., Bushman and Smith, 2001; La Porta *et al*., 2002; Anderson *et al*. 2004). Other studies have found that sound CG mechanisms have a greater information content (Gompers *et al*., 2003; Lemmon and Lins, 2003; Bai *et al*., 2004; Steen, 2005. Ntim, 2015). Regulators, researchers and practitioners in developed and developing countries have devoted much effort in CG studies and proposed various procedures to raise the standards of CG over recent years, especially after the corporate scandals of the early 2000s, such as Enron and WorldCom (Denis and McConnell, 2003; Bai *et al*., 2004; Jiraporn *et al*., 2005).

Agency conflicts also lead to a demand for the services of independent auditors to ensure the fairness of financial reports prepared by management for shareholders, and to detect material deviations from generally accepted accounting principles (GAAP) (Francis and Wilson, 1988; Dye, 1993; Imhoff, 2003). Therefore, firms may voluntarily hire high-quality auditors to improve the credibility of their financial disclosure and thereby mitigate agency problems (Willenborg, 1999; Anderson *et al*., 2004; Wei *et al*., 2014; Asthana *et al*., 2015). Past studies have reported that firms facing serious agency conflicts are more likely to hire high-quality auditors to improve their CG and mitigate the probable conflicts (Hay and Davis, 2004; Fan and Wong, 2005; Srinidhi *et al*., 2014), while poor-quality auditors may be unable to exercise appropriate monitoring of the client's financial reports (Claessens *et al*., 2002; Mayhew *et al*., 2003). For example, Wei *et al*. (2014) document that firms with a sufficiently high proportion of sophisticated investors are more likely to choose high-

quality auditors. Also, Luypaert and Van Caneghem (2013) have evidence supporting that appointing one of the Big 6/5/4 auditors mitigates information asymmetry in mergers and acquisitions; contingent payments are less common when the target is audited by these auditors, after controlling for several other characteristics of the deal and firm. Furthermore, they report that the incentive to use stock payments in periods of stock market overvaluation is lower for acquirers with Big 6/5/4 auditors, and target shareholders are more likely to accept a contingent offer if the acquirer's financial statements are certified by them. Likewise, firms with higher information asymmetry problems benefit more from Big 6/5/4 auditors in terms of lower cost of debt (Gul *et al*., 2013). Srinidhi *et al*. (2014) agree that strongly governed firms are more likely to choose better-quality (specialist) auditors and to exhibit higher earnings quality than other firms. This means that reputable auditors may be considered as a CG device to monitor a firm's financial reporting process (Cohen *et al*., 2002; Ashbaugh and Warfield, 2003; Fan and Wong, 2005; Lin and Liu, 2009, 2010; Asthana *et al*., 2015). Firm-specific CG may also affect a firm's choice of audit/auditor quality. In general, firms adopting sound CG mechanisms have a better control over operating activities and management performance. Thus the firm's management or its controlling shareholders are not totally free in the choice of auditor. On the other hand, in weak governed firms, the management or controlling shareholders have a better opportunity to direct the auditor-hiring decision towards their own interests (Lin and Liu, 2009, 2010). This increases the risk of aggressive earning management or tunnelling behaviours, and thereby the credibility of financial statements may decrease.

The heterogeneous demands for independent audit services and different levels of audit quality to serve as a monitoring function depend on various levels of agency conflict among different firms (Lin and Liu, 2009; Luypaert and Van Caneghem, 2013; Srinidhi *et al*., 2014). Audit quality refers to the ability to detect misstatements, and the willingness to report misstatements uncovered in an audit process (DeAngelo, 1981; Copley and Douthett, 2002; Lee *et al*., 2003; Mohamed and Habib, 2013). That is, audit quality depends on the auditor's ability to discover and report inaccuracies in the financial statements provided by management. The auditor's technical capabilities and competence determine his/her ability to discover a breach in the client's accounting system. However, the probability of reporting the misstatements is a function of the auditor's independence (De Angelo, 1981; Deis and Giroux, 1992; Vanstraelen, 2000). Audit quality is difficult to observe directly, so several observable attributes are used to proxy for it, including the size of the audit firm (DeAngelo, 1981; Palmrose, 1988; Eshleman and Guo, 2014), tenure on audit engagement (Simunic and Stein, 1987), audit structure (Knapp, 1991), auditors' industrial expertise composition (Schauer, 2002), audit fees (Beck *et al*., 2013; Chen *et al*., 2016) and litigation or stock market actions against listed firms and their auditors (Allen *et al*., 2005). Lin and Liu (2009, 2010) argue that the main attributes

of a high-quality auditor are independence (relationship based), sufficient expertise (technique based) and high integrity (honesty and forthrightness).

DeAngelo (1981) argues that the quality of an audit process is a function of the size of the audit firm, or its market share. Large audit firms are more likely to provide higher quality audit to sustain their reputation and avoid litigation costs (Francis and Krishnan, 1999; Eshleman and Guo, 2014). Despite the case of Arthur Andersen, the audit literature provides much evidence confirming that large audit firms are positively associated with providing higher-quality services and a better monitoring role (e.g., Wolson and Grimlund, 1990; Willenborg, 1999; Bandyopadhyay and Kao, 2001; Ireland and Lennox, 2002; Lee *et al*., 2003; Francis, 2004; Watkins *et al*., 2004; Farbar, 2005; Lennox, 2005; Lin and Liu, 2009; Eshleman and Guo, 2014). This is because they usually have better training programmes, and a higher degree of independence and industrial expertise, which qualify them to detect and report irregularities in the financial statements provided by management (DeFond, 1992; Lennox, 1999; Reed *et al*., 2000; Mansi *et al*., 2004; Eshleman and Guo, 2014). A number of previous studies have provided empirical evidence suggesting that high-quality auditors (Big 6/5) can effectively detect earnings management and thus eventually improve the truthfulness and usefulness of accounting information (Francis and Krishnan, 1999; Balsam *et al*., 2003; Watkins *et al*., 2004). On the other hand, because of the relatively limited industrial knowledge and resources available to small audit firms, these are more likely to provide low-quality audit services (Teoh and Wong, 1993; Becker *et al*., 1998; Krishnan, 2003; Ghosh and Moon, 2005). Furthermore, some empirical studies have revealed that accounting numbers (e.g., earnings and book values) reported by the clients of large audit firms have greater information content for the market (Krishnan, 2003; Francis, 2004; Watkins *et al*., 2004; Lennox, 2005; Knechel *et al*., 2007). Similarly, higher audit fees may reflect audit quality and auditor effort (Beck *et al*., 2013), and thus may increase the credibility of corporate reporting and thereby accelerate the incorporation of future earnings information into current stock prices (Chen *et al*., 2016).

Managers and controlling shareholders may gain self-benefits by manipulating accounting numbers or transferring resources through tunnelling behaviour (DeFond and Subramanyam, 1998), and they may take these self-benefits into consideration when hiring external auditors (Johnson *et al*., 2000; La Porta *et al*., 2002). Firms hiring a more reputable auditor signal to the market that their financial reports are more reliable. This helps in reducing information asymmetry (Beatty, 1989; Willenborg, 1999), as well as mitigating agency costs and allowing firms to obtain finance (debt/equity) at lower costs (Beatty, 1989; Ang *et al*., 2000; Lin and Liu, 2009, 2010). Firms also seek to obtain high-quality audit to improve the credibility and reliability of their accounting information. Reliable accounting information, along with market measures, helps in evaluating and

compensating management (Antle, 1982; Watts and Zimmerman, 1986; Blackwell *et al*., 1994). Firms not only demand the better-quality audit services provided by large audit firms but they also believe that large audit firms can provide superior tax expertise or advisory services among the other non-audit services provided (Chaney *et al*., 2004).

From the auditors' point of view, they aim to provide high-quality audit process to minimise their business risk by increasing the auditee's satisfaction, avoiding litigation, and reducing damage to their reputation in the case of audit failure (Al-Ajmi, 2009; Eshleman and Guo, 2014; Kalelkar and Khan, 2016). Large audit firms also provide high-quality audit services for a number of other reasons, including availability of highly qualified and experienced staff; adequate technological resources (DeAngelo, 1981; Frantz, 1999); effective control systems (Al-Ajmi, 2009); more independence of their clients (DeAngelo, 1981); high economic costs imposed on the auditor in the event of audit failure, and the risk of losing the reputation (DeAngelo, 1981) which enables them to charge high audit fees and therefore devote more time and effort to each audit engagement (Francis, 2004; Goodwin-Stewart and Kent, 2006). A considerable number of studies have investigated whether the big audit firms may provide a superior audit quality service, with mixed results. Although extensive empirical evidence suggests that these auditors provide high-quality audits (DeAngelo 1981; Palmrose, 1988; Deis and Giroux, 1992; Mutchler *et al*., 1997; Krishnan and Schauer, 2000; Fuerman, 2004; Eshleman and Guo, 2014), there is also evidence which suggests that no differences in quality exist between the big and non-big auditors (Jeong and Rho 2004; Khurana and Raman, 2004).

In conclusion, the independent audit process can be considered as one of the effective CG mechanisms, where an independent and professional auditor will provide external monitoring of the financial information provided by management and thereby enhance market confidence in corporate financial reporting (Lin and Liu, 2009, 2010; Luypaert and Van Caneghem, 2013). Auditors can also improve the monitoring role of CG by examining and evaluating a firm's internal control procedures to ensure the reliability of disclosed financial reports (Beasley *et al*., 2000; La Porta, 2002; Fan and Wong, 2005). The big audit firms are usually more independent and possess greater professional industrial expertise, both of which are necessary to detect and report misstatements and irregularities in financial reports and thereby better fulfil their monitoring role (Willenborg, 1999; Chaney and Philipich, 2002; Cohen *et al*., 2002; Ghosh and Moon, 2005; Lin and Liu, 2009; 2010). Well governed firms are more likely to hire a higher-quality auditor to ensure that financial reports are fairly presented in conformity with GAAP, eventually enhancing the credibility and usefulness of financial reports to various stakeholders (Bushman and Smith, 2001; Dewing and Russell, 2003; Fan and Wong, 2005; Maniam *et al*., 2006; Srinidhi *et al*., 2014). Therefore, sound CG mechanisms are associated with the quality and effectiveness of the auditing process (Ashbaugh and Warfield, 2003;

Francis *et al*., 2005; Abbott *et al*., 2007). On the other hand, in firms with weak CG mechanisms, it is more likely that managers and controlling shareholders will interfere in the choice of external auditor, so that the independent audit process may not be able to fulfil its monitoring role (Rosner, 2003; Marnet, 2005; Lin and Liu, 2009, 2010).

Indeed, the impact of sound CG mechanisms on external auditing (including auditor choice and fees) is an important issue worthy of study. In particular, the auditing profession and CG practices in MENA countries differ substantially from those in developed countries (as discussed in detail in Section 2), which may have different impacts on the utility of the auditing function in the MENA context. Therefore, investigating the antecedents of auditor choice and fees from the perspective of CG context in the MENA market environment should not only promote the development of CG and independent auditing in these emerging economies, but also enrich the literature on the CG/audit quality-related issues. In particular, this study examines the impact of the CG index, board characteristics (size, diversity, independence, and non-duality of chairperson and CEO roles) and ownership structure mechanisms (government, director and block ownership) on both auditor choice and fees decisions in the MENA context.

3.2 Literature Review and Development of Hypotheses

3.2.1 A Broad Composite Quality CG Index

Major financial reporting scandals have, to a large extent, been attributed to poor governance oversight. Therefore, many countries have implemented new rules to improve the quality of CG (Byard *et al*., 2006; Zaman *et al*., 2011). CG reforms which provide guidelines and recommendations relating to the composition and effectiveness of boards and audit committees are intended to improve financial reporting and external audit quality (Conyon, 2000; Cohen *et al*., 2004; Larcker and Richardson, 2004; Peasnell *et al*., 2005; Turley and Zaman, 2007; Beasley *et al*., 2009; Krishnan and Visvanathan, 2009). Effective CG measures are more likely to result in higher transparency and reliability of financial reporting as well as assisting auditors to effectively accomplish their monitoring role and provide correct audit opinions (Young, 2000; Turley and Zaman, 2004). Furthermore, effective boards and audit committees are expected to maintain auditor independence by taking responsibility for the appointment and remuneration of auditors (i.e., audit fees and non-audit services fees), and playing an important role in ensuring the independence of the auditors in expressing their opinions on management policies (DeZoort *et al*., 2002; Turley and Zaman, 2004; Knechel and Willekens, 2006; Hay *et al*., 2008; Beasley *et al*., 2009).

Researchers examining the relationship between internal CG mechanisms and external auditing have found mixed results (Hay *et al*., 2008). One group argues that internal CG measures

and external auditing can substitute for each other, so that better CG measures will be associated with hiring lower-quality (small) audit firms and paying lower audit fees. Simunic (1980), Wallace (1984) and Felix *et al*. (2001) find empirical evidence confirming that the greater the contribution of effective internal control to the financial statement audit, the lower the external audit fees. This means that high investment in effective internal control systems leads to a decrease in inherent risk (Libby *et al*., 1985; Maletta, 1993; Maletta and Kida, 1993), thereby cutting the cost of external audit services, indicating that an effective internal control system substitutes for external audit services. Fan and Wong (2005) document that in emerging markets with serious agency conflicts between controlling owners and minority shareholders, firms may employ Big 5 auditors to reduce these conflicts as a substitute for conventional corporate control mechanisms such as boards of directors and takeovers. Likewise, Larcker and Richardson (2004) report that in firms with weak CG measures (i.e., low market capitalisation, high growth prospects, less independent boards, low institutional holdings and high insider holdings), the auditor appears to play a key monitoring role to ensure financial reporting quality.

The other group suggests that CG mechanisms and external audit services are complementary, meaning that improved governance is associated with employing reputable (Big 4) auditors and paying higher audit fees. Directors on boards and audit committees are expected to be responsible for monitoring the external audit process effectively, to avoid potential litigation risk and improve their reputation. This requires a wider scope of audit to ensure its quality, and therefore higher audit fees (Zaman *et al*., 2011). Several studies have documented that firms voluntarily forming an audit committee are more likely to switch to one of the Big 8 auditors (e.g., Eichenseher and Shields, 1985; Pincus *et al*., 1989) and pay higher audit fees (e.g., Collier and Gregory, 1996). Hay *et al*. (2008) document that measures of internal auditing, CG, and concentration of ownership are all positively related to audit fees, suggesting that these controls are complementary.

The majority of previous studies have documented evidence supporting the complementary view of the association between CG and audit quality (choice of reputable auditor and high audit fees). For example, Abbott *et al*. (2003) find that audit committee characteristics (i.e., independence and financial expertise) are positively associated with audit fees. O'Sullivan (2000) finds that firms with a high percentage of executive director ownership pay higher fees. Providing evidence from the US, Carcello *et al*. (2002) report that board of director independence, diligence and expertise are associated with higher audit fees. Using data from New Zealand listed firms in 1995 and 2005, Hay *et al.* (2008) document that CG mechanisms (existence of an audit committee, number of outside directors, and existence of a major outside shareholder) are positively related to audit fees, confirming that internal CG mechanisms complement external auditors in providing a monitoring role, although

only where there is sufficient variation in CG arrangements. Zaman *et al*. (2011) investigate the influence of audit committee effectiveness (i.e., independence, financial expertise, diligence and size) on auditor remuneration in the UK, using a sample of 540 firm-year observations for the period 2001–2004 drawn from 135 UK FTSE-350 non-financial companies. They find a significant positive impact of audit committee effectiveness on audit fees, indicating that good CG measures (effective audit committee) tend to ensure higher audit quality. This demands a wider scope of the audit and in turn audit fees will be increased.

On the other hand, Fan and Wong (2005) report empirical evidence, using data from eight East Asian economies between 1994 and 1996, confirming that firms with agency problems embedded in their ownership structures (highly concentrated ownership), between controlling owners and the minority shareholders, are more likely to hire Big 5 auditors and pay higher audit fees. Using a large sample of 3,424 US firms for fiscal years 2000 and 2001, Larcker and Richardson (2004) find a statistically negative relationship between auditor independence (using four alternative measures) and earnings quality in firms with weak CG measures (i.e., low market capitalisation, high growth prospects, less independent boards, low institutional holdings and high insider holdings). This means that CG is considered an important determinant of the association between auditor independence and earnings quality. Furthermore, in firms with weak governance, the auditor appears to play a key role in the governance process to ensure financial reporting quality. These results also suggest that external auditors are motivated to improve their reputation capital by ensuring the earnings quality of clients.

Studies examining the association between CG and audit quality have shown mixed results. The main problem with these studies is that they use a small number of CG provisions (e.g., audit committee; board of directors characteristics), and arguably limiting the generalisability of their findings. Therefore, our study seeks to contribute to the literature by examining the relationship between CG quality (51 CG provisions) and audit quality (i.e., auditor choice and fees). Thus, based on these arguments and mixed results, the first hypothesis is as follows:

***H1a**. A firm with high CG quality is more/less likely to choose a high-quality (Big 4) auditor.*

***H1b.** A firm with high CG quality is more/less likely to pay high audit fees.*

3.2.2 Corporate Board Characteristics Variables

The board of directors stands on the top of the decision-making hierarchy in modern organisations. It has many functions, including controlling and monitoring managers, providing advice and counsel to managers, monitoring organisational compliance with applicable rules and legislation, in addition to linking the organisation to the external environment (Lipton and Lorsch, 1992; Jensen, 1993; Mallin, 2004; Monks and Minow, 2004; Chen, 2005; Lin and Liu, 2009; Ntim,

2012b). Many studies have examined the effect of various board characteristics, such as board size, number of board meetings, dual board leadership structure and the proportion of independent members on the board, on corporate voluntary disclosure, earnings quality, executives' compensation, pay-performance relationship, performance and value relevance of earnings (e.g., Klein 2002a,b; Cotter and Sylvester, 2003; Gul *et al*., 2003; Gul and Leung, 2004; Ajinkya *et al*., 2005; Niemi, 2005; Tauringana and Mangena, 2014; Elmagrhi *et al*., 2016; Ntim *et al*., 2016a,b; Tauringana and Chithambo, 2016). However, studies examining the effect of board characteristics on auditor choice and fees are limited. The next sub-sections will discuss the theoretical link, empirical review and hypotheses development of the association between various board characteristics and auditor choice and fees.

3.2.2.1 Board Size

Agency theory suggests that large boards are more efficient in monitoring and evaluating managers' behaviour to make sure they are consistent with shareholders' interests (Jensen and Meckling, 1976; Fama and Jensen, 1983; Dalton *et al*., 1998; Lin and Hwong, 2010; Ntim, 2015). This is because large boards are less likely to be affected by a dominant CEO than are small boards (Ntim and Soobaroyen, 2013b).

Large boards may include independent, diligent and expert board members who are more likely to demand higher audit quality to protect their reputational capital (Fama 1980; Fama and Jensen 1983), avoid legal liability (Gilson 1990; Sahlman 1990) and promote shareholders' interests (Carcello *et al*., 2002). This means selecting a large audit firm with a wider remit, thereby increasing the auditor's costs and therefore fees, because the auditor's additional costs are ultimately borne by the client (Carcello *et al*., 2002). Prior studies have suggested that there is a high correlation between audit effort and audit fees (e.g., Deis and Giroux 1996). Effective boards demand higher assurance services because directors' marginal benefits are greater than marginal audit costs (Carcello *et al*., 2002).

Carcello *et al*. (2002) argue that the board of directors affects the quality of the audit services performed, either formally or informally. First, with regard to the formal way, the board of directors generally deliberates with management to select the external auditor, subject to shareholder ratification. Consequently, the board is more likely to be involved in reviewing the overall planned audit scope and proposed audit fees (Blue Ribbon Committee, 1999; Public Oversight Board, 1994). Second, with regard to the informal way, external auditors may perform a higher-quality audit to meet the expectations of high-quality boards (e.g., independent, diligent and expert). On the other hand and from the auditor's perspective, Carcello *et al*. also suggest that external auditors assess a lower control

risk for companies with a stronger control environment (e.g., large and qualified boards). This reduces the extent of audit procedures and consequently the audit fees (Carcello *et al*., 2002). Therefore, it is expected that there is a negative relationship between board size and audit fees.

Empirically, investigating 937 Andersen clients in 2001, Asthana *et al*. (2010) document empirical evidence suggesting that board size is positively associated with quick disassociation from auditors with a bad reputation. Lin and Liu (2009) report empirical evidence, using a sample of Chinese firms, suggesting that firms with stronger internal CG caused by a large number of supervisory board (SB) members are more likely to hire high-quality auditor to enhance the supervision or monitoring role of the board. However, in their later study, Lin and Liu (2010) find that SB size does not have a significant impact on auditor switching decisions.

The CG codes for listed companies in most MENA countries recommend that members of the board of directors should be qualified and enjoy adequate knowledge and experience that are necessary to fulfil their assigned responsibilities. There is disagreement about the actual size of the board. The Egyptian CG code 2011, for example, suggests that it should not to be less than five members, while Saudi CG code 2010 and Jordan CG code 2012 recommend a board size of 3 to 11 and 3 to 13 members, respectively. Given the previous theoretical and empirical literature, the second hypothesis is as follows:

H2a. *A firm with large board size is more/less likely to choose a high-quality (Big 4) auditor.*

H2b. *A firm with large board size is more/less likely to pay high audit fees.*

3.2.2.2 Board Diversity

Recent corporate failures (e.g., Enron and WorldCom) have renewed interest in the effective oversight role played by the board of directors (Gul *et al*., 2008; Carter *et al*., 2010; Adams *et al*., 2015). One way to improve boards' monitoring role is to increase diversity among its members, because board diversity enables them to execute their oversight function (Rose, 2007; Carter *et al*., 2010; Terjesen *et al*., 2015a; Gyapong *et al*., 2015; Ntim, 2015).

The argument that an effective board (e.g., a diversified board) leads to the choice of Big 4 auditors, higher audit effort and audit fees is subject to two counter viewpoints. On the one hand, a production function viewpoint of auditing suggests that an effective board works to improve the financial reporting process that, in turn, should reduce inherent risk and the need for extensive external auditing (Simunic, 1980; Wallace, 1984, Felix *et al*., 2001). On the other hand, other view argues that although the production function viewpoint assumes a constant demand for assurance, the aggregate demand for auditing is a function of the set of risks faced by different stakeholders in the firm, including the board members (Knechel and Willekens, 2006). Furthermore, directors on an

effective board need to provide a monitoring role to protect their reputational capital, avoid legal liability and promote shareholder interests (Fama and Jensen, 1983; Gilson, 1990; Carcello *et al*., 2002). Therefore, more diversified boards are more likely to demand an extensive external audit process, appoint Big 4 auditors and pay higher audit fees.

Agency theory argues that female and minority ethnic directors are able to provide an efficient monitoring function to protect shareholders' interests by improving board independence (Carter *et al.*, 2003; Gyapong *et al*., 2015; Ntim, 2015). Several studies have suggested that women are more sensitive to ethical issues than men in most cases of decision making (Bruns and Merchant, 1990; Bernardi and Arnold, 1997; Cohen *et al*., 1998). Therefore, boards with female directors are more likely to have higher levels of awareness in the financial reporting process (Gul *et al*., 2008). Additionally, female directors are more averse to risk and complexity (Jianakoplos and Bernasek, 1998; Barber and Odean, 2001; Brooks and Zank, 2005), indicating that boards with female and ethnic minority directors may demand higher levels of monitoring to protect the firms' reputational capital and to avoid legal liability (Fama and Jensen, 1983; Gilson, 1990; Sahlman, 1990). Women leaders seem to create an atmosphere of greater communication of information (Jelinek and Adler 1988), adopt more participative leadership with a transformational perspective (Trinidad and Normore, 2005), offer a more cooperative and collaborative conflict management style compared to the competitive style adopted by men, and show greater concern for interpersonal relationships and reliance on rules of fairness in the exercise of power (Klenke, 2003). These distinctive characteristics of female directors qualify them to demand extensive audit effort.

The effect of board diversity on firm performance and financial reporting quality has been extensively investigated (e.g., Kang *et al*., 2007; Singh, 2007; Campbell and Minquez-Vera, 2008; Du Plessis, 2008; Carter *et al*., 2010; Gyapong *et al*., 2015; Ntim, 2015; Estélyi and Nisar, 2016; Elmagrhi *et al*., 2016). However, there is a dearth of studies examining the impact of board diversity on audit quality (i.e., auditor choice and fees).

Using a sample of US firms from 2001 to 2003, Gul *et al*. (2008) examine whether female corporate board membership impacts the board's demand for audit effort measured by audit fees. They report that firms that have at least one female director or a higher proportion of female directors on the board are more likely pay higher audit fees. Similarly, a female non-executive director or high proportion of female non-executive directors are positively associated with demanding higher audit effort and thereby paying higher audit fees, particularly in firms with greater information asymmetry, more complexity and a higher level of ethical dilemma. Jordan's CG code 2012 recommends that boards should consider a balance between age, gender and experience to achieve its required roles

and responsibilities effectively. Thus, based on these arguments and mixed results, the third hypothesis is as follows:

***H3a**. A firm with high board diversity is more/less likely to choose a high-quality (Big 4) auditor.*

***H3b**. A firm with high board diversity is more/less likely to pay high audit fees.*

3.2.2.3 Board Independence

Independent directors tend to act in the best interests of shareholders (Cotter *et al*., 1997, Carcello *et al*., 2002). Since ownership and management are separated in most modern corporations, managers have an opportunity to manipulate reported financial results for opportunistic purposes (Jensen and Meckling, 1976; Watts and Zimmerman, 1983). On the other hand, outside directors are motivated to work as representatives of shareholders to prevent and detect such opportunistic reporting by management (Fama and Jensen, 1983; Hay *et al*., 2008), and this can be achieved by pursuing higher-quality audit services. This incentive is driven by the following motivations. First, the directors aim to protect and enhance their reputational capital in the market as expert monitors by not associating themselves with poor corporate performance (Fama 1980; Fama and Jensen 1983; Gilson 1990). Second, directors aim to fulfil their monitoring role with due care in order to avoid legal liability (Eichenseher and Shields, 1985; Gilson, 1990; Sahlman, 1990). Third, directors seek to protect shareholders' wealth from losses arising because of financial reporting problems (Beasley *et al*., 1999; Carcello *et al*., 2002). Since outside directors aim to monitor the opportunistic reporting behaviour of managers and to reduce the likelihood of fraudulent reporting (unlike executive directors, who may face greater conflicts of interest), so they are more likely to support the purchase of high-quality audit services, leading to the selection of big auditors and high audit fees (Carcello *et al*., 2002). Furthermore, NEDs benefit from their network connections to recommend auditor choice and fees (Johansen and Pettersson, 2013). O'Sullivan (2000) has empirical results from UK quoted companies suggesting that the presence of more NEDs on boards encourages intensive audit to satisfy their own monitoring role.

Most CG codes illustrate the value of non-executive representation on boards (e.g., Cadbury, 1992; Hampel, 1998). A higher percentage of NEDs on the board increases board independence and the ability to take better decisions (O'Sullivan and Diacon, 2002). O'Sullivan (2000) and O'Sullivan and Diacon (2002) argue that appointment of non-executives on boards enhances the quality of the audit process and thereby the size of audit fees in a number of ways. Since management prepares financial statements, external auditors and NEDs discuss the way in which the financial statements have been prepared, in order to reach an opinion on the quality of the statements. External directors

place more emphasis on the extent and quality of the audit process than on the cost, compared to executive directors. Both NEDs and external auditors share the objective to overseeing the quality of the financial reporting process. Consequently, NEDs are expected to demand more extensive (costly) auditing to help them to fulfil their own monitoring responsibility.

Empirically, many studies have documented the effectiveness of outside directors in monitoring the financial reporting process. Beasley (1996) reports a significant impact of outside directors on minimising the incidence of fraudulent financial reporting. Dechow *et al*. (1996) also find that the percentage of outside directors has an inverse relation with SEC enforcement actions related to earnings overstatements. Regarding the effect of board independence on auditor choice and audit fees, Carcello *et al*. (2002) employ data from 258 Fortune 1000 (US) companies for the fiscal year April 1992-March 1993. They find a positive relationship between the percentage of outsiders on the board and audit fees. Similarly, the empirical results of O'Sullivan (2000), using a sample of 402 UK quoted companies for 1992, support the positive and significant relationship between the percentage of non-executives on the board and audit fees. Using a sample of Danish listed companies for the period 2002-2008, Johansen and Pettersson (2013) find a positive and significant link between the percentage of non-executive board members and audit fees. Likewise, Hay *et al*. (2008), using data from New Zealand listed firms in 1995 and 2005, document that the number of outside directors is positively related to audit fees, although only where there is sufficient variation in CG arrangements.

However, O'Sullivan and Diacon (2002) find no empirical evidence from their survey of 117 UK registered insurance companies in 1992 to support the relationship between the percentage of NEDs and audit fees. They justify this finding by the likelihood that NEDs, in their sample of insurance companies, monitor directly and have no impact on the extent and fees of the audit. In their study of Danish listed companies 1988-2008, Johansen and Pettersson (2013) in general report no impact of the percentage of NEDs on the choice of either the audit partner or the audit firm.

The majority of CG codes recommend the formation of audit committees of non-executive and independent directors to maintain the objectivity of the relationship between management and auditors (e.g., Cadbury, 1992; Hampel, 1998). Audit committees dominated by NEDs play an important role in ensuring that auditor's effort and opinion will not affected by the level of non-audit fees the company's auditor could earn from the company. This suggests that the appointment of non-executives on boards increases the demand for a more extensive and better-quality auditing process and this ultimately results in high audit fees. Similarly, most of the CG codes issued in MENA countries emphasise the importance of increasing the number of non-executive and independent

directors on boards, as they tend to improve the independence and objectivity of the board's decisions. Given the theoretical and empirical literature, the fourth hypothesis is as follows:

H4a. *A firm with a high percentage of outside directors is more likely to choose a high-quality (Big 4) auditor.*

H4b. *A firm with a high percentage of outside directors is more likely to pay high audit fees.*

3.2.2.4 Board Leadership Structure

The board of directors is an effective CG mechanism to ensure that management behave in the interest of shareholders (La Porta *et al*., 1998; Fan and Wong, 2002). It is responsible for executing the decisions taken during shareholders' meetings, hiring, firing, remunerating, counselling and monitoring senior managers. However, executive directors (including the CEO) may be biased in monitoring and evaluating management. Therefore, the separation of CEO and board chairperson positions is essential if the board is to effectively meet its internal CG monitoring role (La Porta *et al*., 1999; Cohen *et al*., 2002; Gelb and Zarowin, 2002; Lee *et al*., 2004; Wilkinson and Clements, 2006). The duality of the CEO/chairperson positions is more likely to concentrate a great amount of power and authority in one person, compromising the independence of the board of directors (Jensen, 1993). The literature documents the duality of CEO/chairperson positions is associated with weak CG and aggressive earning management (Dechow *et al*., 1996; Hudaib and Cooke, 2005). Although combining the two roles may provide the CEO with more perspectives on the company and encourage him/her to act with determination (Lin and Liu, 2009, 2010), it may lead to weak firm transparency and corruption since there will be weak monitoring of the CEO's actions (Shara, 2004). Therefore, separation of the CEO/chairperson roles improves board independence and enhances the chair's ability to independently and effectively oversee executives' (including the CEO's) performance, and thus protect shareholder interests (La Porta *et al*., 2002; Steven, 2006). It may also enhance corporate transparency, thus ultimately reducing agency conflicts (NYSE, 2002; Imhoff, 2003; SEC, 2003). Raghunandan and Rama (2003) document evidence suggesting that in firms where the CEO also acts as the chairperson, shareholders are likely to vote against the auditor ratification proposal. On the other hand, in firms separating these roles, shareholders support the choice of auditor. Companies dominated by a single CEO/chairperson have less motivation to seek an intensive audit, and consequently hire small audit firms and/or pay a lower fees (O'Sullivan, 2000).

Asthana *et al*. (2010) document empirical evidence suggesting that separation of the CEO and chairperson roles is positively associated with quick disassociation from auditors with a bad reputation. Lin and Liu (2009) report evidence confirming that firms whose board chairperson is independent from the CEO are more likely to select a high-quality auditor to monitor and ensure the

quality of the financial reporting process and management performance. In their later study, Lin and Liu (2010) document empirical results to demonstrate that firms in which the CEO and chairperson positions are held by the same person are more likely to switch to a smaller auditor rather than to a larger one. However, the results of O'Sullivan (2000), from a sample of 402 UK quoted companies in 1992, suggest no relationship between CEO/chairperson role duality and audit fees.

The perception of researchers, investors, regulators and various stakeholders that separating the CEO/chairperson positions is good CG practice has increased since recent financial scandals. In practice, market regulators and professional bodies in most developed countries have imposed separation of the two positions as a good CG device (Jiraporn *et al*., 2005). Similarly, the CG codes of listed companies in many MENA countries recommend preventing the same person from holding the position of chairperson of the board of directors and any executive position in the company at the same time. Given the theoretical and empirical literature, the fifth hypothesis is as follows:

H5a. *A firm with separate positions of CEO and board chairperson is more likely to choose a high-quality (Big 4) auditor.*

H5b. *A firm with separate positions of CEO and board chairperson is more likely to pay high audit fees.*

3.2.3 Ownership Structure Mechanisms

Many studies have examined the effect of ownership structure mechanisms on financial reporting quality (e.g., Haniffa and Cooke, 2002; Dam and Scholtens, 2012; Samaha *et al*., 2012; Al Janadi *et al*., 2013; Ntim and Soobaroyen, 2013b; Albitar, 2015; Ntim, 2016). However, there are limited studies examining the effect of ownership structure mechanisms on auditor choice and fees. The next sub-sections will discuss the theoretical link, empirical review and hypotheses development of the relationship between ownership structure mechanisms and auditor choice and fees.

3.2.3.1 Government Ownership

Corporations with high government ownership pursue government support by providing more transparent and trustworthy financial statements (Ntim and Soobaroyen, 2013b). The winning of government support can be translated into legitimisation of corporate operations (Ashforth and Gibbs, 1990; Suchman, 1995; Aguilera *et al*., 2007) and greater opportunity to acquire essential resources such as subsidies, tax exemptions and contracts to improve performance (Pfeffer and Salanick, 1978; Malherbe and Segal, 2003; Haniffa and Hudaib, 2006; Branco and Rodrigues, 2008; Reverte, 2009). Similarly, the monitoring role provided by high-quality auditors helps in reducing agency conflicts between management and influential owners, including governments (Jensen and Meckling, 1976;

Ntim and Soobaroyen, 2013b). Additionally, corporations with higher government ownership face more agency conflict between government and other shareholders, and therefore prefer to conduct better and more extensive auditing to provide more informative financial statements (Eng and Mak, 2003; Al-Janadi *et al*., 2013; Al-Bassam *et al*., 2015). However, government agencies can exercise a substantial influence over government-controlled firms, and can readily access the firm's information (Chan *et al*., 2006). Therefore, firms with higher government ownership have little incentive to provide highly credible financial reports and thus are less likely to choose higher-quality audit firms, preferring to pay lower fees (Lin and Liu, 2010). Likewise, some studies argue that higher levels of state ownership, with wide and powerful political connections, provide protection against review and discipline by regulatory authorities (e.g., Jia *et al*., 2009; Hou and Moore, 2010). Consequently, firms with a high level of government ownership are less likely to be extensively monitored by better-quality auditors.

Recently in the MENA region, governments have conducted many economic and financial reforms to attract foreign investment. Therefore they may provide more insurance and protection for such investments by performing better-quality audit by more reputable auditors (Al-Ajmi, 2009; Samaha and Hegazy, 2010).

Empirically, there is a dearth of studies that examine the association between government ownership and auditing issues. However, a considerable number of studies have documented a positive relationship between government ownership and financial reporting quality (e.g., Eng and Mak 2003; Ntim *et al*. 2012; Ntim and Soobaroyen 2013b; Al-Bassam *et al*., 2015), while others have reported a negative impact (e.g., Dam and Scholtens, 2012; Al Janadi *et al*., 2013). Lin and Liu, (2010), using 316 Chinese firms listed on the Shanghai and Shenzhen Stock Exchanges from the beginning of 2001 to the end of 2004, find no evidence for the impact of government ownership on auditor switching decisions. Thus, based on these arguments and mixed results, the sixth hypothesis is as follows:

H6a. *A firm with a high percentage of total shares held by the government is more/less likely to choose a high-quality (Big 4) auditor.*

H6b. *A firm with a high percentage of total shares held by the government is more/less likely to pay high audit fees.*

3.2.3.2 Director Ownership

Manager ownership reduces agency conflict with shareholders, and thereby increases firm value (Jensen & Meckling, 1976). Boards have the power to make or at least approve all important company decisions, therefore it is probable that board members with appropriate stock ownership

will have the incentive to offer effective monitoring and oversight of these important corporate decisions (Bhagat *et al*., 2008). Increase in director ownership reduces the conventional agency problems and enhances directors' incentives to provide more disclosure to reduce information asymmetry and thereby lower the cost of capital; therefore greater alignment of interest occurs when management ownership is increased, increasing the incentive for more voluntary disclosure (Leung and Horwitz, 2004).

Since manager ownership helps to reconcile the interests of managers and shareholders, managers who own a significant percentage of equity are less motivated to issue misleading information to shareholders, which may be used in setting their remuneration (Chow, 1982). This reduces the need for intensive auditing and thereby decreases audit costs (O'Sullivan, 2000). Accordingly, the extent of auditing and ultimately the audit fees may have a negative relationship with the percentage of director ownership.

However, in firms with concentrated ownership, the agency problem shifts from the manager-stockholder relation to conflicts between the controlling owners and minority stockholders (Shleifer and Vishny, 1997; Fan and Wong, 2002). On the basis of this argument, Leung and Horwitz (2004) expect and find that the controlling owners (directors) have an incentive to avoid voluntary disclosure that would attract close monitoring by outside shareholders. They find that discretionary segment disclosure is non-linearly related to director ownership. That is, there is a positive relationship between executive director ownership and the extent of voluntary segment disclosure at lower levels of ownership (when it rises from 1% to 25%). This suggests that the expected alignment of interests between management and shareholders increases corporate disclosure. However, as director ownership rises to concentrated levels, such disclosure declines, suggesting that at high levels of board ownership the conflict between controlling owners and minority shareholders negatively influences disclosure decisions. Likewise, Fan and Wong (2005) find empirical evidence confirming that firms with agency problems embedded in the ownership structure (highly concentrated ownership), between controlling owners and minority shareholders, are more likely to hire Big 5 auditors and pay higher audit fees. This suggests that external independent auditors are employed as monitors and bonding mechanisms to mitigate the agency problems.

With regard to empirical evidence, there is a dearth in studies examining the impact of director ownership on auditor choice and fees. However, a number of studies have documented a negative relationship between director ownership and financial reporting quality (e.g., Ruland *et al*., 1990; Oh *et al*., 2011; Samaha and Dahawy, 2011; Hussain and Al-Najjar, 2012; Khan *et al*., 2013; Albitar, 2015). For example, using a sample of 376 Hong Kong listed companies for 1996, Leung and Horwitz (2004) document a negative relationship between board ownership and the extent of voluntary

segment disclosure. However, Samaha *et al*. (2012) report an insignificant impact of director ownership on voluntary CG disclosure.

Empirical results of O'Sullivan, (2000), using a sample of 402 UK quoted companies for 1992, suggest a negative and significant relationship between executives and non-executives ownership and audit fees. This indicates that non-executives owning significant equity interests may also have business or family links with the company and consequently behave in a similar way to their executive colleagues. Thus, based on these arguments and mixed results, the seventh hypothesis is as follows:

H7a. *A firm with a high percentage of total shares held by the directors is more/less likely to choose a high-quality (Big 4) auditor.*

H7b. *A firm with a high percentage of total shares held by the directors is more/less likely to pay high audit fees.*

3.2.3.3 Block Ownership

Ownership structure affects CG and corporate values in different ways (Lin and Liu, 2009). Agency theory suggests that a higher extent of separation between ownership and control might increase agency costs and motivate firms to demand timely independent audits to monitor managerial performance (Abdel-khalik, 1993; Chan *et al*., 1993; O'Sullivan and Diacon, 2002). As ownership becomes more dispersed, direct monitoring by shareholders becomes more costly (O'Sullivan, 2000; O'Sullivan and Diacon, 2002). Therefore, Chan *et al*. (1993), O'Sullivan (2000) and O'Sullivan and Diacon (2002) suggest that firms with widely dispersed ownership (a lower level of block ownership) are more likely to demand higher-quality audit as a means of monitoring managerial behaviour, thus paying higher audit fees to mitigate agency conflict. Furthermore, agency costs are expected to increase in firms with dispersed ownership, because managers are more likely to pursue their own interests at owners' expense (Jensen and Meckling, 1976; Reverte, 2009). However, managers are expected to bond by a more extensive audit, signalling their concern for shareholders' interests (Chan *et al*., 1993; O'Sullivan, 2000; O'Sullivan and Diacon, 2002). O'Sullivan (2000) and O'Sullivan and Diacon (2002) argue that firms with dispersed ownership demand better-quality audit and thereby pay higher fees to minimise opportunities for managerial discretion. Therefore, firms with dispersed ownership may utilise extensive auditing to substitute for this weakness in the ownership structure, and consequently pay higher audit fees. Expected losses for audit firms arising from subsequent discovery of errors in the audit may be higher in firms with dispersed ownership than in those with more concentrated ownership (Simunic, 1980; Pratt and Stice, 1994; Simunic and Stein, 1996). These

possible losses increase auditors' claimed risk premium, and thereby increase audit fees (O'Sullivan and Diacon 2002).

Similarly, firms with concentrated ownership are exposed to greater agency conflict because controlling shareholders may have a prevailing influence on most of the firm's affairs to serve their self-interest at the expense of minority shareholders, and it is probably easier for controlling shareholders to bypass the monitoring of other stakeholders (Fama and Jensen, 1983; Johnson *et al*., 2000). This means that controlling shareholders may be engaged in aggressive tunnelling behaviours that ultimately expropriate the minority shareholders (La Porta *et al*., 1998, 1999; Fan and Wong, 2002). Therefore, firms with concentrated ownership try to avoid being monitored by high-quality (large) auditors, to maximise self-interest through earning management and tunnelling behaviours (Lin and Liu, 2009, 2010). Controlling shareholders can secure more opaqueness in firms with a concentrated ownership structure (Chau and Leung, 2006). Listed firms' motives for issuing less transparent financial statements not only include securing private benefits but may also involve reducing political costs encountered by these firms. This means that listed firms with concentrated ownership may prefer to have a weak CG (e.g., hiring a low-quality auditor) and to issue less transparent financial reporting to prevent competition or social sanctions (Lin and Liu, 2009). High-quality auditors provide a more efficient monitoring role and thereby detect and report misstatements in financial reporting. This may lead to external intervention by minority shareholders, analysts, stock exchanges or regulators (Haw *et al.*, 2004). Moreover, shareholders with controlling ownership can easily control and dominate the nomination and appointment of directors, senior management and auditors (Lin and Liu, 2009, 2010). Therefore, firms with more concentrated ownership may prefer to select lower-quality auditors so that they can easily obtain private benefits (Karpoff *et al*., 1996; Copley and Douthett, 2002; Lin and Liu, 2009, 2010).

On the other hand, and as mentioned above, large shareholders are more likely to try to maximise their own interest by benefit-transfer dealings or tunnelling behaviours, thereby expropriating other stakeholders (Claessens *et al*., 2002; Copley and Douthett, 2002; Fan and Wong, 2002; La Porta *et al.*, 2002; Anderson *et al*., 2004; Chau and Leung, 2006). Consequently, this enrichment increases agency costs, for example by increasing the cost of issuing new shares in the market (Claessens *et al*., 2002; Gelb and Zarowin, 2002). Firms with concentrated ownership tend to use monitoring or bonding mechanisms to protect stakeholders' interests and thereby reduce agency costs (Ang *et al*., 2000; Fan and Wong, 2005). This leads these firms to hire large auditors to signal good CG and credible financial reporting to minority shareholders and other stakeholders, to mitigate agency costs (Reed *et al*., 2000; Johnstone and Bedard, 2004; Fan and Wong, 2005; Lin and Liu, 2009). Similarly, in firms with more concentrated ownership, block shareholders are motivated to

extensively monitor managerial behaviour, given to the size of their equity holdings and the probable cost of any non-value-maximising behaviour by managers (O'Sullivan, 2000). Accordingly, block shareholders are more likely to demand more extensive auditing, paying higher audit fees.

Overall, previous studies have suggested the appointment of large audit firms and higher audit fees both in companies with widely dispersed ownership due to the effective monitoring role of auditors and the bonding motivation of managers, and in companies with large external block holders due to monitoring of block holders' financial incentives and to obtain finance with lower costs. Generally, MENA listed firms are characterised by concentrated ownership, particularly dominated by state and family control (Fawzy, 2004; Jamali *et al*., 2007; Omran *et al*., 2008; Ararat *et al*., 2010; Weir, 2011; Piesse *et al*., 2012; Hasan *et al*., 2014). In other words, a MENA listed firm normally has a dominant controlling owner, either the government or a family. The controlling owner tends to interfere in many of the firm's decisions, including the choice of audit firm (Al-Awaji, 1971; Helms, 1981; Wahdan *et al*., 2005a, b; Mohamed and Habib, 2013). Previous studies have suggested that the decision to hire a high-quality auditor involves a trade-off between relevant benefits (e.g., obtaining debt at a lower cost or issuing equity at higher prices) and costs (e.g., giving up opaqueness gains from earning management and tunnelling behaviour) to the controlling owner. The MENA region aims to increase foreign investments and to protect minority shareholders' interests. Therefore, firms listed in MENA markets are motivated to raise capital with lower costs. This posits that firms with weak CG (e.g., concentrated ownership) intend to signal more concern to protect minority shareholders' interests and thereby choose higher-quality auditors.

Generally, there is a dearth of studies investigating the relationship between the degree of concentration of share ownership and audit fees (Chan *et al*., 1993). Using data from 300 UK quoted companies in 1987, Chan *et al*. (1993) document a significant negative association between ownership concentration and audit fees. Additionally, O'Sullivan and Diacon's (2002) empirical evidence based on 117 UK registered insurance companies in 1992 supports the negative relationship between concentrated ownership and audit fees. Datar *et al*. (1991) and Copley and Douthett (2002) document empirical evidence supporting the inverse relationship between the selection of better-quality auditors and retained ownership.

Lin and Liu (2009), using 184 IPO firms listed on the Shanghai and Shenzhen Stock Exchanges 2001-2004, find that firms with highly concentrated ownership are less likely to choose a Top 10 (high-quality) auditor in China. Furthermore, they report in a later study (Lin and Liu, 2010) that firms with a high level of controlling owners are more likely to switch to a smaller auditor than to a larger one. These results reflect the Chinese context at a specific period of time when the stock market was weak and listed firms were less enthusiastic to offer new equity securities to the public.

The China Securities Regulatory Commission (CSRC) even stopped the listed firms from issuing new equity securities to the public in June 2002. In such a market it is suggested that the benefits of lowering capital-raising costs are insignificant because the listed firms have little intention or possibility of offering new equity securities to the public. Therefore, the opaqueness gains from weak CG are supposed to outweigh this.

However, using data from eight East Asian economies between 1994 and 1996, Fan and Wong (2005) find empirical evidence confirming that firms with agency problems embedded in the ownership structure (highly concentrated ownership) between controlling owners and the minority shareholders, are more likely to hire Big 5 auditors and to pay higher audit fees. Likewise, using data from New Zealand listed firms in 1995 and 2005, Hay *et al*. (2008) document that the existence of a major outside shareholder is positively related to audit fees but only where there is sufficient variation in CG arrangements. However, the empirical results of O'Sullivan (2000), using a sample of 402 UK quoted companies in 1992, suggests no relationship between concentrated (financial institutions and non-financial institutions) ownership and audit fees. Given the inconclusive theoretical and empirical literature, the eighth hypothesis is as follows:

H8a. *A firm with a high percentage of total shares held by the largest owners is more/less likely to choose a high-quality (Big 4) auditor.*

H8b. *A firm with a high percentage of total shares held by the largest owners is more/less likely to pay high audit fees.*

4 Research Design

4.1 Sample Selection and Data Sources

The study's sample covers 600 firm-year observations of 100 firms listed on five MENA countries' stock exchanges from 2009 to 2014.[17] Financial and utility firms are excluded from this study because their operations and governance structures are quite different from other types of firms (Lin and Liu, 2009, 2010). Additionally, since the majority of literature examining the link between CG and audit quality emphasise non-financial institutions (O'Sullivan, 2000; Carcello *et al*., 2002), financial companies are excluded from this study. Therefore, the results can be discussed in the context of existing studies. The remaining companies are classified into five main industries: basic materials/oil and gas; industrial; customer goods; customer services/health care; and technology/telecommunication.

[17] MENA countries used in the current study are Egypt, Jordan, Oman, Saudi Arabia and the UAE. The choice of these specific countries is subject to a number of criteria which are discussed in detail in the first essay.

In order to examine the impact of internal CG on both auditor choice and fees decision, CG variables (i.e., CG index, board characteristics and ownership structure mechanisms) were collected by hand from the sampled firms' annual reports, their websites, capital markets websites and other websites. Financial and accounting variables were collected from the *Datastream* database. Country-level data, including GDP and Corruption Perception Index were collected from the website of the World Bank and Transparency International websites, respectively, while the Inflation Index came from the International Monetary Fund's website.

With regard to audit fees, Jordan, the UAE and Omani companies are obliged to disclose the amount of the audit fees paid to their auditor in their annual financial statements. However, Egyptian companies' audit fees were collected from general assembly meetings reported on the Egyptian stock exchange market website. Saudi Arabia listed firms do not disclose audit fees to the public, and the researcher tried to obtain this information by direct contact with companies and audit firms but unfortunately was unsuccessful in this. Therefore, the current study ends up with audit fees data for 470 firm-year observations (there are ten missing audit fees data in the UAE sampled firms). Thus, the current study only uses firm-year observations that were identified in order to test hypotheses.

The final sample has satisfied two predetermined criteria. Firstly, organisation's CG data should be available for all the six-year period from 2009 to 2014. Secondly, financial data should be accessible for sampled firms for the same time period. These criteria help us to obtain a balanced panel data analysis to increase degrees of freedom and decrease multicollinearity among examined variables (Gujarati 2003; Wooldridge 2010). This design also provides the opportunity to compare the current findings with results of previous studies (Lin and Liu, 2009, 2010; Johansen and Pettersson, 2013).

4.2 Measurement of Variables

This section illustrates dependent, independent and control variables, and models specifications of the study. The study's variables are classified into three main categories as illustrated in Table 19.

4.2.1 Dependent Variables

Following previous studies, a natural log of audit fee (LNFEE) in thousands of dollars was used to measure audit fees (e.g., Chan *et al*., 1993; Behn *et al*., 1999; O'Sullivan, 2000; Carcello *et al*., 2002; O'Sullivan and Diacon, 2002; Johansen and Pettersson, 2013). [18] With regard to the second

[18] The study converted audit fees from local currencies to US dollars using the exchange rate quoted on the World Bank website for each of the sampled years http://data.worldbank.org

dependent variable, a binary classification was employed to divide audit firms in MENA countries into two categories: the Big 4 audit firms to proxy for high-quality auditors and non-Big 4 audit firms to proxy for low-quality ones. Audit firm size has been used effectively and commonly as a surrogate for audit quality in many previous studies (e.g., DeAngelo, 1981; Willenborg, 1999; Lennox, 1999, 2005; Copley and Douthett, 2002; Lee *et al*., 2003; Farbar, 2005; Lin and Liu, 2009, 2010; Eshleman and Guo, 2014). The constructed model examines whether firms' auditor choice is associated with their internal CG mechanisms. Firms will randomly select auditors if the two types of auditors (Big 4 and non-Big 4) do not differ in providing their monitoring service, suggesting that internal CG mechanisms have no impact on the choice of auditors. Otherwise, the two groups of auditors offer monitoring services with varied levels of quality, suggesting that firms' internal CG mechanism should impact their choice of auditors, based on the expected benefits and costs of needed level of audit quality.

4.2.2 Independent Variables

The independent variables are: the CG Index (MCGI), board size (BSIZE), board diversity based on gender and ethnicity (BDIV), proportion of NEDs (NED), the separation of the CEO/chairperson roles (DBLS), government ownership (GOWN), director ownership (DOWN) and block holders ownership (BOWN). A limited number of prior studies have suggested that firm-level CG, board characteristics (e.g., board size, board diversity, board independence and non-duality of board leadership) and ownership structure mechanisms (e.g., government, director and block ownership) influence auditor choice and fees (e.g., O'Sullivan, 2000; Carcello *et al*., 2002; Fan and Wong, 2005; Lin and Liu, 2009, 2010; Zaman *et al*., 2011). Therefore, this study constitutes a timely contribution to the extant literature. The detailed definitions of independent variables are illustrated in Table 19.

4.2.3 Rationale for Control Variables

Consistent with previous studies (e.g., Chan *et al*., 1993; DeFond *et al*., 1999; O'Sullivan, 2000; Carcello *et al*., 2002; O'Sullivan and Diacon, 2002; Chaney *et al*., 2004; Lin and Liu, 2009, 2010; Asthana *et al*., 2010), the current study controls for possible omitted variables bias by including a number of control variables.

Firm-level Control Variables

4.2.3.1 Firm Size

The study employs the logarithm of total assets (LNTA) to control for audit effort. The majority of past studies have documented that auditee size is the most significant factor in determining auditor choice and fees (e.g., Chan *et al*., 1993; Chaney *et al*., 2004; Cullinan *et al*., 2016). Large firms are usually more complicated in operations and therefore need to hire larger auditors with more expertise (Lin and Liu, 2009) and/or pay higher audit fees (Cullinan *et al*., 2016). Lin and Liu (2009) also argue that large firms could generate a price premium for the issued stocks by hiring high-quality auditors. Furthermore, large auditors are able to audit large firms at lower average costs because of the economies of scale (Chaney and Philipich, 2002; Chaney *et al*., 2004). In general, large audit firms possess expertise necessary to audit large firms with complicated operations (Willenborg, 1999), suggesting that large firms will choose to hire big auditors (Lin and Liu, 2009, 2010).

Most empirical past studies have documented a positive relationship between client firm size and auditor choice (e.g., Chaney *et al.*, 2004; Lin and Liu, 2009), and fees (e.g., Chan *et al*., 1993; O'Sullivan, 2000; Carcello *et al*., 2002; O'Sullivan and Diacon, 2002; Johansen and Pettersson, 2013). Following Lennox (1999), Carcello *et al*., (2002), and Lin and Liu, (2009, 2010), the study uses the log of total assets to control for the firm size effect.

4.2.3.2 Busy

The study includes a dummy variable for the year-end (BUSY) to control for off-peak pricing. It is expected that the incremental workload around fiscal year-ends may be relatively higher for audit firms. Therefore, these firms may charge clients who have year-ends in months other than January and March lower fees (Chan *et al.*, 1993; Chaney *et al.*, 2004).

Empirically, Johansen and Pettersson (2013) document evidence supporting that companies are charged premium fees if they are audited in the busy season. However, other studies (e.g., Chan *et al.*, 1993; O'Sullivan, 2000) find an insignificant relationship between audit fees and audit process being conducted in the busy season. In line with past studies (e.g., Chan *et al*., 1993; O'Sullivan, 2000), the study proxies for busy season by using a binary variable =1 if financial year-end is between 31 December and 31 March inclusive; = 0 otherwise.

4.2.3.3 Quick Ratio and Leverage

Quick ratio (QUICK) and leverage (LEV) are included to measure the short-term and long-term financial structures of client firm. Leverage and liquidity ratios are usually used as measures of client risk to reflect the nature of the business and the control environment of the client. The perceived

auditee's risk has an impact on the planned extent and scope of audit testing (Turley and Cooper, 1991; Chan *et al*., 1993). Therefore, auditors may charge higher audit fees for companies with higher audit risk as a result of more audit testing or as an insurance premium (Wallace, 1989; Chan *et al*., 1993). Similarly, Firms with high leverage ratio face more agency costs, thus they prefer to hire an auditor with "superior" reputation to reduce these costs (Chaney *et al*., 2004).

In line with theory, Chaney et al., 2004 find empirical evidence supporting that firms with high quick and debt ratios are more likely pay lower audit fees and choose one of the Big 5 audit firms, respectively. However, other past studies have documented no impact of quick ratio and leverage on auditor choice and fees (e.g., Chan *et al*., 1993; Lin and Liu, 2009; Johansen and Pettersson, 2013). In order to control for the risk associated with short-term and long-term financial structures of the auditee, this essay includes quick ratio and leverage, respectively in the regression models.

4.2.3.4 Loss

To control for audit risk, the study includes a variable for loss (LOSS) of the company if it incurred loss in the previous year. Chan *et al*. (1993) argue that there is no consensus on the relation between auditee risk and audit fees. Firms facing financial difficulties often seek to control all overhead costs including audit fees. On the other hand, auditors of these companies need to extend the scope of the audit work to focus on some issues including the value of assets, the going concern of the auditee, probable breaches of loan covenants and cash flow forecasts. This may lead to an increase in audit fees. Furthermore, firms that incur loss will be less desirable as clients and thus will incur higher costs of finding a new auditor (Asthana *et al*., 2010). Therefore, firms that incurred loss in the previous year may seek to switch to a poor-quality (small) auditor (DeFond *et al*., 1999).

Chaney *et al*. (2004) and Asthana *et al*. (2010) find that firms that incur loss are less likely to hire big auditors. Likewise, Carcello *et al*. (2002) document a significant positive relationship between incurring loss and audit fees. However, another group of studies report no association between loss incurred and auditor choice (i.e., Lin and Liu, 2010) and fees (e.g., Johansen and Pettersson, 2013). This essay proxies for loss by binary variable equal to 1 if the firm incurred a loss in the previous year, 0 otherwise.

4.2.3.5 Profitability

More profitable firms usually have sufficient funds to hire a high-quality (large) auditor (Chaney *et al*., 2004). More profitable firms also are motivated to testify their performance to the market by choosing a high-quality auditor (Lin and Liu, 2009, 2010). Furthermore, Asthana *et al*.

(2010) argue that it is easier to find a successor auditor for firms with better performance. They find a positive association between probability of changing the auditor and ROA.

Empirical evidence provided by Willenborg (1999), Chaney *et al*. (2004), and Lin and Liu (2009) illustrates that more profitable firms are more likely to be audited by large auditing firms. Despite this, Chan *et al*. (1993) document a negative association between profitability and audit fees. O'Sullivan and Diacon (2002) report an insignificant relationship between these variables. Therefore, this study controls for client profitability by including return on assets ratio (ROA) in the regression models.

4.2.3.6 Growth Opportunity

Firms with higher growth potential are inclined to hire poor-quality auditors. Normally, fast growing firms have a relatively higher degree of risk in business expansion and would prefer to hire smaller auditing firms to have a relatively lower degree of audit monitoring (Lin and Liu, 2010). In contrast, firms with growing business activities are more likely need to attract more investors and increase their ability to access financing at lower cost. Therefore, these firms are motivated to choose high-quality auditors to benefit from the signalling effect of the better reputation and quality of large auditors (Anderson *et al*., 2004).

Similar to theory, empirical evidence of the association between firm's growth potential and auditor choice and fees is mixed. Lin and Liu (2009) find that firms with high growth potential are more likely choose one of the big auditors. However, Chaney *et al*. (2004) report a negative relationship between growth opportunity and hiring one of the big audit firms. Following Carcello *et al.* (2002), the study controls for firm growth opportunity (SGR) by including the percentage of current year's sales minus previous year's sales divided by previous year's sales to the regression model.

4.2.3.7 Year and Industry Dummies

Audit firms are required by auditing standards to understand industry characteristics (Cairney and Stewart, 2015), helping audit firms to benefit from lower average costs of economies of scale (Mayhew and Wilkins 2003; Cahan *et al*., 2011). Cairney and Stewart (2015) provide recent empirical evidence that supports client industry's specific characteristics (i.e., homogeneity), influences audit costs and hence audit fees. O'Sullivan (2000) also document that regulated industries including telecommunication companies, water and electricity utilities pay a lower audit fee compared to their unregulated counterparts. Likewise, Zaman *et al*. (2011) argues that level of risk and business complexity differs among industries and times.

Accordingly, this essay intends to control for any potential industry or yearly effect that may have an impact on the auditor choice and fees. In line with past studies, industry and year dummies are included in the test model to control for the type of industry (e.g., O'Sullivan, 2000; Carcello *et al*., 2002; Zaman *et al*., 2011) and the year effects (e.g., Lin and Liu, 2009; Zaman *et al*., 2011).

Country-level Control Variables

4.2.3.8 Country-level Control Variables

Past studies have argued that a country's institutional factors, including gross domestic product, inflation and Corruption Perception Index, may affect financial reporting quality (e.g., Adhikari and Tondkar, 1992; Doupnik and Salter, 1995; Salter, 1998; Archambault and Archambault, 2003; Judge *et al*., 2008; Mateescu, 2015; Baldini *et al*., 2016), and thus they may influence auditor choice and fees. Therefore, this essay controls for a number of country level institutional factors: gross domestic product, inflation and Corruption Perception Index that may impact auditor choice and fees.

Table 19: Summary of variables and measures

Dependent variables	
LNFEE	Natural log of audit fee in thousands of dollars.
BIG4	A dummy variable that takes the value of 1 if a firm is audited by a Big 4 audit firm (PricewaterhouseCoopers, Deloitte & Touche, Ernst & Young, and KPMG), 0 otherwise.
Independent variables	
MCGI	Corporate Governance (CG) Compliance and Disclosure Index containing 51 CG provisions using the CG benchmark of the United Nations Conference Trade and Development (UNCTAD 2006)'s guidance on good practice in CG disclosure, that takes 1 if each of the CG provisions is disclosed, 0 otherwise; scaled to a value between 0 and 100%.
BSIZE	Natural log of the total number of directors on the board of directors.
BDIV	The percentage of the total number of women and ethnic minority (non-Arab) directors to the total number of board members.
NED	The percentage of non-executive directors to the total number of board members.
DBLS	A dummy variable that takes the value of 1 if the roles of chairperson and CEO of firm are separated at the end of its financial year, 0 otherwise.
GOWN	Percentage of shares held by government.
DOWN	Percentage of shares held by all members of the board of directors.
BOWN	Percentage of shares held by shareholders with at least 5% of the total firm shareholdings.
Control variables: Firm level	
LNTA	Natural log of the total assets of a firm.
BUSY	Binary variable =1 if financial year-end is between 31 December and 31 March inclusive; =0 otherwise.
QUICK	Quick Ratio is (Cash & Equivalents + Receivables (Net))/Current Liabilities-Total.

LOSS	Binary variable = 1 if the firm incurred a loss in the previous year, 0 otherwise.
LEV	Percentage of total debt to total assets in a financial year.
SGR	Percentage of current year's sales minus previous year's sales divided by previous year's sales.
ROA	Percentage of operating profit to total assets in a financial year.
YDU	Dummies for the years 2009 to 2014 inclusive.
INDU	Dummies for each of the five main industries: basic materials/oil and gas; industrial; customer goods; customer services/health care and technology/telecommunication.
Control variables: Country level	
GDP	Gross domestic product growth (annual %).
INFL	Inflation, average consumer prices.
CPI	Corruption Perception Index. The Corruption Perceptions Index measures the perceived levels of public sector corruption.

4.3 Models Specification

Consistent with previous studies investigating determinants of audit fees, the current study uses OLS regression models to explain the determinants of audit fees (e.g., Chan *et al*., 1993; O'Sullivan, 2000; O'Sullivan and Diacon, 2002; Carcello *et al*., 2002; Fan and Wong, 2005; Zaman *et al*., 2011).[19] Model 1 regresses CG and control variables on the log of the audit fee for 470 firm-year observations, as follows:

$$LNFEE_{it} = \alpha_0 + \beta_1 MCGI_{it} + \beta_2 BSIZE_{it} + \beta_3 BDIV_{it} + \beta_4 NED_{it} + \beta_5 DBLS_{it} + \beta_6 GOWN_{it} + \beta_7 DOWN_{it} + \beta_8 BOWN + \sum_{i=1}^{n} \beta_i CONTROLS_{it} + \varepsilon_{it} \quad (1)$$

The study also develops a logit regression model to test the impact of firms' internal CG mechanism on auditor choice decisions for 600 firm-year observations during the period 2009 to 2014. Model 2 specification is of the following general form:

$$BIG4_{it} = \alpha_0 + \beta_1 MCGI_{it} + \beta_2 BSIZE_{it} + \beta_3 BDIV_{it} + \beta_4 NED_{it} + \beta_5 DBLS_{it} + \beta_6 GOWN_{it} + \beta_7 DOWN_{it} + \beta_8 BOWN + \sum_{i=1}^{n} \beta_i CONTROLS_{it} + \varepsilon_{it} \quad (2)$$

Where *LNFEE* is natural log of audit fee in dollars, *BIG4* is audit firm size, *MCGI* is firm-level composite CG Index, *BSIZE* is board size, *BDIV is* board diversity, *NED* is the percent of NEDs on the board, *DBLS* is the separation of the CEO/chairperson roles, *GOWN* is government ownership, *DOWN* is director ownership, *BOWN* is block holder ownership, and *CONTROLS* refers to a number of control variables including: *LNTA* is firm size, *BUSY* is busy season, *QUICK* is quick ratio, *LOSS* is firm loss, *LEV* is leverage, *SGR* is growth opportunity, *ROA* is return on assets, *YDU* is year dummies for the study period 2009–2014, industry dummies (*BM&OG* is basic materials/oil and gas; INDUTR is industrial; *CGODS* is customer goods; *CSER&HCARE* is customer services/health care

[19] Following literature (e.g., O'Sullivan, 2000; Carcello *et al*., 2002; Chaney *et al*., 2004; Fan and Wong, 2005) and since the dependent variable (logarithm of audit fee) is highly serially correlated, the study did not use panel regression.

and *TECH&TELE* is technology/ telecommunication), while country control variables include: *GDP* is gross domestic product growth, *INFL* is Inflation Index; and *CPI* is Corruption Perception Index.

4.4 Ordinary Least Squares Assumptions

As indicated earlier, the current study uses the OLS regression as the main estimation technique to examine the determinants of audit fees. In doing so, all the OLS assumptions, namely normality, multicollinearity, homoskedasticity, linearity, and autocorrelation had to be checked before applying the model. Similar to Essay 1, this section discusses a number of statistical procedures to check the validity of the OLS assumptions and resolve any problems associated with meeting these assumptions.

First, the probability-probability (P-P), quintile-quintile (Q-Q) and histograms were used to test the normal distribution of continuous variables. Although the audit fees variable (LNFEE) appears to have a linear distribution, the normality test for explanatory variables and control variables shows mixed results. For example, percentage of *NEDs* on the board, government ownership (GOWN), and leverage (LEV) show non-normal distribution. While the CG Index (MCGI), board size (BSIZE), director ownership (DOWN), block ownership (BOWN) and profitability (ROA) are fairly normally distributed. The non-normality problem was addressed by transforming affected variables such as quick ratio (QUICK), and sales growth (SGR). The histogram depicting the distribution of the *LNFEE* model is presented in Appendix 3.

The *LNFEE* model also was tested for normality using standardised skewness and kurtosis. Table 20 shows that, in general, skewness and kurtosis statistics cannot reject the null hypothesis that most of the variables are symmetrically and mesokurtically distributed. For instance, the skewness of the *LNFEE* is 0.033. Since the skewness value of symmetrical distribution is zero (Gujarati, 2003; Brooks, 2008), *LNFEES* is slightly skewed to the right. That means it approximately follows a normal distribution. For kurtosis, Gujarati (2003) and Brooks (2008) argue that the critical value is 3. Table 20 documents that the kurtosis value of the *LNFEE* is –0.093, implying that the data is mesokurtically distributed.

In addition, Table 20 shows that the skewness values for most of the continuous explanatory and control variables range between 0.000 and 1.655. With regard to kurtosis test statistics, the variables fall between –0.081 and 3.228, indicating slight mesokurtically in some of the data. However, some variables violate the normality assumption. The current study's relatively large sample size (470 firm-year observation) can mitigate any remaining non-normality problem that may cause serious violation of the OLS assumptions (Brooks, 2008).

Table 20: The OLS assumptions tests

Variable	VIF	Tolerance	Skewness	Kurtosis	Cook's distances		Leverage Values	
					Min	Mix	Min	Max
LNFEE			0.033	-0.093				
MCGI	3.559	0.281	-0.008	-0.740				
BSIZE	1.651	0.606	0.189	0.130	0.000	0.025	0.031	0.119
BDIV	1.479	0.676	1.282	0.466				
NED	1.826	0.548	-1.437	2.015				
DBLS	2.120	0.472						
GOWN	1.990	0.503	1.655	1.655				
DOWN	2.545	0.393	-0.007	-1.072				
BOWN	2.450	0.408	-0.510	-0.495				
BIG4	1.701	0.588						
LNTA	3.392	0.295	0.501	-0.363				
BUSY	1.440	0.694						
QUICK	2.177	0.459	0.028	-0.081				
LOSS	1.325	0.755						
LEV	2.132	0.469	0.562	-0.723				
SGR	1.269	0.788	0.000	-0.123				
ROA	1.760	0.568	0.111	1.836				
GDP	1.200	0.833	-0.753	3.228				
INFL	2.025	0.494	0.612	-1.053				
CPI	3.187	0.314	0.265	-0.485				

Notes: variables are defined as follows: natural log of audit fee in thousands of dollars (LNFEE); audit firm size (BIG4); the MENA countries overall Corporate Governance Disclosure Index *(*MCGI*)*; board size (BSIZE); board diversity on the basis of both gender and ethnic minority (BDIV); the percent of NEDs on the board (NED); separate of CEO and chairperson roles (DBLS); government ownership (GOWN); director ownership (DOWN); block ownership (BOWN); firm size (LNTA), busy season (BUSY); quick ratio (QUICK); loss (LOSS); leverage (LEV); growth opportunity (SGR), profitability (ROA); gross domestic product growth (GDP); Inflation Index (INFL); and Corruption Perception Index (CPI). Table 19 fully defines all the variables used.

Second, the correlation matrix in Table 22 is used to test the multicollinearity assumption among the models' variables. Table 22 reports a correlation matrix for the LNFEE, Big4 and all the explanatory and control variables of the OLS and the logit regression models. Table 22 illustrates both Pearson's parametric and Spearman's non-parametric correlation coefficients, as the previous reported results of the skewness and kurtosis statistics in Table 20 indicate that some variables generally have a degree of non-normal behaviour. The coefficients of both the parametric and non-parametric bivariate correlations suggest that there is no serious multicollinearity among variables,

as the level of both parametric and non-parametric correlation coefficients is moderately low. The highest coefficient is between audit fees (LNFEE) and firm size (LNTA) and between director ownership (DOWN) and block ownership (BOWN) (0.710), as indicated by Pearson's parametric correlation coefficients. Tolerance and Variance Inflation Factor (VIF) statistics were used to test multicollinearity. Table 20 shows that the tolerance values range between 0.281 and 0.788, and VIF values range between 1.200 and 3.559, suggesting that there are no severe multicollinearity threats in the current study (Gujarati, 2003).

Third, heteroscedasticity is another assumption that has to be tested to ascertain whether the OLS technique can be estimated properly. Thus, the Breusch-Pagan test was used to diagnose whether the variance of the error term in the estimated model is not constant (Cooke, 1989; Ramly, 2012). The test's result confirms the null hypothesis of homoskedasticity. Furthermore, the construct scatter diagram of the residuals for the *LNFEE* model indicated that the error term is homoscedastic (for brevity purposes scatter diagram is not reported here). Therefore, the results of both Breusch-Pagan test and construct scatter diagram indicate that the model does not suffer from heteroscedasticity.

Fourth, in order to check the linearity of the model variables, Cook's distance and leverage values tests were used. It is argued that linear association amongst the variables used in the model are met if these values do not exceed the critical value of one (Pryce, 2005; Maddala and Lahiri, 2009). Table 20 shows that the Cook's distance values range between 0.000 and 0.025. Also, leverage values range from 0.031 to 0.119 confirming that the linearity of the model variables assumption has been considerably satisfied.

Finally, autocorrelation of the regression residuals should be tested to ensure the adequacy of the model specification. The Durbin-Watson test was used to check for the relationship between an error and its lagged value (autocorrelation or serial correlation). The null hypothesis of no autocorrelation could be confirmed if the Durbin-Watson value is equal or close to 2 (Gujarati, 2003; Brooks, 2008). Table 20 shows that Durbin-Watson values range between 1.884 and 2.235 among all used models, indicating the absence of serious violation of the autocorrelation or serial correlation problems.

Overall, the conducted analyses: P-P, Q-Q, histograms, skewness and kurtosis, correlation matrix, VIF Factor, tolerance statistics, scatter plots, Breusch-Pagan test, Cook's distance, leverage values, and Durbin-Watson indicate that any remaining non-normalities, multicollinearities, heteroscedasticities, non-linearities and autocorrelation in the variables are not so serious as to cause severe threat to the OLS assumptions. Therefore, it will be statistically appropriate to conduct multivariate OLS regression analyses.

5 Empirical Results and Discussion

5.1 Descriptive Statistics

Table 21 summarises the descriptive analysis of the dependent, independent and control variables over the study period. Panel *A* presents descriptive statistics for the two main dependent variables. The average audit fees is $49.35 thousand and ranges from a minimum of $4.06 thousand to a maximum of $865.79 thousand, with standard deviation of $82.31 thousand, confirming that audit fees paid to external auditors have wide variation among firms listed in MENA countries. Furthermore, the Big 4 audit firms dominate the audit market in MENA countries as they audit most of the sampled firms with the mean of 59% (354/600), confirming the argument that the audit profession and audit market of the MENA region is undeveloped (Wahdan *et al*., 2005a; Al-Ajmi, 2009; Samaha and Hegazy, 2010; Mohamed and Habib, 2013), and the Big 4 audit firms provide a superior and trustful audit service that qualify them to dominate most of the MENA region's accounting and auditing markets (Al-Ajmi, 2009). These results are consistent with the findings of Al-Ajmi (2009) who find that 82.5% of companies listed on the Bahrain Stock Exchange are audited by one of the Big 4 audit firms.

Moreover, the descriptive statistics for independent and control variables (firm-and country-levels) are reported in Panels *B, D,* and *E,* respectively. Panel *B* shows wide variation of the MCGI index. It ranges from 31.37% to 84.31%, with the average (median) firm complying with 56.45 % (56.86%) of the 51 CG provisions included in the Index. Board size (BSIZE) has an average of 8.52 board members and ranges between a minimum of four and a maximum of 19. Board diversity on the basis of both gender and ethnic minority (BDIV) ranges from 0% to 69.23% with an average of 7.88%, which suggests that on average MENA listed firms' boards are dominated by Arab males.

Panel *B* shows that the percentage of NEDs (NED) varies between 40% and 100% with an average of 87.43%, indicating that the board of directors in MENA listed firms are more likely to be dominated by NEDs. Additionally, 474 (79%) of the firm-year observation investigated reveals that listed firms in the MENA region are complying with the recommendations of CG codes issued in these countries by having separate board CEO/chairperson roles. Ownership structure mechanisms in sampled firms show an adequate variation, where governmental ownership (GOWN), director ownership (DOWN) and block ownership (BOWN) range from 0%, 0% and 5% to 98.67%, 98.92% and 98.92% with an average of 16.15%, 44.94% and 55.88%, respectively, confirming previous studies conducted in MENA countries. For example, Samaha *et al*. (2012) find block ownership to be 57.1% on average. The results also support the argument that firms in developing countries are characterized by a relatively high concentrated ownership. Ntim and Soobaroyen (2013b) document an average block ownership of (53.14%) in South Africa.

Firm- and country-level control variables' basic statistics are presented in Panel *D* and *E*, respectively. The results, in general, reveal high level of variation among listed firms. For example, firm size (LNTA) records a minimum of $3.45 million, maximum of $35222.66 million, mean of $2091 million and median of $184.45 million. Profitability (ROA) ranges from –32.09% to 31.03%, and has a mean (median) of 6.43% (6.06%) and standard deviation of 7.66%.

Table 21: Summary of descriptive statistics of all variables for all sampled firms

Variables	Mean	Median	STD	Minimum	Maximum
Panel A: Dependent variables					
LNFEE ($000)	49.35	23.61	82.31	4.06	865.79
BIG4%	59	100	49.30	0	100
Panel B: Independent variables: Corporate Governance					
MCGI%	56.45	56.86	11.59	31.37	84.31
BSIZE	8.52	9	2.59	4	19
BDIV%	7.88	0	14.34	0	69.23
NED%	87.43	88.89	14.03	40	100
DBLS%	79	100	40.90	0	100
GOWN%	16.15	3.29	24.60	0	98.67
DOWN%	44.94	47.89	27.90	0	98.92
BOWN%	55.88	59.49	23.39	5	98.92
Panel D: Control variables: Firm-level					
LNTA ($000,000)	2091.00	184.45	5728.09	3.45	35222.66
BUSY%	95	100	22.50	0	100
QUICK%	138.82	100	133.02	10	967
LOSS%	16	0	36.40	0	1
LEV%	20.29	17.76	17.65	0	69.75
SGR%	9.06	5.94	45.45	-92.59	594.06
ROA%	6.43	6.06	7.66	-32.09	31.03
Panel E: Control variables: Country-level					
GDP%	3.46	3.30	2.58	-5.20	10
INFL%	179.70	149.43	59.92	110.50	316.99
CPI	48.20	47.00	11.68	28.00	70.00

Notes: the table shows summary descriptive statistics. Variables are defined as follows: natural log of audit fee in thousands of dollars (LNFEE); audit firm size (BIG4); the MENA countries overall Corporate Governance Disclosure Index (MCGI); board size (BSIZE); board diversity on the basis of both gender and ethnic minority (BDIV); the percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); government ownership (GOWN); director ownership (DOWN); block ownership (BOWN); firm size (LNTA); busy season (BUSY); quick ratio (QUICK); loss (LOSS); leverage (LEV); growth opportunity (SGR); profitanility (ROA); gross domestic product growth (GDP); Inflation Index (INFL); and Corruption Perception Index (CPI). Table 19 fully defines all the variables used.

Table 22 presents the correlation coefficient matrix (including both Pearson's parametric and Spearman's non-parametric bivariate coefficients) for different corporate outcomes variables, independent and control variables. Using Pearson's parametric correlation coefficients only, the audit fee (LNFEE) variable is positively related, at the significant level, to auditor size (BIG4), the CG Index (MCGI), board size (BSIZE), the percent of independent directors on the board (NED), separation of the CEO/chairperson roles (DBLS), government ownership (GOWN), block ownership (BOWN), firm size (LNTA), busy season (BUSY), leverage (LEV), Inflation Index (INFL) and Corruption Perception Index (CPI). Likewise, Table 22 shows that the choice of Big 4 auditors (BIG4) is positively related, at a significant level, to the CG Index (MCGI), board size (BSIZE), board diversity *(*BDIV*),* the percent of NEDs on the board (NED), separation of the CEO/chairperson roles (DBLS), government ownership (GOWN), director ownership (DOWN), block ownership (BOWN), firm size (LNTA), busy season (BUSY), leverage (LEV), growth opportunity (SGR), profitability (ROA), Inflation Index (INFL) and Corruption Perception Index (CPI), whereas Big 4 auditors (BIG4) is significantly and negatively related to firm loss (LOSS).

Correlation coefficients among the independent variables are not high with only one at the level of .710 (between audit fees and the firm size and between director ownership and block ownership), so multicollinearity is moderate and have an insignificant effect on the relationship between the dependent and independent variables, as the correlation coefficients do not exceed 0.80 (Hannifa and Hudaib, 2006; Ramly, 2012) (as cited by Gujarati, 2003). In general the results of the correlation matrix support that auditor choice and fees are affected by internal CG measures, that the CG Index, board characteristics (large boards, independent boards, and separation of CEO/chairperson positions) and ownership structure mechanisms (block and governmental ownership) have a positive and significant effect on audit fees and the choice of the Big 4 auditors.

Table 22. Pearson and Spearman correlation matrices of all variables

	LNFEE	BIG4	MCGI	BSIZE	BDIV	NED	DBLS	GOWN	DOWN	BOWN	LNTA	BUSY	QUICK	LOSS	LEV	SGR	ROA	GDP	INFL	CPI
LNFEE	1	.468***	.459***	.146***	-.054	.314***	.337***	.365***	.025	.133***	.706***	.203***	.064	-.071	.197***	.011	-.019	.032	.341***	.413***
BIG4	.467***	1	.420***	.150***	.163***	.339***	.296***	.350***	.154***	.178***	.492***	.178***	.029	-.133***	.223***	.107***	.164***	.053	.109***	.137***
MCGI	.493***	.421***	1	-.052	.034	.399***	.501***	.166***	-.137***	-.014	.467***	.204***	.147***	-.113***	.146***	.083**	.12***	.220***	.053	.508***
BSIZE	.175***	.135***	-.033	1	.054	.011	-.243***	.273***	.093**	-.098***	.355***	.010	-.010	-.083***	.016	.102**	.081**	-.091**	.083**	-.221***
BDIV	-.025	.181***	.055	.062	1	.159***	-.039	.016	.308***	.281***	-.034	-.005	-.053	-.038	0	-.022	.163***	.070*	.077*	-.103***
NED	.340***	.352***	.386***	.029	.134***	1	.448***	.226***	.107***	.137***	.138***	.083**	.116***	-.043	.023	.025	.143***	.159***	-.024	.365***
DBLS	.353***	.296***	.500***	-.249***	.003	.435***	1	.023	-.068***	.017	.201***	.240***	.147***	.021	.085**	-.016	.005	.152***	-.121***	.435***
GOWN	.312***	.238***	.140***	.167***	-.052	.062	.027	1	.206***	.220***	.557***	-.218***	.110***	-.183***	-.012	.053	.128***	-.033	.313***	.027
DOWN	.031	.145***	-.155***	.107***	.323***	.022	-.072***	.273***	1	.709***	.122***	-.202***	-.062	-.188***	.074*	.116***	.266***	-.062	.255***	-.193***
BOWN	.125***	.200***	-.007	-.067	.279***	.049	.018	.328***	.710***	1	.153***	-.220***	-.025	-.165***	.033	.062	.222***	-.018	.300***	-.017
LNTA	.710***	.489***	.457***	.353***	-.019	.124***	.208***	.532***	.134***	.177***	1	.082**	-.055	-.171***	.297***	.155***	.083**	.013	.183***	.066
BUSY	.205***	.178***	0.209***	-.016	.018	.202***	.240***	-.277***	-.212***	-.207***	.088**	1	.001	.102**	.136***	-.005	-.037	.018	-.135***	.179***
QUICK	.066	.034	.147***	-.01	-.045	.138***	.150***	.137***	-.064	-.020	-.066	-.032	1	-.230***	-.568***	.056	.263***	.027	0.046	.242***
LOSS	-.063	-.133***	-.102**	-.102**	-.025	-.005	.021	-.164***	-.190***	-.187***	-.149***	.102**	-.235***	1	.096	-.096***	-.474***	-.008	-.129***	-.041
LEV	.153***	.208***	.141***	.027	.021	.033	.078*	-.054	.061	.051	.329***	.136***	-.524***	.134***	1	.047	-.163***	.031	-.028***	.024
SGR	.016	.117***	.078*	.096**	-.011	.027	-.015	.033	.127***	.089**	.173***	-.014	.042	-.089**	.059	1	.302***	-.003	.062	-.062
ROA	-.007	.145***	.097**	.089**	.156***	.080*	-.010	.044	.243***	.243***	.068*	-.020	.243***	-.441***	-.207***	.287***	1	.086**	-.022	-.005
GDP	-.033	.016	.117***	-.025	.059	.059	.054	-.037	-.042	-.048	.011	-.002	-.050	.047	.026	.016	.052	1	-.253***	.182***
INFL	0.269***	.098**	.024	.184***	-.031	-.140***	-.160***	.282***	.199***	.240***	.243***	-.113***	-.002	-.095**	.008	.064	-.073*	-.277***	1	.097**
CPI	.486***	.157***	.597***	-.202***	-.166***	.322***	.466***	.071*	-.262***	-.042	.175***	.205***	.255***	-.036	.023	-.049	-.045	-.046	.105***	1

Notes: the bottom half of the table contains Person's parametric correlation coefficients, whereas the upper right half of the table shows Spearman's non-parametric correlation coefficients. ***, **, and * indicate that correlation is significant at the 0.01, 0.05 and 0.1 levels, respectively. Variables are defined as follows: natural log of audit fee in thousands of dollars (LNFEE); audit firm size (BIG4); the MENA countries overall Corporate Governance Disclosure Index *(*MCGI*)*; board size (BSIZE), board diversity on the basis of both gender and ethnic minority (BDIV); the percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); government ownership (GOWN); director ownership (DOWN), block ownership (BOWN); firm size (LNTA), busy season (BUSY); quick ratio (QUICK); loss (LOSS); leverage (LEV); growth opportunity (SGR); profitability (ROA); gross domestic product growth (GDP); Inflation Index (INFL); and Corruption Perception Index (CPI). Table 19 fully defines all the variables used.

5.2 Multivariate Regression Analyses

Table 23 provides empirical results for the two regression models to test the association between firms' internal CG mechanisms and their audit fees and auditor choice decisions. Models 1, 2, 3, and 4 show the cross-sectional OLS regressions of the CG Index, board characteristics, ownership structure mechanisms and control variables on audit fees, while Models 5, 6, 7 and 8 report the logistic regressions of independent and control variables on auditor choice decision. With Pseudo R-square of 36.88% and a Chi-square 299.79***, the logistic model (Model 8) is statistically significant and differentiate the listed firms selecting Big 4 (high-quality) auditors from those selecting non-Big 4 auditors.

First, with regard to composite CG index, Models 1 and 4 show a negative and significant relationship between the CG Index (MCGI) and audit fees (LNFEE), whereas Models 5 and 8 reveal a positive and significant association between the CG index (MCGI) and Big 4 auditors, suggesting that *H1a* and *H1b* are empirically supported. This evidence is consistent with the theoretical predictions of the agency theory insights, which suggest that firms with good CG practices are more likely to hire Big 4 auditors, indicating that CG mechanisms and external audit services are complementary in providing their monitoring roles. Members of the board of directors and audit committees are expected to provide their responsibilities and monitor the external audit process more effectively to avoid potential litigation risk and improve their reputation capital. This increases the demand for both employing good CG provisions and hiring high-quality (Big 4) auditors (Eichenseher and Shields, 1985; Pincus *et al*., 1989; Hay *et al*., 2008; Zaman *et al*., 2011). On the other hand the substitution view of the association between CG and audit quality suggests that good CG practices is associated with less extensive audit work and thereby lower audit fees. This point of view argues that firms adopting better internal CG practices have lower inherent risk and are not need to conduct more extensive external audit work, thus they pay lower audit fees (Simunic, 1980; Wallace, 1984; Libby et al., 1985; Maletta, 1993; Maletta and Kida, 1993; Felix et al., 2001; Fan and Wong, 2005). These results are consistent with Fan and Wong (2005) who find empirical evidence supporting that firms with higher agency problems and weak CG embedded in the ownership structure (high concentrated ownership) are more likely to pay higher audit fees. However, they are not in line with the findings of O'Sullivan (2000); Abbott *et al*. (2003); Carcello *et al*. (2002); Hay *et al*. (2008) which document a positive impact of CG measures on audit fees.

Second, large boards (BSIZE) have a positive significant impact on audit fees (as illustrated in Models 2 and 4); however, they have an insignificant impact on auditor choice decision (as reported in Models 6 and 8). This finding supports *H2b* and is consistent with the suggestions of agency theory of the ability of large boards to meet their monitoring function more efficiently. Since large boards

may include independent, knowledgeable, experienced and externally connected members, they are more likely to demand higher audit quality to protect their reputational capital (Fama, 1980; Fama and Jensen 1983), avoid legal liability (Gilson, 1990; Sahlman, 1990) and promote shareholder interests (Carcello *et al*., 2002). This requires more audit work, increases auditor's costs and consequently raises audit fees as the auditor's additional costs are ultimately borne by the client (Carcello et al., 2002). This finding is consistent with Lin and Liu (2010) who find that SB size does not have a significant impact on auditor switching decisions to one of the big audit firms. However, the reported finding does not support the findings of Asthana *et al.* (2010) and Lin and Liu (2009), which suggest that big audit firms are selected by firms with larger board of directors and SB size, respectively.

Third, the results presented in Models 2, 4, 6 and 8 suggest that board diversity based on gender and ethnicity has a significant negative effect on audit fees, whereas it significantly but positively impacts Big 4 auditors choice. These results support the agency theory argument that diversified boards are more likely able to provide an effective monitoring role (Rose, 2007; Carter *et al.*, 2010; Terjesen *et al*., 2015a; Gyapong *et al*., 2015; Ntim, 2015). Therefore, firms with more diversified boards are more likely to hire one of the Big 4 audit firms to complement the monitoring role of diversified directors, which supports *H3a*. However, this expected effective monitoring role of diversified boards reduces client inherent risk, thereby decreasing the need for a more extensive external audit (Simunic, 1980; Wallace, 1984, Felix *et al.*, 2001). Therefore, this leads to the payment of lower audit fees, which supports *H3b*. The results offered in Models 2 and 4 contradict the empirical results of Gul *et al.* (2008) that document that firms with at least one female director and a higher proportion of female directors on the board are more likely to pay higher audit fees.

Fourth, the findings reported in Models 2, 4, 6 and 8 show a positive and significant relationship between the percentage of independent non-executive board members, and payment of more audit fees and hiring one of the Big 4 auditors. This suggests that boards with a high proportion of independent non-executive members (NED) are more likely to demand an extensive audit service and ultimately hire reputable audit firms (one of the Big 4) and pay higher audit fees, which supports *H4a* and *H4b*. Therefore, the findings are consistent with agency theory which argues that independent *NEDs* aim to protect and enhance their reputational capital in the market of directors as expert monitors (Fama 1980; Fama and Jensen 1983; Gilson 1990), to avoid legal liability (Gilson 1990; Sahlman 1990), and to protect shareholders' wealth from losses arising because of financial reporting problems (Beasley *et al*., 1999; Carcello *et al*., 2002), through not associating themselves with poor corporate performance and providing their monitoring role with due care. Therefore, they prefer to obtain a higher quality audit service, which leads to more audit fees and the selection of

large audit firms (Carcello *et al*., 2002). Empirically, the results support previous studies that document a positive and significant relationship between board independence and audit fees (e.g., O'Sullivan, 2000; Carcello *et al*., 2002; Johansen and Pettersson, 2013).

Fifth, Models 2, 4, 6 and 8 reveal that separation of the CEO/chairperson roles (DBLS) does not impact audit fees, but has a positive significant association with auditor choice, which supports *H5a*. Theoretically, these findings are consistent with agency theory, which suggests that separation of the roles of chairperson and the CEO enhances the monitoring role of the board of directors (La Porta *et al*., 1999; Cohen *et al*., 2002; Gelb and Zarowin, 2002; Lee *et al*., 2004; Wilkinson and Clements, 2006). Therefore firms with separate CEO/chairperson roles are more likely to hire one of the big audit firms. Empirically, these findings are in line with Lin and Liu (2009) who find evidence supporting that firms with the board chairperson is independent from the CEO are more likely to select a high-quality auditor to ensure the quality of the firm's financial statements and to monitor management performance.

Sixth, Models 3, 4, 7 and 8 show that although government ownership is negative and significantly associated with audit fees at the 10% level of significance, it has a negative but insignificant impact on auditor choice decision, so *H6b* is supported empirically. From the agency theory perspective, government institutions can exercise a substantial influence over government-controlled firms, and they can easily access a firm's information (Chan *et al*., 2006). Consequently, firms with higher government ownership are less likely to provide highly credible financial reports and thus they are less likely to choose higher quality audit firms and prefer to pay lower fees (Lin and Liu, 2010). Empirically, the insignificant impact of government ownership on auditor choice is congruent with Lin and Liu (2010) who find no evidence for the impact of governmental ownership on auditor switching decision in China.

Seventh, the results shown in Models 3, 4, 7 and 8 reveal a positive and significant relationship between director ownership and audit fees, which supports *H7b*, while it reports insignificant impact of director ownership on auditors choice decision. These findings support the notion that in firms with higher levels of ownership, the agency problem shifts from the manager–stockholder relation to conflicts between the controlling owners and minority stockholders (Shleifer and Vishny, 1997; Fan and Wong, 2002). On the basis of this argument, Fan and Wong (2005) expect that the controlling owners (directors) have an incentive to hire Big 5 auditors and pay higher audit fees in order to mitigate agency conflicts between controlling owners and the minority shareholders. Empirically, the significant positive impact of concentrated ownership on audit fees is consistent with Fan and Wong (2005) who find that firms with concentrated ownership structures are more likely to pay higher audit fees. In contrast, the current results contradict the results of O'Sullivan (2000), which suggest a

negative and significant relationship between executives and non-executives ownership and audit fees.

Eighth, Models 3, 4, 7 and 8 illustrate that concentrated ownership is positively and significantly impacts auditor choice, whereas it has an insignificant effect on audit fees, confirming *H8a*. These findings suggest that firms with a higher level of ownership concentration (i.e., percentage of equity shares held by the largest owners) prefer to hire reputable auditors (Big 4). Since concentrated ownership normally represents weak CG, the reported results propose that these firms would be inclined to choose big audit firms to signal good CG and credible financial reporting to minority shareholders and other stakeholders. This helps in mitigating agency costs (Reed *et al*., 2000; Johnstone and Bedard, 2004; Fan and Wong, 2005; Lin and Liu, 2009) and in extensively monitoring managerial behaviour to avoid any non-value-maximising behaviour by managers (O'Sullivan, 2000). Empirically, the reported results confirm Fan and Wong (2005) who find empirical evidence supporting that firms with high concentrated ownership are more likely to hire Big 5 auditors. However, the current results are inconsistent with the findings provided by Datar *et al*. (1991); Chan *et al*. (1993); Copley and Douthett (2002) and Lin and Liu (2009) that support the negative relationship between concentrated ownership and audit fees.

With regard to the association between control variables and audit fees and the choice illustrated in Models 1 to 8, the study finds mixed results. For example, Models 1 to 4 show that auditor size (Big4) has a positive and significant impact on audit fees. This is consistent with the empirical findings of Francis (1984), Francis and Simon (1987) and Chan *et al*. (1993) which argue that audit teams of large audit firms have greater expertise, skills and seniority; thus big auditors are more likely provide higher quality of audit services with higher fees compared to non-big auditors. Similarly firm size (LNTA) has a positive and significant effect at 1% level on both audit fees and choice, which suggests that large firms are usually more complicated in operation and therefore need extensive audit process (Chan *et al*., 1993) and to hire larger auditors with more expertise (Lin and Liu, 2009). Lin and Liu (2009) also argue that large firms could generate price premium for the issued stocks by hiring high-quality auditors. Furthermore, large auditors are able to audit large firms at low average costs because of the economies of scale (Chaney and Philipich, 2002; Chaney *et al*., 2004). In general, large audit firms possess the expertise necessary to audit large firms with complicated operations (Willenborg, 1999). Models 1 to 4, also, show a positive significant association between firm-year ends being on busy audit months and audit fees, confirming previous studies which argue that the incremental workload around fiscal year-ends may be relatively higher for audit firms, therefore audit firms may charge clients which have year-ends in months other than January and March lower fees (Chan *et al*., 1993; Chaney *et al*., 2004).

However, and in general, the empirical results do not find a significant impact of quick ratio (QUICK), firm loss (LOSS) and growth opportunity (SGR) on auditor choice and fees, which is consistent with the empirical findings of Chan *et al*. (1993), Chaney *et al*. (2004), Lin and Liu (2010), and Johansen and Pettersson (2013). Although, leverage (LEV) has an insignificant impact on audit fees, it has a positive but significant impact on auditor choice, supporting the argument that more leveraged firms are motivated to choose high-quality auditors to decrease market's suspicion on their performance and to lower their costs of capital (Reed *et al.*, 2000; Chaney *et al.*, 2004). With regard to client profitability (ROA), Models 1 to 8 report mixed results. The study records a positive and significant impact of client profitability on choosing one of the Big 4 audit firms, consistent with the argument that more profitable firms usually have sufficient funds to hire a large (high-quality) auditor (Chaney *et al*., 2004), and they are also motivated to testify their performance to the market by choosing a high-quality auditor (Lin and Liu, 2009, 2010). However, the empirical results document a positive and insignificant relationship between firm profitability and audit fees. This insignificant relationship is consistent with the empirical results of O'Sullivan and Diacon (2002).

Finally and with regard to country level control variables the study finds mixed results. For example, Corruption Perception Index (CPI) has a significantly positive relationship with audit fees but it has a significantly negative relationship with auditor choice. The empirical results suggest that firms listed in countries that have a high Corruption Perception Index are more likely to prefer to provide investors with more reliable financial reports (Judge *et al*., 2008; Baldini *et al*., 2016) and therefore conduct more extensive audit procedures and thus pay higher audit fees. However, these firms have no need to hire one of the Big 4 auditors. The empirical results also illustrate that although there is no significant impact of inflation on auditor choice, firms listed in countries with high inflation rates are more likely to pay lower audit fees, confirming Archambault and Archambault (2003) who report a negative relationship between inflation and corporate disclosure. Furthermore, reported results in Models 1 to 8, in general, do not suggest any significant effect of the degree of economic development (GDP) on auditor choice and fees.

In summary, the empirical results, in general, support that there is an association between firm's internal CG mechanisms and auditor choice and fees, which means that external audit quality (Big 4 auditor, high audit fees) is more likely to have a CG monitoring role in MENA countries. Furthermore, auditor choice and fees decisions are affected by the firm-level CG among firms listed in MENA countries.

Table 23: Determinants of auditor choice and fees

Independent variables: CG		LNFEE	LNFEE	LNFEE	LNFEE	BIG4	BIG4	BIG4	BIG4
(Model)	Predicted sign	1	2	3	4	5	6	7	8
MCGI	+/-	-1.689***			-1.814***	7.549***			4.674***
		(0.000)			(0.000)	(0.000)			(0.005)
BSIZE	+/-		0.264***		0.317***		-0.006		0.366
			(0.006)		(0.001)		(0.990)		(0.444)
BDIV	+/-		-0.559**		-0.551**		4.495***		3.678***
			(0.024)		(0.026)		(0.000)		(0.005)
NED	+		0.739***		0.854***		5.305***		4.827***
			(0.001)		(0.000)		(0.000)		(0.000)
DBLS	+		-0.010		-0.052		0.910**		0.829**
			(0.900)		(0.501)		(0.016)		(0.032)
GOWN	+/-			-0.170	-0.240*			-0.263	-0.094
				(0.236)	(0.078)			(0.659)	(0.887)
DOWN	+/-			0.606***	0.491***			0.238	-0.377
				(0.000)	(0.000)			(0.688)	0.568
BOWN	+/-			-0.113	0.211			1.378**	1.203*
				(0.492)	(0.210)			(0.033)	(0.088)
Control variables: Firm-level									
BIG4	+	0.342***	0.238***	0.246***	0.262***				
		(0.000)	(0.000)	(0.000)	(0.000)				
LNTA	+	0.350***	0.315***	0.339***	0.337***	0.487***	0.687	0.664***	0.574***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000***)	(0.000)	(0.000)
BUSY	+	0.340***	0.283***	0.344***	0.341***				
		(0.001)	(0.008)	(0.003)	(0.002)				
QUICK	+	0.020	0.002	0.017	0.042	0.195*	0.143	0.276**	0.123
		(0.461)	(0.939)	(0.531)	(0.115)	(0.073)	(0.209)	(0.012)	(0.288)
LOSS	+/-	0.039	0.048	0.105	0.058	0.109	0.004	0.063	0.134
		(0.626)	(0.540)	(0.187)	(0.436)	(0.738)	(0.991)	(0.842)	(0.707)
LEV	+	-0.250	-0.304	-0.387*	-0.223	2.205**	1.652*	2.120**	1.734*
		(0.227)	(0.140)	(0.066)	(0.266)	(0.011)	(0.072)	(0.019)	(0.081)
SGR	+/-	-0.022	-0.040	-0.065	-0.060	-0.008	0.107	0.061	0.046
		(0.719)	(0.518)	(0.298)	(0.307)	(0.974)	(0.695)	(0.809)	(0.870)
ROA	+	-0.414	-0.573	-0.899**	-0.834**	3.630**	3.796**	2.437	3.230*
		(0.323)	(0.182)	(0.034)	(0.042)	(0.032)	(0.034)	(0.153)	(0.090)
Control variables: Country-level									
GDP	+	-0.712	-1.247	1.514	-0.742	-2.828	-0.278	0.350	-2.319
		(0.528)	(0.266)	(0.177)	(0.486)	(0.525)	(0.952)	(0.935)	(0.620)

INFL	+	-0.157***	-0.131**	-0.152***	-0.121**	0.167	0.376	-0.320	0.414
		(0.007)	(0.029)	(0.009)	(0.033)	(0.433)	(0.104)	(0.139)	(0.104)
CPI	+	3.351***	2.296***	2.800***	3.713***	-2.635**	-1.292	1.880*	-3.767**
		(0.000)	(0.000)	(0.000)	(0.000)	(0.048)	(0.297)	(0.066)	(0.014)
YDU		Included	Included	Included	Included	Included	Included	Included	Included
INDU		Included	Included	Included	Included	Included	Included	Included	Included
Constant		4.958***	3.928***	4.311***	3.255***	-9.833***	-14.446***	-9.528***	-15.625
Durbin-Watson statistics		2.253	2.216	2.216	1.930				
F-value		50.94***	44.98***	46.75***	45.64				
Chi-square						231.75****	288.87***	215.37***	299.79
Adjusted R^2		69.10%	69.23%	69.17%	72.71%				
Pseudo R2						28.51%	35.53%	26.49%	36.88%
No. of observations		470	470	470	470	600	600	600	600

Notes: P-values are between brackets. ***, **, * indicate that the relationships are significant at the 0.01, 0.05 and 0.10 levels, respectively. Variables are defined as follows: natural log of audit fee in thousands of dollars (LNFEE); audit firm size (BIG4); the MENA countries overall Corporate Governance Disclosure Index (MCGI); board size (BSIZE); board diversity on the basis of both gender and ethnic minority (BDIV); the percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); government ownership (GOWN); director ownership (DOWN); block ownership (BOWN); firm size (LNTA); busy season (BUSY); quick ratio (QUICK); loss (LOSS); leverage (LEV); growth opportunity (SGR); profitability (ROA); gross domestic product growth (GDP); Inflation Index (INFL); Corruption Perception Index (CPI); year dummies (YDU) and industry dummies (INDU). Table 19 fully defines all the variables used.

5.3 Robustness Tests

A series of further tests were conducted to examine the robustness of the results.

5.3.1 Results Based on Alternative Proxies to Measure the Control Variables

This study adopts alternative proxies to measure the control variables. It uses the log of revenues (LNTS) to proxy for firm size, the return on equity (ROE) to proxy for profitability, the current ratio (CURRENT) to proxy for firm-specific risk, and the market to book value of equity (MTB) ratio to proxy for firm growth opportunity. Models 1 and 2 in Table 24 show that the results are generally supported (except the coefficients of *GOWN* in Model 1 and *MCGI* in Model 2 which become insignificant) after adopting the alternative measures for the control variables. This indicates that the study's results documented in Models 4 and 8 in Table 23 are robust to the use of alternative control variables.

5.3.2 Results Based on Non-Linear Assumption

Additionally, a number of previous studies have suggested that some of corporate board characteristics (e.g., board size) and ownership structure mechanisms (e.g., government, director and block ownership) have non-linear relationship with financial reporting quality (e.g., Leung and Horwitz, 2004; Guest, 2009; Sun *et al*., 2015; Elmagrhi *et al*., 2016). This suggests that the extent of external auditing and ultimately the audit fees and auditor choice may have a nonlinear association with board characteristics and ownership structure mechanisms (O'Sullivan, 2000). To identify the existence of non-linear relationship between board size, government ownership, director ownership and block ownership on the one hand, and the audit fees and auditor choice decision on the other hand, Models 4 and 8 in Table 23 have been re-stimated by adding the square root of board size, government ownership, director ownership and block ownership. The findings are reported in Models 3 and 4 in Table 24. With respect to board size, Model 3 and 4 show that larger boards have a positive significant impact on audit fees and a negative and significant effect on the choice of large audit firms, respectively. This indicates that there is a curvilinear relationship between board size and auditor choice decision, which suggests that larger boards provide a more effective monitoring role and thereby firms do not need to hire Big 4 auditors (Simunic, 1980; Wallace, 1984 and Felix *et al*., 2001). This evidence also supports the findings of Guest (2009) and Elmagrhi *et al*. (2016) who reported similar non-linear evidence between board size and financial reporting quality.

The findings presented in Models 3 and 4 generally suggest the existence of non-linear relationships between the ownership structure mechanisms and both audit fees and the auditor choice decision. For example, and with respect to government ownership, the evidence suggests that there is

a non-linear relationship between government ownership and auditor choice decision. Model 4 shows that larger government ownership has a negative and significant effect on choice of large auditors, supporting the argument that government agencies can exercise a substantial influence over government-controlled firms, and they can easily access a firm's information (Chan *et al*., 2006). Therefore, firms with higher government ownership have low incentive to provide higher credible financial reports, and thus they are less likely to choose higher-quality auditors (Lin and Liu, 2010).

Similarly, and with regard to director ownership, the evidence reported in Model 4 suggests that director shareholders become more entrenched at higher levels of ownership. This result confirms the notion that managerial ownership helps to reconcile the interests of managers and shareholders; managers obtaining a significant percentage of equity have less incentive to issue misleading information to shareholders (Chow, 1982). This reduces the need for intensive auditing (O'Sullivan, 2000). Furthermore, this evidence confirms the findings of Leung and Horwitz (2004), which suggests that directors with concentrated ownership negatively influence disclosure decisions. On the other hand, the findings reported in Model 3 in Table 24 propose that directors with high levels of ownership have an insignificant effect on audit fees. Finally, the evidence in Models 3 and 4 suggests that block holders become less entrenched at higher levels of ownership. This result indicates that highly concentrated ownership has an insignificant effect on both auditor choice and fees.

5.3.3 Results Based on Lagged Structure Model

The third sensitivity test is related to the lagged effect of CG index, board characteristics and ownership structure mechanisms on auditor choice and fees as suggested by Lin and Liu (2010). In general, the findings presented in Models 5 and 6 in Table 24 support the robustness of the results reported in Models 4 and 8 in Table 23 on the effect of lagged effect (except the non-dual structure of board leadership that was found to have an insignificant impact on auditor choice).

5.3.4 Results Based on the Effect of Client Size

The final sensitivity test is related to the proposed moderating effect of client size on the relationship among firm-specific characteristics (CG index, board characteristics and ownership structure mechanisms) and auditor choice and fees (Chan *et al*., 1993; Carcello *et al*., 2002). Following Carcello *et al*. (2002), the study sample was split at the median to test regression Models 1 and 2 within each subset of the data. The figures shown in Models 7 and 9 in Table 24 suggest that the results hold in large companies (except for government ownership which has a negative but insignificant effect on audit fees) and some of the results hold in the small subset (such as board size and non-dual structure of board leadership). Furthermore, Models 8 and 10 in Table 24 illustrate the

moderating effect of client size on the relationship between internal governance variables and auditor choice decision. The results reported in Model 8 in Table 24 support those of small companies (except for CG Index and separating the CEO/chairperson roles which have a significantly negative and insignificant impact on auditor choice decision in small companies, respectively). However, Model 10 in Table 24 shows that board diversity and block ownership have an insignificant relationship with auditor choice in large firms. To summarise, Models 7, 8, 9 and 10 in Table 24 support the argument that client size moderates the relationship between firm-specific CG characteristics (CG index, board characteristics and ownership structure mechanisms) and audit fees and auditor choice decision (Chan *et al*., 1993; Carcello *et al*., 2002).

In conclusion, a number of additional tests were conducted to examine the robustness of the results, including results based on alternative proxies to measure the control variables, results based on non-linear assumption, results based on lagged structure model and results based on the effect of client size. In total, the findings are fairly robust across these econometric models. Overall, the findings are generally consistent with the predictions of agency theory.

Table 24: Sensitivity analyses of the determinants of auditor choice and fees

	Additional control var.		Linearity		Lagged		Small size firms		Large size firms	
Ind. Variables	**LNFEE**	**Big4**	**LNFEE**	**Big4**	**LNFEE**	**Big4**	**LNFEE**	**Big4**	**LNFEE**	**Big4**
(Model)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
MCGI	-1.897***	2.520	-1.692***	5.453***	-1.860***	3.873**	-0.281	-4.586*	-2.836***	30.608***
	(0.000)	(0.164)	(0.000)	(0.002)	(0.000)	(0.036)	(0.663)	(0.081)	(0.000)	(0.000)
BSIZE	0. 587***	0.442	-1.534	14.860***	0.319***	-0.095	0.427**	1.101	0.486***	-1.553
	(0.000)	(0.362)	(0.101)	(0.003)	(0.003)	(0.855)	(0.019)	(0.125)	(0.000)	(0.323)
$BSIZE^2$			0.411*	-3.543***						
			(0.060)	(0.003)						
BDIV	-0.663**	3.645***	-0.688***	4.102***	-0.611**	3.219**	-0.446	9.880***	-0.730**	-0.851
	(0.013)	(0.006)	(0.006)	(0.005)	(0.026)	(0.024)	(0.334)	(0.000)	(0.028)	(0.832)
NED	0.974***	6.340***	0.752***	4.221***	0.971***	5.267***	0.357	4.857**	1.335***	5.402**
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.299)	(0.035)	(0.000)	(0.024)
DBLS	0.087	0.917**	-0.090	0.686*	-0.087	0.389	0.129	0.697	-0.202	7.712***
	(0.298)	(0.020)	(0.247)	(0.094)	(0.296)	(0.339)	(0.241)	(0.164)	(0.177)	(0.001)
GOWN	0.154	-0.363	0.938**	4.414**	-0.289**	-0.179	0.363	0.907	-0.050	2.592
	(0.276)	(0.582)	(0.013)	(0.026)	(0.049)	(0.803)	(0.362)	(0.549)	(0.792)	(0.147)
$GOWN^2$			-1.570***	-6.979**						
			(0.001)	(0.013)						
DOWN	0.420***	-0.266	0.754	5.882**	0.471***	-0.552	-0.187	-1.596	1.012***	-0.568
	(0.006)	(0.693)	(0.129)	(0.017)	(0.002)	(0.455)	(0.424)	(0.113)	(0.000)	(0.773)
$DOWN^2$			-0.322	-6.473**						
			(0.579)	(0.028)						
BOWN	0.341*	1.292*	-0.603	3.057	0.264	1.385*	0.549**	3.097***	0.060	-0.523
	(0.075)	(0.082)	(0.334)	(0.312)	(0.160)	(0.084)	(0.050)	(0.008)	(0.820)	(0.776)
$BOWN^2$			0.838	-1.205						
			(0.197)	(0.711)						
Control variables: Firm-level										
BIG4	0.266***		0.228***		0.231***		0.302***		0.185	
	(0.000)		(0.000)		(0.001)		(0.000)		(0.125)	
LNTA			0.344***	0.643***	0.342***	0.641***	0.357***	0.707***	0.330***	0.566
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.191)
BUSY	0.384***		0.417***		0.395***		0.587***		0.569***	
	(0.002)		(0.000)		(0.001)		(0.001)		(0.001)	
QUICK			0.048*	0.137	0.056*	0.101	0.099**	0.353**	-0.009	0.795**
			(0.072)	(0.271)	(0.052)	(0.424)	(0.018)	(0.045)	(0.813)	(0.048)
LOSS	0.078	0.390	0.067	0.182	0.023	-0.008	0.031	-0.210	0.226*	-0.850
	(0.347)	(0.293)	(0.370)	(0.634)	(0.779)	(0.983)	(0.756)	(0.625)	(0.070)	(0.558)

LEV	-0.382*	1.046	-0.246	0.678	-0.160	1.256	-0.075	2.523*	0.159	6.881**
	(0.075)	(0.308)	(0.221)	(0.535)	(0.459)	(0.250)	(0.825)	(0.084)	(0.566)	(0.028)
SGR			-0.068	0.028	0.008	0.092	-0.044	-0.028	-0.066	-0.244
			(0.242)	(0.927)	(0.900)	(0.761)	(0.591)	(0.941)	(0.428)	(0.720)
ROA			-0.858**	-0.457	-0.971**	4.247**	-1.216**	-1.251	-1.081	3.001
			(0.036)	(0.823)	(0.027)	(0.042)	(0.022)	(0.617)	(0.166)	(0.656)
LNTS	0.237***	0.776***								
	(0.000)	(0.000)								
CURRENT	-0.024	0.155**								
	(0.185)	(0.049)								
MTB	-0.006*	-0.008								
	(0.073)	(0.563)								
ROE	-0.495**	-0.266								
	(0.018)	(0.781)								
Control variables: Country level										
GDP	-0.749	0.311	-0.826	-1.742	-0.421	0.593	-0.503	-4.211	-1.004	9.002
	(0.517)	(0.949)	(0.433)	(0.727)	(0.692)	(0.900)	(0.803)	0.571	(0.469)	(0.422)
INFL	0.038	0.582**	0.168***	0.323	-0.106	0.416	-0.183*	-0.097	0.201*	4.067***
	(0.513)	(0.023)	(0.004)	(0.261)	(0.112)	(0.161)	(0.061)	(0.822)	(0.082)	(0.001)
CPI	4.309***	-3.099*	3.581***	-4.977***	3.720***	-3.079*	1.496**	-4.277*	5.231***	-30.503***
	(0.000)	(0.060)	(0.000)	(0.003)	(0.000)	(0.068)	(0.027)	(0.097)	(0.000)	(0.000)
YDU	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
INDU	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Constant	3.334***	-18.217***	5.436***	-31.207***	3.726***	-15.268***	3.724***	-14.484***	2.658***	-25.589***
Durb-Watson	2.096		1.884		1.975		1.915		1.926	
F-value	36.26***		41.48***		41.91***		10.52***		21.58***	
Chi-square		325.44***		345.38****		249.75***		119.05***		211.83***
Adjusted R^2	67.79%		73.42%		73.81%		53.26%		71.12%	
Pseudo R2		40.03%		42.48%		36.94%		29.60%		67.55%
No. of obs.	470	600	470	600	470	600	235	300	235	300

Notes: P-values are between brackets. ***, **, * indicate that the relationships are significant at the 0.01, 0.05 and 0.10 levels, respectively. Variables are defined as follows: natural log of audit fee in thousands of dollars (LNFEE); audit firm size (BIG4); the MENA countries overall Corporate Governance Disclosure Index (MCGI); board size (BSIZE); board diversity on the basis of both gender and ethnic minority (BDIV); the percent of non-executive directors on the board (NED); separate of CEO and chairperson roles (DBLS); government ownership (GOWN); director ownership (DOWN); block ownership (BOWN); firm size (LNTA); busy season (BUSY); quick ratio (QUICK); firm loss (LOSS); leverage (LEV); growth opportunity (SGR); profitability (ROA); country's gross domestic product growth (GDP); Inflation Index (INFL); Corruption Perception Index (CPI); year dummies (YDU); and industry dummies (INDU). Table 19 fully defines all the variables used.

6. Summary and Conclusions

The audit profession in MENA countries is less well established than in developed countries. There is no effective code of professional ethics governing the accountants' and auditors' work and practice, and no powerful professional organisations responsible for the development of the auditing profession. However, MENA countries have recently experienced a rapid shift in economic development and the strong presence of multinational firms and international financial institutions, requiring better protection of their investments through better-quality audit performed by more reputable auditors. Therefore, the purpose of this study is to examine the association between firms' internal CG mechanisms (i.e., CG index, board characteristics and ownership structure mechanisms) and auditor choice and fees, in the MENA context. The study uses available data on audit fees; auditors are classified into two groups, the Big 4 and non-Big 4. Through OLS and logit regression models, the study identifies the impact of the internal CG variables on the choice of auditor and fees among listed firms in MENA countries during the period 2009 to 2014.

The empirical results suggest that choice of auditor and fees can be significantly influenced by firm-level CG measures. Specifically, the empirical results reveal that CG index, board diversity based on gender and ethnicity, board independence, separation of the CEO/chairperson roles, and concentrated ownership impact significantly and positively on firms' choice of Big 4 auditors. Board size has a positive but insignificant effect on the choice of Big 4 auditors, whereas government ownership and director ownership are insignificant and negatively related to the choice of Big 4 auditors. With regard to audit fees, the research findings suggests that CG index, board diversity based on gender and ethnicity, and government ownership are significantly and negatively related to audit fees, whereas board size, board independence and director ownership have a positive significant effect. Non-dual board leadership structure and concentrated ownership have no significant impact on audit fees. Generally, the study concludes that external audit quality (Big 4 auditors, high audit fees) has an effective monitoring role in MENA countries in protecting shareholders' interests and hence minimising agency conflict. Furthermore, auditor choice and fee decisions are affected by the firm-level CG among MENA listed firms.

6.1 Contributions, Policy Implications and Recommendations

The current study makes a number of contributions to the CG and auditing literature. First, the evidence in general suggests that large auditors have been able to product-differentiate themselves in the MENA equity market. Empirical evidence of the antecedents of auditor choice in the MENA context emphasises how to improve a firm's CG and audit monitoring to enhance the credibility of

corporate reporting, which in turn helps to promote development of capital markets and attracts foreign investment to the MENA region.

Second, many studies have examined the impact of CG mechanisms on auditor choice and fees in developed countries, where institutional structures and corporate settings are largely similar. However, limited evidence is available from emerging countries. Therefore, the current study contributes to the limited literature investigating auditor choice and fees in MENA countries, using one of the most extensive hand-collected data sets to date (i.e., a sample of 100 MENA listed firms from 2009 to 2014, with 600 firm-year observations) in order to enhance the generalisability of the results. Therefore, this study can expand current understanding of the role that CG mechanisms play in influencing auditor choice and fees in emerging markets. Moreover, unlike the many studies that employed either time series or cross-sectional data, this study employs panel data that mitigates the effect of multicollinearity, controls unobserved heterogeneity among variables and increases the degree of freedom.

Third, again unlike previous studies, this study adds to the auditing and CG literature by examining a number of CG measures that have not been widely investigated before. It does not limit its analyses to a few types of board characteristics and ownership structure mechanisms in investigating why and how these antecedents may influence auditor choice and fees. Instead, it provides empirical evidence for a broad composite CG index, a number of board characteristics (i.e., board size, board diversity, board independence and separation of CEO/chairperson roles), as well as some ownership structure mechanisms (i.e., government, director and block ownership). The study's results generally illustrate that these factors significantly influence auditor choice and fees.

Fourth, unlike previous studies, a series of different econometric models and estimations were conducted to ensure the robustness of the empirical results of the study. A number of analyses were conducted to check the extent to which the main results are robust or sensitive to alternative models and estimations. The results of the robustness analyses confirmed *a priori* theoretical expectation that sound CG practices have a significant influence on auditor choice and fees.

Finally, given the distinct nature of the MENA context, it was assumed that most national CG codes issued in MENA countries based on the Anglo-American model would not necessarily lead to the desired outcomes. However, this study provides empirical evidence that national CG codes generally attain favourable outcomes, although differences in the corporate contexts between emerging and developed countries should be taken into account when intoducing new CG reforms or modifying existing ones. This evidence also supports the suggestion that emerging economies tend to implement CG best practice issued by leading international organisations (e.g., OECD) in order to be globally competitive, attain international legitimacy, and thereby attract foreign investment. This

is consistent with the international movement towards CG harmonisation, where national CG structures tend to be similar to the Anglo-American model.

Furthermore, the current study has implications for international investors. As the reports issued by the International Bank demonstrate an increase in foreign direct investments in the MENA region, the findings suggest that foreign investors need to be aware of the structure of CG mechanisms of listed firms and the quality of external audit monitoring. It is good practice for listed firms with strong internal CG mechanisms to choose to conduct higher-quality audit to strengthen the confidence of the market participants. Therefore, the MENA governments and regulatory bodies should promote reform of the CG of listed firms and encourage the development of the accounting and auditing profession.

6.2 Limitations and Avenues for Further Research

As an empirical study, this essay is subject to a number of limitations. First, the sample is limited to 100 non-financial and non-utility listed MENA firms, because it involved a great deal of hand-collected data which consumes time and effort; the availability, accessibility, funding and time constraints of the PhD registration timeframe was a further restriction on the size of the sample. Future studies should consider a large data set to improve the generalisability of the findings. Second, the study attempted to control for determinants of auditor choice and fees reported in the literature that may be correlated with CG variables and auditor choice and fees; however, there may be other exogenous factors that are correlated with both the CG mechanisms examined in this study and with auditor choice and fees. Likewise, although this study attempted to control for many factors that previous studies have found to affect auditor choice and fees, other variables are not included because the data was not available, such as for non-audit services and the composition of audit committees. These limitations represent important items for future research.

Third, the current study depends only on quantitative analysis in investigating the CG antecedents of auditor choice and fees in MENA countries. Future studies could use mixed methods, that is both quantitative and qualitative analysis to interpret the data. Finally, this essay contributes to the literature by using agency theory to explain firms' motivations for auditor choice and fees in MENA countries. However, future studies might prefer a multi-theoretical methodology (e.g., political cost theory and signalling theory) in order to arrive at a uniform theoretical framework that could be used to examine the antecedents of auditor choice and fees.

Concluding Chapter

Summary and Conclusion: Objectives, Findings, Implications and Recommendations, Contributions, Limitations and Avenues for Future Research

The detailed discussions presented in the three essays suggest that the majority of empirical evidence on how and to what extent a firm's CG might impact its outcomes comes from developed countries; similar studies in emerging economics, especially those in the MENA region, are few. Furthermore, the special characteristics of the MENA context are a motivation for investigating how, and to what extent, a firm's CG might affect a number of specific outcomes, including voluntary CG disclosure, firm market value, accounting returns, EP, the PPS, and auditor choice and fees. Accordingly, this study was designed to quantitatively examine the extent to which national CG reforms have been effective in improving corporate outcomes through focusing on a number of closely related CG topics over the 6-year period (2009-2014). The period selected to investigate these three topics coincides with that in which the authorities in most MENA countries pursued economic and CG reforms designed to improve corporate performance. In particular, in response to the corporate scandals of the early 1990s, the financial crisis in 2007/2008, and the increased flow of foreign investments, MENA governments carried out a number of CG reforms including issuing national CG codes. These reforms aim to improve firms' internal control procedures and protect stakeholders' interests. The series of CG codes issued in the MENA region started in 2002 with a voluntary CG code in Oman, followed by Egypt in 2005, Saudi Arabia in 2006, Jordan in 2007 and the UAE in 2007. These codes comprise a number of recommendations which seek to encourage a culture of compliance and CG disclosure, to mitigate agency conflicts, and to reduce agency costs associated with conflicts of interest between management and other stakeholders.

i) Objectives

This study seeks to achieve the following main objectives. First, it aims to assess the level of MENA listed firms' voluntary CG compliance and disclosure practices. Second, it attempts to ascertain whether the observed differences in levels of voluntary CG compliance and disclosure can be explained by compliance and disclosure of Islamic values, board characteristics and ownership structure mechanisms. Third, it hopes to determine whether national religion and governance quality can explain noticeable variations in the level of voluntary CG compliance and disclosure practices. Fourth, it intends to examine whether more diversified boards based on gender, ethnic minority and nationality improve firm market value and accounting returns. Fifth, it ascertains whether a firm's CG quality moderates the relationship between board diversity and firm performance. Sixth, it examines whether appointing women, ethnic minorities and foreign directors has an impact on EP.

Seventh, it seeks to investigate whether board diversity enhances the PPS. Eighth, it attempts to ascertain the extent to which the CG Index, board characteristics and ownership structure mechanisms can explain the auditor choice. Finally, it attempts to determine the extent to which the CG Index, board characteristics and ownership structure mechanisms can explain observable variations in audit fees.

ii) Findings

The theoretical expectation of this thesis is that an effective CG system should lead to better corporate outcomes. Motivated by limited previous evidence from the MENA region, the study seeks to empirically investigate whether MENA countries' listed firms that voluntary comply with CG measures proposed by the UNCTAD *ISAR benchmark* of guidance on good practice in CG disclosure tend to result in better performance than their poorly governed counterparts. The main findings of each essay are summarised below.

The first essay investigates the level of voluntary CG compliance and disclosure among MENA countries' listed firms, and factors potentially explaining such behaviour. The results indicate several conclusions. First, in spite of the initial theoretical prediction that the release of the voluntary national CG codes would promote a culture of CG compliance and disclosure among listed firms in MENA countries, the results clearly suggest that the level of CG compliance and disclosure is generally low compared to empirical evidence from developed countries. Second, regarding antecedents of voluntary CG compliance and disclosure practices, MENA listed firms have had some positive response to the voluntary codes' recommendations. This result is contrary to general expectations about the ability of national voluntary codes to improve CG standards in MENA context, where norms, traditions and ownership concentration were expected to negatively affect firms' willingness to comply with these codes. Third, the introduction of the national voluntary CG codes has had a positive impact in enhancing good CG practices over time, as the levels of CG compliance and disclosure have improved over the examined period. Fourth, there is an obvious variation in the levels of CG compliance and disclosure among the countries examined. This may be attributable to the institutional and contextual differences among sampled countries. Fifth, the theoretical evidence suggests that the CG codes' reliance on an Anglo-American model may not be suitable to the MENA context and thereby will not improve CG practice. The results show that the national codes were able to promote CG practices to some extent. Sixth, the findings generally indicate that Islamic values, board characteristics and ownership structure mechanisms have a significant impact on firm-level voluntary CG disclosure. Board characteristics which have a significant and positive influence on firm-level voluntary CG disclosure include board diversity on the basis of gender and ethnicity, board

independence, and separation of the CEO/chairperson roles; whereas board size has a significant but negative impact. Similarly, director ownership is significantly and negatively associated with firm-level voluntary CG disclosure whereas government and block ownership have an insignificant influence. Seventh, the results indicate that firms in countries complying with Islamic economic principles and having high-quality national governance are more likely to voluntarily comply and disclose more CG practices than those that do not. Overall, these findings are in line with the predictions of the study's neo-institutional theory insights, and with prior studies (e.g., Haniffa and Cooke, 2002; Maali *et al*., 2006; Cerdioni and Parbonetti, 2007; Ezat and El-Masry, 2008; Judge *et al*., 2008; Farook *et al*., 2011; Oh *et al*., 2011; Samaha *et al.*, 2012; Al Janadi *et al*., 2013, Khan *et al*., 2013; Albitar, 2015; Mateescu, 2015; Baldini *et al*., 2016; Elmagrhi *et al*., 2016).

The second essay examines the impact of board diversity (based on gender, ethnic minorities and nationality) on a number of corporate outcomes, namely market value, accounting returns, EP and the PPS. Contrary to the initial theoretical expectation that the impact of board diversity on such corporate outcomes might be different from what is reported in developed countries, because of the differences in corporate contexts, the results generally indicate that board diversity influences firm market value, accounting returns and the PPS. On average, firms with more diversified boards are more likely to attain higher market value, accounting returns and the PPS than are their less diversified counterparts. The empirical evidence suggests that national Arab males dominate the majority of boards of directors in MENA listed firms. These results also suggest that firms with more diversified boards based on gender, ethnic minorities and nationality are more likely to attain higher accounting returns and market value. Furthermore, these findings indicate that there is a statistically significant positive association between the percentage of female directors in boardrooms and firm market value and accounting returns, while foreign directors impact significantly and positively on firm accounting returns. Further, the results suggest that firm CG quality has no influence on the relationship between board diversity and firm market value. However, a high percentage of ethnic and foreign directors positively and significantly affects accounting returns in firms with weak CG. Moreover, the results suppose that different measures of board diversity have insignificant impact on EP. However, a high percentage of female and minority ethnic directors on boards improves the PPS. These findings are generally consistent with the predictions of the study's multi-theoretical framework that incorporates insights from agency theory, stakeholder theory, resource dependence theory and social psychology theory, and are in line with empirical literature (e.g., Zahra and Stanton, 1988; Johnston and Malina, 2008; Adams and Ferreira, 2009; Edmans and Gabaix, 2009; Adler, 2010; Carter *et al*., 2010; Bart and McQueen, 2013; Luckerath-Rovers, 2013; Wellage and Locke, 2013; Conyon, 2014; Ntim, 2015; Gyapong *et al*., 2015).

The final essay examines the effect of a number of CG measures on auditor choice and fees, specifically the extent to which firms with high-quality CG are more likely to hire one of the Big 4 auditors and pay higher audit fees by testing the relationship between auditor choice and fees on the one hand and the CG Index, board characteristics and ownership structure mechanisms on the other hand. Contrary to the initial expectation that the impact of CG measures on auditor choice and fees would be different from what is reported in developed countries, the results suggest that the MENA firms' CG system has been able to influence auditor choice and to clearly explain variations in the level of audit fees among MENA countries' listed firms. First, the empirical results reveal that CG index, board diversity based on gender and ethnicity, board independence, separation of the CEO/chairperson roles and concentrated ownership have a significant and positive effect on choice of Big 4 auditors. Board size influences this decision positively but insignificantly, whereas government and director ownership are insignificant and negatively related to it. Second, CG index, board diversity based on gender and ethnicity, and government ownership have a significant and negative association with audit fees, whereas board size, board independence and director ownership have a significant but positive impact. A non-dual board leadership structure and concentrated ownership have insignificant impact on audit fees.

Overall, the three essays provide empirical evidence that CG improves corporate outcomes in MENA countries, where its provisions mitigate a number of agency problems associated with separation of ownership and control and constraint of opportunistic managerial behaviour. This thesis illustrates that MENA countries, like other emerging economies, can utilise CG systems in reducing agency problems, constraining opportunistic managerial behaviour, restoring investors' confidence, protecting stakeholders' interests, improving corporate outcomes, and making their economies less vulnerable to financial crises.

iii) Implications and Recommendations

Although the MENA region has a unique corporate context that is different from developed countries, prior empirical evidence for the influence of CG provisions on corporate outcomes is limited. Therefore, this thesis identifies a number of implications and recommendations that can be drawn from examining the effect of CG mechanisms on three sets of corporate outcomes.

First, given that the majority of national CG codes issued in MENA countries are based on an Anglo-American model, the theoretical assumption was that these codes are not suitable in the local corporate context and thereby may not lead to the desired outcomes. On the contrary, this thesis provides empirical evidence that national CG codes generally attain favourable outcomes, although differences in the corporate contexts between emerging and developed countries should be taken into

account whether in conducting new CG reforms or modifying existing ones. This evidence also supports the suggestion that emerging countries tend to implement CG best practice proposed by leading international organisations like OECD in order to be globally competitive, attain international legitimacy and thereby attract foreign investment. This supports the notion of the international movement toward attaining CG harmonisation, where different countries tend to adopt national CG structures similar to the Anglo-American model.

Second, although the initial argument that applying the CG recommendations included in CG codes through a voluntary 'comply or explain' compliance and disclosure regime may not be effective in emerging economies, the empirical evidence of this research shows that the voluntary national CG codes improve CG practices among MENA listed firms. This suggests that regulatory bodies and policy makers in emerging economies can rely on voluntary 'comply or explain' CG regimes to improve CG practices in their countries, rather than mandatory CG systems which were introduced in some developed countries, for example by the US's 2000 Sarbanes-Oxley Act.

Third, the reported evidence for the improvement in voluntary compliance with CG best practices among listed firms in MENA countries indicates that CG reforms including the codes have a positive impact on CG practices in these countries. This may inspire other emerging countries including those in the MENA region which have not yet published CG codes, such as Iraq, Kuwait, Libya and Syria, to implement such codes in order to improve their firms' CG practices.

Fourth, the high extent of heterogeneity in the level of compliance with good CG practices among MENA listed firms and among the countries themselves does, however, suggest that there is a need for the regulatory authorities and policy makers to further enhance CG compliance and enforcement. This can be attained by strengthening legislative enforcement and establishing a 'compliance and enforcement' unit that will continuously observe the implementation of CG practices.

Fifth, evidence from the thesis indicates that firms adopting Islamic values and listed in countries observing Islamic economic principles are likely to disclose more voluntary CG information. This may encourage potential investors to invest in these firms and nations, as they expect better-quality financial reports to help them make optimal investment decisions.

Sixth, the three essays generally provide evidence which highlights the importance of board characteristics as a CG mechanism and its role in mitigating agency problems. They illustrate that board size, board diversity, board independence, and separation of the CEO and chairperson roles give firms a strong impetus to actively monitor CG standards. Investors may be encouraged to invest in firms with a small board size, hiring more female, foreign and minority ethnic directors, a high percentage of NEDs, and separate CEO/chairperson roles, as they expect higher-quality corporate

financial reporting and/or better firm market value and accounting returns. Thus, policy makers in MENA countries should be encouraged to recommend board diversity when reforming or issuing new CG codes (such as the Jordanian CG code, 2012).

Seventh, considering the concern that female directors in the restrictive context of MENA countries may be insufficiently represented to exert a significant influence on corporate outcomes (Assad, 2006; Jamali *et al*., 2007; Chamlou, 2008; World Bank, 2013; Ibrahim and Hanefah, 2014; Syed and Van Buren, 2014; Loukil and Yousfi, 2015), the main evidence that emerges is that these concerns are not justified. Appointing female directors to boardrooms enhances firm market value, accounting returns and the PPS. Therefore, documented evidence emphasises the importance of government regulations (e.g., legislation for quotas for women directors) and CG codes in line with international CG best practice to address the weak representation of women in top management and corporate board-level positions, despite the contextual differences between emerging and developed countries.

Eighth, previous studies examining the auditing profession in MENA countries document that there is no effective code of professional ethics governing the accountants' and auditors' work and practices, and that no powerful professional organisations responsible exists. Therefore, theoretical predictions suggest that the efficient CG practices in these countries may have an impact on the audit profession and the quality of audit services. Consistent with these predictions, the evidence, in general, reveals external audit quality (Big 4 auditor, high audit fees) do have a CG monitoring role to ensure the quality of financial reporting in MENA countries. Moreover, auditor choice and fees decisions are affected by firm-level CG measures. This may encourage governments and regulatory bodies in MENA countries to develop the accounting and auditing profession.

Ninth, unlike developed countries, emerging countries including the MENA region, have concentrated ownership, which appears to have important implications for corporate outcomes. The evidence shows that firms with large block shareholders are more likely to demand a higher-quality audit process (i.e. choose one of the Big 4 audit firms). However, they have low market value. This indicates that although block ownership does perform its function as a CG mechanism (providing a better monitoring function), it does not gain the trust of minority shareholders and markets. Accordingly, regulators and policy makers in MENA countries should introduce CG provisions that force firms with large-majority shareholders to extend their compliance levels and protect minority shareholders from being expropriated by large shareholders. For example, it is recommended that firms appoint a representative of minority shareholders to the board.

Tenth, consistent with the theoretical predictions, the evidence illustrates that good CG mechanisms may help firms in mitigating agency problems; improving voluntary CG compliance and

disclosure practices; increasing firm market value, accounting returns and the PPS; and enhancing audit quality (i.e., appointing one of the Big 4 audit firms and paying higher audit fees). This suggests that new investors may be motivated to consider CG practices to distinguish between firms with better financial reporting and auditing quality and those with less reliable financial reporting. Moreover, individual investors, among others, may tend to invest in firms with more diversified boards, as they can gain more returns on their shares, and with good-quality external auditing. Accordingly, policy makers in MENA countries should issue regulations and recommendations to ensure that firms keep improving their CG structures. For instance, policy makers should stress the important role of board diversity and of board of directors' committees (e.g., CG committee) to make sure that CG best practices are applied and regularly reviewed.

Finally, in order to attain better corporate outcomes from applying sound CG practices, the findings of this thesis suggest the need for effective co-operation and co-ordination between the key financial regulatory and enforcement bodies that constitute CG systems in MENA countries. This can enhance legal enforcement of recommended CG practices and thereby achieve better corporate outcomes by constraining managers' opportunistic behaviours.

iv) Contributions

The majority of previous studies examining the influence of CG measures on corporate outcomes have reported research conducted in developed countries. Using data from MENA countries, therefore, this thesis extends the literature by providing new evidence on the effect of CG on three different sets of corporate outcomes in MENA countries. It also contributes to the growing body of literature on the influence of CG on corporate outcomes in a number of ways.

First, this research uses a sample of 100 firms from 2009 to 2014, with a total of 600 firm-year observations, and can be considered one of the largest and most extensive hand-collected data sets to date on CG compliance and disclosure in MENA countries. Thus, it is a pioneer in offering empirical evidence on the effectiveness of CG reforms in improving listed firms' outcomes. It provides detailed evidence on: (i) the level and antecedents of compliance with CG best practices among listed firms in MENA countries; (ii) why and how a firm's board diversity impacts its market value, accounting returns, EP and the PPS; and (iii) whether CG influences the choice of auditors and fees. The findings from the extensive summary of descriptive statistics suggest improvement in the level of voluntary compliance with, and disclosure of, the CG practices among listed firms over the six years examined. However, the level of improvement differs widely among the five MENA countries investigated. The findings also illustrate that, in general, better-governed firms disclose

more information, attain better market value, accounting returns and PPS, and engage higher-quality audit.

Second, this study uses the CG Index developed by the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR), with five sections used to construct five sub-indices: ownership structure and exercise of control rights, financial transparency, auditing, corporate responsibility and compliance, and board and management structure and process. This index was used to investigate the influence of CG on voluntary compliance and disclosure, firm market value, accounting returns, the PPS and external audit quality in MENA countries.

Third, unlike most past studies that have attempted to examine the effect of individual CG mechanisms (e.g., board characteristics) on CG compliance and disclosure, firm market value, accounting returns, EP, the PPS and audit quality, this study uses a comprehensive measure of CG, comprising board characteristics, ownership structure mechanisms and CG Index, including 51 CG provisions to examine these relationships. This is in line with recent suggestions in the literature that CG can be better examined by more comprehensive CG measures rather than using individual CG mechanisms.

Fourth, unlike a considerable number of previous studies, this thesis extends the literature by examining a number of CG measures that have not been widely investigated in the literature. It does not limit its analyses to a few types of board characteristics and ownership structure mechanisms in investigating why and how these antecedents may influence CG compliance and disclosure level, market value, accounting returns, EP, the PPS and audit quality. Instead, it extends the literature by providing empirical evidence for a broad composite CG index, a number of board characteristics including, board size, board diversity on the basis of gender, ethnicity, and nationality, board independence, and non-duality of board leadership, as well as some ownership structure mechanisms, namely government ownership, block ownership and director ownership. The results generally illustrate that these factors significantly influence different sets of corporate outcomes.

Fifth, this work contributes to the literature by employing a number of theoretical frameworks for developing hypotheses and interpreting findings. This is useful in identifying an appropriate theoretical framework that can be used to explain firms' motivations for different sets of corporate outcome, including voluntary CG compliance and disclosure, market value, accounting returns and the PPS, and using higher-quality audit, especially in complex corporate contexts, such as those in MENA countries whose unique corporate context may restrict voluntary CG codes from producing the desired outcomes.

Sixth, although religion is often considered to be one of the main institutional and contextual factors that may influence corporate activities, this study, particularly the first essay, offers empirical

evidence that including religion as a CG measure provides new critical insight into the importance of the governance role of religion (both on the firm- and national-levels) in influencing corporate outcomes. The evidence suggests that there is a significant positive impact of firm and national compliance with Islamic principles and values on voluntary CG disclosure. Unlike developed countries, where religion is considered as a private matter, this thesis concludes that Islam could have a significant impact on daily activities and businesses, including corporate outcomes in MENA countries, as Islam is integrated in all aspects of society.

Seventh, unlike most prior studies conducted in emerging markets that investigate the impact of CG measures on corporate outcomes in the context of a single country, this research examines cross-country empirical data from a number of MENA countries. Thus, this research design enables the results to be generalised to a large number of emerging economies with similar institutional contexts. This examination can expand current understanding of the role that CG mechanisms play in influencing CG compliance and disclosure levels, market value, accounting returns, EP, the PPS, and auditor choice and fees in MENA countries.

Finally, distinguishing it from a large number of previous studies, this research used a series of different econometric models and estimations to ensure the robustness of the empirical results. The robustness analyses confirm *a priori* theoretical expectations that sound CG practices have a significant influence on CG compliance and disclosure levels, market value, accounting returns, the PPS and audit quality.

In conclusion, the results documented in this thesis aim to fill a gap in the CG literature by providing empirical evidence from emerging economies in general and MENA countries in particular.

v) Limitations and Avenues for Future Research

Although the findings are generally robust across a number of econometric models, there are some weaknesses that suggest further research. First, this thesis employs a relatively limited sample size (600 firm-year observations) with content analysis to collect data manually from financial reports and websites, consuming much time and effort. Thus, future studies can employ a larger representative sample. Second, due to data limitations, the research focuses on the influence of a set of internal CG measures on the CG compliance level, market value, accounting returns, EP, the PPS and choice of auditor and fees. Therefore, future studies may investigate the association among external CG controls (e.g., government regulations, media exposure, market competition and takeover activities), other internal CG measures (e.g., composition and efficiency of audit committee), as well as characteristics unique to the MENA context (e.g., cultural practices and social norms) and CG compliance, market value, accounting returns, EP, the PPS and choice of auditor and fees.

Third, although the results based on un-weighted CG indices are generally robust, future research may enhance the analysis by employing a weighted CG index. Fourth, as the coding in this study was conducted by a single researcher, it was not possible to check the inter-coder reliability of the MCGI that could be measured if the coding was performed by more than one researcher. Fifth, the measures for CG, Islamic values, firm performance and audit quality variables may or may not accurately reflect the actual values in practice, due to potential measurement errors. Therefore, future studies could employ other measures for these variables. Finally, this study excludes financial firms from its analysis because these may be subject to additional governance requirements that probably lead to different reactions to corporate outcomes from the CG measures investigated. Future studies could include both financial and non-financial firms to ascertain whether there is a significant difference in terms of CG's effect on CG disclosure, market value, accounting returns, EP, the PPS and choice of auditor and fees in MENA countries.

Appendices

Appendix 1: Full List of the MENA Corporate Governance Disclosure Benchmark Provisions

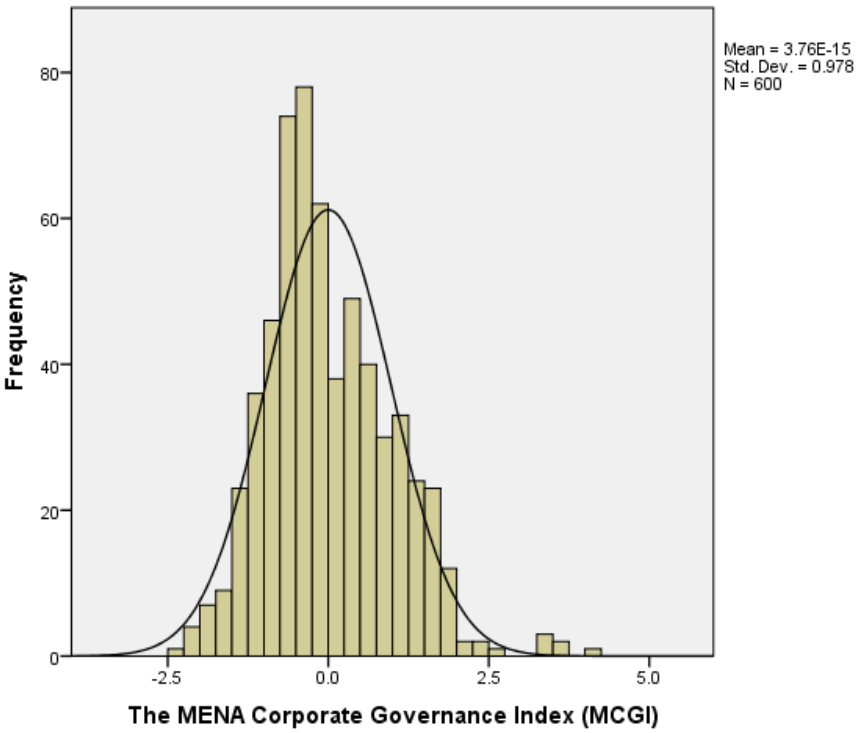
MCGI Theme	Disclosure Item	Range of scores	Total score per item
(i) Ownership Structure and Exercise of Control Rights	1. Ownership structure	0-1	
	2. Process for holding annual general meetings	0-1	
	3. Changes in shareholdings	0-1	
	4. Control structure	0-1	
	5. Control and corresponding equity stake	0-1	9
	6. Availability and accessibility of meeting agenda	0-1	
	7. Control rights	0-1	
	8. Rules and procedures governing the acquisition of corporate control in capital markets	0-1	
	9. Anti-takeover measures	0-1	
(ii) Financial Transparency	10. Financial and operating results	0-1	
	11. Critical accounting estimates	0-1	
	12. Nature, type and elements of related-party transactions	0-1	
	13. Company objectives	0-1	8
	14. Impact of alternative accounting decisions	0-1	
	15. The decision-making process for approving transactions with related parties	0-1	
	16. Rules and procedures governing extraordinary transactions	0-1	
	17. Board's responsibilities regarding financial communications	0-1	
(iii) Auditing	18. Process for interaction with internal auditors	0-1	
	19. Process for interaction with external auditors	0-1	
	20. Process for appointment of external auditors	0-1	
	21. Process for appointment of internal auditors/scope of work and responsibilities	0-1	
	22. Board confidence in independence and integrity of external auditors	0-1	9
	23. Internal control systems	0-1	
	24. Duration of current auditors	0-1	
	25. Rotation of audit partners	0-1	
	26. Auditors' involvement in non-audit work and the fees paid to the auditors	0-1	
(iv) Corporate Responsibility and Compliance	27. Policy and performance in connection with environmental and social responsibility	0-1	
	28. Impact of environmental and social responsibility policies on the firm's sustainability	0-1	
	29. A code of ethics for the board and waivers to the ethics code	0-1	
	30. A code of ethics for all company employees	0-1	7
	31. Policy on "whistle blower" protection for all employees	0-1	
	32. Mechanisms protecting the rights of other stakeholders in business	0-1	
	33. The role of employees in corporate governance	0-1	
(v) Board and Management Structure and Process	34. Governance structures, such as committees and other mechanisms to prevent conflict of interest	0-1	
	35. "Checks and balances" mechanisms	0-1	
	36. Composition of board of directors (executives and non-executives)	0-1	
	37. Composition and function of governance committee structures	0-1	
	38. Role and functions of the board of directors	0-1	
	39. Risk management objectives, system and activities	0-1	
	40. Qualifications and biographical information on board members	0-1	
	41. Material interests of members of the board and management	0-1	
	42. Existence of plan of succession	0-1	
	43. Duration of director's contracts	0-1	18
	44. Compensation policy for senior executives departing the firm as a result of a merger or acquisition	0-1	
	45. Determination and composition of directors` remuneration	0-1	
	46. Independence of the board of directors	0-1	
	47. Number of outside board and management position directorships held by the directors	0-1	
	48. Existence of procedure(s) for addressing conflicts of interest among board members	0-1	
	49. Professional development and training activities	0-1	
	50. Availability and use of advisorship facility during reporting period	0-1	
	51. Performance evaluation process	0-1	
Total	**51 MCGI Items**		51

Scoring procedure

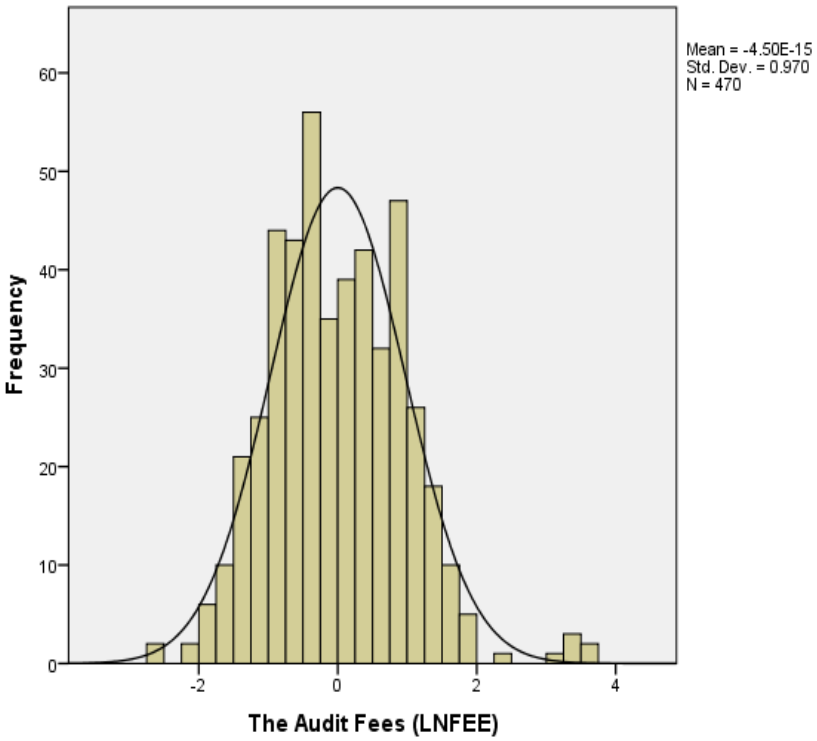
0: If a particular corporate governance item is not disclosed.

1: If a particular corporate governance item is disclosed.

Appendix 2: A Normal Histogram of Distribution of the MENA Corporate Governance Index (MCGI)



Appendix 3: A Normal Histogram of the Distribution of Audit Fees (LNFEE)



References

Abbott, L. J., & Parker, S. (2000). Auditor selection and audit committee characteristics. *Auditing: A Journal of Practice & Theory*, *19*(2), 47-66.

Abbott, L. J., Parker, S., Peters, G. F., & Raghunandan, K. (2003). The association between audit committee characteristics and audit fees. *Auditing: A Journal of Practice & Theory*, *22*(2), 17-32.

Abbott, L. J., Parker, S., Peters, G. F., & Rama, D. V. (2007). Corporate governance, audit quality, and the Sarbanes-Oxley Act: Evidence from Internal Audit Outsourcing. *The Accounting Review*, *82*(4), 803-835.

Abdel Karim, R. & Archer, S. (2006). On capital structure, risk sharing and capital adequacy in Islamic banks. *International Journal of Theoretical and Applied Finance*, *9*(3), 269-280.

Abdel Karim, R. (2001). International accounting harmonization, banking regulation, and Islamic banks. *The International Journal of Accounting*, *36*(2), 169-193.

Abdel Karim, R. A. (1990). Standard setting for the financial reporting of religious business organisations: the case of Islamic banks. *Accounting and Business Research*, *20*(80), 299-305.

Abdel Karim, R. and Archer, S. (2002). *Islamic Finance: Innovation and Growth*, Euromoney Publications, London.

Abdel-Khalik, A. R. (1993). Why do private companies demand auditing? A case for organizational loss of control. *Journal of Accounting, Auditing & Finance*, *8*(1), 31-52.

Abdel-Khalik, A. R. (2002). Reforming corporate governance post Enron: Shareholders' Board of Trustees and the auditor. *Journal of Accounting and Public Policy*, *21*(2), 97-103.

Abdelsalam, O. H., & Street, D. L. (2007). Corporate governance and the timeliness of corporate internet reporting by UK listed companies. *Journal of International Accounting, Auditing and Taxation*, *16*(2), 111-130.

Abd-Elsalam, O. H., & Weetman, P. (2003). Introducing International Accounting Standards to an emerging capital market: relative familiarity and language effect in Egypt. *Journal of International Accounting, Auditing and Taxation*, *12*(1), 63-84.

Abdul Rahman, R., & Haniffa, R. M. (2005). The effect of role duality on corporate performance in Malaysia. *Corporate Ownership and Control*, *2*(2), 40-47.

Abdullah, S. N. (2014). The causes of gender diversity in Malaysian large firms. *Journal of Management & Governance*, *18*(4), 1137-1159.

Abu-Tapanjeh, A. M. (2009). Corporate governance from the Islamic perspective: A comparative analysis with OECD principles. *Critical Perspectives on Accounting*, *20*(5), 556-567.

Adams, R. B., & Ferreira, D. (2007). A theory of friendly boards. *The Journal of Finance*, *62*(1), 217-250.

Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, *94*(2), 291-309.

Adams, R. B., & Funk, P. (2012). Beyond the glass ceiling: Does gender matter? *Management Science*, *58*(2), 219-235.

Adams, R. B., Almeida, H., & Ferreira, D. (2005). Powerful CEOs and their impact on corporate performance. *Review of Financial Studies*, *18*(4), 1403-1432.

Adams, R. B., Haan, J., Terjesen, S., & Ees, H. (2015). Board diversity: Moving the field forward. *Corporate Governance: An International Review*, *23*(2), 77-82.

Adams, R., Hermalin, B. E., & Weisbach, M. S. (2010). The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of Economic Literature*, *48*(1), 58-107.

Adesua Lincoln, A., & Adedoyin, O. (2012). Corporate governance and gender diversity in Nigerian boardrooms. *World Academy of Science, Engineering and Technology*, *6*(11), 1853-1859.

Adhikari, A., & Tondkar, R. H. (1992). Environmental factors influencing accounting disclosure requirements of global stock exchanges. *Journal of International Financial Management & Accounting*, *4*(2), 75-105.

Aggarwal, R. K., & Yousef, T. (2000). Islamic banks and investment financing. *Journal of Money, Credit and Banking*, *32*(1), 93-120.

Aggarwal, R., Erel, I., Ferreira, M., & Matos, P. (2011). Does governance travel around the world? Evidence from institutional investors. *Journal of Financial Economics*, *100*(1), 154-181.

Agrawal, A., & Knoeber, C. R. (1996).Firm Performance and Mechanisms to Control Agency Problems between Managers and Shareholders. *Journal of Financial and Quantitative Analysis*, *31*(3), 377-397.

Aguilera, R. V., & Cuervo-Cazurra, A. (2004). Codes of good governance worldwide: what is the trigger? *Organization Studies*, *25*(3), 415-443.

Aguilera, R. V., & Jackson, G. (2003). The cross-national diversity of corporate governance: Dimensions and determinants. *Academy of Management Review*, *28*(3), 447-465.

Aguilera, R. V., Rupp, D. E., Williams, C. A., & Ganapathi, J. (2007). Putting the S back in corporate social responsibility: A multilevel theory of social change in organizations. *Academy of Management Review*, *32*(3), 836-863.

Aguilera, R.V., and Cuervo-Cazurra, A. (2009). Codes of good governance. *Corporate Governance: An International Review*, *17*(3), 376-387.

Ahern, K. R., & Dittmar, A. K. (2012). The changing of the boards: The impact on firm valuation of mandated female board representation. *Quarterly Journal of Economics*, *127*(1), 137-197.

Ahmed, A. S., & Duellman, S. (2007). Accounting conservatism and board of director characteristics: An empirical analysis. *Journal of Accounting and Economics, 43*(2), 411-437.

Ahmed, K., & Henry, D. (2012). Accounting conservatism and voluntary corporate governance mechanisms by Australian firms. *Accounting & Finance, 52*(3), 631-662.

Ahmed, K., & Nicholls, D. (1994). The impact of non-financial company characteristics on mandatory disclosure compliance in developing countries: The case of Bangladesh. *The International Journal of Accounting, 29*, 62–77.

Ajinkya, B., Bhojraj, S., & Sengupta, P. (2005). The association between outside directors, institutional investors and the properties of management earnings forecasts. *Journal of Accounting Research, 43*(3), 343-376.

Akhtaruddin, M. (2005). Corporate mandatory disclosure practices in Bangladesh. *The International Journal of Accounting, 40*(4), 399-422.

Akhtaruddin, M., Hossain, M. A., Hossain, M., & Yao, L. (2009). Corporate governance and voluntary disclosure in corporate annual reports of Malaysian listed firms. *Journal of Applied Management Accounting Research, 7*(1), 1-19.

Al-Abbas, M. (2009). Corporate governance and earnings management: An empirical study of the Saudi market. *The Journal of American Academy of Business, 15*(1), 301-310.

Al-Ajmi, J. (2009). Audit firm, corporate governance, and audit quality: Evidence from Bahrain. *Advances in Accounting, 25*(1), 64-74.

Al-Awaji, I. M. (1971). *Bureaucracy and society in Saudi Arabia*. Ph.D. Thesis. USA: University of Virginia.

Al-Bassam, W. M., & Ntim, C. G. (2016). The effect of Islamic values on voluntary corporate governance disclosure: The case of Saudi listed firms. *Journal of Islamic Accounting and Business Research*, Forthcoming.

Al-Bassam, W. M., Ntim, C. G., Opong, K. K., & Downs, Y. (2015). Corporate Boards and Ownership Structure as Antecedents of Corporate Governance Disclosure in Saudi Arabian Publicly Listed Corporations. *Business & Society, Forthcoming*.

Al-Bassam, W., Elghuweel, M., Ntim, C. G., & Soobaroyen, T. (2012). Islamic values, ownership structure, corporate governance and disclosure in Saudi Arabian publicly listed corporations. *Working Paper*. Southampton, GB, University of Southampton

Albitar, K. (2015). Firm Characteristics, Governance Attributes and Corporate Voluntary Disclosure: A Study of Jordanian Listed Companies. *International Business Research, 8*(3), 1-10.

Alchian, A. A., & Demsetz, H. (1972). Production, information costs, and economic organization. *The American Economic Review, 62*(5), 777-795.

Alessandri, T. M., Black, S. S., & Jackson, W. E. (2011). Black economic empowerment transactions in South Africa: Understanding when corporate social responsibility may create or destroy value. *Long Range Planning*, *44*(4), 229-249.

Alfaraih, M., Alanezi, F., & Almujamed, H. (2012). The influence of institutional and government ownership on firm performance: evidence from Kuwait. *International Business Research*, *5*(10), 192-200.

Ali, M. J., Ahmed, K., & Henry, D. (2004). Disclosure compliance with national accounting standards by listed companies in South Asia. *Accounting and Business Research*, *34*(3), 183-199.

Ali, S. S. (2000). *Gender and human rights in Islam and international law: equal before Allah, unequal before man?* The Hague: Boston: Kluwer Law International.

Aliani, D., M'hamid, I., & Zarai, M. A. (2011). Diversité en genre dans le Conseil d'Administration et optimisation fiscale: validation dans le contexte tunisien. *Global Journal of Management and Business Research*, *11*(8), 41-49.

Al-Janadi, Y., Abdul Rahman, R., & Omar, N. H. (2013). Corporate governance mechanisms and voluntary disclosure in Saudi Arabia. *Research Journal of Finance and Accounting*, *4*(4), 25-35.

Aljifri, K., Alzarouni, A., Ng, C., & Tahir, M. I. (2014). The association between firm characteristics and corporate financial disclosures: Evidence from UAE companies. *The International Journal of Business and Finance Research*, *8*(2), 101-123.

Allegrini, M., & Greco, G. (2013). Corporate boards, audit committees and voluntary disclosure: Evidence from Italian listed companies. *Journal of Management & Governance*, *17*(1), 187-216.

Allen, F., Qian, J., & Qian, M. (2005). Law, finance, and economic growth in China. *Journal of Financial Economics*, *77*(1), 57-116.

Allen, M. F., Linville, M., & Stott, D. M. (2005). The effect of litigation on independent auditor selection. *American Journal of Business*, *20*(1), 37-45.

Almazan, A., Hartzell, J.C., & Starks, L.T. (2005). Active institutional shareholders and costs of monitoring: Evidence from executive compensation. *Financial Management*, *34*(4), 5-34.

Al-Moataz, E., & Hussainey, K. (2014). Determinants of corporate governance disclosure in Saudi companies. *Journal of Economics and Management*, Forthcoming.

Al-Najjar, B., & Abed, S. (2014). The association between disclosure of forward-looking information and corporate governance mechanisms: Evidence from the UK before the financial crisis period. *Managerial Auditing Journal*, *29*(7), 578-595.

Al-Najjar, B., Ding, R., & Hussainey, K. (2016). Determinants and value relevance of UK CEO pay slice. *International Review of Applied Economics*, *30*(3), 403-421.

Alotaibi, K. O., & Hussainey, K. (2016). Determinants of CSR disclosure quantity and quality: Evidence from non-financial listed firms in Saudi Arabia. *International Journal of Disclosure and Governance, 13*(4), 364-393.

Al-Rehaily, A. (1992). *The evolution of accounting in Saudi Arabia: A study of its relevance to the social and economic environment*. Ph.D. Thesis. UK: Hull University.

Alsaeed, K. (2006). The association between firm-specific characteristics and disclosure: The case of Saudi Arabia. *Managerial Auditing Journal, 21*(5), 476-496.

Al-Shammari, B. (2008). Voluntary disclosure in Kuwait corporate annual reports. *Review of Business Research, 1*(1), 10-30.

Al-Shammari, B., & Al-Sultan, W. (2010). Corporate governance and voluntary disclosure in Kuwait. *International Journal of Disclosure and Governance, 7*(3), 262-280.

Alshehri, A., & Solomon, J.F. (2012). The evolution of corporate governance in Saudi Arabia. *Working Paper* presented for the British Accounting and Finance Association (BAFA) Conference 2012, Brighton: BAFA.

Altamuro, J., Beatty, A. L., & Weber, J. (2005). The effects of accelerated revenue recognition on earnings management and earnings informativeness: Evidence from SEC Staff Accounting Bulletin No. 101. *The Accounting Review, 80*(2), 373-401.

Anderson, U., Kadous, K., & Koonce, L. (2004). The role of incentives to manage earnings and quantification in auditors' evaluations of management-provided information. *Auditing: A Journal of Practice & Theory, 23*(1), 11-27.

Andrade, G., & Kaplan, S. N. (1998). How Costly Is Financial (Not Economic) Distress? Evidence from Highly Leveraged Transactions That Became Distressed. *The Journal of Finance, 53*(5), 1443-1493.

Andreas, J. M., Rapp, M. S., & Wolff, M. (2012). Determinants of director compensation in two-tier systems: evidence from German panel data. *Review of Managerial Science, 6*(1), 33-79.

Ang, J. S., Cole, R. A., & Lin, J. W. (2000). Agency costs and ownership structure. *The Journal of Finance, 55*(1), 81-106.

Ararat, M., Aksu, M. H., & Tansel Cetin, A. (2010). The impact of board diversity on boards' monitoring intensity and firm performance: evidence from the Istanbul Stock Exchange. *Working Paper*, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1572283.

Arcay, M. R. B., & Vazquez, M. F. M. (2005). Corporate characteristics, governance rules and the extent of voluntary disclosure in Spain. *Advances in Accounting, 21*, 299-331.

Archambault, J. J., & Archambault, M. E. (1999). A cross-national test of determinants of inflation accounting practices. *International Journal of Accounting, 34*(2), 189–207.

Archambault, J. J., & Archambault, M. E. (2003). A multinational test of determinants of corporate disclosure. *The International Journal of Accounting*, *38*(2), 173-194.

Archer, S., Karim, R. A. A., & Al-Deehani, T. (1998). Financial contracting, governance structures and the accounting regulation of Islamic banks: an analysis in terms of agency theory and transaction cost economics. *Journal of Management and Governance*, *2*(2), 149-170.

Aribi, Z. A., & Gao, S. (2010). Corporate social responsibility disclosure: A comparison between Islamic and conventional financial institutions. *Journal of Financial Reporting and Accounting*, *8*(2), 72-91.

Armstrong, C.S., Ittner, C.D., & Larcker, D.F. (2012). Corporate governance, compensation consultants, and CEO pay levels. *Review of Accounting Studies, 17*(2), 322-351.

Arnegger, M., Hofmann, C., Pull, K., & Vetter, K. (2014). Firm size and board diversity. *Journal of Management & Governance*, *18*(4), 1109-1135.

Ashbaugh, H., & Warfield, T. D. (2003). Audits as a corporate governance mechanism: Evidence from the German market. *Journal of International Accounting Research*, *2*(1), 1-21.

Ashforth, B. E., & Gibbs, B. W. (1990). The double-edge of organizational legitimation. *Organization Science*, *1*(2), 177-194.

Assad, R. (2006). Employment and Unemployment Dynamics. *Working Paper* presented for the Egypt Labor Market Panel Survey 2006 Dissemination Conference, Cairo.

Assad, R., & Barsoum, G. (2007). Youth Exclusion in Egypt: In Search of 'Second Chances'. Middle East Youth Initiative *Working Paper* (2). Wolfensohn Center for Development/Brookings Institution and Dubai School of Government. Washington, DC.

Asthana, S. C., Balsam, S., & Krishnan, J. (2010). Corporate governance, audit firm reputation, auditor switches, and client stock price reactions: The Andersen experience. *International Journal of Auditing*, *14*(3), 274-293.

Asthana, S. C., Raman, K. K., & Xu, H. (2015). US-listed foreign companies' choice of a US-based versus home country-based Big N principal auditor and the effect on audit fees and earnings quality. *Accounting Horizons*, *29*(3), 631-666.

Ayuso, S., & Argandoña, A. (2007). Responsible corporate Governance: towards a Stakeholder board of directors? *Working Paper*. IESE Business School-University of Navarra.

Baber, W. R., Kumar, K. R., & Verghese, T. (1995). Client security price reactions to the Laventhol and Horwath bankruptcy. *Journal of Accounting Research*, *33*(2), 385-395.

Bae, K. H., Ozoguz, A., Tan, H., & Wirjanto, T. S. (2012). Do foreigners facilitate information transmission in emerging markets? *Journal of Financial Economics*, *105*(1), 209-227.

Baele, L., Farooq, M., & Ongena, S. (2014). Of religion and redemption: Evidence from default on Islamic loans. *Journal of Banking & Finance*, *44*, 141-159.

Bai, C. E., Liu, Q., Lu, J., Song, F. M., & Zhang, J. (2004). Corporate governance and market valuation in China. *Journal of Comparative Economics*, *32(4),* 599-616.

Baixauli-Soler, J.S., & Sanchez-Marin, G. (2015). Executive compensation and corporate governance in Spanish listed firms: A principal–principal perspective. *Review of Managerial Science*, *9*(1), 115-140.

Balafas, N., & Florackis, C. (2014). CEO compensation and future shareholder returns: Evidence from the London Stock Exchange. *Journal of Empirical Finance*, *27*, 97-115.

Baldini, M., Dal Maso, L., Liberatore, G., Mazzi, F., & Terzani, S. (2016). Role of Country-and Firm-Level Determinants in Environmental, Social, and Governance Disclosure. *Journal of Business Ethics, Forthcoming*.

Baltagi B.H. (2005). *Econometric analysis of panel data*. John Wiley & Sons Ltd. The Atrium, Southern Gate, Chichester.

Bandyopadhyay, S. P., & Kao, J. L. (2001). Competition and Big 6 Brand Name Reputation: Evidence from the Ontario Municipal Audit Market. *Contemporary Accounting Research, 18*(1), 27-64.

Barako, D. G., & Brown, A. M. (2008). Corporate social reporting and board representation: evidence from the Kenyan banking sector. *Journal of Management & Governance*, *12*(4), 309-324.

Barako, D. G., Hancock, P., & Izan, H. Y. (2006). Factors influencing voluntary corporate disclosure by Kenyan companies. *Corporate Governance: An International Review*, *14*(2), 107-125.

Baranchuk, N., & Dybvig, P. H. (2009). Consensus in diverse corporate boards. *Review of Financial Studies*, *22*(2), 715-747.

Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *Quarterly Journal of Economics*, *116*(1), 261-292.

Barkess, L., & Simnett, R. (1994). The provision of other services by auditors: Independence and pricing issues. *Accounting and Business Research*, *24*(94), 99-108.

Bart, C., & McQueen, G. (2013). Why women make better directors. *International Journal of Business Governance and Ethics*, *8*(1), 93-99.

Basu, S., Hwang, L. S., Mitsudome, T., & Weintrop, J. (2007). Corporate governance, top executive compensation and firm performance in Japan. *Pacific-Basin Finance Journal*, *15*(1), 56-79.

Baydoun, N. & Willett, R (1997). Islam and accounting: Ethical issues in the presentation of financial information. *Accounting, Commerce and Finance: The Islamic perspective Journal*, *1*(1):1-25.

Baydoun, N., & Willett, R. (2000). Islamic corporate reports. *Abacus*, *36*(1), 71-90.

Baydoun, N., & Willett, R. J. (1998). Islam and accounting: Ethical issues in the presentation of financial information. *Accounting, Commerce and Finance: The Islamic Perspective*, *12*(1), 1-25.

Baydoun, N., Maguire, W., Ryan, N., & Willett, R. (2012). Corporate governance in five Arabian Gulf countries. *Managerial Auditing Journal, 28*(1), 7-22.

Baydoun, N., Mamman, A., & Mohmand, A. (1999). The religious context of management practices: The case of the Islamic religion. *Accounting, Commerce and Finance: The Islamic Perspective Journal, 3*(1&2): 59-79.

Baysinger, B. D., & Butler, H. N. (1985). Corporate governance and the board of directors: Performance effects of changes in board composition. *Journal of Law, Economics, & Organization, 1*(1), 101-124.

Baysinger, B., & Hoskisson, R. E. (1990). The composition of boards of directors and strategic control: Effects on corporate strategy. *Academy of Management review, 15*(1), 72-87.

Bear, S., Rahman, N., & Post, C. (2010). The impact of board diversity and gender composition on corporate social responsibility and firm reputation. *Journal of Business Ethics, 97*(2), 207-221.

Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review, 71*(4), 443-465.

Beasley, M. S., Carcello, J. V., & Hermanson, D. R. (1999). *Fraudulent Financial Reporting: 1987-1997: An Analysis of US Public Companies: Research Report*. New York: Committee of Sponsoring Organizations of the Treadway Commission (COSO).

Beasley, M. S., Carcello, J. V., Hermanson, D. R., & Lapides, P. D. (2000). Fraudulent financial reporting: Consideration of industry traits and corporate governance mechanisms. *Accounting Horizons, 14*(4), 441-454.

Beasley, M. S., Carcello, J. V., Hermanson, D. R., & Neal, T. L. (2009). The audit committee oversight process. *Contemporary Accounting Research, 26*(1), 65-122.

Beattie, V., & Fearnley, S. (1995). The importance of audit firm characteristics and the drivers of auditor change in UK listed companies. *Accounting and Business Research, 25*(100), 227-239.

Beattie, V., McInnes, B., & Fearnley, S. (2004). A methodology for analysing and evaluating narratives in annual reports: a comprehensive descriptive profile and metrics for disclosure quality attributes. *Accounting Forum, 28* (3), 205-236.

Beatty, R. P. (1989). Auditor reputation and the pricing of initial public offerings. *The Accounting Review, 64*(4), 693-709.

Beatty, R., & St Zajac, E. (1994). Managerial incentives, monitoring, and risk bearing: A study of executive compensation, ownership, and board structure in initial public offerings. *Administrative Science Quarterly, 39(2),* 313-335.

Bebchuk, L. A., & Fried, J. M. (2005). Pay without performance: Overview of the issues. *Journal of Applied Corporate Finance, 17*(4), 8-23.

Bebchuk, L. A., & Weisbach, M. S. (2010). The state of corporate governance research. *Review of Financial Studies, 23*(3), 939-961.

Bebchuk, L. A., Fried, J. M., & Walker, D. I. (2002). Managerial power and rent extraction in the design of executive compensation. *University of Chicago Law Review, 69*, 751-846.

Bebchuk, L.A., & Fried, J.M. (2004). *Pay without performance: The unfulfilled promise of executive compensation*. Cambridge, MA: Harvard University Press.

Beck, A. K., Fuller, R. M., Muriel, L., & Reid, C. D. (2013). Audit fees and investor perceptions of audit characteristics. *Behavioral Research in Accounting*, *25*(2), 71-95.

Beck, N. (2001). Time-series–cross-section Data. *Statistica Neerlandica*, *55*(2), 111-133.

Beck, T., Demirgüç-Kunt, A., & Merrouche, O. (2013). Islamic vs. conventional banking: Business model, efficiency and stability. *Journal of Banking & Finance*, *37*(2), 433-447.

Beckman, C. M., & Haunschild, P. R. (2002). Network learning: The effects of partners' heterogeneity of experience on corporate acquisitions. *Administrative Science Quarterly*, *47*(1), 92-124.

Bedard, J. C., & Johnstone, K. M. (2004). Earnings manipulation risk, corporate governance risk, and auditors' planning and pricing decisions. *The Accounting Review*, *79*(2), 277-304.

Beekes, W., & Brown, P. (2006). Do Better-Governed Australian Firms Make More Informative Disclosures? *Journal of Business Finance & Accounting*, *33*(3-4), 422-450.

Beekes, W., Pope, P., & Young, S. (2004). The link between earnings timeliness, earnings conservatism and board composition: evidence from the UK. Corporate Governance: *An International Review*, 12(1), 47-59.

Behn, B. K., Carcello, J. V., Hermanson, D. R., & Hermanson, R. H. (1999). Client Satisfaction and Big 6 Audit Fees. *Contemporary Accounting Research*, *16*(4), 587-608.

Beiner, S., Drobetz, W., Schmid, M. M., & Zimmermann, H. (2006). An integrated framework of corporate governance and firm valuation. *European Financial Management*, *12*(2), 249-283.

Belkaoui, A. (1983). Economic, political, and civil indicators and reporting and disclosure adequacy: Empirical investigation. *Journal of Accounting and Public Policy*, 2(3), 207-219.

Bello, D. (2010). Financial information quality and inflation accounting disclosure in Nigerian cement industry. *Working Paper*, available at: http://ssrn.com/abstract=1537622.

Bem, S. L. (1983). Gender schema theory and its implications for child development: Raising gender-aschematic children in a gender-schematic society. *Signs*, *8*(4), 598-616.

Ben Naceur, S., Ghazouani, S., & Omran, M. (2007). The performance of newly privatized firms in selected MENA countries: The role of ownership structure, governance and liberalization policies. *International Review of Financial Analysis*, *16*(4), 332-353.

Benito, A., & Conyon, M. J. (1999). The governance of directors' pay: Evidence from UK companies. *Journal of Management and Governance*, *3*(2), 117-136.

Berger, A. N., & Udell, G. F. (1998). The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking & Finance*, *22*(6), 613-673.

Bernardi, R. A., & Arnold, D. F. (1997). An examination of moral development within public accounting by gender, staff level, and firm. *Contemporary Accounting Research*, *14*(4), 653-668.

Bertrand, M., & Mullainathan, S. (2001). Are CEOs rewarded for luck? The ones without principals are. *Quarterly Journal of Economics*, *116*(3), 901-932.

Beyer, A., Cohen, D. A., Lys, T. Z., & Walther, B. R. (2010). The financial reporting environment: Review of the recent literature. *Journal of Accounting and Economics*, *50*(2), 296-343.

Bhagat, S., & Black, B. (2002). Non-Correlation between Board Independence and Long-Term Firm Performance, *Journal Corporation Law*, 27, 231-274.

Bhagat, S., Bolton, B., & Romano, R. (2008). The promise and peril of corporate governance indices. *Columbia Law Review*, *108*(8), 1803-1882.

Bharath, S. T., Jayaraman, S., & Nagar, V. (2013). Exit as governance: An empirical analysis. *The Journal of Finance*, *68*(6), 2515-2547.

Bhatti, M., & Bhatti, M. I. (2010). Toward understanding Islamic corporate governance issues in Islamic finance. *Asian Politics & Policy*, 2(1), 25-38.

Bianchi, M., Ciavarella, A., Novembre, V., & Signoretti, R. (2011). Comply or explain: investor protection through the Italian corporate governance code. *Journal of Applied Corporate Finance*, *23*(1), 107-121.

Bilimoria, D., & Wheeler, J. V. (2000). Women corporate directors: Current research and future directions. *Women in Management: Current Research Issues*, *2*(10), 138-163.

Bills, K. L., & Cunningham, L. M. (2015). How Small Audit Firm Membership in Associations, Networks, and Alliances Can Impact Audit Quality and Audit Fees. *Current Issues in Auditing*, *9*(2), P29-P35.

Bills, K. L., & Stephens, N. M. (2015). Spatial competition at the intersection of the large and small audit firm markets. *AUDITING: A Journal of Practice & Theory*, *35*(1), 23-45.

Bishara, N. D. (2011). Governance and Corruption Constraints in the Middle East: Overcoming the Business Ethics Glass Ceiling. *American Business Law Journal*, *48(2)*, 227-283.

Black, B. (2001). The corporate governance behavior and market value of Russian firms. *Emerging Markets Review*, *2*(2), 89-108.

Black, B. S., Jang, H., & Kim, W. (2006). Does corporate governance predict firms' market values? Evidence from Korea. *Journal of Law, Economics, and Organization*, *22*(2), 366-413.

Blackwell, D. W., Brickley, J. A., & Weisback, M. S. (1994). Accounting information and internal performance evaluation: evidence from Texas banks. *Journal of Accounting and Economics*, *17*(3), 331-358.

Blue Ribbon Committee. (1999). *Report and Recommendations of the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees*, NYSE and National Association of Securities Dealers.

Bohren, O., & Strom, R. O. (2010). Governance and politics: Regulating independence and diversity in the board room. *Journal of Business Finance & Accounting*, *37*(9-10), 1281-1308.

Bolbol, A. A., Fatheldin, A., & Omran, M. M. (2005). Financial development, structure, and economic growth: the case of Egypt, 1974–2002. *Research in International Business and Finance*, *19*(1), 171-194.

Boone, A. L., Casares Field, L., Karpoff, J. M., & Raheja, C. G. (2007). The Determinants of Corporate Board Size and Composition: An Empirical Analysis. *Journal of Financial Economics*, *85*(1), 66-101.

Borghesi, R., Houston, J., & Naranjo, A. (2007).Value, Survival, and the Evolution of Firm Organizational Structure. *Financial Management*, *36*(3), 5-31.

Botosan, C. A. (1997). Disclosure level and the cost of equity capital. *The Accounting Review*, *72*(3), 323-349.

Boyd, B. K. (1994). Board control and CEO compensation. *Strategic Management Journal*, *15*(5), 335-344.

Boytsun, A., Deloof, M., & Matthyssens, P. (2011). Social norms, social cohesion, and corporate governance. *Corporate Governance: An International Review*, *19*(1), 41-60.

Bozec, R., Dia, M., & Bozec, Y. (2010). Governance–performance relationship: a re-examination using technical efficiency measures. *British Journal of Management*, *21*(3), 684-700.

Bozec, Y., & Bozec, R. (2007). Ownership concentration and corporate governance practices: substitution or expropriation effects? *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, *24*(3), 182-195.

Bracker, J. S., Keats, B. W., & Pearson, J. N. (1988). Planning and financial performance among small firms in a growth industry. *Strategic Management Journal*, *9*(6), 591-603.

Brammer, S., Millington, A., & Pavelin, S. (2007). Gender and ethnic diversity among UK corporate boards. *Corporate Governance: An International Review*, *15*(2), 393-403.

Branco, M. C., & Rodrigues, L. L. (2006). Corporate social responsibility and resource-based perspectives. *Journal of Business Ethics*, *69*(2), 111-132.

Branco, M. C., & Rodrigues, L. L. (2008). Factors influencing social responsibility disclosure by Portuguese companies. *Journal of Business Ethics*, *83*(4), 685-701.

Brandon, D. M., Crabtree, A. D., & Maher, J. J. (2004). Nonaudit fees, auditor independence, and bond ratings. *Auditing: A Journal of Practice & Theory*, *23*(2), 89-103.

Bremer, J., & Elias, N. (2007). Corporate governance in developing economies? The case of Egypt. *International Journal of Business Governance and Ethics*, *3*(4), 430-445.

Breusch, T. S., & Pagan, A. R. (1980). The Lagrange multiplier test and its applications to model specification in econometrics. *The Review of Economic Studies*, *47*(1), 239-253.

Brick, I. E., Palmon, O., & Wald, J. K. (2006). CEO compensation, director compensation, and firm performance: Evidence of cronyism? *Journal of Corporate Finance*, *12*(3), 403-423.

Brickley, J. A., Coles, J. L., & Jarrell, G. (1997). Leadership structure: Separating the CEO and chairman of the board. *Journal of Corporate Finance*, *3*(3), 189-220.

Brooks, C. (2008). *Introductory Econometrics for Finance*, Cambridge University Press, New York, US.

Brooks, P., & Zank, H. (2005). Loss averse behavior. *Journal of Risk and Uncertainty*, *31*(3), 301-325.

Brown, S. V., & Tucker, J. W. (2011). Large-sample evidence on firms' year-over-year MD&A modifications. *Journal of Accounting Research*, *49*(2), 309-346.

Bruns, W. J., & Merchant, K. A. (1990). The dangerous morality of managing earnings. *Management Accounting*, *72*(2), 22-25.

Bryan, S., Hwang, L., & Lilien, S. (2000). CEO Stock-Based Compensation: An Empirical Analysis of Incentive-Intensity, Relative Mix, and Economic Determinants. *The Journal of Business*, *73*(4), 661-693.

Buck, T., Bruce, A., Main, B. G., & Udueni, H. (2003). Long Term Incentive Plans, Executive Pay and UK Company Performance. *Journal of Management Studies*, *40*(7), 1709-1727.

Burgess, Z., & Tharenou, P. (2002). Women board directors: Characteristics of the few. *Journal of Business Ethics*, *37*(1), 39-49.

Burke, R. (1994). Women on corporate boards of directors: views of Canadian chief executive officers. *Women in Management Review*, 9(5), 3-10.

Burke, R. J. (2003). Women on corporate boards of directors: the timing is right. *Women in Management Review*, *18*(7), 346-348.

Bushee, B. J. (1998). The influence of institutional investors on myopic R&D investment behavior. *The Accounting Review*, *73*(3), 305-333.

Bushman, R. M., & Smith, A. J. (2001). Financial accounting information and corporate governance. *Journal of Accounting and Economics*, *32*(1), 237-333.

Butler, S. R. (2012). All on Board: Strategies for Constructing Diverse Boards of Directors. *Virginia Law & Business Review, 7*, 61-96.

Byard, D., Li, Y., & Weintrop, J. (2006). Corporate governance and the quality of financial analysts' information. *Journal of Accounting and Public Policy*, *25*(5), 609-625.

Byrd, J., Cooperman, E.S., & Wolfe, G.A. (2010). Director tenure and the compensation of bank CEOs. *Managerial Finance*, *36*(2), 86-102.

Byron, K., & Post, C. (2016). Women on Boards of Directors and Corporate Social Performance: a Meta-Analysis. *Corporate Governance: An International Review*, Forthcoming.

Cadbury, A. (1992). *Committee on the Financial Aspects of Corporate Governance*, GEE, London.

Campbell, K., & Mínguez-Vera, A. (2008). Gender diversity in the boardroom and firm financial performance. *Journal of Business Ethics*, *83*(3), 435-451.

Canarella, G., & Nourayi, M. M. (2008). Executive compensation and firm performance: adjustment dynamics, non-linearity and asymmetry. *Managerial and Decision Economics*, *29*(4), 293-315.

Carcello, J. V., & Neal, T. L. (2000). Audit committee composition and auditor reporting. *The Accounting Review, 75*(4), 453-467.

Carcello, J. V., Hermanson, D. R., & Ye, Z. (2011). Corporate governance research in accounting and auditing: Insights, practice implications, and future research directions. *Auditing: A Journal of Practice & Theory*, *30*(3), 1-31.

Carcello, J. V., Hermanson, D. R., Neal, T. L., & Riley, R. A. (2002). Board characteristics and audit fees. *Contemporary Accounting Research, 19*(3), 365-384.

Carmines, E. G., & Zeller, R. A. (1991). *Reliability and Validity Assessment.* London: Sage.

Carter, D. A., D'Souza, F., Simkins, B. J., & Simpson, W. G. (2010). The gender and ethnic diversity of US boards and board committees and firm financial performance. *Corporate Governance: An International Review*, *18*(5), 396-414.

Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity, and firm value. *Financial Review*, *38*(1), 33-53.

Cascino, S., Clatworthy, M., García Osma, B., Gassen, J., Imam, S., & Jeanjean, T. (2014). Who uses financial reports and for what purpose? Evidence from capital providers. *Accounting in Europe*, *11*(2), 185-209.

Castrillo, L. A., Marcos, S., & San Martin, J. M. (2010). Corporate governance, legal investor protection, and performance in Spain and the United Kingdom. *Corporate Ownership and Control*, *7*(3), 416-429.

Cazden, C. B. (1968). The acquisition of noun and verb inflections. *Child Development*, *39*(2), 433-448.

Cerbioni, F., & Parbonetti, A. (2007). Exploring the effects of corporate governance on intellectual capital disclosure: an analysis of European biotechnology companies. *European Accounting Review*, *16*(4), 791-826.

Chahine, S., & Safieddine, A. (2011). Is corporate governance different for the Lebanese banking system? *Journal of Management & Governance*, *15*(2), 207-226.

Chamlou, N. (2008). *The Environment for Women's Entrepreneurship in the Middle East and North Africa. Orientations in Development Series.* Washington, DC: World Bank. https://openknowledge.worldbank.org/handle/10986/6479.

Chan, K. H., Lin, K. Z., & Mo, P. L. L. (2006). A political–economic analysis of auditor reporting and auditor switches. *Review of Accounting Studies*, *11*(1), 21-48.

Chan, P., Ezzamel, M., & Gwilliam, D. (1993). Determinants of audit fees for quoted UK companies. *Journal of Business Finance & Accounting*, *20*(6), 765-786.

Chaney, P. K., & Philipich, K. (2002). Shredded reputation: the cost of audit failure. *Journal Accounting Research*, *40*(4), 1221-1245.

Chaney, P. K., Jeter, D. C., & Shivakumar, L. (2004). Self-selection of auditors and audit pricing in private firms. *The Accounting Review*, *79*(1), 51-72.

Chan-Serafin, S., Brief, A. P., & George, J. M. (2013). Perspective—How does religion matter and why? Religion and the organizational sciences. *Organization Science*, *24*(5), 1585-1600.

Chapra, M. U., & Ahmed, H. (2002). Corporate Governance in Islamic Financial Institutions, Islamic Development Bank, Islamic Research and Training Institute, *Periodical Document* No. 6.

Chau, G. K., & Gray, S. J. (2002). Ownership structure and corporate voluntary disclosure in Hong Kong and Singapore. *The International Journal of Accounting*, *37*(2), 247-265.

Chau, G., & Leung, P. (2006). The impact of board composition and family ownership on audit committee formation: Evidence from Hong Kong. *Journal of International Accounting, Auditing and Taxation*, *15*(1), 1-15.

Chen, C. J., & Jaggi, B. (2001). Association between independent non-executive directors, family control and financial disclosures in Hong Kong. *Journal of Accounting and Public Policy*, *19*(4), 285-310.

Chen, J. C., & Roberts, R. W. (2010). Toward a more coherent understanding of the organization–society relationship: A theoretical consideration for social and environmental accounting research. *Journal of Business Ethics*, *97*(4), 651-665.

Chen, J. J. (2005). China's institutional environment and corporate governance. *Corporate Governance: A Global Perspective Advances in Financial Economics, 11*, 75-93.

Chen, J. J., Liu, X., & Li, W. (2010). The effect of insider control and global benchmarks on Chinese executive compensation. *Corporate Governance: An International Review*, *18*(2), 107-123.

Chen, L., Srinidhi, B., Tsang, A., & Yu, W. (2016). Audited Financial Reporting and Voluntary Disclosure of Corporate Social Responsibility (CSR) Reports. *Journal of Management Accounting Research*, Forthcoming.

Chen, S., Lin, B., Lu, R., & Zhang, T. (2015). Controlling shareholders' incentives and executive pay-for-performance sensitivity: Evidence from the split share structure reform in China. *Journal of International Financial Markets, Institutions and Money*, *34*, 147-160.

Chen, Y., & Jermias, J. (2014). Business strategy, executive compensation and firm performance. *Accounting & Finance*, *54*(1), 113-134.

Cheng, E. C., & Courtenay, S. M. (2006). Board composition, regulatory regime and voluntary disclosure. *The International Journal of Accounting*, *41*(3), 262-289.

Cheng, S. (2008). Board size and the variability of corporate performance. *Journal of Financial Economics*, *87*(1), 157-176.

Cheng, S., Evans III, J. H., & Nagarajan, N. J. (2008). Board size and firm performance: the moderating effects of the market for corporate control. *Review of Quantitative Finance and Accounting*, *31*(2), 121-145.

Chong, B. S., & Liu, M. H. (2009). Islamic banking: interest-free or interest-based? *Pacific-Basin Finance Journal*, *17*(1), 125-144.

Choudhury M., & Alam, M. (2013). Corporate governance in Islamic perspective. *International Journal of Islamic and Middle Eastern Finance and Management*, *6*(3), 180-199.

Chow, C. W. (1982). The demand for external auditing: Size, debt and ownership influences. *The Accounting Review*, *57(2)*, 272-291.

Chow, C. W., & Rice, S. J. (1982). Qualified audit opinions and auditor switch. *The Accounting Review*, *57* (2), 326−335.

Chung, K. H., & Zhang, H. (2011). Corporate governance and institutional ownership. *Journal of Financial and Quantitative Analysis*, *46*(01), 247-273.

Ciampi, F. (2015). Corporate governance characteristics and default prediction modeling for small enterprises. An empirical analysis of Italian firms. *Journal of Business Research*, *68*(5), 1012-1025.

Claessens, S., & Djankov, S. (1999). Ownership concentration and corporate performance in the Czech Republic. *Journal of Comparative Economics*, *27*(3), 498-513.

Claessens, S., & Yurtoglu, B. B. (2013). Corporate governance in emerging markets: A survey. *Emerging Markets Review*, *15*, 1-33.

Claessens, S., Djankov, S., Fan, J. P., & Lang, L. H. (2002). Disentangling the incentive and entrenchment effects of large shareholdings. *The Journal of Finance*, *57*(6), 2741-2771.

Coffee, J. C. (1991). Liquidity versus control: The institutional investor as corporate monitor. *Columbia Law Review*, *91*(6), 1277-1368.

Cohen, J. R., & Hanno, D. M. (2000). Auditors' consideration of corporate governance and management control philosophy in preplanning and planning judgments. *Auditing: A Journal of Practice & Theory*, *19*(2), 133-146.

Cohen, J. R., Krishnamoorthy, G., & Wright, A. (2004). The corporate governance mosaic and financial reporting quality. *Journal of Accounting Literature*, *23*, 87-152.

Cohen, J. R., Krishnamoorthy, G., & Wright, A. M. (2008). Form versus substance: The implications for auditing practice and research of alternative perspectives on corporate governance. *Auditing: A Journal of Practice & Theory*, *27*(2), 181-198.

Cohen, J. R., Pant, L. W., & Sharp, D. J. (1998). The effect of gender and academic discipline diversity on the ethical evaluations, ethical intentions and ethical orientation of potential public accounting recruits. *Accounting Horizons*, *12*(3), 250.

Cohen, J., Krishnamoorthy, G., & Wright, A. M. (2002). Corporate governance and the audit process. *Contemporary Accounting Research*, *19*(4), 573-594.

Coles, J. L., Daniel, N. D., & Naveen, L. (2008). Boards: Does one size fit all? *Journal of Financial Economics*, *87*(2), 329-356.

Collett, P., & Hrasky, S. (2005). Voluntary disclosure of corporate governance practices by listed Australian companies. *Corporate Governance: An International Review*, *13*(2), 188-196.

Collier, P., & Gregory, A. (1996). Audit committee effectiveness and the audit fee. *European Accounting Review*, *5*(2), 177-198.

Combs, J. G., Crook, T. R., & Shook, C. L. (2005). The dimensionality of organizational performance and its implications for strategic management research. *Research Methodology in Strategy and Management*, *2*(5), 259-286.

Common, R. (2008). Administrative change in the Gulf: Modernization in Bahrain and Oman. *International Review of Administrative Sciences*, *74*(2), 177-193.

Conger, J. A., Finegold, D., & Lawler, E. E. (1998). Appraising boardroom performance. *Harvard Business Review*, *76*, 136-164.

Conyon, M. J. (1994). Corporate governance changes in UK companies between 1988 and 1993. *Corporate Governance: An International Review*, *2*(2), 87-100.

Conyon, M. J. (2000). Discussion The Increasing Use of Non-Executive Directors: Its Impact on UK Board Structure and Governance Arrangements. *Journal of Business Finance & Accounting*, *27*(9-10), 1343-1348.

Conyon, M. J. (2014). Executive compensation and board governance in US firms. *The Economic Journal*, *124*(574), F60-F89.

Conyon, M. J., & He, L. (2011). Executive compensation and corporate governance in China. *Journal of Corporate Finance, 17*(4), 1158-1175.

Conyon, M. J., & He, L. (2012). CEO compensation and corporate governance in China. *Corporate Governance: An International Review, 20*(6), 575-592.

Conyon, M. J., & Murphy, K. J. (2000). The prince and the pauper? CEO pay in the United States and United Kingdom. *The Economic Journal, 110*(467), 640-671.

Conyon, M. J., & Peck, S. I. (1998). Board size and corporate performance: evidence from European countries. *The European Journal of Finance, 4*(3), 291-304.

Conyon, M. J., & Sadler, G. V. (2001). Executive pay, tournaments and corporate performance in UK firms. *International Journal of Management Reviews, 3*(2), 141-168.

Conyon, M. J., Peck, S. I., & Sadler, G. V. (2009). Compensation consultants and executive pay: Evidence from the United States and the United Kingdom. *The Academy of Management Perspectives, 23*(1), 43-55.

Conyon, M., & Mallin, C. (1997). A review of compliance with Cadbury. *Journal of General Management, 22*, 24-37.

Cooke, T. E. (1989). Voluntary corporate disclosure by Swedish companies. *Journal of International Financial Management & Accounting, 1*(2), 171-195.

Cooke, T. E. (1991). An assessment of voluntary disclosure in the annual reports of Japanese corporations. *The International Journal of Accounting, 26*(3), 174-189.

Cooke, T. E. (1992). The impact of size, stock market listing and industry type on disclosure in the annual reports of Japanese listed corporations. *Accounting and Business Research, 22*(87), 229-237.

Copley, P. A., & Douthett, E. B. (2002). The association between auditor choice, ownership retained, and earnings disclosure by firms making initial public offerings. *Contemporary Accounting Research, 19*(1), 49–75.

Core, J. E. (2001). A review of the empirical disclosure literature: discussion. *Journal of Accounting and Economics, 31*(1), 441-456.

Core, J. E., Guay, W. R., & Larcker, D. F. (2003). Executive equity compensation and incentives: A survey. *Economic Policy Review, 9*(1) 27-50.

Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics, 51*(3), 371-406.

Cornett, M. M., Marcus, A. J., Saunders, A., & Tehranian, H. (2007).The Impact of Institutional Ownership on Corporate Operating Performance. *Journal of Banking & Finance, 31*(6), 1771-1794.

Cosh, A., & Hughes, A. (1997). Executive remuneration, executive dismissal and institutional shareholdings. *International Journal of Industrial Organization, 15*(4), 469-492.

Cotter, D. A., Hermsen, J. M., Ovadia, S., & Vanneman, R. (2001). The glass ceiling effect. *Social Forces, 80*(2), 655-681.

Cotter, J. F., Shivdasani, A., & Zenner, M. (1997). Do independent directors enhance target shareholder wealth during tender offers? *Journal of Financial Economics, 43*(2), 195-218.

Cotter, J., & Silvester, M. (2003). Board and monitoring committee independence. *Abacus*, *39*(2), 211-232.

Craswell, A. T. (1988). The association between qualified opinions and auditor switches. *Accounting and Business Research, 19*(73), 23-31.

Craswell, A. T. (1999). Does the Provision of Non-Audit Services Impair Auditor Independence? *International Journal of Auditing*, *3*(1), 29-40.

Cremers, K., & Nair, V. B. (2005). Governance Mechanisms and Equity Prices. *The Journal of Finance, 60*(6), 2859-2894.

Cronqvist, H., & Nilsson, M. (2003). Agency costs of controlling minority shareholders. *Journal of Financial and Quantitative Analysis, 38*(4), 695-719.

Cullinan, C. P., Du, H., & Zheng, X. (2016). Size Variables in Audit Fee Models: An Examination of the Effects of Alternative Mathematical Transformations. *Auditing: A Journal of Practice and Theory*, *35*(3), 169-181.

Cyert, R. M., Kang, S. H., & Kumar, P. (2002). Corporate governance, takeovers, and top-management compensation: Theory and evidence. *Management Science, 48*(4), 453-469.

Dahya, J., McConnell, J. J., & Travlos, N. G. (2002). The Cadbury committee, corporate performance, and top management turnover. *The Journal of Finance, 57*(1), 461-483.

Daily, C. M., & Dalton, D. R. (2003). Women in the boardroom: A business imperative. *Journal of Business Strategy, 24*(5), 8-10.

Dale-Olsen, H., Schone, P., & Verner, M. (2013). Diversity among Norwegian boards of directors: Does a quota for women improve firm performance? *Feminist Economics, 19*(4), 110-135.

Dalton, D. R., Daily, C. M., Ellstrand, A. E., & Johnson, J. L. (1998). Meta-analytic reviews of board composition, leadership structure, and financial performance. *Strategic Management Journal*, *19*(3), 269-290.

Dam, L., & Scholtens, B. (2012). Does ownership type matter for corporate social responsibility? *Corporate Governance: An International Review, 20(3),* 233-252.

Datar, S., Feltham, G. A., & Hughes, J. S. (1991). The role of audits and audit quality in valuing new issues. *Journal of Accounting and Economics, 14*(1), 3–49.

David, P., Kochhar, R., & Levitas, E. (1998). The effect of institutional investors on the level and mix of CEO compensation. *Academy of Management Journal, 41*(2), 200-208.

Davidson III, W. N., Jiraporn, P., & DaDalt, P. (2006). Causes and consequences of audit shopping: An analysis of auditor opinions, earnings management, and auditor changes. *Quarterly Journal of Business and Economics, 45*(1/2) 69-87.

Davies, J. R., Hillier, D., & McColgan, P. (2005). Ownership structure, managerial behavior and corporate value. *Journal of Corporate Finance, 11*(4), 645-660.

DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of Accounting and Economics*, *3*(3), 183-199.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1996). Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research*, *13*(1), 1-36.

DeFond, M. L. (1992). The association between changes in client firm agency costs and auditor switching. *Auditing*, *11*(1), 16-31.

DeFond, M. L., & Francis, J. R. (2005). Audit research after sarbanes-oxley.*Auditing: A Journal of Practice & Theory*, *24*(s-1), 5-30.

DeFond, M. L., & Subramanyam, K. R. (1998). Auditor changes and discretionary accruals. *Journal of Accounting and Economics*, *25*(1), 35-67.

DeFond, M. L., Wong, T. J., & Li, S. (1999). The impact of improved auditor independence on audit market concentration in China. *Journal of Accounting and Economics*, *28*(3), 269-305.

Deis Jr, D. R., & Giroux, G. A. (1992). Determinants of audit quality in the public sector. *The Accounting Review*, *67*(3), 462-479.

Deis, D. R., & Giroux, G. (1996). The effect of auditor changes on audit fees, audit hours, and audit quality. *Journal of Accounting and Public policy*, *15*(1), 55-76.

Delis, M. D., Gaganis, C., Hasan, I., & Pasiouras, F. (2016). The effect of board directors from countries with different genetic diversity levels on corporate performance. *Management Science*, Forthcomung.

Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, *93*(6), 1155-1177.

Denis, D. K., & McConnell, J. J. (2003). International corporate governance. *Journal of Financial and Quantitative Analysis*, 38, 1-36.

DeVellis, R. F. (1991). *Scale development*. Newbury Park, NJ: Sage Publications.

Dewing, I. P., & Russell, P. O. (2003). Post-Anron developments in UK audit and corporate governance regulations. *Journal of Financial Regulation and Compliance*, 11(4), 309-321.

Dey, A. (2008). Corporate governance and agency conflicts. *Journal of Accounting Research*, *46*(5), 1143-1181.

DeZoort, F. T., Hermanson, D. R., Archambeault, D. S., & Reed, S. A. (2002). Audit committee effectiveness: A synthesis of the empirical audit committee literature. *Journal of Accounting Literature, 21,* 38-75.

DiMaggio, P. J. & Powell, W. W. (1991). *The new institutionalism in organizational analysis*. Chicago, IL: University of Chicago Press.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, *48*(2), 147-160.

Dimitropoulos, P. E., & Asteriou, D. (2010). The effect of board composition on the informativeness and quality of annual earnings: Empirical evidence from Greece. *Research in International Business and Finance, 24*(2), 190-205.

Dobbin, F., & Jung, J. (2011). Corporate board gender diversity and stock performance: The competence gap or institutional investor bias. *North Carolina Law Review, 89, 809-838*.

Donaldson, L. (1990). The ethereal hand: Organizational economics and management theory. *Academy of Management Review*, *15*(3), 369-381.

Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management, 16*(1), 49-64.

Dong, G. N. (2014). Excessive financial services CEO pay and financial crisis: Evidence from calibration estimation. *Journal of Empirical Finance*, *27,* 75-96.

Dong, M., & Ozkan, A. (2008). Institutional investors and director pay: An empirical study of UK companies. *Journal of Multinational Financial Management, 18*(1), 16-29.

Dong, Y., Meng, C., Firth, M., & Hou, W. (2014). Ownership structure and risk-taking: Comparative evidence from private and state-controlled banks in China. *International Review of Financial Analysis, 36,* 120-130.

Donnelly, R., & Mulcahy, M. (2008). Board structure, ownership, and voluntary disclosure in Ireland. *Corporate Governance: An International Review*, *16*(5), 416-429.

Doupnik, T. S., &Salter, S. B. (1995). External environment, culture, and accounting practice: a preliminary test of a general model of international accounting development. *International Journal of Accounting*, 30(3), 189–207.

Doupnik, T. S., &Salter, S. B. (1995). External environment, culture, and accounting practice: a preliminary test of a general model of international accounting development. *International Journal of Accounting*, 30(3), 189–207.

Du Plessis, C. J. (2008). Ethical failure under the agency logic grounding governance reform in a logic of value. *Group & Organization Management*, *33*(6), 781-804.

Dumas, T. L., Phillips, K. W., & Rothbard, N. P. (2013). Getting closer at the company party: Integration experiences, racial dissimilarity, and workplace relationships. *Organization Science, 24*(5), 1377-1401.

Durnev, A., & Kim, E. (2005). To steal or not to steal: Firm attributes, legal environment, and valuation. *The Journal of Finance, 60*(3), 1461-1493.

Dwyer, S., Richard, O. C., & Chadwick, K. (2003). Gender diversity in management and firm performance: the influence of growth orientation and organizational culture. *Journal of Business Research, 56*(12), 1009-1019.

Dye, R. A. (1993). Auditing standards, legal liability, and auditor wealth. *Journal of political Economy, 101(5)*, 887-914.

Ebaid, E. I. (2013). Corporate governance and investors' perceptions of earnings quality: Egyptian perspective. *Corporate Governance: The International Journal of Business in Society, 13*(3), 261-273.

Ebrahim, A. (2007). Earnings management and board activity: an additional evidence. *Review of Accounting and Finance, 6*(1), 42-58.

Edmans, A., & Gabaix, X. (2009). Is CEO pay really inefficient? A survey of new optimal contracting theories. *European Financial Management, 15*(3), 486-496.

Eggertsson, Þ. (1990). *Economic behavior and institutions: Principles of Neoinstitutional Economics*. Cambridge, United Kingdom, Cambridge University Press.

Ehikioya, B. I. (2009). Corporate governance structure and firm performance in developing economies: evidence from Nigeria. *Corporate Governance: The International Journal of Business in Society, 9*(3), 231-243.

Eichenseher, J. W., & Shields, D. (1985). Corporate director liability and monitoring preferences. *Journal of Accounting and Public Policy, 4*(1), 13-31.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review, 14*(1), 57-74.

El-Gazzar, S. M. (1998). Predisclosure information and institutional ownership: A cross-sectional examination of market revaluations during earnings announcement periods. *The Accounting Review, 73*(1), 119-129.

Elghuweel, M. I. (2015). *Empirical essays on corporate governance and corporate decisions in emerging economies: the case of Oman*. Ph.D. Thesis. UK: University of Glasgow.

Elghuweel, M. I., Ntim, C. G., Opong, K. K., & Avison, L. (2016). Corporate governance, Islamic governance and earnings management in Oman: A new empirical insights from a behavioural theoretical framework. *Journal of Accounting in Emerging Economies*. Forthcoming.

Elkinawy, S., & Stater, M. (2011). Gender differences in executive compensation: Variation with board gender composition and time. *Journal of Economics and Business, 63*(1), 23-45.

Elmagrhi, M. H., Ntim, C., Wang, Y., & Eweje, G. (2016). Antecedents of voluntary corporate governance gisclosure: A Post-2007/08 financial crisis evidence from the influential UK Combined Code. *Corporate Governance*: *The International Journal of Business in Society*, *16*(3), 507-538.

El-Sayed Ebaid, I. (2013). Corporate governance and investors' perceptions of earnings quality: Egyptian perspective. *Corporate Governance: The International Journal of Business in Society*, *13*(3), 261-273.

Elsayed, K. (2007). Does CEO Duality Really Affect Corporate Performance? *Corporate Governance: An International Review, 15*(6), 1203-1214.

Elshandidy, T., & Neri, L. (2015). Corporate governance, risk disclosure practices, and market liquidity: comparative evidence from the UK and Italy. *Corporate Governance: An International Review*, *23*(4), 331-356.

Elshandidy, T., Fraser, I., & Hussainey, K. (2015). What drives mandatory and voluntary risk reporting variations across Germany, UK and US? *The British Accounting Review*, *47*(4), 376-394.

Eng, L. L., & Mak, Y. T. (2003). Corporate governance and voluntary disclosure. *Journal of Accounting and Public Policy*, *22*(4), 325-345.

Erhardt, N. L., Werbel, J. D., & Shrader, C. B. (2003). Board of director diversity and firm financial performance. *Corporate Governance: An International Review*, *11*(2), 102-111.

Eshleman, J. D., & Guo, P. (2014). Do Big 4 auditors provide higher audit quality after controlling for the endogenous choice of auditor? *Auditing: A Journal of Practice & Theory*, *33*(4), 197-219.

Estélyi, K. S., & Nisar, T. M. (2016). Diverse boards: Why do firms get foreign nationals on their boards? *Journal of Corporate Finance*. Forthcoming.

Ettredge, M., Richardson, V. J., & Scholz, S. (2002). Dissemination of information for investors at corporate Web sites. *Journal of Accounting and Public Policy*, 21(4), 357-369.

European Commission. (2008). Consultation on control structures in audit firms and their consequences on the audit market. Directorate General for Internal Market and Services, *Europan Commission*, Brussels.

European Union (2012). Women in economic decision-making in the EU: progress report. A Europe 2020 initiative, Commission Staff *Working Paper*, Luxembourg.

Evans, D. S. (1987). The relationship between firm growth, size, and age: Estimates for 100 manufacturing industries. *The Journal of Industrial Economics*, *35*(4), 567-581.

Ezat, A., & El-Masry, A. (2008). The impact of corporate governance on the timeliness of corporate internet reporting by Egyptian listed companies. *Managerial Finance*, *34*(12), 848-867.

Ezzamel, M., Gwilliam, D. R., & Holland, K. M. (1996). Some empirical evidence from publicly quoted UK companies on the relationship between the pricing of audit and non-audit services. *Accounting and Business Research*, *27*(1), 3-16.

Falato, A., Kadyrzhanova, D., & Lel, U. (2014). Distracted directors: Does board busyness hurt shareholder value? *Journal of Financial Economics*, *113*(3), 404-426.

Faleye, O., Hoitash, R., & Hoitash, U. (2011). The costs of intense board monitoring. *Journal of Financial Economics*, *101*(1), 160-181.

Fama, E. F. (1980). Agency Problems and the Theory of the Firm. *The Journal of Political Economy*, *88*(2), 288-307.

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law & Economics*, *26*(2), 301-325.

Fan, J. P., & Wong, T. J. (2002). Corporate ownership structure and the informativeness of accounting earnings in East Asia. *Journal of Accounting and Economics*, *33*(3), 401-425.

Fan, J. P., & Wong, T. J. (2005). Do external auditors perform a corporate governance role in emerging markets? Evidence from East Asia. *Journal of Accounting Research*, *43*(1), 35-72.

Farber, D. B. (2005). Restoring trust after fraud: Does corporate governance matter? *The Accounting Review*, *80*(2), 539-561.

Farook, S., Kabir Hassan, M., & Lanis, R. (2011). Determinants of corporate social responsibility disclosure: The case of Islamic banks. *Journal of Islamic Accounting and Business Research*, *2*(2), 114-141.

Farrell, K. A., & Hersch, P. L. (2005). Additions to corporate boards: the effect of gender. *Journal of Corporate finance*, *11*(1), 85-106.

Fawzy, S. (2004). How does corporate governance in Egypt compare with selected MENA and emerging markets? *The Egyptian Center for Educational Studies*, Cairo University.

Felix Jr, W. L., & Gramling, A. A. (2001). The contribution of internal audit as a determinant of external audit fees and factors influencing this contribution. *Journal of Accounting Research*, *39*(3), 513-534.

Feltham, G. A., Hughes, J. S., & Simunic, D. A. (1991).Empirical assessment of the impact of auditor quality on the valuation of newissues. *Journal of Accounting and Economics*, *14*(4), 375–399.

Ferri, F., & Maber, D. A. (2013). Say on pay votes and CEO compensation: Evidence from the UK. *Review of Finance*, *17*(2), 527-563.

Ferris, S. P., Jagannathan, M., & Pritchard, A. C. (2003). Too busy to mind the business? Monitoring by directors with multiple board appointments. *The Journal of Finance*, *58*(3), 1087-1111.

Fich, E. M., & Shivdasani, A. (2006). Are busy boards effective monitors? *The Journal of Finance*, *61*(2), 689-724.

Field, L., Lowry, M., & Mkrtchyan, A. (2013). Are busy boards detrimental? Journal of Financial Economics, *109*(1), 63-82.

Finkelstein, S., & D'aveni, R. A. (1994). CEO duality as a double-edged sword: How boards of directors balance entrenchment avoidance and unity of command. *Academy of Management Journal*, *37*(5), 1079-1108.

Firth, M. (1985). An Analysis of Audit Fees and their Determinants in New-Zealand. *Auditing: A Journal of Practice and Theory*, *4*(2), 23-37.

Firth, M. (1997a). The provision of non-audit services and the pricing of audit fees. *Journal of Business Finance & Accounting*, *24*(3), 511-525.

Firth, M. (1997b). The Provision of Non-audit Services by Accounting Firms to their Audit Clients. *Contemporary Accounting Research*, *14*(2), 1-21.

Firth, M., Fung, P. M., & Rui, O. M. (2007). How ownership and corporate governance influence chief executive pay in China's listed firms. *Journal of Business Research*, *60*(7), 776-785.

Forbes, D. P., & Milliken, F. J. (1999). Cognition and corporate governance: Understanding boards of directors as strategic decision-making groups. *Academy of Management Review*, *24*(3), 489-505.

Forker, J. J. (1992). Corporate governance and disclosure quality. *Accounting and Business Research*, *22*(86), 111-124.

Francis, J. R. (1984). The effect of audit firm size on audit prices: A study of the Australian market. *Journal of Accounting and Economics*, *6*(2), 133-151.

Francis, J. R. (2004). What do we know about audit quality? *The British Accounting Review*, *36*(4), 345-368.

Francis, J. R., & Krishnan, J. (1999). Accounting Accruals and Auditor Reporting Conservatism. *Contemporary Accounting Research*, *16*(1), 135-165.

Francis, J. R., & Simon, D. T. (1987). A test of audit pricing in the small-client segment of the US audit market. *The Accounting Review*, *62*(1), 145-157.

Francis, J. R., & Wilson, E. R. (1988). Auditor changes: A joint test of theories relating to agency costs and auditor differentiation. *The Accounting Review*, *63*(4), 663-682.

Francis, J., Nanda, D., & Olsson, P. (2008). Voluntary disclosure, earnings quality, and cost of capital. *Journal of Accounting Research*, *46*(1), 53-99.

Francis, J., Schipper, K., & Vincent, L. (2005). Earnings and dividend informativeness when cash flow rights are separated from voting rights. *Journal of Accounting and Economics*, *39*(2), 329-360.

Francoeur, C., Labelle, R., & Sinclair-Desgagne, B. (2008). Gender diversity in corporate governance and top management. *Journal of Business Ethics*, *81*(1), 83-95.

Frankel, R. M., Johnson, M. F., & Nelson, K. K. (2002). The relation between auditors' fees for nonaudit services and earnings management. *The Accounting Review*, *77*(s-1), 71-105.

Frantz, P. (1999). Auditor's skill, auditing standards, litigation, and audit quality. *The British Accounting Review*, *31*(2), 151-183.

Freeman, F. R. R., & Reed, D. L. (1983). Stockholders and stakeholders: A new perspective in corporate governance. *California Management Review*, *25*, 88-106.

Freeman, R. E. (1984). *Strategic management*: A stakeholder approach. Boston, MA: Pitman.

Friedlan, J. (1994). Accounting choices of issuers of initial public offerings. *Contemporary Accounting Research*, *11*(1), 1−31.

Fuerman, R. D. (2003). Audit quality examined one large CPA firm at a time: Mid-1990's empirical evidence of a precursor of Arthur Andersen's collapse. *Corporate Ownership & Control*, *2*(1), 137-148.

Gabaix, X. & Landier, A. (2008). Why has CEO pay increased so much? *Quarterly Journal of Economics*, *121*(1), 49-100.

Gabaix, X., Landier, A., & Sauvagnat, J. (2014). CEO pay and firm size: an update after the crisis. *The Economic Journal*, *124*(574), F40-F59.

Gambling, T., & AbdelKarim, R. A. (1993). Business and accounting ethics in Islam. *Journal of Business Ethics*, *12* (5), 348-420.

García Lara, J. M. G., Osma, B. G., & Penalva, F. (2009). Accounting conservatism and corporate governance. *Review of Accounting Studies*, *14*(1), 161-201.

Gaver, J. J., & Gaver, K. M. (1993). Additional evidence on the association between the investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Accounting and Economics*, *16*(1), 125-160.

Geiger, M. A., Raghunandan, K., & Rama, D. V. (1998). Costs associated with going-concern modified audit opinions: An analysis of auditor changes, subsequent opinions, and client failures. *Advances in Accounting*, *16*(1), 117-139.

Gelb, D. S., & Zarowin, P. (2002). Corporate disclosure policy and the informativeness of stock prices. *Review of Accounting Studies*, *7*(1), 33-52.

Gentry, R. J., & Shen, W. (2010). The relationship between accounting and market measures of firm financial performance: How strong is it? *Journal of Managerial Issues*, *22*(4), 514-530.

Ghazali, N. A. M., & Weetman, P. (2006). Perpetuating traditional influences: Voluntary disclosure in Malaysia following the economic crisis. *Journal of International Accounting, Auditing and Taxation*, *15*(2), 226-248.

Ghorbani, M., & Tung, R. L. (2007). Behind the veil: an exploratory study of the myths and realities of women in the Iranian workforce. *Human Resource Management Journal*, *17*(4), 376-392.

Ghosh, A., & Moon, D. (2005). Auditor tenure and perceptions of audit quality. *The Accounting Review*, *80*(2), 585−612.

Gilbert, J. A., & Stead, B. A. (1999). Stigmatization revisited does diversity management make a difference in applicant success? *Group & Organization Management*, *24*(2), 239-256.

Gillan, S. L., & Starks, L. T. (2000). Corporate governance proposals and shareholder activism: The role of institutional investors. *Journal of financial Economics*, *57*(2), 275-305.

Gillan, S., Hartzell, J. C., & Starks, L. T. (2003). Explaining corporate governance: Boards, bylaws, and charter provisions. *Working Paper*, University of Georgia available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=442740.

Gilson, S. C. (1990). Bankruptcy, boards, banks, and blockholders: Evidence on changes in corporate ownership and control when firms default. *Journal of Financial Economics*, *27*(2), 355-387.

Girma, S., Thompson, S., & Wright, P. W. (2007). Corporate governance reforms and executive compensation determination: evidence from the UK. *The Manchester School*, *75*(1), 65-81.

Goergen, M., & Renneboog, L. (2011). Managerial compensation. *Journal of Corporate Finance*, *17*(4), 1068-1077.

Golbe, D. L., & Nyman, I. (2013). How do share repurchases affect ownership concentration? *Journal of Corporate Finance*, *20*, 22-40.

Gomez-Mejia, L. R., & Balkin, D. B. (1992). Determinants of faculty pay: An agency theory perspective. *Academy of Management Journal*, *35*(5), 921-955.

Gomez-Mejia, L.R., Larraza-Kintana, M., & Makri, M. (2003). The determinants of executive compensation in family-controlled public corporations. *Academy of Management Journal*, *46*(2), 226-237.

Gompers, P., Ishii, J., & Metrick, A. (2003). Corporate governance and equity prices. *The quarterly journal of economics*, *118(1)*, 107-156.

Goodrich, P. S. (1986). Cross-national financial accounting linkages: an empirical political analysis. *The British Accounting Review*, *18*(1), 42-60.

Goodstein, J., Gautam, K., & Boeker, W. (1994). The effects of board size and diversity on strategic change. *Strategic Management Journal*, *15*(3), 241-250.

Goodwin-Stewart, J., & Kent, P. (2006). Relation between external audit fees, audit committee characteristics and internal audit. *Accounting & Finance*, *46*(3), 387-404.

Gorton, G., & Schmid, F. A. (2000). Universal banking and the performance of German firms. *Journal of Financial Economics*, *58*(1), 29-80.

Government Accountability Office (GAO) (2003), *Public Accounting firms: Required Study on the Potential Effects of Mandatory Audit Firm Rotation*. Washington DC: GAO.

Goyal, V. K., & Park, C. W. (2002). Board leadership structure and CEO turnover. *Journal of Corporate Finance*, *8*(1), 49-66.

Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing & Accountability Journal*, *8*(2), 47-77.

Gregg, P., Jewell, S., & Tonks, I. (2012). Executive pay and performance: did bankers' bonuses cause the crisis? *International Review of Finance*, *12*(1), 89-122.

Gregory, B. T., Rutherford, M. W., Oswald, S., & Gardiner, L. (2005).An Empirical Investigation of the Growth Cycle Theory of Small Firm Financing. *Journal of Small Business Management*, *43*(4), 382-392.

Gregory-Smith, I. (2012). Chief Executive Pay and Remuneration Committee Independence. *Oxford Bulletin of Economics and Statistics*, *74*(4), 510-531.

Gregory-Smith, I., Main, B. G., & O'Reilly, C. A. (2014). Appointments, pay and performance in UK boardrooms by gender. *The Economic Journal*, *124*(574), 109-128.

Grinstein, Y., & Hribar, P. (2004). CEO compensation and incentives: Evidence from M&A bonuses. *Journal of Financial Economics*, *73*(1), 119-143.

Groysberg, B., & Bell, D. (2013). Dysfunction in the boardroom. *Harvard Business Review*, *91*(6), 89-97.

Guercio, D. D., & Hawkins, J. (1999).The Motivation and Impact of Pension Fund Activism. *Journal of Financial Economics*, *52*(3), 293-340.

Guest, P. M. (2009). The impact of board size on firm performance: evidence from the UK. *The European Journal of Finance*, *15*(4), 385-404.

Gugler, K., Mueller, D. C., & Burcin Yurtoglu, B. (2003). The impact of corporate governance on investment returns in developed and developing countries. *The Economic Journal*, *113*(491), F511-F539.

Guiso, L., Sapienza, P., & Zingales, L. (2006). Does culture affect economic outcomes? *Journal of Economic Perspectives*, *20*(2), 23-48.

Gujarati, D. N. (2003). *Basic econometrics*. New York: McGraw-Hill.

Gul, F. A., & Leung, S. (2004). Board leadership, outside directors' expertise and voluntary corporate disclosures. *Journal of Accounting and Public Policy*, *23*(5), 351-379.

Gul, F. A., & Tsui, J. S. L. (1998). A test of the free cash flow and debt monitoring hypotheses: Evidence from audit pricing. *Journal of Accounting and Economics*, *24*(2), 219-237.

Gul, F. A., Chen, C. J., & Tsui, J. S. (2003). Discretionary accounting accruals, managers' incentives, and audit fees. *Contemporary Accounting Research*, *20*(3), 441-464.

Gul, F. A., Srinidhi, B., & Ng, A. C. (2011). Does board gender diversity improve the informativeness of stock prices? *Journal of Accounting and Economics*, 51(3), 314-338.

Gul, F. A., Srinidhi, B., & Tsui, J. S. (2008). Board diversity and the demand for higher audit effort. *Working Paper*, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1359450.

Gul, F. A., Zhou, G. S., & Zhu, X. K. (2013). Investor protection, firm informational problems, Big N auditors, and cost of debt around the world. *Auditing: A Journal of Practice & Theory*, *32*(3), 1-30.

Gunasekarage, A., Hess, K., & Hu, A. J. (2007). The influence of the degree of state ownership and the ownership concentration on the performance of listed Chinese companies. *Research in International Business and Finance*, *21*(3), 379-395.

Gürsoy, G., & Aydoğan, K. (2002). Equity ownership structure, risk taking, and performance: an empirical investigation in Turkish listed companies. *Emerging Markets Finance & Trade*, *38*(6), 6-25.

Gyapong, E., Monem, R. M., & Hu, F. (2015). Do Women and Ethnic Minority Directors Influence Firm Value? Evidence from Post-Apartheid South Africa. *Journal of Business Finance & Accounting*, Forthcoming.

Habbash, M., Hussainey, K., & Awad, E. (2015). The determinants of voluntary disclosure in Saudi Arabia: an empirical study. *International Journal of Accounting, Auditing and Performance Evaluation*, Forthcoming.

Hackenbrack, K. E., & Hogan, C. E. (2002). Market Response to Earnings Surprises Conditional on Reasons for an Auditor Change. *Contemporary Accounting Research*, *19*(2), 195-223.

Hamid, S., Craig, R., & Clarke, F. (1993). Religion: A confounding cultural element in the international harmonization of accounting. *Abacus*, *29*(2), 131-148.

Hampel, R. (1998). *Committee on Corporate Governance*, GEE, London.

Haniffa, R. (2001). Social responsibility disclosure: An Islamic perspective. *Discussion paper* in Accounting and Finance, University of Exeter, Exeter.

Haniffa, R. M., & Cooke, T. E. (2002). Culture, Corporate Governance and Disclosure in Malaysian Corporations. *Abacus*, *38*(3), 317-349.

Haniffa, R. M., & Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy*, *24*(5), 391-430.

Haniffa, R., & Hudaib, M. (2006). Corporate governance structure and performance of Malaysian listed companies. *Journal of Business Finance & Accounting*, *33*(7-8), 1034-1062.

Haniffa, R., & Hudaib, M. (2007). Locating audit expectations gap within a cultural context: The case of Saudi Arabia. *Journal of International Accounting, Auditing and Taxation*, *16*(2), 179-206.

Harabi, N. (2007). State of corporate governance in Arab Countries: An overview. University of Applied Sciences. Northwestern Switzerland. *Working Paper*, available at: https://mpra.ub.uni-muenchen.de/4566/1/.

Hartzell, J.C., & Starks, L. T. (2003). Institutional investors and executive compensation. *Journal of Finance*, *58*(6), 2351-2374.

Hasan, I., Kobeissi, N., & Song, L. (2014). Corporate governance, investor protection, and firm performance in MENA countries. *Middle East Development Journal*, *6*(1), 84-107.

Hassan, O., & Marston, C. (2010). Disclosure measurement in the empirical accounting literature: a review article. *Economics and Finance Working Paper Series*, University of Brunel, UK, available at: http://www.brunel.ac.uk/about/acad/sss/depts/economics

Hassan, R. (1994). Women's interpretation of Islam. In H. Thijssen (Ed.), *Women and Islam in Muslim societies*. The Hague: Ministry of Foreign Affairs Poverty and Development Program.

Hassan, S., & Christopher, T. (2005). Corporate governance statement disclosure of Malaysian banks and the role of Islam. *Asian Review of Accounting*, *13*(2), 36-50.

Hassan, S., & Courtis, J. (2001). A Comparison of the Readibility Levels of the Chairmans Address of Shariah Islamiah Approved and Non-Shariah Islamiah Approved Companies. *Accounting, Commerce and Finance–The Islamic Perspective*, *5*, 65-97.

Hausman, J. (1978). Specification tests in econometrics Econometrica. *Econometrica*, *46*, 1251-1271.

Haw, I. M., Hu, B., Hwang, L. S., & Wu, W. (2004). Ultimate ownership, income management, and legal and extra-legal institutions. *Journal of Accounting Research, 42*(2), 423-462.

Hay, D., & Davis, D. (2004). The voluntary choice of an auditor of any level of quality. *Auditing: A journal of practice & theory*, *23*(2), 37-53.

Hay, D., Knechel, W. R., & Ling, H. (2008). Evidence on the impact of internal control and corporate governance on audit fees. *International Journal of Auditing*, *12*(1), 9-24.

He, L., Wan, H., & Zhou, X. (2014). How are political connections valued in China? Evidence from market reaction to CEO succession. *International Review of Financial Analysis, 36*, 141-152.

Heidenhof, G. (2014). Strengthening Governance and Institutions in MENA: Issues and Priorities. *MENA knowledge and learning quick notes series; no. 114*. World Bank, Washington, DC, available at https://openknowledge.worldbank.org/handle/10986/20555.

Helms, C. M. (1981). *The cohesion of Saudi Arabia: Evolution of political Identity*. London: Croom Helm Ltd.

Henry, D. (2008). Corporate governance structure and the valuation of Australian firms: is there value in ticking the boxes? *Journal of Business Finance & Accounting*, *35*(7-8), 912-942.

Hermalin, B. & Weisman, M. (2007). Transparency and corporate governance. National Bureau of Economic Research, Cambridge, *Working Paper*, available at: http://www.nber.org/papers/w12875.

Hermalin, B. E., & Weisbach, M. S. (1988). The determinants of board composition. *The RAND Journal of Economics*, *19*(4), 589-606.

Hermalin, B. E., & Weisbach, M. S. (2003). Boards of directors as an endogenously determined institution: A survey of the economic literature. *Economic Policy Review*, *9*(1), 7–26.

Hillman, A. J., Cannella, A. A., & Harris, I. C. (2002). Women and racial minorities in the boardroom: How do directors differ? *Journal of Management*, *28*(6), 747-763.

Hillman, A. J., Cannella, A. A., & Paetzold, R. L. (2000). The resource dependence role of corporate directors: Strategic adaptation of board composition in response to environmental change. *Journal of Management studies*, *37*(2), 235-256.

Hillman, A. J., Shropshire, C., & Cannella, A. A. (2007). Organizational predictors of women on corporate boards. *Academy of Management Journal*, *50*(4), 941-952.

Hiraki, T., Inoue, H., Ito, A., Kuroki, F., & Masuda, H. (2003). Corporate governance and firm value in Japan: Evidence from 1985 to 1998. *Pacific-Basin Finance Journal*, *11*(3), 239-265.

Ho, S. S., & Wong, K. S. (2001). A study of the relationship between corporate governance structures and the extent of voluntary disclosure. *Journal of International Accounting, Auditing and Taxation*, *10*(2), 139-156.

Hogon, C. (1997). Costs and benefits of audit quality in the IPO market: A self-selection analysis. *The Accounting Review*, *72*(1), 67–86.

Hope, O. K., & Thomas, W. B. (2008). Managerial empire building and firm disclosure. *Journal of Accounting Research*, *46*(3), 591-626.

Horwitz, S. K., & Horwitz, I. B. (2007). The effects of team diversity on team outcomes: A meta-analytic review of team demography. *Journal of Management*, *33*(6), 987-1015.

Hossain, M., Ahmed, K., & Godfrey, J. M. (2005). Investment opportunity set and voluntary disclosure of prospective information: A simultaneous equations approach. *Journal of Business Finance & Accounting*, *32*(5-6), 871-907.

Hossain, M., Tan, L. M., & Adams, M. C. (1994). Voluntary disclosure in an emerging capital market: Some empirical evidence from companies listed in the Kuala Lumpur Stock Exchange. *The International Journal of Accounting*, *29*, 334–351.

Hou, W., & Moore, G. (2010). Players and referee roles held jointly: The effect of state ownership on China's regulatory enforcement against fraud. *Journal of Business Ethics, 95,* 317–335.

Hovey, M., Li, L., Naughton, T. (2003). The relationship between valuation and ownership of listed firms in China. *Corporate Governance: An International Review*, *11*(2), 112–122.

Hsiao, C. (2013). *Analysis of Panel Data*. Third edition. Cambridge university press.

Hudaib, M., & Cooke, T. E. (2005). The impact of managing director changes and financial distress on audit qualification and auditor switching. *Journal of Business Finance & Accounting*, *32*(9-10), 1703-1739.

Humphrey, C., Moizer, P., & Turley, S. (1993). The audit expectations gap in Britain: An empirical investigation. *Accounting and Business Research*, *23*(sup1), 395-411.

Hussain, A. (1987). *Status of women in Islam*. Lahore: Law Publishing Company.

Hussain, S. H., & Mallin, C. (2002). Corporate governance in Bahrain.*Corporate Governance: An International Review*, *10(3)*, 197-210.

Hussainey, K., & Al-Najjar, B. (2012). Understanding the determinants of RiskMetrics/ISS ratings of the quality of UK companies' corporate governance practice. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, *29*(4), 366-377.

Hussainey, K., & Al-Nodel, A. (2008). Corporate governance online reporting by Saudi listed companies. *Research in Accounting in Emerging Economies*, *8*, 39-64.

Iannaccone, L. R. (1998). Introduction to the Economics of Religion. *Journal of Economic Literature*, *36*(3), 1465-1495.

Ibn Majah. (1952). *Sunan Ibn Majah*. Cairo: Dar Ihya' al Kutub al Arabiyah.

Ibrahim, A. H., & Hanefah, M. M. (2014). Board Diversity and Corporate Social Responsibility in Jordan. *Working Paper* presented for The 3rd International Conference on Management, Economics and Finance (ICMEF, 2014).

Imhoff, E. A. (2003). Accounting quality, auditing, and corporate governance. *Accounting Horizons*, *17*, 117–128.

Ioannou, I., & Serafeim, G. (2012). What drives corporate social performance & quest; The role of nation-level institutions. *Journal of International Business Studies*, *43*(9), 834-864.

Ireland, J. C., & Lennox, C. S. (2002). The large audit firm fee premium: A case of selectivity bias? *Journal of Accounting, Auditing & Finance*, *17*(1), 73-91.

Jackling, B., & Johl, S. (2009). Board structure and firm performance: Evidence from India's top companies. *Corporate Governance: An International Review*, *17*(4), 492-509.

Jaggi, B., & Low, P. Y. (2000). Impact of culture, market forces, and legal system on financial disclosures. *The International Journal of Accounting*, *35*(4), 495-519.

Jamali, D., Safieddine, A., & Daouk, M. (2007). Corporate governance and women: an empirical study of top and middle women managers in the Lebanese banking sector. *Corporate Governance: The International Journal of Business in Society*, *7*(5), 574-585.

Jelinek, M., & Adler, N. J. (1988). Women: World-class managers for global competition. *The Academy of Management Executive*, *2*(1), 11-19.

Jennings, M. M., Pany, K. J., & Reckers, P. M. (2006). Strong corporate governance and audit firm rotation: Effects on judges' independence perceptions and litigation judgments. *Accounting Horizons*, *20*(3), 253-270.

Jensen, M. C. (1986). Agency cost of free cash flow, corporate finance, and takeovers. *The American Economic Review*, *76*(2). 323-329.

Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *The Journal of Finance*, *48*(3), 831-880.

Jensen, M. C. (2001). Value maximization, stakeholder theory, and the corporate objective function. *Journal of Applied Corporate Finance*, *14*(3), 8-21.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics, 3(4),* 305–360.

Jensen, M. C., & Murphy, K. J. (1990). Performance pay and top-management incentives. *Journal of Political Economy*, *98*(2), 225-264.

Jeong, S. W., & Rho, J. (2004). Big Six auditors and audit quality: The Korean evidence. *The International Journal of Accounting*, *39*(2), 175-196.

Jia, C., Ding, S., Li, Y., & Wu, Z. (2009). Fraud, enforcement action, and the role of corporate governance: Evidence from China. *Journal of Business Ethics*, *90*(4), 561-576.

Jianakoplos, N. A., & Bernasek, A. (1998). Are women more risk averse? *Economic Inquiry*, *36*(4), 620-630.

Jiang, B.B., Laurenceson, J., Tang, K.K. (2008). Share reform and the performance of China's listed companies. *China Economic Review*, *19* (3), 489–501.

Jiraporn, P., Kim, Y. S., & Davidson III, W. N. (2005). CEO compensation, shareholder rights, and corporate governance: An empirical investigation. *Journal of Economics and Finance*, *29*(2), 242-258.

Jiraporn, P., Singh, M., & Lee, C. I. (2009). Ineffective corporate governance: Director busyness and board committee memberships. *Journal of Banking & Finance*, *33*(5), 819-828.

Johansen, T. R., & Pettersson, K. (2013). The impact of board interlocks on auditor choice and audit fees. *Corporate Governance: An International Review*, *21*(3), 287-310.

John, K., & Senbet, L. W. (1998). Corporate governance and board effectiveness. *Journal of Banking & Finance*, *22*(4), 371-403.

Johnson, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2000). Tunneling. *American Economic Review*, *90*(2), 22-27.

Johnson, W. B., & Lys, T. (1990). The market for audit services: Evidence from voluntary auditor changes. *Journal of Accounting and Economics*, *12*(1), 281-308.

Johnston, D., & Malina, M. A. (2008). Managing Sexual Orientation Diversity the Impact on Firm Value. *Group & Organization Management*, *33*(5), 602-625.

Johnston, J. (2007). Independent directors, executive remuneration and the governance of the corporation: Some empirical evidence from the United Kingdom. *Review of Applied Economics, 3*(1-2), 105-122.

Johnstone, K. M., & Bedard, J. C. (2004). Audit firm portfolio management decisions. *Journal of Accounting Research*, *42*(4), 659-690.

Judge, G.G., Hill, R.C., Griffiths, W.E., Lutkepohl, H. & Lee, T.C. (1988). *Introduction to the Theory and Practice of Econometrics*, 2nd edition, Wiley, New York.

Judge, W. (2010). Corporate governance mechanisms throughout the world. *Corporate Governance: An International Review*, *18*(3), 159-160.

Judge, W. Q., Douglas, T. J., & Kutan, A. M. (2008). Institutional antecedents of corporate governance legitimacy. *Journal of Management*, *34*, 765-785.

Judge, W., Li, S., & Pinsker, R. (2010). National adoption of international accounting standards: An institutional perspective. *Corporate Governance: An International Review*, *18*(3), 161-174.

Kajananthan, R. (2012). Effect of Corporate Governance on Capital Structure: Case of the Srilankan Listed Manufacturing Companies. *Journal of Arts, Science and Commerce*, *3*(4), 63-71.

Kalelkar, R., & Khan, S. A. (2016). CEO Financial Background and Audit Pricing. *Accounting Horizons,* Forthcoming.

Kamla, R. (2009). Critical insights into contemporary Islamic accounting. Critical Perspectives on Accounting, *20*(8), 921-932.

Kandel, E., & Lazear, E. P. (1992). Peer pressure and partnerships. *Journal of Political Economy, 100*(4), 801-817.

Kang, H., Cheng, M., & Gray, S. J. (2007). Corporate governance and board composition: Diversity and independence of Australian boards. *Corporate Governance: An International Review*, *15*(2), 194-207.

Kanter, R. M. (1977). *Men and Women of the Corporation*. New York: Basic books.

Karim, A. W., & Moizer, P. (1996). Determinants of audit fees in Bangladesh. *The International Journal of Accounting*, *31*(4), 497-509.

Karpoff, J. M., Malatesta, P. H., & Walkling, R. A. (1996). Corporate governance and shareholder initiatives: Empirical evidence. *Journal of Financial Economics, 42*(3), 365-395.

Kelly, S., & Breslin, J. (Eds.). (2010). *Women's rights in the Middle East and North Africa: progress amid resistance*. New York, NY: Freedom House; Lanham, MD: Rowman & Littlefield.

Kennedy, P. (2008). *A guide to econometrics*. 6th ed. Malden, MA: Blackwell Publishing.

Kent, P., & Stewart, J. (2008). Corporate governance and disclosures on the transition to International Financial Reporting Standards. *Accounting & Finance*, *48*(4), 649-671.

Kesner, I. F. (1988). Directors' characteristics and committee membership: An investigation of type, occupation, tenure, and gender. *Academy of Management Journal*, *31*(1), 66-84.

Khalil, M., & Ozkan, A. (2016). Board Independence, Audit Quality and Earnings Management: Evidence from Egypt. *Journal of Emerging Market Finance*, *15*(1), 84-118.

Khan, A., & Awan, S. H. (2012). Effect of board composition on firm's performance: A case of Pakistani listed companies. *Interdisciplinary Journal of Contemporary Research in Business*, *3*(10), 853.

Khan, A., Muttakin, M. B., & Siddiqui, J. (2013). Corporate governance and corporate social responsibility disclosures: Evidence from an emerging economy. *Journal of Business Ethics*, *114*(2), 207-223.

Khan, R., Dharwadkar, R., &Brandes, P. (2005). Institutional ownership and CEO compensation: A longitudinal examination. *Journal of Business Research, 58*(8), 1078-1088.

Khasharmeh, H. A., & Aljifri, K. (2010). The timeliness of annual reports in Bahrain and the United Arab Emirates: An empirical comparative study. *The International Journal of Business and Finance Research*, *4*(1), 51-71.

Khurana, I. K., & Raman, K. K. (2004). Are big four audits in ASEAN countries of higher quality than non-big four audits? *Asia-Pacific Journal of Accounting & Economics*, *11*(2), 139-165.

Khurana, I. K., Pereira, R., & Martin, X. (2006). Firm growth and disclosure: An empirical analysis. *Journal of Financial and Quantitative Analysis, 41*(02), 357-380.

Kiel, G. C., & Nicholson, G. J. (2003). Board composition and corporate performance: How the Australian experience informs contrasting theories of corporate governance. *Corporate Governance: An International Review*, *11*(3), 189-205.

Kim, B., Burns, M. L., & Prescott, J. E. (2009). The strategic role of the board: The impact of board structure on top management team strategic action capability. *Corporate Governance: An International Review*, *17*(6), 728-743.

Klapper, L. F., & Love, I. (2004). Corporate governance, investor protection, and performance in emerging markets. *Journal of Corporate Finance*, *10*(5), 703-728.

Klein, A. (1998). Firm performance and board committee structure 1. *The Journal of Law and Economics*, *41*(1), 275-304.

Klein, A. (2002a). Audit committee, board of director characteristics, and earnings management. *Journal of accounting and economics*, *33*(3), 375-400.

Klein, A. (2002b). Economic determinants of audit committee independence. *The Accounting Review*, *77*(2), 435-452.

Klenke, K. (2003). Gender influences in decision-making processes in top management teams. *Management Decision*, *41*(10), 1024-1034.

Knapp, M. C. (1985). Audit conflict: An empirical study of the perceived ability of auditors to resist management pressure. *The Accounting Review*, *60*(2), 202-211.

Knapp, M. C. (1991). Factors that audit committee members use as surrogates for audit quality. *Auditing: A Journal of Practice & Theory*, *10*(1), 35-52.

Knechel, W. R., & Willekens, M. (2006). The role of risk management and governance in determining audit demand. *Journal of Business Finance & Accounting*, *33*(9-10), 1344-1367.

Koh, P. S. (2007). Institutional investor type, earnings management and benchmark beaters. *Journal of Accounting and Public Policy*, *26*(3), 267-299.

Kramer, V. W., Konrad, A. M., Erkut, S., & Hooper, M. J. (2007). Critical mass on corporate boards: Why three or more women enhance governance. *Directors Monthly*, *31*(2), 19–22.

Krishnamurthy, S., Zhou, J., & Zhou, N. (2006). Auditor reputation, auditor independence, and the stock-market impact of Andersen's indictment on its client firms. *Contemporary Accounting Research*, *23*(2), 465-490.

Krishnan, G. V. (2003). Audit quality and the pricing of discretionary accruals. *Auditing: A Journal of Practice & Theory*, *22*(1), 109-126.

Krishnan, G. V., & Visvanathan, G. (2008). Does the SOX Definition of an Accounting Expert Matter? The Association between Audit Committee Directors' Accounting Expertise and Accounting Conservatism. *Contemporary Accounting Research*, *25*(3), 827-858.

Krishnan, G., & Visvanathan, G. (2009). Do auditors price audit committee's expertise? The case of accounting versus nonaccounting financial experts. *Journal of Accounting, Auditing & Finance*, *24*(1), 115-144.

Krishnan, H. A., & Park, D. (2005). A few good women—on top management teams. *Journal of Business Research*, *58*(12), 1712-1720.

Krishnan, J., & Krishnan, J. (1997). Litigation risk and auditor resignations. *The Accounting Review*, *72*(4), 539-560.

Krishnan, J., & Schauer, P. C. (2000). The differentiation of quality among auditors: Evidence from the not-for-profit sector. *Auditing: A Journal of Practice & Theory*, *19*(2), 9-25.

Krishnan, J., & Ye, Z. (2005). Why some companies seek shareholder ratification on auditor selection. *Accounting Horizons*, *19*(4), 237-254.

Kristie, J. (2011). The power of three. *Director Boards*, *35*(5), 22-32.

Kuo, H. C., Lin, D., Lien, D., Wang, L. H., & Yeh, L. J. (2014). Is there an inverse U-shaped relationship between pay and performance? *The North American Journal of Economics and Finance*, *28*, 347-357.

Kuran, T. (1995). The inevitability of future revolutionary surprises. *American Journal of Sociology*, *100*(6), 1528-1551.

La Porta, R., Lopez-De-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *Journal of Finance*, *2*, 471-517.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of Financial Economics*, *58*(1), 3-27.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2002). Investor protection and corporate valuation. *Journal of Finance*, *57*(3), 1147-1170.

La Porta, R., Lopez-De-Silanes, F., Shleifer, A., & Vishny, R.W. (1998). Law and finance. *Journal of Political Economy*, *106*, 1113–1155.

Lagoarde-Segot, T., & Lucey, B. M. (2008). Efficiency in emerging markets—Evidence from the MENA region. *Journal of International Financial Markets, Institutions and Money*, *18*(1), 94-105.

Lakhal, F. (2005). Voluntary earnings disclosures and corporate governance: Evidence from France. *Review of Accounting and Finance*, *4*(3), 64-85.

Laksmana, I. (2008). Corporate board governance and voluntary disclosure of executive compensation practices. *Contemporary Accounting Research*, *25*(4), 47-82.

Lambert, R. A., Larcker, D. F., & Weigelt, K. (1993). The structure of organizational incentives. *Administrative Science Quarterly*, *38*, 438-461.

Lang, M., & Lundholm, R. (1993). Cross-sectional determinants of analyst ratings of corporate disclosures. *Journal of Accounting Research*, *31*(2), 246-271.

Larcker, D. F., & Richardson, S. A. (2004). Fees paid to audit firms, accrual choices, and corporate governance. *Journal of Accounting Research*, *42*(3), 625-658.

Lashgari, M. (2004). Corporate governance: theory and practice. *Journal of American Academy of Business,* 5, 46-51.

Lau, D. C., & Murnighan, J. K. (1998). Demographic diversity and faultlines: The compositional dynamics of organizational groups. *Academy of Management Review*, *23*(2), 325-340.

Lee, H. Y., Mande, V., & Ortman, R. (2004). The effect of audit committee and board of director independence on auditor resignation. *Auditing: A Journal of Practice & Theory*, *23*(2), 131-146.

Lee, P., Stokes, D., Taylor, S., & Walter, T. (2003). The association between audit quality, accounting disclosures and firm-specific risk: Evidence from initial public offerings. *Journal of Accounting and Public Policy*, *22*(5), 377-400.

Lee, S. P., & Isa, M. (2015). Directors' remuneration, governance and performance: the case of Malaysian banks. *Managerial Finance*, *41*(1), 26-44.

Lemmon, M., & Lins, K. (2003). Ownership structure, corporate governance, and firm value: evidence from East Asian financial crisis. *Journal of Finance, 58,* 1445−1468.

Lennox, C. S. (1999). Audit quality and auditor size: An evaluation of reputation and deep pockets hypotheses. *Journal of Business Finance & Accounting*, *26*(7-8), 779–805.

Lennox, C. S. (2005). Audit quality and executive officers' affiliation with CPA firms. *Journal of Accounting and Economics*, *39*(2), 201–232.

Leung, R., & Ilsever, J. (2013). Review of Evidence between Corporate Governance and Mandatory IFRS Adoption from the Perspective of Agency Theory and Information Asymmetry. *Universal Journal of Accounting and Finance*, *1*(3), 85-94.

Leung, S., & Horwitz, B. (2004). Director ownership and voluntary segment disclosure: Hong Kong evidence. *Journal of International Financial Management & Accounting*, *15*(3), 235-260.

Lewis, B. (1995). *The Middle East: 2000 years of history from the rise of Christianity to the present day*. London: George Weidenfeld & Nicolson.

Lewis, M. (2012). *Social cognition and the acquisition of self*. Springer Science & Business Media.

Lewis, M. K. (2001). Islam and accounting. *Accounting Forum*, *25* (2), 103-127.

Lewis, M. K. (2006). Accountability and Islam. *Conference paper* presented at Fourth International Conference on Accounting and Finance in Transition, Adelaide, Australia.

Liao, T. J., & Yu, C. M. J. (2012). Knowledge transfer, regulatory support, legitimacy, and financial performance: The case of foreign firms investing in China. *Journal of World Business*, *47*(1), 114-122.

Libby, R., Artman, J. T., & Willingham, J. J. (1985). Process susceptibility, control risk, and audit planning. *The Accounting Review*, *60*(2), 212-230.

Lilienfeld-Toal, U. V., & Ruenzi, S. (2014). CEO ownership, stock market performance, and managerial discretion. *The Journal of Finance*, *69*(3), 1013-1050.

Lim, R. (2011). Are corporate governance attributes associated with accounting conservatism? *Accounting & Finance*, *51*(4), 1007-1030.

Lim, S., Matolcsy, Z., & Chow, D. (2007).The Association between Board Composition and Different Types of Voluntary Disclosure. *European Accounting Review, 16*(3), 555-583.

Lin, H. C., Chou, T. K., & Wang, W. G. (2012). Capital Structure and executive compensation contract design: A theoretical and empirical analysis. *Journal of Banking & Finance, 36*(1), 209-224.

Lin, J. W., & Hwang, M. I. (2010). Audit quality, corporate governance, and earnings management: A meta-analysis. *International Journal of Auditing, 14*(1), 57-77.

Lin, Y. F. (2005). Corporate governance, leadership structure and CEO compensation: Evidence from Taiwan. *Corporate Governance: An International Review, 13*(6), 824-835.

Lin, Z. J., & Liu, M. (2009). The impact of corporate governance on auditor choice: Evidence from China. *Journal of International Accounting, Auditing and Taxation*, *18*(1), 44-59.

Lin, Z. J., & Liu, M. (2010). The determinants of auditor switching from the perspective of corporate governance in China. *Advances in Accounting*, *26*(1), 117-127.

Lincoln, A., & Adedoyin, O. (2012). Corporate governance and gender diversity in Nigerian boardrooms. *World Academy of Science, Engineering and Technology, 71*, 1853–1859.

Lipczynski, J., & Wilson, J. (2001). *Industrial Organisation*, Edinburgh Gate: Prentice Hall.

Lipton, M., & Lorsch, J. W. (1992). A modest proposal for improved corporate governance. *The Business Lawyer, 48(1),* 59-77.

Litwin, M.S. (1995). *How to measure survey reliability and validity*, 7th Edition, SAGE Publications, UK.

Liu, Y., Wei, Z., & Xie, F. (2014). Do women directors improve firm performance in China? *Journal of Corporate Finance, 28*, 169-184.

Lo, K., & Wu, S. S. (2016). Private information in executive compensation: The information role vs. the monitoring role of the board. *Corporate Governance: An International Review*, *24*(1), 5-23.

Lorsch, J.W. and MacIver, E. (1989). *Pawns or Potentates?* Harvard Business School Press, Boston, MA.

Loukil, N., & Yousfi, O. (2016). Does gender diversity on corporate boards increase risk-taking? *Canadian Journal of Administrative Sciences, 33,* 66–81.

Lucas-Pérez, M. E., Mínguez-Vera, A., Baixauli-Soler, J. S., Martín-Ugedo, J. F., & Sánchez-Marín, G. (2015). Women on the board and managers' pay: Evidence from Spain. *Journal of Business Ethics, 129*(2), 265-280.

Luckerath-Rovers, M. (2013). Women on boards and firm performance. *Journal of Management & Governance, 17*(2), 491-509.

Luypaert, M., & Van Caneghem, T. (2013). Can auditors mitigate information asymmetry in M&As? An empirical analysis of the method of payment in Belgian transactions. *AUDITING: A Journal of Practice & Theory*, *33*(1), 57-91.

M'hamid, I., Hachana, R., & Abdelwahed, O. M. R. I. (2011). Diversité genre dans le conseil d'administration et Performance des entreprises Tunisiennes Cotées. *Global Journal of Management and Business Research*, *11*(4), 93-101.

Maali, B., Casson, P., & Napier, C. (2006). Social reporting by Islamic banks. *Abacus*, *42*(2), 266-289.

Maddala, S. and Lahiri, K. (2009). *Introduction to Econometrics*, 4rd Edition, John Wiley and Sons Ltd, New York, US.

Mahadeo, J. D., Soobaroyen, T., & Hanuman, V. O. (2012). Board composition and financial performance: Uncovering the effects of diversity in an emerging economy. *Journal of Business Ethics*, *105*(3), 375-388.

Mak, Y. T., & Li, Y. (2001). Determinants of corporate ownership and board structure: evidence from Singapore. *Journal of Corporate Finance*, *7*(3), 235-256.

Maletta, M. J. (1993). An examination of auditors' decisions to use internal auditors as assistants: The effect of inherent risk. *Contemporary Accounting Research*, *9*(2), 508-525.

Maletta, M. J., & Kida, T. (1993). The effect of risk factors on auditors' configural information processing. *The Accounting Review*, *68*(3), 681-691.

Malherbe, S. and Segal, N. (2003). 'South Africa: After Apartheid', in Oman, C. P. (Ed.), *Corporate Governance in Development, the Experiences of Brazil, Chile, India, and South Africa*, OECD Development Centre, Washington, USA.

Mallin, C. A. (2004). *Corporate governance*. Oxford: Oxford University Press.

Mallin, C., & Ow-Yong, K. (2012). Factors influencing corporate governance disclosures: evidence from Alternative Investment Market (AIM) companies in the UK. *The European Journal of Finance*, *18*(6), 515-533.

Mandaci, P., & Gumus, G. (2010). Ownership Concentration, Managerial Ownership and Firm Performance: Evidence from Turkey. *South East European Journal of Economics and Business*, 5(1), 57-66.

Mangel, R., & Singh, H. (1993). Ownership structure, board relationships and CEO compensation in large US corporations. *Accounting and Business Research*, *23*(sup1), 339-350.

Mangena, M., Tauringana, V., & Chamisa, E. (2012). Corporate boards, ownership structure and firm performance in an environment of severe political and economic crisis. *British Journal of Management*, *23*(S1), S23-S41.

Maniam, B., Subramaniam, G., & Johnson, J. (2006). Perspectives of corporate governance in the US and abroad. *The Business Review*, *5*(2), 36−43.

Mansi, S. A., Maxwell, W. F., & Miller, D. P. (2004). Does auditor quality and tenure matter to investors? Evidence from the bond market. *Journal of Accounting Research*, *42*(4), 755-793.

Marnet, O. (2005). Behavior and rationality in corporate governance. *Journal of Economics Issues, 39*(3), 613−622.

Marston, C. L., & Shrives, P. J. (1991). The use of disclosure indices in accounting research: a review article. *The British Accounting Review*, *23*(3), 195-210.

Marston, C., & Polei, A. (2004). Corporate reporting on the Internet by German companies. *International Journal of Accounting Information Systems*, *5*(3), 285-311.

Mashayekhi, B., & Bazaz, M. S. (2008). Corporate governance and firm performance in Iran. *Journal of Contemporary Accounting & Economics*, *4*(2), 156-172.

Masulis, R. W., Wang, C., & Xie, F. (2012). Globalizing the boardroom—The effects of foreign directors on corporate governance and firm performance. *Journal of Accounting and Economics*, *53*(3), 527-554.

Mateescu, R. A. (2015). Corporate governance disclosure practices and their determinant factors in European emerging countries. *Journal of Accounting and Management Information Systems*, *14*(1), 170-192.

Mattis, M. C. (1993). Women directors: Progress and opportunities for the future. *Business and the Contemporary World, 5*(3), 140-56.

Maug, E. (1998). Large shareholders as monitors: Is there a trade-off between liquidity and control?. *Journal of Finance, 53*(1), 65-98.

Mayhew, B. W., Schatzberg, J. W., & Sevcik, G. R. (2004). Examining the Role of Auditor Quality and Retained Ownership in IPO Markets: Experimental Evidence. *Contemporary Accounting Research*, *21*(1), 89.

McConnell, J. J., & Servaes, H. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial economics*, *27*(2), 595-612.

McCormick Hyland, M., & Marcellino, P. A. (2002). Examining gender on corporate boards: A regional study. *Corporate Governance: The International Journal of Business in Society*, *2*(4), 24-31.

Medland, D. (2004). Small steps for womankind. *Corporate Board Member Europe,* Winter.

Meek, G. K., & Saudagaran, S. M. (1990). A survey of research on financial reporting in a transnational context. *Journal of Accounting Literature*, *9*, 145-182.

Mehran, H. (1995). Executive compensation structure, ownership, and firm performance. *Journal of Financial Economics*, *38*(2), 163-184.

Mernissi, F. (1991). *Women and Islam: An historical and theological enquiry*. Oxford: Blackwell.

Metcalfe, B. D. (2007). Gender and human resource management in the Middle East. *The International Journal of Human Resource Management*, *18*(1), 54-74.

Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, *83*(2), 340-363.

Miles, R. (2002). Employment and unemployment in Jordan: The importance of the gender system. *World Development*, *30*(3), 413-427.

Miletkov, M. K., Poulsen, A. B., & Wintoki, M. B. (2014). A multinational study of foreign directors on non-US corporate boards. *Working Paper*, available at: http://ssrn.com/abstract=2024655.

Milliken, F. J., & Martins, L. L. (1996). Searching for common threads: Understanding the multiple effects of diversity in organizational groups. *Academy of Management Review*, *21*(2), 402-433.

Mitton, T. (2002). A cross-firm analysis of the impact of corporate governance on the East Asian financial crisis. *Journal of Financial Economics*, *64*(2), 215-241.

Mizruchi, M. S., & Fein, L. C. (1999). The social construction of organizational knowledge: A study of the uses of coercive, mimetic, and normative isomorphism. *Administrative Science Quarterly*, *44*(4), 653-683.

Moghadam, V. M. (2005). Women's Economic Participation in the Middle East: What Difference Has the Neoliberal Policy Turn Made? *Journal of Middle East Women's Studies*, *1*(1), 110-146.

Mohamed, D. M., & Habib, H. M. (2013). Auditor independence, audit quality and the mandatory auditor rotation in Egypt. *Education, Business and Society: Contemporary Middle Eastern Issues*, *6*(2), 116-144.

Moideenkutty, U., Al-Lamki, A., & Sree Rama Murthy, Y. (2011). HRM practices and organizational performance in Oman. *Personnel Review*, *40*(2), 239-251.

Molz, R. (1988). Managerial domination of boards of directors and financial performance. *Journal of Business Research*, *16*(3), 235-249.

Monks, R. A. (2007). Two challenges for fiduciary capitalism. *Corporate Governance: An International Review*, *15*(3), 486-492.

Monks, R. A. G. & Minow, N. (2004). *Corporate governance*, 3rd edn. Madden, MA: Blackwell Publishing Ltd.

Monks, R. A. G. and Minow, N. (1995). *Corporate Governance*. Cambridge, MA: Blackwell Business.

Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics*, *20*, 293-315.

Morris, R., Susilowati, I., & Gray, S. (2012). "The Impact of IFRS Adoption versus Non-Adoption on Corporate Disclosure Levels in the Asian Region". *Working Paper* presented for American Accounting Association Annual Meeting and Conference on Teaching and Learning in Accounting, Washington DC. Available at http://aaahq.org/AM2012/display.cfm.

Mutchler, J. F., Hopwood, W., & McKeown, J. M. (1997). The influence of contrary information and mitigating factors on audit opinion decisions on bankrupt companies. *Journal of Accounting Research*, *35*(2), 295-310.

Myers, S. C. (1977). Determinants of Corporate Borrowing. *Journal of Financial Economics*, *5*(2), 147-175.

Najid, N. A., & Abdul Rahman, R. (2011). Government ownership and performance of Malaysian government-linked companies. *International Research Journal of Finance and Economics*, *61*(1), 1450-2887.

Naser, K., Al-Khatib, K., & Karbhari, Y. (2002). Empirical evidence on the depth of corporate information disclosure in developing countries: The case of Jordan. *International Journal of Commerce and Management*, *12*(3/4), 122-155.

New York Stock Exchange (NYSE). (2002). *Corporate governance rules proposal*. Available at www.nyse.com.

Newton, A. N. (2015). Executive compensation, organizational performance, and governance quality in the absence of owners. *Journal of Corporate Finance*, *30*, 195-222.

Ng, D. (2006). The impact of corruption on financial markets. *Managerial Finance*, *32*(10), 822-836.

Nguyen, P., Rahman, N., & Zhao, R. (2013). Ownership structure and divestiture decisions: Evidence from Australian firms. *International Review of Financial Analysis*, *30*, 170-181.

Nichols, D. R., & Smith, D. B. (1983). Auditor credibility and auditor changes. *Journal of Accounting Research*, *21*(2), 534-544.

Nicholson, G. J., & Kiel, G. C. (2007). Can Directors Impact Performance? A case-based test of three theories of corporate governance. *Corporate Governance: An International Review*, *15*(4), 585-608.

Niemi, L. (2005). Audit effort and fees under concentrated client ownership: Evidence from four international audit firms. *The International Journal of Accounting*, *40*(4), 303-323.

Ntim, C. G. (2013). Corporate Governance, Affirmative Action and Firm Value in Post-Apartheid South Africa: A Simultaneous Equation Approach. *African Development Review*, *25*(2), 148-172.

Ntim, C. G. (2015). Board diversity and organizational valuation: unravelling the effects of ethnicity and gender. *Journal of Management & Governance*, *19*(1), 167-195.

Ntim, C. G. (2016). Corporate governance, corporate health accounting, and firm value: The case of HIV/AIDS disclosures in Sub-Saharan Africa. *The International Journal of Accounting*, *51*(2), 155-216.

Ntim, C. G., & Soobaroyen, T. (2013a). Black economic empowerment disclosures by South African listed corporations: The influence of ownership and board characteristics. *Journal of Business Ethics*, *116*(1), 121-138.

Ntim, C. G., & Soobaroyen, T. (2013b). Corporate Governance and Performance in Socially Responsible Corporations: New Empirical Insights from a Neo-Institutional Framework. *Corporate Governance: An International Review*, *21*(5), 468-494.

Ntim, C. G., Lindop, S., & Thomas, D. A. (2013). Corporate governance and risk reporting in South Africa: A study of corporate risk disclosures in the pre-and post-2007/2008 global financial crisis periods. *International Review of Financial Analysis*, *30*, 363-383.

Ntim, C. G., Lindop, S., Osei, K. A., & Thomas, D. A. (2015a). Executive compensation, corporate governance and corporate performance: a simultaneous equation approach. *Managerial and Decision Economics*, *36*(2), 67-96.

Ntim, C. G., Opong, K. K., & Danbolt, J. (2012a). The relative value relevance of shareholder versus stakeholder corporate governance disclosure policy reforms in South Africa. *Corporate Governance: An International Review*, *20*(1), 84-105.

Ntim, C. G., Opong, K. K., & Danbolt, J. (2015b). Board size, corporate regulations and firm valuation in an emerging market: a simultaneous equation approach. *International Review of Applied Economics*, *29*(2), 194-220.

Ntim, C. G., Opong, K. K., Danbolt, J., & Thomas, D. A. (2012b). Voluntary corporate governance disclosures by post-apartheid South African corporations.*Journal of Applied Accounting Research*, *13*(2), 122-144.

Ntim, C.G. (2012a). Director shareownership and corporate performance in South Africa. *African Journal of Accounting, Auditing and Finance*, *1*(4), 359-373.

Ntim, C.G. (2012b). Does the South African stock market values independent board dual leadership structure? *Economics and Business Letters*, *1*(1), 35-45.

Ntim, C.G. (2013a). Monitoring board committee structure and market valuation in large publicly listed South African corporations. *International Journal of Managerial and Financial Accounting*, *5*(3), 310-325.

Ntim, C.G. (2013b). Corporate ownership and market valuation in South Africa: Uncovering the effects of shareholdings by different groups of corporate insiders and outsiders. *International Journal of Business Governance and Ethics*, *8*(3), 242-264.

Ntim, C.G., Lindop, S., Osei, K.A., Thomas, D.A., Abdou, H. and Opong, K.K. (2016a). Executive pay and performance: The moderating effect of CEO power and governance structure. *International Journal of Human Resource Management*, Forthcoming.

Ntim, C.G., Soobaroyen, T., & Broad, M.J. (2016b). Governance structures, voluntary disclosures and public accountability: The case of UK higher education institutions. *Accounting, Auditing and Accountability Journal*, Forthcoming.

O'sullivan, N. (2000). The impact of board composition and ownership on audit quality: Evidence from large UK companies. *The British Accounting Review*, *32*(4), 397-414.

OECD (Organisation for Economic Co-operation and Development). (1999). *OECD Principles of Corporate Governance*, 1st Edition, Organization for Economic Co-operation and Development, Paris, France.

OECD (Organisation for Economic Co-operation and Development). (2009). *Competition and regulation in auditing and related professions*. OECD, Directorate for Financial and Enterprise Affairs, Competition Committee, Paris.

OECD (Organisation for Economic Co-operation and Development). (3013). *Regulatory Reform in the Middle East and North Africa, Implementing Regulatory Policy Principles to Foster Inclusive Growth*. DOI: 10.1787/9789264204553-en.

Offenhauer, P. (2005). *Women in Islamic societies: a selected review of social scientific literature*. Federal Research Division, Library of Congress.

Oh, W. Y., Chang, Y. K., & Martynov, A. (2011). The effect of ownership structure on corporate social responsibility: Empirical evidence from Korea. *Journal of Business Ethics*, *104*(2), 283-297.

Omar, B., & Simon, J. (2011). Corporate aggregate disclosure practices in Jordan. *Advances in Accounting*, 27(1), 166-186.

Omran, M. M., Bolbol, A., & Fatheldin, A. (2008). Corporate governance and firm performance in Arab equity markets: Does ownership concentration matter? *International Review of Law and Economics*, *28*(1), 32-45.

Ongena, S., & Şendeniz-Yüncü, İ. (2011). Which firms engage small, foreign, or state banks? And who goes Islamic? Evidence from Turkey. *Journal of Banking & Finance*, *35*(12), 3213-3224.

Orden, O. D., & Garmendia, A. (2005). Does it matter ownership structure? Performance in Spanish companies. *Journal of European Financial Management*, *1*, 1-40.

O'sullivan, N., & Diacon, S. R. (2002). The impact of ownership, governance and non-audit services on audit fees: Evidence from the insurance industry. *International Journal of Auditing*, *6*(1), 93-107.

Owusu-Ansah, S. (1998). The impact of corporate attribites on the extent of mandatory disclosure and reporting by listed companies in Zimbabwe. *The International Journal of Accounting*, *33*(5), 605-631.

Oxelheim, L., & Randøy, T. (2013). Globalization of monitoring practices: The case of American influences on the dismissal risk of European CEOs. *Journal of Economics and Business, 70*, 3-15.

Oxera. (2006). Competition and Choice in the UK Audit Market. *Working Prepared* presented for the Department of Trade and Industry and Financial Reporting Council.

Ozkan, N. (2007). Do corporate governance mechanisms influence CEO compensation? An empirical investigation of UK companies. *Journal of Multinational Financial Management, 17*(5), 349-364.

Ozkan, N. (2011). CEO compensation and firm performance: An empirical investigation of UK panel data. *European Financial Management, 17*(2), 260-285.

Palmrose, Z. V. (1988). 1987 Competitive Manuscript Co-Winner: An analysis of auditor litigation and audit service quality. *The Accounting Review*, *63*(1), 55-73.

Parker, S., Peters, G. F., & Turetsky, H. F. (2005). Corporate governance factors and auditor going concern assessments. *Review of Accounting and Finance, 4*(3), 5-29.

Patel, S. A., Balic, A., & Bwakira, L. (2002). Measuring transparency and disclosure at firm-level in emerging markets. *Emerging Markets Review*, *3*(4), 325-337.

Pearce, J. A., & Zahra, S. A. (1992). Board composition from a strategic contingency perspective. *Journal of Management Studies, 29*(4), 411-438.

Peasnell, K. V., Pope, P. F., & Young, S. (2005). Board monitoring and earnings management: Do outside directors influence abnormal accruals? *Journal of Business Finance & Accounting*, *32*(7-8), 1311-1346.

Pellegrini, M., & Grais, W. (2006). Corporate governance and Shariah compliance in institutions offering Islamic financial services. World Bank, Policy Research *Working Paper* No. WPS4054.

Peloza, J., & Papania, L. (2008). The missing link between corporate social responsibility and financial performance: stakeholder salience and identification. *Corporate Reputation Review, 11*(2), 169-181.

Pergola, T.M. (2005). Management entrenchment: Can it negate the effectiveness of recently legislated governance reform? *Journal of American Academy of Business, 6*(2), 177−184.

Perrault, E. (2014). Why Does Board Gender Diversity Matter and How Do We Get There? The Role of Shareholder Activism in Deinstitutionalizing Old Boys' Networks. *Journal of Business Ethics*, 128(1), 149–165.

Pfeffer, J. & Salancik, G. R. (1978). *The external control of organizations: a resource dependence perspective*. New York: Harper & Row.

Pfeffer, J. (1973). Size, composition, and function of hospital boards of directors: A study of organization-environment linkage. *Administrative Science Quarterly*, *18*(3), 349-364.

Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. Stanford University Press.

Piesse, J., Strange, R., & Toonsi, F. (2012). Is there a distinctive MENA model of corporate governance? *Journal of Management & Governance*, *16*(4), 645-681.

Pincus, K., Rusbarsky, M., & Wong, J. (1989). Voluntary formation of corporate audit committees among NASDAQ firms. *Journal of Accounting and Public Policy*, *8*(4), 239-265.

Pittman, J. A., & Fortin, S. (2004). Auditor choice and the cost of debt capital for newly public firms. *Journal of Accounting and Economics*, *37*(1), 113-136.

Post, C., & Byron, K. (2015). Women on boards and firm financial performance: A meta-analysis. *Academy of Management Journal*, *58*(5), 1546-1571.

Postma, T. J., & Hermes, N. (2003). Institutions, corporate governance and corporate governance institutions: The case of Estonia. *Journal for East European Management Studies*, *8*(3), 263-292.

Pound, J. (1995). The promise of the governed corporation. *Harvard Business Review*, 73(2), 89-98.

Pratt, J., & Stice, J. D. (1994). The effects of client characteristics on auditor litigation risk judgments, required audit evidence, and recommended audit fees. *The Accounting Review*, *69*(4), 639-656.

Provan, K. G. (1980). Board power and organizational effectiveness among human service agencies. *Academy of Management Journal*, *23*(2), 221-236.

Pryce, G. (2005). *Inference and Statistics in SPSS: A Course for Business and Social Science*, 1st Edition, GeeBeeJey Publishing, Glasgow, UK.

Public Oversight Board (POB). (1994). *Strengthening the professionalism of the independent auditor*. Stamford, CT: POB.

Pyle, J. L. (1990). *The state and women in the economy: Lessons from sex discrimination in the Republic of Ireland*. Albany, New York: State University of New York Press.

Qi, D., Wu, W., Zhang, H., (2000). Shareholding structure and corporate performance of partially privatized firms: evidence from listed Chinese companies. *Pacific-Basin Finance Journal. 8*(5), 587-610.

Rabelo, F. M., & Vasconcelos, F. C. (2002). Corporate governance in Brazil.*Journal of Business Ethics*, *37*(3), 321-335.

Raghunandan, K., & Rama, D. V. (2003). Audit committee composition and shareholder actions: Evidence from voting on auditor ratification. *Auditing: A Journal of Practice & Theory*, *22*(2), 253-263.

Rainsbury, E. A., Bradbury, M., & Cahan, S. F. (2009). The impact of audit committee quality on financial reporting quality and audit fees. *Journal of Contemporary Accounting & Economics, 5*(1), 20-33.

Ramly, Z. (2012). Impact of corporate governance quality on the cost of equity capital in an emerging market: Evidence from Malaysian listed firms. *African Journal of Business Management, 6*(4), 1733-1748.

Randall, R. F. (1999). Corruption in world's economy is targeted. *Strategic Finance, 81*(1), 18-19.

Rashid, A., De Zoysa, A., Lodh, S., & Rudkin, K. (2010). Board composition and firm performance: Evidence from Bangladesh. *Australasian Accounting Business & Finance Journal, 4*(1), 76-95.

Rechner, P. L., & Dalton, D. R. (1991). CEO duality and organizational performance: A longitudinal analysis. *Strategic Management Journal, 12*(2), 155-160.

Reddy, K., Abidin, S., & You, L. (2015). Does corporate governance matter in determining CEO compensation in the publicly listed companies in New Zealand? An empirical investigation. *Managerial Finance, 41*(3), 301-327.

Reed, B. J., Trombley, M. A., & Dhaliwal, D. S. (2000). Demand for audit quality: The case of Laventhol and Horwath's auditees. *Journal of Accounting, Auditing & Finance, 15*(2), 183-198.

Reed, D. (2002). Corporate governance reforms in developing countries. *Journal of Business Ethics, 37*(3), 223-247.

Reverte, C. (2009). Determinants of corporate social responsibility disclosure ratings by Spanish listed firms. *Journal of Business Ethics, 88*(2), 351-366.

Rice, G. (1999). Islamic ethics and the implications for business. *Journal of Business Ethics*, 18(4), 345-358.

Roberson, Q. M., & Park, H. J. (2007). Examining the link between diversity and firm performance the effects of diversity reputation and leader racial diversity. *Group & Organization Management, 32*(5), 548-568.

Robinson, G., & Dechant, K. (1997). Building a business case for diversity. *The Academy of Management Executive, 11*(3), 21-31.

Roe, M. J. (2003). *Political determinants of corporate governance: Political context, corporate impact*. Oxford University Press, New York.

Rose, C. (2007). Does female board representation influence firm performance? The Danish evidence. *Corporate Governance: An International Review, 15*(2), 404-413.

Rosen, S. (1982). Authority, control, and the distribution of earnings. *The Bell Journal of Economics, 13*(2) 311-323.

Rosener, J. B. (1997). *America's competitive secret: Women managers*. New York: Oxford University Press.

Rosner, R. L. (2003). Earnings manipulation in failing firms. *Contemporary Accounting Research, 20*(2), 361−408.

Ross, M. L. (2008). Oil, Islam, and women. *American Political Science Review, 102*(1), 107-123.

Ruland, W., Tung, S., & George, N. E. (1990). Factors associated with the disclosure of managers' forecasts. *The Accounting Review*, *65*(3), 710-721.

Ryan, L. V. (2000). Moral aspects of executive leadership. *International Journal of Value-Based Management, 13*(2), 109-122.

Ryan, M. K., & Haslam, S. A. (2007). The glass cliff: Exploring the dynamics surrounding the appointment of women to precarious leadership positions. *Academy of Management Review, 32*(2), 549-572.

Saeidi, S. P., Sofian, S., Saeidi, P., Saeidi, S. P., & Saaeidi, S. A. (2015). How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. *Journal of Business Research*, *68*(2), 341-350.

Safieddine, A. (2009). Islamic financial institutions and corporate governance: New insights for agency theory. *Corporate Governance: An International Review*, *17*(2), 142-158.

Sahlman, W. A. (1990). Why sane people shouldn't serve on public boards. *Harvard Business Review, 68*(3), 28-35.

Saidi, N. (2004). Corporate governance in MENA countries: Improving transparency and disclosure. *The second Middle East and North Africa regional corporate governance forum.* Summary Report Published by Hawkamah the Institute for Corporate Governance.

Sainty, B. J., Taylor, G. K., & Williams, D. D. (2002). Investor dissatisfaction toward auditors. *Journal of Accounting, Auditing & Finance*, *17*(2), 111-136.

Salter, S. B. (1998). Corporate financial disclosure in emerging markets: does economic development matter? *The International Journal of Accounting*, *33*(2), 211-234.

Samaha, K., & Dahawy, K. (2010). Factors influencing corporate disclosure transparency in the active share trading firms: An explanatory study. *Research in Accounting in Emerging Economies*, *10*(1), 87-118.

Samaha, K., & Dahawy, K. (2011). An empirical analysis of corporate governance structures and voluntary corporate disclosure in volatile capital markets: The Egyptian experience. *International Journal of Accounting, Auditing and Performance Evaluation*, *7*(1), 61-93.

Samaha, K., & Hegazy, M. (2010). An empirical investigation of the use of ISA 520 "analytical procedures" among Big 4 versus non-Big 4 audit firms in Egypt. *Managerial Auditing Journal*, *25*(9), 882-911.

Samaha, K., Dahawy, K., Hussainey, K., & Stapleton, P. (2012). The extent of corporate governance disclosure and its determinants in a developing market: The case of Egypt. *Advances in Accounting*, *28*(1), 168-178.

Sankaraguruswamy, S., & Whisenant, J. S. (2004). An empirical analysis of voluntarily supplied client-auditor realignment reasons. *Auditing: A Journal of Practice & Theory*, *23*(1), 107-121.

Sapp, S.G. (2008). The impact of corporate governance on executive compensation. *European Financial Management, 14*(4), 710-746.

Sarker, M. A. A. (1999). Islamic business contracts, agency problem and the theory of the Islamic firm. *International Journal of Islamic Financial Services, 1*(2), 12-28.

Saunders, M. Lewis, P. and Thornhill, A. (2007). *Research methods for business students*, 4th Edition, Prentice Hill, London, UK.

Schadewitz, H. J., & Blevins, D. R. (1998). Major determinants of interim disclosures in an emerging market. *American Business Review*, *16*(1), 41-55.

Schauer, P. C. (2002). The effects of industry specialization on audit quality: an examination using bid-ask spreads. *Journal of Accounting and Finance Research, 10*(1), 76-86.

Schultz, E., Tian, G.Y., &Twite, G. (2013). Corporate governance and the CEO pay–performance link: Australian evidence. *International Review of Finance*, *13*(4), 447-472.

Schwartz, K. B., & Menon, K. (1985). Auditor switches by failing firms. *The Accounting Review*, *60*(2), 248-261.

Scott, W. R. (2001). *Institutions and organizations*, 2nd edn. Thousand Oaks, CA: Sage.

Sealy, R., Vinnicombe, S., & Singh, V. (2008). *The Female FTSE Report 2008. A decade of delay.* International Center for Women Leaders, Cranfield School of Management.

Securities and Exchange Commission (SEC). 2003. *Standards relating to listed company auditor committee*. Final Rules (April) Release No. 338220.Washington, DC: Government Printing Office.

Sehar, N. UI., Bilal, & Tufail, S. (2013). Determinants of Voluntary Disclosure in Annual Report: A Case Study of Pakistan, *Management & Administrative Sciences Review, 2*(2), 181-195.

Seidl, D., Sanderson, P., & Roberts, J. (2013). Applying the 'comply-or-explain'principle: discursive legitimacy tactics with regard to codes of corporate governance. *Journal of Management & Governance, 17*(3), 791-826.

Sekran, U. (2003). *Research methods for business: A skill building approach*, 4th Edition, John Wiley & Sons, Inc, US.

Sharma, N. (2014). Extent of corporate governance disclosure by banks and finance companies listed on Nepal Stock Exchange. *Advances in Accounting*, *30*(2), 425-439.

Sharma, V. D. (2004). Board of director characteristics, institutional ownership, and fraud: Evidence from Australia. *Auditing: A Journal of Practice & Theory*, *23*(2), 105-117.

Sheu, H. J., Chung, H., & Liu, C. L. (2010). Comprehensive disclosure of compensation and firm value: The case of policy reforms in an emerging market. *Journal of Business Finance & Accounting*, *37*(9-10), 1115-1144.

Shevlin, T. (2004). Discussion of "A framework for the analysis of firm risk communication". *The International Journal of Accounting*, *39*(3), 297-302.

Shinawi, A. (1970). *The role of accounting and accountants in the developing economy of Saudi Arabia*. Ph.D. Thesis. USA: University of Southern California.

Shleifer, A., & Vishny, R. W. (1986). Large shareholders and corporate control. *The Journal of Political Economy*, *94*(3), 461-488.

Shleifer, A., & Vishny, R. W. (1994). Politicians and firms. *The Quarterly Journal of Economics*, *109* (4), 995-1025.

Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The Journal of Finance*, *52*(2), 737-783.

Shleifer, A., & Wolfenzon, D. (2002). Investor protection and equity markets. *Journal of Financial Economics*, *66*(1), 3-27.

Shockley, R. A. (1981). Perceptions of auditors' independence: An empirical analysis. *The Accounting Review*, *56*(4), 785-800.

Short, H., & Keasey, K. (1999). Managerial Ownership and the Performance of Firms: Evidence from the UK. *Journal of Corporate Finance*, *5*(1), 79-101.

Shrader, C. B., Blackburn, V. B., & Iles, P. (1997). Women in management and firm financial performance: An exploratory study. *Journal of Managerial Issues*, *9*(3), 355-372.

Shu, S. Z. (2000). Auditor resignations: Clientele effects and legal liability. *Journal of Accounting and Economics*, *29*(2), 173-205.

Simunic, D. A. (1980). The pricing of audit services: Theory and evidence. *Journal of Accounting Research*, *18*(1), 161-190.

Simunic, D. A., & Stein, M. T. (1987). *Product differentiation in auditing: Auditor choice in the market for unseasoned new issues*. Vancouver, BC: Canadian Certified General Accountants' Research Foundation.

Simunic, D. A., & Stein, M. T. (1996). Impact of litigation risk on audit pricing: A review of the economics and the evidence. *Auditing: A Journal of Practice & Theory, 15*, 119–134.

Singh, M., & Davidson III, W. N. (2003). Agency costs, ownership structure and corporate governance mechanisms. *Journal of Banking & Finance*, *27*(5), 793-816.

Singh, V. (2007). Ethnic diversity on top corporate boards: a resource dependency perspective. *The International Journal of Human Resource Management, 18*(12), 2128-2146.

Singh, V. K., & Singh, A. (2010). Corporate governance in the Middle East: Meeting points for the advancement of social citizenship. *ASBM Journal of Management, 3*(1/2), 1-12.

Singh, V., & Vinnicombe, S. (2004). Why so few women directors in top UK boardrooms? Evidence and theoretical explanations. *Corporate Governance: An International Review, 12*(4), 479-488.

Singh, V., Terjesen, S., & Vinnicombe, S. (2008). Newly appointed directors in the boardroom: How do women and men differ? *European Management Journal, 26*(1), 48-58.

Slovin, M. B., & Sushka, M. E. (1993). Ownership concentration, corporate control activity, and firm value: Evidence from the death of inside blockholders. *The Journal of Finance, 48*(4), 1293-1321.

Smith, C. W., & Watts, R. L. (1992). The investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Financial Economics, 32*(3), 263-292.

Smith, K. G., Smith, K. A., Olian, J. D., Sims Jr, H. P., O'Bannon, D. P., & Scully, J. A. (1994). Top management team demography and process: The role of social integration and communication. *Administrative Science Quarterly, 39*(3), 412-438.

Smith, M. P. (1996). Shareholder Activism by Institutional Investors: Evidence from Calpers. *The Journal of Finance, 51*(1), 227-252.

Smith, N., Smith, V., & Verner, M. (2006). Do women in top management affect firm performance? A panel study of 2,500 Danish firms. *International Journal of Productivity and Performance Management, 55*(7), 569-593.

Smith, P. A. (2009). Gulf aims to take lead in corporate governance. *Middle East, 396*, 52-56.

Solomon, J. F., Lin, S. W., Norton, S. D., & Solomon, A. (2003). Corporate governance in Taiwan: Empirical evidence from Taiwanese company directors. *Corporate Governance: An International Review, 11*(3), 235-248.

Sonnenfeld, J. A. (2002). What makes great boards great. *Harvard Business Review, 80*(9), 106-113.

Spero, L. L. (1979). *The extent and causes of voluntary disclosure of financial information in three European capital markets: An exploratory study*. Ph.D. Thesis. USA: Harvard University.

Srinidhi, B. N., He, S., & Firth, M. (2014). The effect of governance on specialist auditor choice and audit fees in US family firms. *The Accounting Review, 89*(6), 2297-2329.

Steen, T. (2005). Corporate governance as a determinant of corporate values. *Corporate Governance, 5*(4), 10−27.

Stephenson, C. (2004). Leveraging diversity to maximum advantage: The business case for appointing more women to boards. *Ivey Business Journal, 69*(1), 1-5.

Steven, T. P. (2006). Corporate governance reforms: fact or fiction? *Corporate Governance*, *6*(2), 107−116.

Stiglitz, J. E. (1985). Credit markets and the control of capital. *Journal of Money, Credit and Banking*, *17*(2), 133-152.

Street, D. L., & Bryant, S. M. (2000). Disclosure level and compliance with IASs: A comparison of companies with and without US listings and filings. *The International Journal of Accounting*, *35*(3), 305-329.

Stulz, R. (1988). Managerial control of voting rights: Financing policies and the market for corporate control. *Journal of Financial Economics*, *20*, 25-54.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, *20*(3), 571-610.

Sudarsanam, S., Holl, P., & Salami, A. (1996). Shareholder wealth gains in mergers: effect of synergy and ownership structure. *Journal of Business Finance & Accounting*, *23*(5-6), 673-698.

Sulaiman, M. and R. Willett. (2003). Using the Hofstede-Gray framework to argue normatively for an extension of Islamic corporate reports. *Malaysian Accounting Review*, *2*(1): 81-105.

Suleiman, N. M. (2000). Corporate governance in Islamic banks. *Society and Economy in Central and Eastern Europe*, *22* (3), 98-116.

Sun, J., Ding, L., Guo, J. M., & Li, Y. (2015). Ownership, capital structure and financing decision: Evidence from the UK. *The British Accounting Review*, Forthcoming.

Sun, Q., Tong, W.H.S. (2003). China share issue privatisation: the extent of its success. *Journal of Financial Economics*, *70* (2), 183– 222.

Sundaram, R. K., & Yermack, D. L. (2007). Pay me later: Inside debt and its role in managerial compensation. *The Journal of Finance*, *62*(4), 1551-1588.

Sunden, A. E., & Surette, B. J. (1998). Gender differences in the allocation of assets in retirement savings plans. *The American Economic Review*, *88*(2), 207-211.

Swann, W. B., Polzer, J. T., Seyle, D. C., & Ko, S. J. (2004). Finding value in diversity: Verification of personal and social self-views in diverse groups. *Academy of Management Review*, *29*(1), 9-27.

Syed, J., & Van Buren, H. J. (2014). Global business norms and Islamic views of women's employment. *Business Ethics Quarterly*, *24*(2), 251-276.

Syed, J., Ali, F., & Winstanley, D. (2005). In pursuit of modesty: contextual emotional labour and the dilemma for working women in Islamic societies. *International Journal of Work Organisation and Emotion*, *1*(2), 150-167.

Tan, H., Wang, S., & Welker, M. (2011). Analyst following and forecast accuracy after mandated IFRS adoptions. *Journal of Accounting Research*, *49*(5), 1307-1357.

Tauringana, V., & Chithambo, L. (2016). Determinants of risk disclosure compliance in Malawi: a mixed-method approach. *Journal of Accounting in Emerging Economies*, *6*(2), 111-137.

Tauringana, V., & Mangena, M. (2014). Board structure and supplementary commentary on the primary financial statements. *Journal of Applied Accounting Research*, *15*(3), 273-290.

Terjesen, S., & Sealy, R. (2016). Board gender quotas: Exploring ethical tensions from a multi-theoretical perspective. *Business Ethics Quarterly*, *26*(1), 23-65.

Terjesen, S., & Singh, V. (2008). Female presence on corporate boards: A multi-country study of environmental context. *Journal of Business Ethics*, *83*(1), 55-63.

Terjesen, S., Aguilera, R. V., & Lorenz, R. (2015a). Legislating a woman's seat on the board: Institutional factors driving gender quotas for boards of directors. *Journal of Business Ethics*, *128*(2), 233-251.

Terjesen, S., Couto, E. B., & Francisco, P. M. (2015b). Does the presence of independent and female directors impact firm performance? A multi-country study of board diversity. *Journal of Management & Governance*, *20*(3), 447–483.

Terjesen, S., Sealy, R., & Singh, V. (2009). Women directors on corporate boards: A review and research agenda. *Corporate Governance: An International Review*, *17*(3), 320-337.

Thaler, R. (2004). *Advances in behavioral finance*. New York, NY: Russell Sage Foundation.

Tharenou, P., Latimer, S., & Conroy, D. (1994). How do you make it to the top? An examination of influences on women's and men's managerial advancement. *Academy of Management Journal*, *37*(4), 899-931.

The Economist. (2014). The spread of gender quotas for company boards. Available at: http://www.economist.com/blogs/economist-explains/2014/03/economist-explains-14 Last.

Thomas, D. E., & Eden, L. (2004). What is the shape of the multinationality-performance relationship? *Multinational Business Review*, *12*(1), 89-110.

Thomsen, S., Pedersen, T., & Kvist, H. K. (2006). Blockholder ownership: Effects on firm value in market and control based governance systems. *Journal of Corporate Finance*, *12*(2), 246-269.

Tinker, T. (2004). The Enlightenment and its discontents: Antinomies of Christianity, Islam and the calculative sciences. *Accounting, Auditing & Accountability Journal*, *17*(3), 442-475.

Titman, S., & Trueman, B. (1986). Information quality and the valuation of new issues. *Journal of Accounting and Economics*, *8*(2), 159–172.

Torchia, M., Calabrò, A., & Huse, M. (2011). Women directors on corporate boards: From tokenism to critical mass. *Journal of Business Ethics*, *102*(2), 299-317.

Tosi, H. L., Katz, J. P., & Gomez-Mejia, L. R. (1997). Disaggregating the agency contract: The effects of monitoring, incentive alignment, and term in office on agent decision making. *Academy of Management Journal*, *40*(3), 584-602.

Tracey, P. (2012). Religion and organization: A critical review of current trends and future directions. *The Academy of Management Annals*, *6*(1), 87-134.

Treasury, U. S. (2008). *Final Report of the Advisory Committee on the Auditing Profession to the US Department of the Treasury*. Advisory Committee on the Auditing Profession, the Department of the Treasury.

Triana, M. D. C., Miller, T. L., & Trzebiatowski, T. M. (2013). The double-edged nature of board gender diversity: Diversity, firm performance, and the power of women directors as predictors of strategic change. *Organization Science*, *25*(2), 609-632.

Trinidad, C., & Normore, A. H. (2005). Leadership and gender: a dangerous liaison? *Leadership & Organization Development Journal*, *26*(7), 574-590.

Tsipouri, L., & Xanthakis, M. (2004). Can corporate governance be rated? Ideas based on the Greek experience. *Corporate Governance: An International Review*, *12*(1), 16-28.

Tunyi, A. A., & Ntim, C. G. (2016). Location advantages, governance quality, stock market development and firm characteristics as antecedents of African M&As. *Journal of International Management*, *22*(2), 147-167.

Turley, S., & Cooper, M. (1991). *Auditing in the United Kingdom: A study of development in the audit methodologies of large accounting firms*. Prentice-Hall.

Turley, S., & Zaman, M. (2004). The corporate governance effects of audit committees. *Journal of Management and Governance*, *8*(3), 305-332.

Turley, S., & Zaman, M. (2007). Audit committee effectiveness: informal processes and behavioural effects. *Accounting, Auditing & Accountability Journal*, *20*(5), 765-788.

Uadiale, O. M. (2010). The impact of board structure on corporate financial performance in Nigeria. *International Journal of Business and Management*, *5*(10), 155-166.

Ugeux, G. (2004). Toward global convergence in corporate governance: An assessment of the current situation. *International Journal of Disclosure and Governance*, *1*(4), 339−355.

Ujunwa, A. (2012). Board characteristics and the financial performance of Nigerian quoted firms. *Corporate Governance: The International Journal of Business in Society*, *12*(5), 656-674.

Ujunwa, A., Okoyeuzu, C., & Nwakoby, I. (2012). Corporate board diversity and firm performance: Evidence from Nigeria. *Revista de Management Comparat International*, *13*(4), 605-620.

UNCTAD (United Nations Conference on Trade and Development) (2006). *Guidance on Good Practices in Corporate Governance Disclosure*. Available at: http://unctad.org/en/Docs/iteteb20063_en.pdf

UNCTAD (United Nations Conference on Trade and Development) (2011). *Corporate Governance Disclosure in Emerging Markets. Statistical analysis of legal requirements and company practices*. Available at: http://unctad.org/en/Docs/diaeed2011d3_en.pdf

UNDP (United Nations Development Programme). (2010). *The Real Wealth of Nations: Pathways to Human Developm*ent. 20th Anniversary Ed. Human Development Report 2010, New York.

Upadhyay, A. (2014). Social concentration on boards, corporate information environment and cost of capital. *Journal of Business Finance & Accounting*, *41*(7-8), 974-1001.

Vaaler, P. M., & Schrage, B. N. (2006). 13. Home country governance quality and the 'bonding'hypothesis: evidence from industrialized, emerging-market and less-developed countries. *Transformations in Global Governance: Implications for Multinationals and Other Stakeholders*, Edward Elgar: Cheltenham, UK, 264-297.

Vafeas, N. (1999). Board meeting frequency and firm performance. *Journal of Financial Economics*, *53*(1), 113-142.

Van den Berghe, L. A., & Levrau, A. (2004). Evaluating Boards of Directors: what constitutes a good corporate board? *Corporate Governance: an International Review*, *12*(4), 461-478.

Van Der Walt, N., & Ingley, C. (2003). Board dynamics and the influence of professional background, gender and ethnic diversity of directors. *Corporate Governance: An International Review*, *11*(3), 218-234.

Van Essen, M., Otten, J., & Carberry, E. J. (2015). Assessing managerial power theory: A meta-analytic approach to understanding the determinants of CEO compensation. *Journal of Management*, *41*, 164-202.

Vanstraelen, A. (2000). Impact of renewable long-term audit mandates on audit quality. *European Accounting Review*, *9*(3), 419-442.

Vanstraelen, A. (2003). Going-concern opinions, auditor switching, and the self-fulfilling prophecy effect examined in the regulatory context of Belgium. *Journal of Accounting, Auditing & Finance*, *18*(2), 231-254.

Victoravich, L.M., Xu, P., &Gan, H. (2012). Institutional ownership and executive compensation: Evidence from US banks during the financial crisis. *Managerial Finance*, *39*(1), 28-46.

Vieito, J. P. T. (2012). Gender, top management compensation gap, and company performance: Tournament versus behavioral theory. *Corporate Governance: An International Review*, *20*(1), 46-63.

Vinnicombe, T. (2010). AAOIFI reporting standards: Measuring compliance. *Advances in Accounting*, 26(1), 55-65.

Wahdan, M. A., Spronck, P. H. M., Ali, H. F., Vaassen, E., and Van den Herik, H. J. (2005a). *Auditing in Egypt: A study of challenges, problems, and possibility of an automatic formulation of the auditor's report*. The 14th World Business Congress, IMDA, Granada, Spain, July 10-14, 91-98.

Wahdan, M. A., Spronck, P. H. M., Ali, H. F., Vaassen, E., and Van den Herik, H. J. (2005b). Auditing in Egypt: A study of the legal framework and professional standards. *Working Paper* Series of the University of Maastricht, Maastricht.

Wallace, W. A. (1984). Internal auditors can cut outside CPA costs. *Harvard Business Review*, *62*(2), 16-20.

Wallace, W. A. (1989). Are audit fees sufficiently risk adjusted. *Advances in Accounting*, *7*, 3-37.

Walt, N., & Ingley, C. (2003). Board dynamics and the influence of professional background, gender and ethnic diversity of directors. *Corporate Governance: An International Review*, *11*(3), 218-234.

Wan, W. P., & Hoskisson, R. E. (2003). Home country environments, corporate diversification strategies, and firm performance. *Academy of Management Journal*, *46*(1), 27-45.

Wang, D. (2006). Founding family ownership and earnings quality. *Journal of Accounting Research, 44*(3), 619-656.

Wang, K., & Xiao, X. (2011). Controlling shareholders' tunneling and executive compensation: Evidence from China. *Journal of Accounting and Public Policy*, *30*(1), 89-100.

Wang, T., Song, M., & Zhao, Y. L. (2014). Legitimacy and the value of early customers. *Journal of Product Innovation Management*, *31*(5), 1057-1075.

Watkins, A. L., Hillison, W., & Morecroft, S. E. (2004). Audit quality: A synthesis of theory and empirical evidence. *Journal of Accounting Literature*, *23*, 153-193.

Watson, W. E., Kumar, K., & Michaelsen, L. K. (1993). Cultural diversity's impact on interaction process and performance: Comparing homogeneous and diverse task groups. *Academy of Management Journal*, *36*(3), 590-602.

Watts, R. L., & Zimmerman, J. L. (1983). Agency problems, auditing, and the theory of the firm: Some evidence. *The Journal of Law & Economics*, *26*(3), 613-633.

Watts, R. L., & Zimmerman, J. L. (1986). *Positive accounting theory*. Englewood Cliffs, NJ: Prentice-Hall Inc.

Watts, R. L., & Zimmerman, J. L. (1990). Positive accounting theory: a ten year perspective. *The Accounting Review, 65 (1)*, 131-156.

Waweru, N. M. (2014). Determinants of quality corporate governance in Sub-Saharan Africa: Evidence from Kenya and South Africa. *Managerial Auditing Journal*, *29*(5), 455-485.

Waweru, N. M., Kakabadsa, N., & Fleur, M., (2014). Factors influencing quality corporate governance in Sub Saharan Africa: an empirical study. *Corporate Governance*, *14*(4), 555-574.

Weber, R.P. (1990). *Basic Content Analysis*. California: Sage Publications Inc.

Wei, X., Xiao, X., & Zhou, Y. (2014). Investor Heterogeneity, Auditor Choice, and Information Signaling. *AUDITING: A Journal of Practice & Theory*, *34*(3), 113-138.

Weir, D. (2011). 17. Some reflections on corporate governance in the Middle East and North Africa (MENA) region. *Handbook on international corporate governance: Country analyses* (2nd Ed.,). Northampton, MA: Edward Elgar, 371-390.

Weisbach, M. S. (1988). Outside directors and CEO turnover. *Journal of Financial Economics*, *20*, 431-460.

Welbourne, T. M., Cycyota, C. S., & Ferrante, C. J. (2007). Wall Street reaction to women in ipos an examination of gender diversity in top management teams. *Group & Organization Management*, *32*(5), 524-547.

Welch, E. (2003). The relationship between ownership structure and performance in listed Australian companies. *Australian Journal of Management*, *28*(3), 287-305.

Wellalage, N. H., & Locke, S. (2013). Corporate governance, board diversity and firm financial performance: New evidence from Sri Lanka. *International Journal of Business Governance and Ethics*, *8*(2), 116-136.

Westphal, J. D., & Bednar, M. K. (2005). Pluralistic ignorance in corporate boards and firms' strategic persistence in response to low firm performance. *Administrative Science Quarterly*, *50*(2), 262-298.

Westphal, J. D., & Milton, L. P. (2000). How experience and network ties affect the influence of demographic minorities on corporate boards. *Administrative Science Quarterly*, *45*(2), 366-398.

Westphal, J. D., & Zajac, E. J. (1995). Who shall govern? CEO/board power, demographic similarity, and new director selection. *Administrative Science Quarterly*, *40(1)*, 60-83.

White, J. W., & Ingrassia, P. (1992). Board ousts managers at GM; Takes control of crucial committee. *The Wall Street Journal*, *69*(5), 56-69.

Wiersema, M. F., & Bantel, K. A. (1992). Top management team demography and corporate strategic change. *Academy of Management journal*, *35*(1), 91-121.

Wilkinson, B. R., & Clements, C. E. (2006). Corporate governance mechanisms and the early-filing of CEO certification. *Journal of Accounting and Public Policy*, *25*(2), 121-139.

Willenborg, M. (1999). Empirical analysis of the economic demand for auditing in the initial public offerings market. *Journal of Accounting Research*, *37*(1), 225-238.

Williams, D. D. (1988). The potential determinants of auditor change. *Journal of Business Finance & Accounting*, *15*(2), 243-261.

Williams, K. Y., & O'Reilly, C. A., III. (1998). Demography and diversity in organizations: A review of 40 years of research. *Research in Organizational Behavior*, *21*, 77-140.

Wilson, T. E., & Grimlund, R. A. (1990). An Examination of the Importance of an Auditors Reputation. *Auditing-a Journal of Practice & Theory*, *9*(2), 43-59.

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. Cambridge, MA: MIT Press.

World Bank (2002). *Report on the Observance of Standards and Codes: Accounting and Auditing, Arab Republic of Egypt*. World Bank, Washington, DC.

World Bank. (2007). *MENA Economic Development and Prospects 2007*. Washington, D.C. Available at: http://siteresources.worldbank.org/INTMENA/Resources/EDP_2007_REPORT_Aug7.pdf.

World Bank. (2012). *World Development Report 2012: Gender Equality and Development*. Washington, DC. Available at: http://siteresources.worldbank.org/INTWDR2012/Resources/7778105-1299699968583/7786210-1315936222006/Complete-Report.pdf.

World Bank. (2013). *Opening Doors: Gender Equality and Development in the Middle East and North Africa*. MENA Development Report. Washington, DC. Available at: https://openknowledge.worldbank.org/handle/10986/12552.

World Value Survey database. Available at: www.worldvaluessurvey.org.

Wu, X. (2005). Corporate governance and corruption: A cross-country analysis. *Governance: An International Journal of Policy, Administration, and Institutions*, *18*(2), 151-170.

Xiao, J. Z., Yang, H., & Chow, C. W. (2004). The determinants and characteristics of voluntary internet-based disclosures by listed Chinese companies. *Journal of Accounting and Public Policy*, *23*(3), 191-225.

Xiao, S., & Zhao, S. (2014). How do agency problems affect firm value?–Evidence from China. *The European Journal of Finance*, *20*(7-9), 803-828.

Xie, B., Davidson, W. N., & DaDalt, P. J. (2003). Earnings management and corporate governance: the role of the board and the audit committee. *Journal of Corporate Finance*, *9*(3), 295-316.

Xu, X., & Wang, Y. (1999). Ownership structure and corporate governance in Chinese stock companies. *China Economic Review*, *10*(1), 75-98.

Yang, Y., & Konrad, A. M. (2011). Understanding diversity management practices: Implications of institutional theory and resource-based theory. *Group & Organization Management*, *36*(1), 6-38.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics*, *40*(2), 185-211.

Yoshikawa, T., & Rasheed, A. A. (2009). Convergence of corporate governance: Critical review and future directions. *Corporate Governance: An International Review*, *17*(3), 388-404.

Yoshikawa, T., Tsui-Auch, L. S., & McGuire, J. (2007). Corporate governance reform as institutional innovation: The case of Japan. *Organization Science*, *18*(6), 973-988.

Young, S. (2000). The Increasing Use of Non-Executive Directors: Its Impact on UK Board Structure and Governance Arrangements. *Journal of Business Finance & Accounting*, *27*(9-10), 1311-1342.

Yu, M. (2013). State ownership and firm performance: Empirical evidence from Chinese listed companies. *China Journal of Accounting Research*, *6*(2), 75-87.

Zahra, S. A., & Pearce, J. A. (1989). Boards of directors and corporate financial performance: A review and integrative model. *Journal of Management*, *15*(2), 291-334.

Zahra, S. A., & Stanton, W. W. (1988). The implications of board of directors composition for corporate strategy and performance. *International Journal of Management*, *5*(2), 229-236.

Zaman, M., Hudaib, M., & Haniffa, R. (2011). Corporate governance quality, audit fees and non-audit services fees. *Journal of Business Finance & Accounting*, *38*(1-2), 165-197.

Zattoni, A., & Cuomo, F. (2008). Why adopt codes of good governance? A comparison of institutional and efficiency perspectives. *Corporate Governance: An International Review*, *16*(1), 1-15.

Zheng, Y. (2010). Heterogeneous institutional investors and CEO compensation. *Review of Quantitative Finance and Accounting*, *35*(1), 21-46.

Zhou, X. (2001). Understanding the determinants of managerial ownership and the link between ownership and performance: comment. *Journal of Financial Economics*, *62*(3), 559-571.